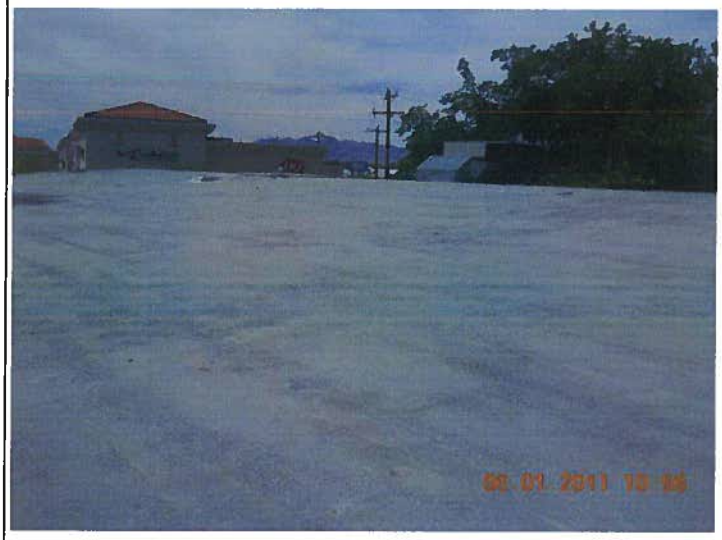
Picture 25.

Picture 26.

Picture 27.

Picture 28. Ceiling sample.



Picture 1. Roofing.

Picture 2. Roofing.

Picture 3. Roofing .

Picture 4. Roofing sample.

Picture 5. Roofing.

Picture 6. Roofing sample.

Picture 7. Roofing sample.

Picture 8. Roofing sample.

Picture 9. Roofing sample.

Picture 10. Roofing sample.

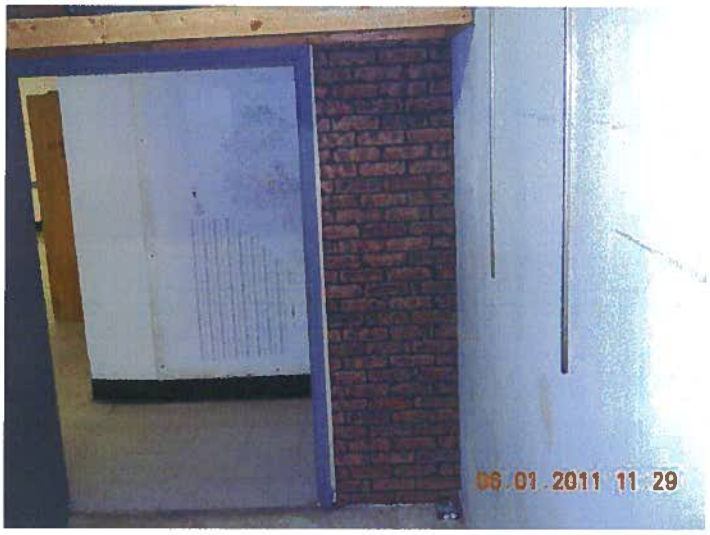
Pictures 11. Roof.

Pictures 12. Roof.

Picture 13. Roofing sample.

Picture 14. White/Beige vinyle tile.

Picture 15.

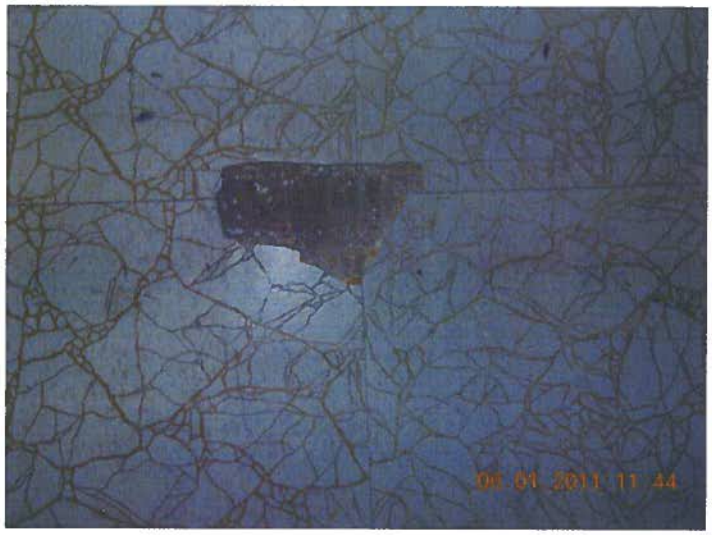


Picture 16.

Picture 17. Wallboard sample.

Picture 18. Wallboard sample.

Picture 19. Wallboard sample.



Picture 20. White/Beige tile sample.

Picture 21.

Picture 22.

Picture 23.

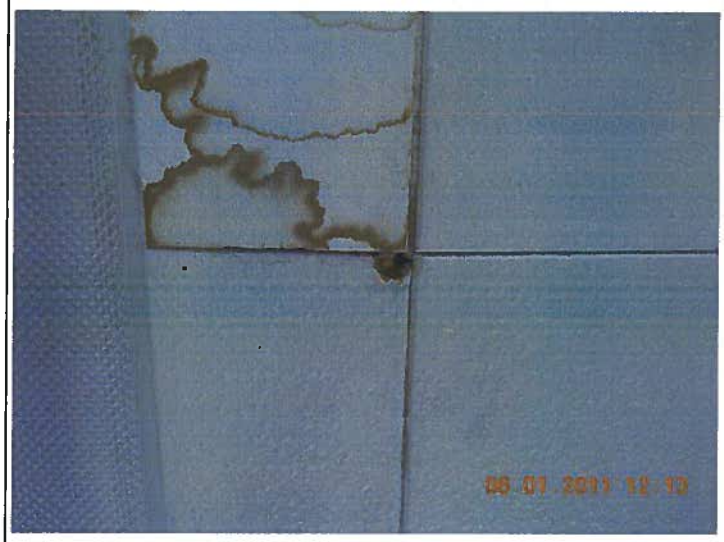
Picture 24.

Picture 25.

Picture 26.

Picture 27.

Picture 28. Ceiling sample.



Picture 29. Ceiling sample.

Picture 30. White vinyl tile sample.

Picture 31. Vinyl tile sample.

Picture 32. White vinyl tile sample.

Picture 33. Wallboard sample.

Picture 34. Wallboard sample.

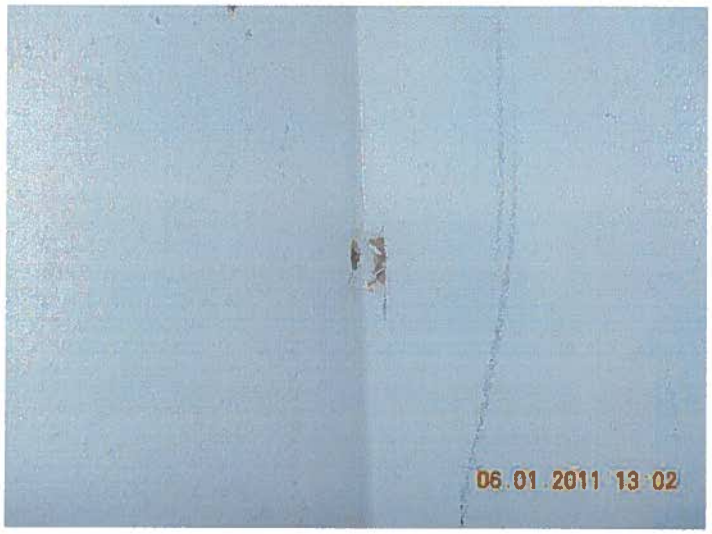
Picture 35. Wallboard sample.

Picture 36. Vinyl tile sample.

Picture 37.

Picture 38.

Picture 39.



Picture 40. Wallboard sample.

Picture 41. Grey vinyl tile sample

Picture 42. Ceiling

Picture 43.

Picture 44.

Picture 45.

Picture 46.

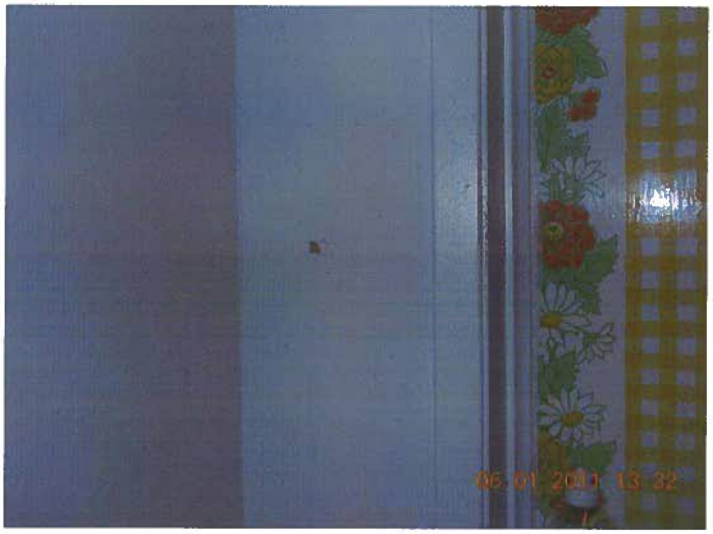
Picture 47.

Picture 48.

Picture 49.

Picture 50.

Picture 51. Ceiling sample.



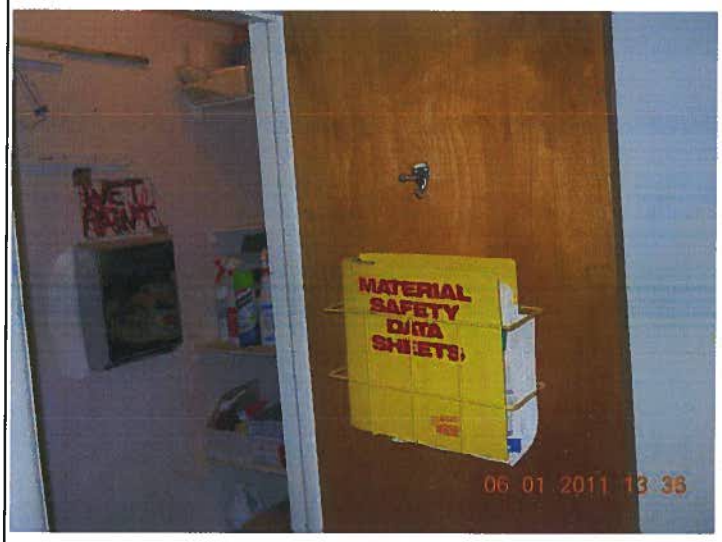
Picture 52. Wallboard sample.

Picture 53. Wallboard sample.

Picture 54. Wallboard sample.

Picture 55. Black cove base sample.

Picture 56. Black cove base sample.



Picture 57.

Picture 58.

Picture 59.

Picture 60. Ceiling.

Picture 61.

Picture 62.

Picture 63.

Picture 64.

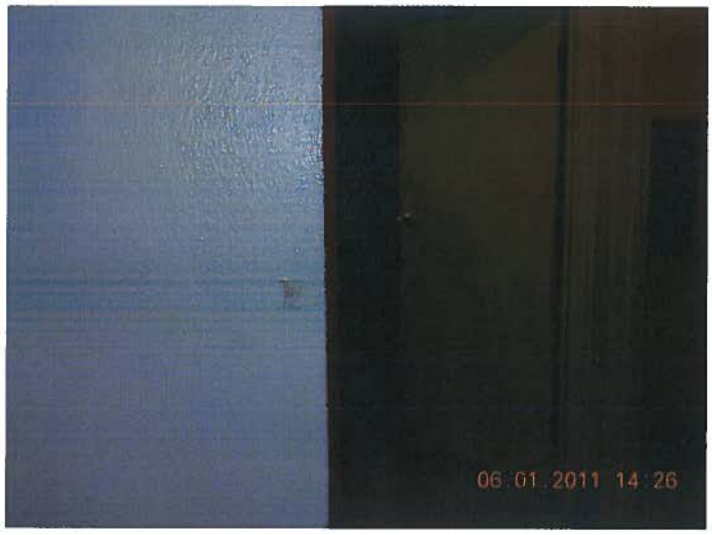
Picture 65.

Picture 66.

Picture 67. Wallboard sample.

Picture 68. Wallboard sample.

Picture 69. Wallboard sample.



Picture 70. Wallboard sample

Picture 71.

Picture 72.

Picture 73.

Picture 74.

Picture 75.

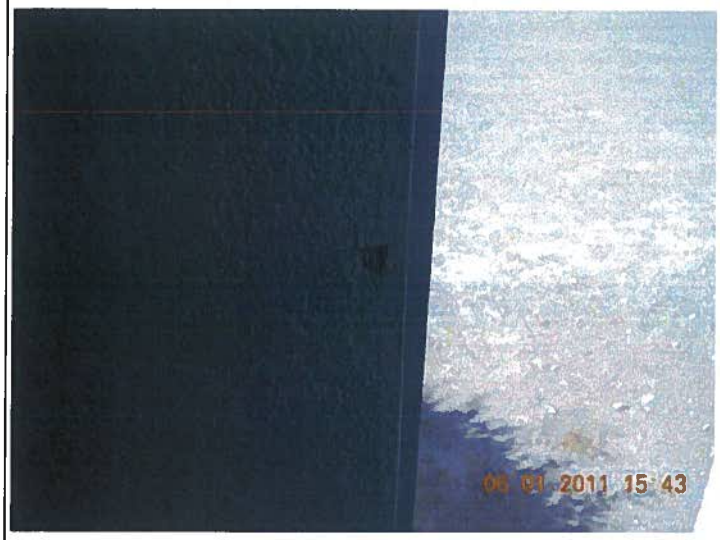
Picture 76.

Picture 77.

Picture 78.

Picture 79.

Picture 80.



Picture 81. Wallboard sample.

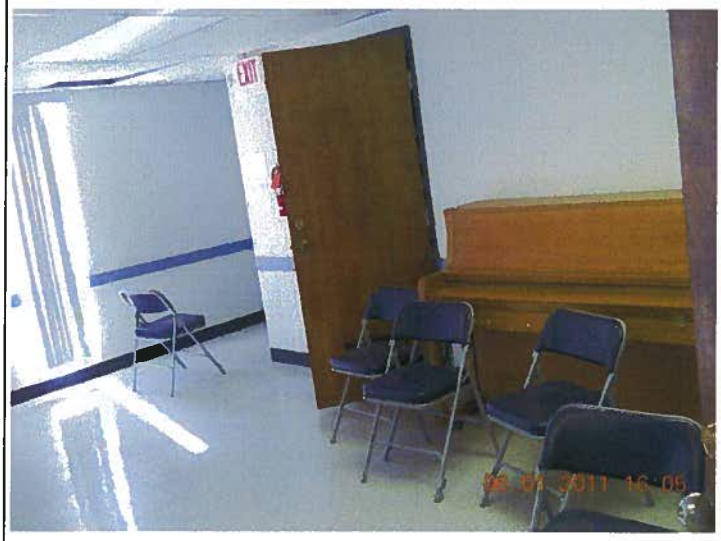
Picture 82.

Picture 83. White vinyl tile sample.

Picture 84. Wallboard sample.

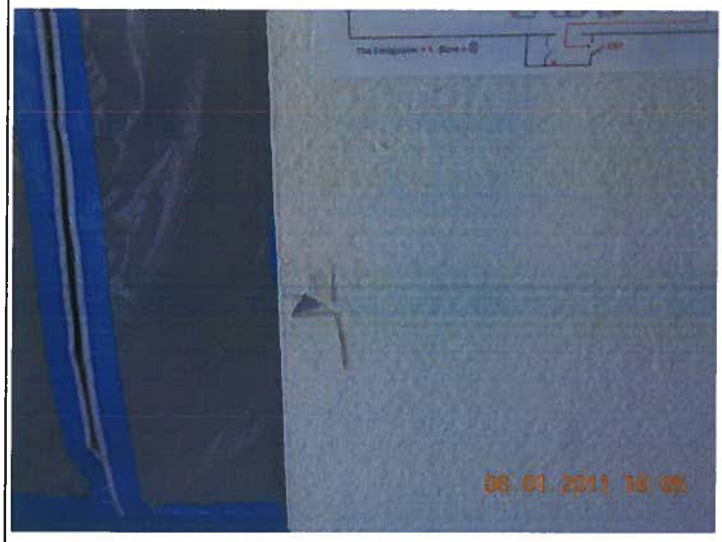
Picture 85. Wallboard sample.

Picture 86. Black cove base sample.



Picture 87.

Picture 88.



Picture 89. Wallboard sample.

Picture 90. Black cove base sample.

Picture 91. Vinyl tile sample.

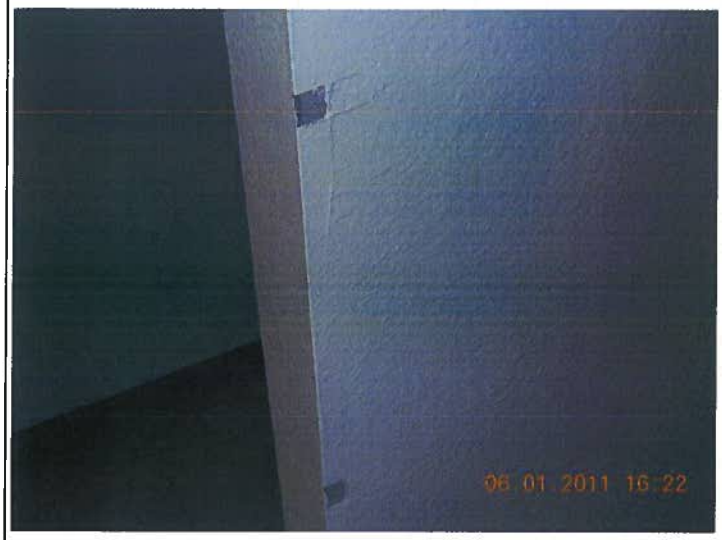
Picture 92. Wallboard sample.

Picture 93.

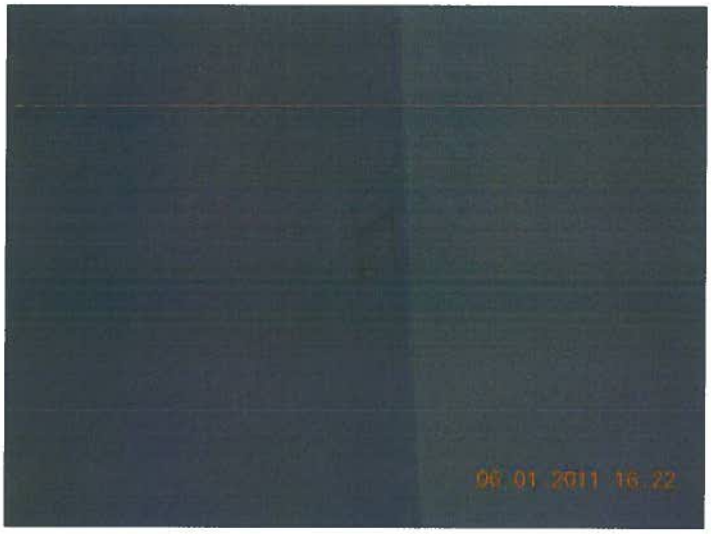
Picture 94.

Picture 95. Wallboard sample.

Picture 96. Vinyl tile sample.



Picture 97. Wallboard sample.

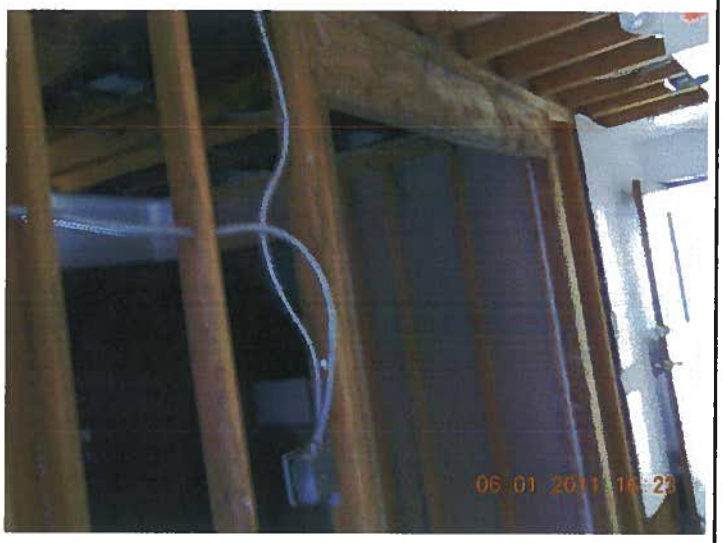


Picture 98. Wallboard sample.

Picture 99. Black cove base sample.

Picture 100. Wallboard sample.

Picture 101. Black cove base sample.



Picture 102.

Picture 103.

Picture 104.

FIBERQUANT ANALYTICAL SERVICES

Polarized Light Microscope (PLM) Analysis for Asbestos

JobNumber: **201105827**

Client: **BEC ENVIRONMENTAL INC**

7660 W SAHARA AVE #150

LAS VEGAS, NV 89117-0000

Office Phone: (702) 304-9830
FAX: (702) 304-9839

 # Samples: 110 PLM **Rec:** 6/10/2011 **Method:** EPA 600/R-93/116 PLM analysis for asbestos in bulk smp

Client Job: 031.11.003 **PO Number:**

Report Date: 6/16/2011 **Date Analyzed:** 6/16/2011 **Routing Number:** -

Method and Analysis Information: **Fiberquant Internal SOP:** PLMn

Each bulk sample is first dissected under a 7-30x magnification stereo-microscope. This examination is used to determine the general type of sample, how many and what type of layers it has, and initial estimates of fiber types and quantities. Second, liquid media mounts are made of each layer - such mounts may be of selected fibers (used solely for identification purposes) or may be representative of the layer as a whole (used for quantitation purposes). The mounts may be made in a synthetic Canadian balsam, one of several solvents, or in refractive index oils (media of known refractive index). Generally, a variety of different mounts are made: some optimized for fiber visibility, some optimized for fiber identification, and some optimized for fiber quantitation. The mounted slides are then examined at 50-400x magnification on a Nikon Labphot-pol microscope. Optical characteristics are used to identify each observed fiber type; the optical data are contained for each sample on its detail analysis sheet, attached.

Current EPA and NESHAP regulations designate a result of <=1 % asbestos as "negative" and >1 % asbestos as "positive". Samples containing layers that have been determined to be "positive" may have to be handled differently during a renovation or demolition than samples whose layers have been determined to be "negative."

The method of fiber analysis and identification is the EPA Method 600/R-93/116. The method of fiber quantitation is an estimation technique in which the analysts quantitation is routinely calibrated by reference quantitation standards, and which has been shown to be equivalent in precision and accuracy to point counting. Friability is estimated for the purposes of deciding when to point count. Friabilities determined in the field take precedence over those determined in the laboratory. Those sample layers which are friable and estimated by the analyst to contain <= 1% asbestos are point counted using 400 points. Such point counting is required by NESHAP (National Emission Standards for Hazardous Air Polutants, Nov. 1990) in order to rely on analytical results that are <= 1%. The coefficient of variation for the estimation quantitation technique is 100% in the range 0-5%. This means that PLM analysis is not capable of conclusively determining whether a layer containing close to 1% asbestos is actually "positive" or "negative". For this reason, Fiberquant refers to results where asbestos was detected but <= 1% as "borderline negative", and results where asbestos was >1 % but <= 2% as "borderline positive" to indicate the uncertainty in assigning a "positive" or "negative" label. In the sample summary, "ND" means that no asbestos was detected during the analysis. A "Tr" or "Trace" of asbestos reported is defined for our purposes as the detection of several asbestos fibers during the analysis; this level would be right at the limit of detection for the method. Trace is only reported on the analysis detail - in the summary a trace would be reported as <=1%. The limit of detection (the smallest % of asbestos that can be detected) varies greatly depending on the matrix in which the asbestos is found. As little as 0.001% asbestos can be detected in favorable samples, while detection in unfavorable samples may approach the detection limit of 1% stated in the method. During the analysis, the analyst, for Fiberquant identification purposes only, determines the "apparent sample type" and "apparent layer types." It must be emphasized that these types are only what is apparent. Often, different materials appear similar or identical after sampling, so the analyst may assign a type other than what was sampled.

Floor tiles present a special problem for PLM asbestos analysis. Floor tile can contain chrysotile fibers so thin that they cannot be resolved by optical methods. In such a case, we may observe a percentage of asbestos which is lower than the actual percentage, or not observe asbestos at all when some is present. For this reason, floor tiles reported as negative should be confirmed to be negative using transmission electron microscope (TEM) analysis. Likewise, vermiculite insulation materials containing traces of asbestiform asbestos present a problem for routine PLM analysis - the amphiboles are sometimes present in trace amounts inhomogeneously distributed. We recommend a hydro-separation technique for such samples.

Vermiculite-containing samples may contain trace amounts of asbestiform amphibole that may or may not be detected during routine PLM analysis. For this reason, loose vermiculite samples reported as negative should be confirmed to contain no amphibole using hydroseparation techniques.

The samples were analyzed under the following ongoing quality assurance program: Blank samples are routinely analyzed to maintain contamination-free materials. Each analyst has at least a bachelor's degree in physical science, and has also completed extensive training specific to asbestos analysis for 1-3 months before being allowed to analyze client samples. Qualitative reference samples are routinely analyzed to assure that analysts can identify asbestos and asbestos-look-alike fibers. Quantitative reference samples are routinely analyzed to calibrate and characterize the estimation procedure. Microscope alignment is checked each day. Refractive index oils are calibrated at least quarterly. At least 10% of client samples are re-analyzed from scratch by a different analyst than the original, and any discrepancies are resolved for the sample and similar sample types before the results are reported. All quality checks performed for these samples were in control except as detailed in the "Analytical Notes" below. All analysts participate in interlab round robins and proficiency testing to assure competence. Fiberquant is accredited by NVLAP (Lab #101031) for the analysis of bulk samples for asbestos using PLM. Accreditation does not imply endorsement by the EPA, any other United States governmental agency or any private agency or association. Each lab analysis refers only to the sample tested, and may not, due to the sampling

process, be representative of the material sampled. This report may not be reproduced except in full, without the approval of Fiberquant Analytical Services.

Some results may have been calculated using client supplied data, such as volume or area sampled, for which Fiberquant assumes no liability for accuracy.

Job Analysis Notes:

PLM Analysis Summary: **Job Number:** **201105827** 031.11.003

Sample Number	Layer	Color	Apparent Layer Type *	Lab Number	Apparent Sample Type *	Asbestos Results	Positive Layer Yes or No
Sample # **RF-ACM-001a**				2011-05827- 1	Roofing		Positive Layer? No
	Layer # 1	silver	paint			*no asbestos detected*	
	Layer # 2	black	roof ply			*no asbestos detected*	
	Layer # 3	black	roof ply			*no asbestos detected*	
	Layer # 4	black	bitumen			*no asbestos detected*	
	Layer # 5	black	roof ply			*no asbestos detected*	
Sample # **RF-ACM-002b**				2011-05827- 2	Roofing		Positive Layer? No
	Layer # 1	off-white	paint			*no asbestos detected*	
	Layer # 2	silver	paint			*no asbestos detected*	
	Layer # 3	black	roof ply			*no asbestos detected*	
	Layer # 4	black	bitumen			*no asbestos detected*	
Sample # **RF-ACM-003c**				2011-05827- 3	Roofing		Positive Layer? Yes
	Layer # 1	silver	paint			*>1-2% chrysotile asbestos*	
	Layer # 2	black	roof ply			*no asbestos detected*	
	Layer # 3	black	roof ply			*no asbestos detected*	
	Layer # 4	black	bitumen			*no asbestos detected*	
Sample # **RF-ACM-004d**				2011-05827- 4	Roofing		Positive Layer? Yes
	Layer # 1	silver	paint			*>1-2% chrysotile asbestos*	
	Layer # 2	black	roof ply			*no asbestos detected*	
	Layer # 3	black	bitumen			*no asbestos detected*	
	Layer # 4	black	roof ply			*no asbestos detected*	
	Layer # 5	black	bitumen			*no asbestos detected*	
Sample # **RF-ACM-005e**				2011-05827- 5	Roofing		Positive Layer? Yes
	Layer # 1	silver	paint			*>1-2% chrysotile asbestos*	
	Layer # 2	black	roof ply			*no asbestos detected*	
	Layer # 3	black	bitumen			*no asbestos detected*	
	Layer # 4	black	roof ply			*no asbestos detected*	
	Layer # 5	black	bitumen			*no asbestos detected*	
Sample # **RF-ACM-006f**				2011-05827- 6	Roofing		Positive Layer? Yes
	Layer # 1	silver	paint			*>1-2% chrysotile asbestos*	
	Layer # 2	black	roof ply			*no asbestos detected*	
	Layer # 3	black	bitumen			*no asbestos detected*	
Sample # **RF-ACM-007g**				2011-05827- 7	Roofing		Positive Layer? Yes
	Layer # 1	silver	paint			*>1-2% chrysotile asbestos*	
	Layer # 2	black	bitumen			*no asbestos detected*	
	Layer # 3	black	roof ply			*no asbestos detected*	
	Layer # 4	black	bitumen			*no asbestos detected*	
Sample # **RF-ACM-008h**				2011-05827- 8	Roofing		Positive Layer? Yes
	Layer # 1	silver	paint			*>1-2% chrysotile asbestos*	
	Layer # 2	black	caulk			*10-20% chrysotile asbestos*	
Sample # **RF-ACM-009i**				2011-05827- 9	Roofing		Positive Layer? Yes
	Layer # 1	silver	paint			*>1-2% chrysotile asbestos*	
	Layer # 2	black	caulk			*no asbestos detected*	
	Layer # 3	black	roof ply			*no asbestos detected*	
	Layer # 4	black	bitumen			*no asbestos detected*	
	Layer # 5	white	roofing roll/shingle			*no asbestos detected*	
Sample # **SR-ACM-001a**				2011-05827- 10	Wall System		Positive Layer? No
	Layer # 1	off-white	paint			*no asbestos detected*	
	Layer # 2	white	texture/joint compound			*<=1% chrysotile asbestos*	
	Layer # 3	tan	paper/cardboard			*no asbestos detected*	
	Layer # 4	white	drywall core			*no asbestos detected*	
Sample # **SR-ACM-002b**				2011-05827- 11	Wall System		Positive Layer? No
	Layer # 1	off-white	paint			*no asbestos detected*	
	Layer # 2	tan	paper/cardboard			*no asbestos detected*	
	Layer # 3	white	drywall core			*no asbestos detected*	
Sample # **SR-ACM-003c**				2011-05827- 12	Wall System		Positive Layer? No
	Layer # 1	off-white	paint			*no asbestos detected*	
	Layer # 2	tan	paper/cardboard			*no asbestos detected*	
	Layer # 3	white	drywall core			*no asbestos detected*	

Sample #	**SR-ACM-004d**		2011-05827- 13	Flooring	Positive Layer? Yes
Layer # 1	off-white	floor tile	*5-10% chrysotile asbestos*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Layer # 3	white	leveling compound	*no asbestos detected*		
Sample #	**SR-ACM-005e**		2011-05827- 14	Flooring	Positive Layer? Yes
Layer # 1	off-white	floor tile	*5-10% chrysotile asbestos*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Layer # 3	off-White	floor tile	*2-5% chrysotile asbestos*		
Layer # 4	yellow	mastic	*no asbestos detected*		
Sample #	**SR-ACM-006f**		2011-05827- 15	Flooring	Positive Layer? Yes
Layer # 1	off-white	floor tile	*5-10% chrysotile asbestos*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Layer # 3	off-white	leveling compound	*no asbestos detected*		
Sample #	**SR-ACM-007g**		2011-05827- 16	Ceiling System	Positive Layer? No
Layer # 1	white	spray-on ceiling	*no asbestos detected*		
Layer # 2	tan	paper/cardboard	*no asbestos detected*		
Layer # 3	white	drywall core	*no asbestos detected*		
Sample #	**SR-ACM-008h**		2011-05827- 17	Ceiling System	Positive Layer? No
Layer # 1	white	spray-on ceiling	*no asbestos detected*		
Layer # 2	tan	paper/cardboard	*no asbestos detected*		
Layer # 3	white	drywall core	*no asbestos detected*		
Sample #	**SR-ACM-009i**		2011-05827- 18	Ceiling System	Positive Layer? No
Layer # 1	white	spray-on ceiling	*no asbestos detected*		
Layer # 2	tan	paper/cardboard	*no asbestos detected*		
Layer # 3	white	drywall core	*no asbestos detected*		
Sample #	**ENT-ACM-001a**		2011-05827- 19	Acoustical Tile	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	brown	acoustical tile	*no asbestos detected*		
Sample #	**ENT-ACM-002b**		2011-05827- 20	Acoustical Tile	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	brown	acoustical tile	*no asbestos detected*		
Sample #	**ENT-ACM-003c**		2011-05827- 21	Acoustical Tile	Positive Layer? No
Layer # 1	brown	acoustical tile	*no asbestos detected*		
Sample #	**ENT-ACM-004d**		2011-05827- 22	Flooring	Positive Layer? Yes
Layer # 1	gray	floor tile	*2-5% chrysotile asbestos*		
Layer # 2	brown	mastic	*no asbestos detected*		
Sample #	**ENT-ACM-005e**		2011-05827- 23	Flooring	Positive Layer? Yes
Layer # 1	gray	floor tile	*2-5% chrysotile asbestos*		
Layer # 2	brown	mastic	*no asbestos detected*		
Sample #	**ENT-ACM-006f**		2011-05827- 24	Flooring	Positive Layer? Yes
Layer # 1	gray	floor tile	*2-5% chrysotile asbestos*		
Layer # 2	gray	miscellaneous	*no asbestos detected*		
Sample #	**BRF-ACM-001a**		2011-05827- 25	Miscellaneous	Positive Layer? No
Layer # 1	gray	base cove	*no asbestos detected*		
Layer # 2	off-white	mastic	*no asbestos detected*		
Sample #	**BRF-ACM-002b**		2011-05827- 26	Miscellaneous	Positive Layer? No
Layer # 1	gray	base cove	*no asbestos detected*		
Layer # 2	off-white	mastic	*no asbestos detected*		
Sample #	**BRF-ACM-003c**		2011-05827- 27	Miscellaneous	Positive Layer? No
Layer # 1	gray	base cove	*no asbestos detected*		
Layer # 2	off-white	mastic	*no asbestos detected*		
Sample #	**BRF-ACM-004d**		2011-05827- 28	Wall System	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	white	texture/joint compound	*no asbestos detected*		
Layer # 3	off-white	paint	*no asbestos detected*		
Layer # 4	off-white	texture/joint compound	*<=1% chrysotile asbestos*		
Sample #	**BRF-ACM-005e**		2011-05827- 29	Wall System	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	white	texture/joint compound	*no asbestos detected*		
Layer # 3	off-white	paint	*no asbestos detected*		
Layer # 4	white	texture/joint compound	*no asbestos detected*		
Layer # 5	off-white	paper/cardboard	*no asbestos detected*		
Layer # 6	white	texture/joint compound	*no asbestos detected*		
Sample #	**BRF-ACM-006f**		2011-05827- 30	Wall System	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	white	texture/joint compound	*no asbestos detected*		
Layer # 3	yellow	fabric	*no asbestos detected*		
Sample #	**BRF-ACM-007g**		2011-05827- 31	Flooring	Positive Layer? No
Layer # 1	gray	floor tile	*no asbestos detected*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Sample #	**BRF-ACM-008h**		2011-05827- 32	Flooring	Positive Layer? No
Layer # 1	gray	floor tile	*no asbestos detected*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Layer # 3	brown	wood	*no asbestos detected*		

Sample #	**BRF-ACM-009i**		2011-05827- 33	Flooring	Positive Layer? No
Layer # 1	gray	floor tile	*no asbestos detected*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Sample #	**BRF-ACM-010j**		2011-05827- 34	Flooring	Positive Layer? No
Layer # 1	white	floor tile	*no asbestos detected*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Layer # 3	white	leveling compound	*no asbestos detected*		
Sample #	**BRF-ACM-011k**		2011-05827- 35	Flooring	Positive Layer? No
Layer # 1	white	floor tile	*no asbestos detected*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Sample #	**BRF-ACM-012l**		2011-05827- 36	Flooring	Positive Layer? No
Layer # 1	white	floor tile	*no asbestos detected*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Sample #	**TR-ACM-001a**		2011-05827- 37	Wall System	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	white	texture/joint compound	*<=1% chrysotile asbestos*		
Layer # 3	off-white	paper/cardboard	*no asbestos detected*		
Layer # 4	white	texture/joint compound	*<=1% chrysotile asbestos*		
Layer # 5	tan	paper/cardboard	*no asbestos detected*		
Sample #	**TR-ACM-002b**		2011-05827- 38	Wall System	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	tan	paper/cardboard	*no asbestos detected*		
Layer # 3	white	drywall core	*no asbestos detected*		
Sample #	**TR-ACM-003c**		2011-05827- 39	Wall System	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	tan	paper/cardboard	*no asbestos detected*		
Layer # 3	white	drywall core	*no asbestos detected*		
Sample #	**TR-ACM-004d**		2011-05827- 40	Flooring	Positive Layer? No
Layer # 1	gray	floor tile	*no asbestos detected*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Layer # 3	off-white	leveling compound	*no asbestos detected*		
Sample #	**TR-ACM-005e**		2011-05827- 41	Flooring	Positive Layer? No
Layer # 1	gray	floor tile	*no asbestos detected*		
Sample #	**TR-ACM-006f**		2011-05827- 42	Flooring	Positive Layer? No
Layer # 1	gray	floor tile	*no asbestos detected*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Layer # 3	gray	debris	*no asbestos detected*		
Sample #	**TR-ACM-007g**		2011-05827- 43	Acoustical Tile	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	brown	acoustical tile	*no asbestos detected*		
Sample #	**TR-ACM-008h**		2011-05827- 44	Acoustical Tile	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	brown	acoustical tile	*no asbestos detected*		
Sample #	**TR-ACM-009j**		2011-05827- 45	Acoustical Tile	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	brown	acoustical tile	*no asbestos detected*		
Sample #	**KT-ACM-001a**		2011-05827- 46	Flooring	Positive Layer? No
Layer # 1	white	floor tile	*no asbestos detected*		
Layer # 2	black	mastic	*no asbestos detected*		
Sample #	**KT-ACM-002b**		2011-05827- 47	Flooring	Positive Layer? No
Layer # 1	white	floor tile	*no asbestos detected*		
Layer # 2	black	mastic	*no asbestos detected*		
Layer # 3	off-white	leveling compound	*no asbestos detected*		
Sample #	**KT-ACM-003c**		2011-05827- 48	Flooring	Positive Layer? No
Layer # 1	white	floor tile	*no asbestos detected*		
Layer # 2	black	bitumen-paper	*no asbestos detected*		
Sample #	**KT-ACM-004d**		2011-05827- 49	Acoustical Tile	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	brown	acoustical tile	*no asbestos detected*		
Sample #	**KT-ACM-005e**		2011-05827- 50	Acoustical Tile	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	brown	acoustical tile	*no asbestos detected*		
Sample #	**KT-ACM-006f**		2011-05827- 51	Acoustical Tile	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	brown	acoustical tile	*no asbestos detected*		
Sample #	**KT-ACM-007g**		2011-05827- 52	Wall System	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	off-white	texture/joint compound	*<=1% chrysotile asbestos*		
Sample #	**KT-ACM-008h**		2011-05827- 53	Wall System	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	off-white	texture/joint compound	*<=1% chrysotile asbestos*		
Sample #	**KT-ACM-009i**		2011-05827- 54	Wall System	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	tan	paper/cardboard	*no asbestos detected*		
Layer # 3	white	drywall core	*no asbestos detected*		

Sample #	**KT-ACM-010j**		2011-05827- 55	Miscellaneous		Positive Layer? No
Layer # 1	black	base cove	*no asbestos detected*			
Layer # 2	brown	mastic	*no asbestos detected*			
Sample #	**KT-ACM-011k**		2011-05827- 56	Miscellaneous		Positive Layer? No
Layer # 1	black	base cove	*no asbestos detected*			
Layer # 2	off-white	mastic	*no asbestos detected*			
Sample #	**KT-ACM-012l**		2011-05827- 57	Miscellaneous		Positive Layer? No
Layer # 1	black	base cove	*no asbestos detected*			
Layer # 2	off-white	mastic	*no asbestos detected*			
Layer # 3	brown	mastic	*no asbestos detected*			
Sample #	**MR-ACM-001a**		2011-05827- 58	Flooring		Positive Layer? No
Layer # 1	gray	floor tile	*no asbestos detected*			
Layer # 2	yellow	mastic	*no asbestos detected*			
Sample #	**MR-ACM-002b**		2011-05827- 59	Flooring		Positive Layer? No
Layer # 1	gray	floor tile	*no asbestos detected*			
Layer # 2	yellow	mastic	*no asbestos detected*			
Layer # 3	off-white	leveling compound	*no asbestos detected*			
Layer # 4	brown	wood	*no asbestos detected*			
Sample #	**MR-ACM-003c**		2011-05827- 60	Flooring		Positive Layer? No
Layer # 1	gray	floor tile	*no asbestos detected*			
Layer # 2	yellow	mastic	*no asbestos detected*			
Layer # 3	off-white	leveling compound	*no asbestos detected*			
Layer # 4	brown	wood	*no asbestos detected*			
Sample #	**MR-ACM-004d**		2011-05827- 61	Flooring		Positive Layer? No
Layer # 1	gray	floor tile	*no asbestos detected*			
Layer # 2	yellow	mastic	*no asbestos detected*			
Layer # 3	off-white	leveling compound	*no asbestos detected*			
Sample #	**MR-ACM-005e**		2011-05827- 62	Flooring		Positive Layer? No
Layer # 1	gray	floor tile	*no asbestos detected*			
Layer # 2	yellow	mastic	*no asbestos detected*			
Layer # 3	off-white	leveling compound	*no asbestos detected*			
Layer # 4	brown	wood	*no asbestos detected*			
Sample #	**MR-ACM-006f**		2011-05827- 63	Miscellaneous		Positive Layer? No
Layer # 1	black	base cove	*no asbestos detected*			
Layer # 2	off-white	mastic	*no asbestos detected*			
Sample #	**MR-ACM-007g**		2011-05827- 64	Miscellaneous		Positive Layer? No
Layer # 1	black	base cove	*no asbestos detected*			
Layer # 2	off-white	mastic	*no asbestos detected*			
Sample #	**MR-ACM-008h**		2011-05827- 65	Miscellaneous		Positive Layer? No
Layer # 1	black	base cove	*no asbestos detected*			
Layer # 2	off-white	mastic	*no asbestos detected*			
Sample #	**MR-ACM-009i**		2011-05827- 66	Miscellaneous		Positive Layer? No
Layer # 1	black	base cove	*no asbestos detected*			
Layer # 2	off-white	mastic	*no asbestos detected*			
Sample #	**MR-ACM-010j**		2011-05827- 67	Miscellaneous		Positive Layer? No
Layer # 1	black	base cove	*no asbestos detected*			
Layer # 2	off-white	mastic	*no asbestos detected*			
Sample #	**MR-ACM-011k**		2011-05827- 68	Acoustical Tile		Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*			
Layer # 2	brown	acoustical tile	*no asbestos detected*			
Sample #	**MR-ACM-012l**		2011-05827- 69	Acoustical Tile		Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*			
Layer # 2	brown	acoustical tile	*no asbestos detected*			
Sample #	**MR-ACM-013m**		2011-05827- 70	Acoustical Tile		Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*			
Layer # 2	brown	acoustical tile	*no asbestos detected*			
Sample #	**MR-ACM-014n**		2011-05827- 71	Acoustical Tile		Positive Layer? No
Layer # 1	brown	acoustical tile	*no asbestos detected*			
Sample #	**MR-ACM-015o**		2011-05827- 72	Acoustical Tile		Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*			
Layer # 2	brown	acoustical tile	*no asbestos detected*			
Sample #	**MR-ACM-016p**		2011-05827- 73	Wall System		Positive Layer? No
Layer # 1	various	paint	*no asbestos detected*			
Layer # 2	off-white	texture/joint compound	*<=1% chrysotile asbestos*			
Layer # 3	tan	paper/cardboard	*no asbestos detected*			
Layer # 4	white	drywall core	*no asbestos detected*			
Sample #	**MR-ACM-017p**		2011-05827- 74	Wall System		Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*			
Layer # 2	off-white	texture/joint compound	*<=1% chrysotile asbestos*			
Sample #	**MR-ACM-018r**		2011-05827- 75	Wall System		Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*			
Layer # 2	off-white	texture/joint compound	*<=1% chrysotile asbestos*			

Sample #	**MR-ACM-019s**		2011-05827- 76	Wall System	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	off-white	texture/joint compound	*<=1% chrysotile asbestos*		
Layer # 3	tan	paper/cardboard	*no asbestos detected*		
Layer # 4	white	drywall core	*no asbestos detected*		
Sample #	**MR-ACM-020t**		2011-05827- 77	Wall System	Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*		
Layer # 2	tan	paper/cardboard	*no asbestos detected*		
Layer # 3	white	drywall core	*no asbestos detected*		
Sample #	**RMB-ACM-001a**		2011-05827- 78	Flooring	Positive Layer? No
Layer # 1	off-white	floor tile	*no asbestos detected*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Sample #	**RMB-ACM-002b**		2011-05827- 79	Flooring	Positive Layer? No
Layer # 1	off-white	floor tile	*no asbestos detected*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Sample #	**RMB-ACM-003c**		2011-05827- 80	Flooring	Positive Layer? No
Layer # 1	off-white	floor tile	*no asbestos detected*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Sample #	**RMB-ACM-004d**		2011-05827- 81	Acoustical Tile	Positive Layer? No
Layer # 1	white	paint	*no asbestos detected*		
Layer # 2	tan	acoustical tile	*no asbestos detected*		
Sample #	**RMB-ACM-005e**		2011-05827- 82	Acoustical Tile	Positive Layer? No
Layer # 1	white	paint	*no asbestos detected*		
Layer # 2	tan	acoustical tile	*no asbestos detected*		
Sample #	**RMB-ACM-006f**		2011-05827- 83	Acoustical Tile	Positive Layer? No
Layer # 1	white	paint	*no asbestos detected*		
Layer # 2	tan	acoustical tile	*no asbestos detected*		
Sample #	**RMB-ACM-007g**		2011-05827- 84	Miscellaneous	Positive Layer? No
Layer # 1	black	base cove	*no asbestos detected*		
Layer # 2	brown	mastic	*no asbestos detected*		
Sample #	**RMB-ACM-008h**		2011-05827- 85	Miscellaneous	Positive Layer? No
Layer # 1	black	base cove	*no asbestos detected*		
Layer # 2	brown	mastic	*no asbestos detected*		
Sample #	**RMB-ACM-009i**		2011-05827- 86	Miscellaneous	Positive Layer? No
Layer # 1	black	base cove	*no asbestos detected*		
Layer # 2	brown	mastic	*no asbestos detected*		
Layer # 3	white	mastic	*no asbestos detected*		
Sample #	**RMB-ACM-010j**		2011-05827- 87	Wall System	Positive Layer? No
Layer # 1	various	paint	*no asbestos detected*		
Layer # 2	white	texture/joint compound	*no asbestos detected*		
Layer # 3	tan	paper/cardboard	*no asbestos detected*		
Sample #	**RMB-ACM-011k**		2011-05827- 88	Wall System	Positive Layer? No
Layer # 1	various	paint	*no asbestos detected*		
Layer # 2	white	texture/joint compound	*no asbestos detected*		
Layer # 3	tan	paper/cardboard	*no asbestos detected*		
Sample #	**RMB-ACM-012l**		2011-05827- 89	Wall System	Positive Layer? No
Layer # 1	various	paint	*no asbestos detected*		
Layer # 2	white	texture/joint compound	*no asbestos detected*		
Layer # 3	tan	paper/cardboard	*no asbestos detected*		
Layer # 4	white	drywall core	*no asbestos detected*		
Sample #	**RMA-ACM-001a**		2011-05827- 90	Flooring	Positive Layer? No
Layer # 1	off-white	floor tile	*no asbestos detected*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Sample #	**RMA-ACM-002b**		2011-05827- 91	Flooring	Positive Layer? No
Layer # 1	off-white	floor tile	*no asbestos detected*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Sample #	**RMA-ACM-003c**		2011-05827- 92	Flooring	Positive Layer? No
Layer # 1	off-white	floor tile	*no asbestos detected*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Sample #	**RMA-ACM-004d**		2011-05827- 93	Acoustical Tile	Positive Layer? No
Layer # 1	white	paint	*no asbestos detected*		
Layer # 2	off-white	acoustical tile	*no asbestos detected*		
Sample #	**RMA-ACM-005e**		2011-05827- 94	Acoustical Tile	Positive Layer? No
Layer # 1	white	paint	*no asbestos detected*		
Layer # 2	off-white	acoustical tile	*no asbestos detected*		
Sample #	**RMA-ACM-006f**		2011-05827- 95	Acoustical Tile	Positive Layer? No
Layer # 1	white	paint	*no asbestos detected*		
Layer # 2	off-white	acoustical tile	*no asbestos detected*		
Sample #	**RMA-ACM-007g**		2011-05827- 96	Miscellaneous	Positive Layer? No
Layer # 1	black	base cove	*no asbestos detected*		
Layer # 2	yellow	mastic	*no asbestos detected*		
Sample #	**RMA-ACM-008h**		2011-05827- 97	Miscellaneous	Positive Layer? No
Layer # 1	black	base cove	*no asbestos detected*		
Layer # 2	off-white	mastic	*no asbestos detected*		

Sample #	**RMA-ACM-009i**		2011-05827- 98	Miscellaneous		Positive Layer? No
Layer # 1	black	base cove	*no asbestos detected*			
Layer # 2	yellow	mastic	*no asbestos detected*			
Sample #	**RMA-ACM-010j**		2011-05827- 99	Wall System		Positive Layer? No
Layer # 1	white	paint	*no asbestos detected*			
Layer # 2	white	texture/joint compound	*no asbestos detected*			
Sample #	**RMA-ACM-011k**		2011-05827- 100	Wall System		Positive Layer? No
Layer # 1	white	paint	*no asbestos detected*			
Layer # 2	white	texture/joint compound	*no asbestos detected*			
Sample #	**RMA-ACM-012l**		2011-05827- 101	Wall System		Positive Layer? No
Layer # 1	off-white	paint	*no asbestos detected*			
Layer # 2	white	texture/joint compound	*no asbestos detected*			
Layer # 3	tan	paper/cardboard	*no asbestos detected*			
Layer # 4	white	drywall core	*no asbestos detected*			
Sample #	**BRB-ACM-001a**		2011-05827- 102	Flooring		Positive Layer? No
Layer # 1	off-white	floor tile	*no asbestos detected*			
Layer # 2	yellow	mastic	*no asbestos detected*			
Sample #	**BRB-ACM-002b**		2011-05827- 103	Flooring		Positive Layer? No
Layer # 1	off-white	floor tile	*no asbestos detected*			
Layer # 2	yellow	mastic	*no asbestos detected*			
Sample #	**BRB-ACM-003c**		2011-05827- 104	Flooring		Positive Layer? No
Layer # 1	off-white	floor tile	*no asbestos detected*			
Layer # 2	yellow	mastic	*no asbestos detected*			
Sample #	**BRB-ACM-004d**		2011-05827- 105	Wall System		Positive Layer? No
Layer # 1	white	paint	*no asbestos detected*			
Layer # 2	white	texture/joint compound	*no asbestos detected*			
Sample #	**BRB-ACM-005e**		2011-05827- 106	Wall System		Positive Layer? No
Layer # 1	white	paint	*no asbestos detected*			
Layer # 2	white	texture/joint compound	*<=1% chrysotile asbestos*			
Layer # 3	tan	paper/cardboard	*no asbestos detected*			
Layer # 4	white	drywall core	*no asbestos detected*			
Sample #	**BRB-ACM-006f**		2011-05827- 107	Wall System		Positive Layer? No
Layer # 1	white	paint	*no asbestos detected*			
Layer # 2	white	texture/joint compound	*<=1% chrysotile asbestos*			
Layer # 3	off-white	paper/cardboard	*no asbestos detected*			
Layer # 4	white	texture/joint compound	*<=1% chrysotile asbestos*			
Layer # 5	tan	paper/cardboard	*no asbestos detected*			
Layer # 6	white	drywall core	*no asbestos detected*			
Sample #	**BRB-ACM-007g**		2011-05827- 108	Miscellaneous		Positive Layer? No
Layer # 1	black	base cove	*no asbestos detected*			
Layer # 2	off-white	mastic	*no asbestos detected*			
Sample #	**BRB-ACM-008h**		2011-05827- 109	Miscellaneous		Positive Layer? No
Layer # 1	black	base cove	*no asbestos detected*			
Layer # 2	off-white	mastic	*no asbestos detected*			
Layer # 3	brown	mastic	*no asbestos detected*			
Sample #	**BRB-ACM-009i**		2011-05827- 110	Miscellaneous		Positive Layer? No
Layer # 1	black	base cove	*no asbestos detected*			
Layer # 2	off-white	mastic	*no asbestos detected*			

* Apparent Sample Types and Apparent Layer Types are as they appeared to the analyst. Since many types of materials appear similar after sampling damage, the apparent type of material may not be the actual type of material.

Sample RF-ACM-001a **Lab Number** 2011-05827- 1 **Sampled:** 6/1/2011 10:42 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Roofing Fibrous Solid
Homogeneous No **# Layers** 5 **Pos Layer?** No **# Sub-Samples** 10
Non-Fibrous Components (in approx. decreasing order): bitumen, filler, binder

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	3	silver	1	n.d.	n.d.	-	-	-	-
2	roof ply	22	black	1	10-20%	n.d.	-	-	-	-
3	roof ply	15	black	1	10-20%	n.d.	-	-	-	-
4	bitumen	50	black	1	n.d.	n.d.	-	-	-	-
5	roof ply	10	black	1	n.d.	60-70%	-	-	-	-
	Total %	100		**Overall %**	5-10%	5-10%	-	-	-	-
				Fiber Identification:	glass fiber	cellulose fiber				

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	glass fiber	CL	D	Y									
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of bitumen matrix using solvent.

Sample RF-ACM-002b **Lab Number** 2011-05827- 2 **Sampled:** 6/1/2011 10:47 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Roofing Fibrous Solid
Homogeneous No **# Layers** 4 **Pos Layer?** No **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): bitumen, filler, binder

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	5	off-white	1	n.d.	-	-	-	-	-
2	paint	2	silver	1	n.d.	-	-	-	-	-
3	roof ply	33	black	1	10-20%	-	-	-	-	-
4	bitumen	60	black	1	n.d.	-	-	-	-	-
	Total %	100		**Overall %**	2-5%	-	-	-	-	-
				Fiber Identification:	glass fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	glass fiber	CL	D	Y									
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of bitumen matrix using solvent.

Sample RF-ACM-003c **Lab Number** 2011-05827- 3 **Sampled:** 6/1/2011 10:52 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Roofing Fibrous Solid
Homogeneous No **# Layers** 4 **Pos Layer?** Yes **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): bitumen, filler, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	6	silver	1	>1-2%	2-5%	n.d.	-	-	-
2	roof ply	32	black	1	n.d.	n.d.	10-20%	-	-	-
3	roof ply	32	black	1	n.d.	n.d.	10-20%	-	-	-
4	bitumen	30	black	1	n.d.	n.d.	n.d.	-	-	-
	Total %	100		**Overall %**	<=1%	<=1%	5-10%	-	-	-
				Fiber Identification:	chrysotile asbestos	cellulose fiber	glass fiber			

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	cellulose fiber	W	F	N	N	H	+	U					
3	glass fiber	CL	D	Y									
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of bitumen matrix using solvent.

Sample RF-ACM-004d **Lab Number** 2011-05827- 4 **Sampled:** 6/1/2011 10:57 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Roofing Fibrous Solid
Homogeneous No **# Layers** 5 **Pos Layer?** Yes **# Sub-Samples** 10
Non-Fibrous Components (in approx. decreasing order): bitumen, filler, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	5	silver	1	>1-2%	n.d.	2-5%	-	-	-
2	roof ply	25	black	1	n.d.	10-20%	n.d.	-	-	-
3	bitumen	20	black	1	n.d.	n.d.	n.d.	-	-	-
4	roof ply	30	black	1	n.d.	n.d.	60-70%	-	-	-
5	bitumen	20	black	1	n.d.	n.d.	n.d.	-	-	-
	Total %	100		**Overall %**	<=1%	2-5%	10-20%	-	-	-
				Fiber Identification:	chrysotile asbestos	glass fiber	cellulose fiber			

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	glass fiber	CL	D	Y									
3	cellulose fiber	W	F	N	N	H	+	U					
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of bitumen matrix using solvent.

Sample RF-ACM-005e **Lab Number** 2011-05827- 5 **Sampled:** 6/1/2011 11:02 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Roofing Fibrous Solid
Homogeneous No **# Layers** 5 **Pos Layer?** Yes **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): bitumen, filler, binder

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	5	silver	1	>1-2%	n.d.	2-5%	-	-	-
2	roof ply	25	black	1	n.d.	10-20%	n.d.	-	-	-
3	bitumen	20	black	1	n.d.	n.d.	n.d.	-	-	-
4	roof ply	30	black	1	n.d.	n.d.	60-70%	-	-	-
5	bitumen	20	black	1	n.d.	n.d.	n.d.	-	-	-
	Total %	100		**Overall %**	<=1%	2-5%	10-20%	-	-	-
				Fiber Identification:	chrysotile asbestos	glass fiber	cellulose fiber			

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	glass fiber	CL	D	Y									
3	cellulose fiber	W	F	N	N	H	+	U					
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of bitumen matrix using solvent.

Sample RF-ACM-006f **Lab Number** 2011-05827- 6 **Sampled:** 6/1/2011 11:07 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Roofing Fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, filler, binder

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	10	silver	1	>1-2%	2-5%	n.d.	-	-	-
2	roof ply	50	black	1	n.d.	n.d.	10-20%	-	-	-
3	bitumen	40	black	1	n.d.	n.d.	n.d.	-	-	-
	Total %	100		**Overall %**	<=1%	<=1%	5-10%	-	-	-
				Fiber Identification:	chrysotile asbestos	cellulose fiber	glass fiber			

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	cellulose fiber	W	F	N	N	H	+	U					
3	glass fiber	CL	D	Y									
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of bitumen matrix using solvent.

Sample RF-ACM-007g **Lab Number** 2011-05827- 7 **Sampled:** 6/1/2011 11:12 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Roofing Fibrous Solid
Homogeneous No **# Layers** 4 **Pos Layer?** Yes **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): bitumen, filler, binder

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
					Percents of Each Fiber					
1	paint	5	silver	1	>1-2%	2-5%	n.d.	-	-	-
2	bitumen	10	black	1	n.d.	n.d.	n.d.	-	-	-
3	roof ply	55	black	1	n.d.	n.d.	10-20%	-	-	-
4	bitumen	30	black	1	n.d.	n.d.	n.d.	-	-	-
	Total %	100		Overall %	<=1%	<=1%	5-10%	-	-	-
				Fiber Identification:	chrysotile asbestos	cellulose fiber	glass fiber			

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
									Refractive Index Determinations				
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	cellulose fiber	W	F	N	N	H	+	U					
3	glass fiber	CL	D	Y									
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of bitumen matrix using solvent.

Sample RF-ACM-008h **Lab Number** 2011-05827- 8 **Sampled:** 6/1/2011 11:16 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Roofing Fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 4
Non-Fibrous Components (in approx. decreasing order): bitumen, filler, binder

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
					Percents of Each Fiber					
1	paint	5	silver	1	>1-2%	-	-	-	-	-
2	caulk	95	black	1	10-20%	-	-	-	-	-
	Total %	100		Overall %	10-20%	-	-	-	-	-
				Fiber Identification:	chrysotile asbestos					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
									Refractive Index Determinations				
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of bitumen matrix using solvent.

Sample RF-ACM-009i **Lab Number** 2011-05827- 9 **Sampled:** 6/1/2011 11:20 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Roofing Fibrous Solid
Homogeneous No **# Layers** 5 **Pos Layer?** Yes **# Sub-Samples** 10
Non-Fibrous Components (in approx. decreasing order): bitumen, filler, binder

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	5	silver	1	>1-2%	n.d.	n.d.	-	-	-
2	caulk	10	black	1	n.d.	10-20%	n.d.	-	-	-
3	roof ply	30	black	1	n.d.	n.d.	10-20%	-	-	-
4	bitumen	20	black	1	n.d.	n.d.	n.d.	-	-	-
5	roofing roll/shingle	35	white	1	n.d.	n.d.	5-10%	-	-	-
	Total %	100		**Overall %**	<=1%	>1-2%	5-10%	-	-	-
				Fiber Identification:	chrysotile asbestos	cellulose fiber	glass fiber			

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	cellulose fiber	W	F	N	N	H	+	U					
3	glass fiber	CL	D	Y									
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of bitumen matrix using solvent.

Sample SR-ACM-001a **Lab Number** 2011-05827- 10 **Sampled:** 6/1/2011 11:24 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Wall System Fibrous Solid
Homogeneous No **# Layers** 4 **Pos Layer?** No **# Sub-Samples** 12
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Percents of Each Fiber: Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	3	off-white	1	n.d.	n.d.	n.d.	-	-	-
2	texture/joint compound	7	white	3	<=1%	n.d.	n.d.	-	-	-
3	paper/cardboard	15	tan	2	n.d.	90-100%	n.d.	-	-	-
4	drywall core	75	white	3	n.d.	<=1%	<=1%	-	-	-
	Total %	100		**Overall %**	<=1%	10-20%	<=1%	-	-	-
				Fiber Identification:	chrysotile asbestos	cellulose fiber	glass fiber			

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations: Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	cellulose fiber	W	F	N	N	H	+	U					
3	glass fiber	CL	D	Y									
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of joint compound/texture matrix using acid. Point Count: Layer Number 2; 0 asbestos counts per 400 total counts = Trace percent.

Sample SR-ACM-002b **Lab Number** 2011-05827- 11 **Sampled:** 6/1/2011 11:28 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Wall System Fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	3	off-white	1	n.d.	n.d.	-	-	-	-
2	paper/cardboard	7	tan	2	90-100%	n.d.	-	-	-	-
3	drywall core	90	white	3	>1-2%	<=1%	-	-	-	-
	Total %	100		**Overall %**	5-10%	<=1%	-	-	-	-
				Fiber Identification:	cellulose fiber	glass fiber				

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample SR-ACM-003c **Lab Number** 2011-05827- 12 **Sampled:** 6/1/2011 11:33 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Wall System Fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	20	off-white	1	n.d.	n.d.	-	-	-	-
2	paper/cardboard	65	tan	2	90-100%	n.d.	-	-	-	-
3	drywall core	15	white	3	>1-2%	<=1%	-	-	-	-
	Total %	100		**Overall %**	60-70%	<=1%	-	-	-	-
				Fiber Identification:	cellulose fiber	glass fiber				

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample SR-ACM-004d **Lab Number** 2011-05827- 13 **Sampled:** 6/1/2011 11:35 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	45	off-white	1	5-10%	n.d.	-	-	-	-
2	mastic	5	yellow	2	n.d.	n.d.	-	-	-	-
3	leveling compound	50	white	3	n.d.	>1-2%	-	-	-	-
	Total %	100		**Overall %**	2-5%	<=1%	-	-	-	-
				Fiber Identification:	chrysotile asbestos	cellulose fiber				

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent. Procedure: dissolution of matrix using dilute HCl acid.

Sample SR-ACM-005e **Lab Number** 2011-05827- 14 **Sampled:** 6/1/2011 11:37 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 4 **Pos Layer?** Yes **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	30	off-white	1	5-10%	-	-	-	-	-
2	mastic	2	yellow	2	n.d.	-	-	-	-	-
3	floor tile	66	off-White	1	2-5%	-	-	-	-	-
4	mastic	2	yellow	2	n.d.	-	-	-	-	-
	Total %	100		**Overall %**	5-10%	-	-	-	-	-
				Fiber Identification:	chrysotile asbestos					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample SR-ACM-006f **Lab Number** 2011-05827- 15 **Sampled:** 6/1/2011 11:40 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	60	off-white	1	5-10%	n.d.	-	-	-	-
2	mastic	10	yellow	2	n.d.	n.d.	-	-	-	-
3	leveling compound	30	off-white	3	n.d.	>1-2%	-	-	-	-
	Total %	100		Overall %	5-10%	<=1%	-	-	-	-
				Fiber Identification:	chrysotile asbestos	cellulose fiber				

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent. Procedure: dissolution of matrix using dilute HCl acid.

Sample SR-ACM-007g **Lab Number** 2011-05827- 16 **Sampled:** 6/1/2011 11:42 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Ceiling System Fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, polymer foam, binder

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	spray-on ceiling	60	white	3	n.d.	-	-	-	-	-
2	paper/cardboard	25	tan	2	90-100%	-	-	-	-	-
3	drywall core	15	white	3	>1-2%	-	-	-	-	-
	Total %	100		Overall %	20-30%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of sprayed material using acid.

Sample SR-ACM-008h **Lab Number** 2011-05827- 17 **Sampled:** 6/1/2011 11:46 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Ceiling System Fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, polymer foam, binder

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	spray-on ceiling	30	white	3	n.d.	-	-	-	-	-
2	paper/cardboard	60	tan	2	90-100%	-	-	-	-	-
3	drywall core	10	white	3	>1-2%	-	-	-	-	-
	Total %	100		**Overall %**	50-60%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of sprayed material using acid.

Sample SR-ACM-009i **Lab Number** 2011-05827- 18 **Sampled:** 6/1/2011 11:48 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Ceiling System Fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, polymer foam, binder

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	spray-on ceiling	60	white	3	n.d.	-	-	-	-	-
2	paper/cardboard	20	tan	2	90-100%	-	-	-	-	-
3	drywall core	20	white	3	>1-2%	-	-	-	-	-
	Total %	100		**Overall %**	10-20%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of sprayed material using acid.

Sample ENT-ACM-001a **Lab Number** 2011-05827- 19 **Sampled:** 6/1/2011 12:05 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Acoustical Tile Fibrous Mat
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	20	off-white	1	n.d.	-	-	-	-	-
2	acoustical tile	80	brown	3	90-100%	-	-	-	-	-
	Total %	100		Overall %	70-80%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample ENT-ACM-002b **Lab Number** 2011-05827- 20 **Sampled:** 6/1/2011 12:08 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Acoustical Tile Fibrous Mat
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	5	off-white	1	n.d.	-	-	-	-	-
2	acoustical tile	95	brown	3	90-100%	-	-	-	-	-
	Total %	100		Overall %	90-100%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample ENT-ACM-003c **Lab Number** 2011-05827- 21 **Sampled:** 6/1/2011 12:10 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Acoustical Tile Fibrous Mat
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	acoustical tile	100	brown	3	90-100%	-	-	-	-	-
	Total %	100		Overall %	90-100%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample ENT-ACM-004d **Lab Number** 2011-05827- 22 **Sampled:** 6/1/2011 12:14 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	95	gray	1	2-5%	>1-2%	-	-	-	-
2	mastic	5	brown	1	n.d.	2-5%	-	-	-	-
	Total %	100		Overall %	2-5%	2-5%	-	-	-	-
				Fiber Identification:	chrysotile asbestos	cellulose fiber				

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample ENT-ACM-005e **Lab Number** 2011-05827- 23 **Sampled:** 6/1/2011 12:18 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	90	gray	1	2-5%	>1-2%	-	-	-	-
2	mastic	10	brown	1	n.d.	2-5%	-	-	-	-
	Total %	100		Overall %	2-5%	2-5%	-	-	-	-
				Fiber Identification:	chrysotile asbestos	cellulose fiber				

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample ENT-ACM-006f **Lab Number** 2011-05827- 24 **Sampled:** 6/1/2011 12:21 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	60	gray	1	2-5%	>1-2%	-	-	-	-
2	miscellaneous	40	gray	2	n.d.	>1-2%	-	-	-	-
	Total %	100		Overall %	>1-2%	>1-2%	-	-	-	-
				Fiber Identification:	chrysotile asbestos	cellulose fiber				

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample BRF-ACM-001a **Lab Number** 2011-05827- 25 **Sampled:** 6/1/2011 12:25 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Miscellaneous Rubbery
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability
1	base cove	97	gray	1
2	mastic	3	off-white	1
	Total %	100	**Overall %**	

Percents of Each Fiber

	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
	n.d.	-	-	-	-	-
	<=1%	-	-	-	-	-
Overall %	<=1%	-	-	-	-	-
Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bl	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2								
3								
4								
5								
6								

Refractive Index Determinations

Oil	Col Par	Col Per	RI Par	RI Per

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of polymer matrix using solvent. Minor adhering wall paint and/or texture, etc. not analyzed.

Sample BRF-ACM-002b **Lab Number** 2011-05827- 26 **Sampled:** 6/1/2011 12:26 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Miscellaneous Rubbery
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability
1	base cove	95	gray	1
2	mastic	5	off-white	1
	Total %	100	**Overall %**	

Percents of Each Fiber

	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
	n.d.	-	-	-	-	-
	<=1%	-	-	-	-	-
Overall %	<=1%	-	-	-	-	-
Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bl	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2								
3								
4								
5								
6								

Refractive Index Determinations

Oil	Col Par	Col Per	RI Par	RI Per

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of polymer matrix using solvent. Minor adhering wall paint and/or texture, etc. not analyzed.

Sample BRF-ACM-003c **Lab Number** 2011-05827- 27 **Sampled:** 6/1/2011 12:28 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Miscellaneous Rubbery
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	base cove	98	gray	1	n.d.	-	-	-	-	-
2	mastic	2	off-white	1	<=1%	-	-	-	-	-
	Total %	100		**Overall %**	<=1%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of polymer matrix using solvent. Minor adhering wall paint and/or texture, etc. not analyzed.

Sample BRF-ACM-004d **Lab Number** 2011-05827- 28 **Sampled:** 6/1/2011 12:30 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Wall System Fibrous Solid
Homogeneous No **# Layers** 4 **Pos Layer?** No **# Sub-Samples** 12
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	15	off-white	1	n.d.	-	-	-	-	-
2	texture/joint compound	25	white	3	n.d.	-	-	-	-	-
3	paint	25	off-white	1	n.d.	-	-	-	-	-
4	texture/joint compound	35	off-white	3	<=1%	-	-	-	-	-
	Total %	100		**Overall %**	<=1%	-	-	-	-	-
				Fiber Identification:	chrysotile asbestos					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of joint compound/texture matrix using acid. Point Count: Layer Number 4; 0 asbestos counts per 400 total counts = Trace percent.

Sample BRF-ACM-005e **Lab Number** 2011-05827- 29 **Sampled:** 6/1/2011 12:32 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Wall System Fibrous Solid
Homogeneous No **# Layers** 6 **Pos Layer?** No **# Sub-Samples** 12
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	10	off-white	1	n.d.	-	-	-	-	-
2	texture/joint compound	40	white	3	n.d.	-	-	-	-	-
3	paint	10	off-white	1	n.d.	-	-	-	-	-
4	texture/joint compound	10	white	3	n.d.	-	-	-	-	-
5	paper/cardboard	20	off-white	2	90-100%	-	-	-	-	-
6	texture/joint compound	10	white	3	n.d.	-	-	-	-	-
	Total %	100		**Overall %**	10-20%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of joint compound/texture matrix using acid.

Sample BRF-ACM-006f **Lab Number** 2011-05827- 30 **Sampled:** 6/1/2011 12:35 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Wall System Fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	15	off-white	1	n.d.	-	-	-	-	-
2	texture/joint compound	80	white	3	n.d.	-	-	-	-	-
3	fabric	5	yellow	2	90-100%	-	-	-	-	-
	Total %	100		**Overall %**	2-5%	-	-	-	-	-
				Fiber Identification:	glass fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	glass fiber	CL	D	Y									
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of joint compound/texture matrix using acid.

Sample BRF-ACM-007g **Lab Number** 2011-05827- 31 **Sampled:** 6/1/2011 12:37 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	95	gray	1	n.d.	-	-	-	-	-
2	mastic	5	yellow	1	n.d.	-	-	-	-	-
	Total %	100		Overall %	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample BRF-ACM-008h **Lab Number** 2011-05827- 32 **Sampled:** 6/1/2011 12:38 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	90	gray	1	n.d.	-	-	-	-	-
2	mastic	3	yellow	1	n.d.	-	-	-	-	-
3	wood	7	brown	2	90-100%	-	-	-	-	-
	Total %	100		Overall %	5-10%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample BRF-ACM-009i **Lab Number** 2011-05827- 33 **Sampled:** 6/1/2011 12:40 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	gray	1	n.d.	-	-	-	-	-
2	mastic	2	yellow	1	n.d.	-	-	-	-	-
	Total %	100		Overall %	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample BRF-ACM-010j **Lab Number** 2011-05827- 34 **Sampled:** 6/1/2011 12:42 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	92	white	1	n.d.	-	-	-	-	-
2	mastic	5	yellow	1	n.d.	-	-	-	-	-
3	leveling compound	3	white	3	n.d.	-	-	-	-	-
	Total %	100		Overall %	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample BRF-ACM-011k **Lab Number** 2011-05827- 35 **Sampled:** 6/1/2011 12:45 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	95	white	1	n.d.	-	-	-	-	-
2	mastic	5	yellow	1	n.d.	-	-	-	-	-
	Total %	100		Overall %	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample BRF-ACM-012l **Lab Number** 2011-05827- 36 **Sampled:** 6/1/2011 12:47 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	white	1	n.d.	-	-	-	-	-
2	mastic	1	yellow	1	n.d.	-	-	-	-	-
	Total %	100		Overall %	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample TR-ACM-001a **Lab Number** 2011-05827- 37 **Sampled:** 6/1/2011 12:51 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Wall System Fibrous Solid
Homogeneous No **# Layers** 5 **Pos Layer?** No **# Sub-Samples** 14
Non-Fibrous Components (in approx. decreasing order): powder, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	10	off-white	1	n.d.	n.d.	-	-	-	-
2	texture/joint compound	50	white	3	<=1%	n.d.	-	-	-	-
3	paper/cardboard	15	off-white	2	n.d.	90-100%	-	-	-	-
4	texture/joint compound	5	white	3	<=1%	n.d.	-	-	-	-
5	paper/cardboard	20	tan	2	n.d.	90-100%	-	-	-	-
	Total %	100		**Overall %**	<=1%	30-40%	-	-	-	-
				Fiber Identification:	chrysotile asbestos	cellulose fiber				

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of joint compound/texture matrix using acid. Note: the texture/joint compound layers were identical in appearance and asbestos content. One point count was used to quantify them. Point Count: Layer Number 2,4; 0 asbestos counts per 400 total counts = Trace percent.

Sample TR-ACM-002b **Lab Number** 2011-05827- 38 **Sampled:** 6/1/2011 12:53 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Wall System Fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	15	off-white	1	n.d.	n.d.	-	-	-	-
2	paper/cardboard	50	tan	2	90-100%	n.d.	-	-	-	-
3	drywall core	35	white	3	<=1%	<=1%	-	-	-	-
	Total %	100		**Overall %**	40-50%	<=1%	-	-	-	-
				Fiber Identification:	cellulose fiber	glass fiber				

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample TR-ACM-003c **Lab Number** 2011-05827- 39 **Sampled:** 6/1/2011 12:56 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Wall System Fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	15	off-white	1	n.d.	n.d.	-	-	-	-
2	paper/cardboard	40	tan	2	90-100%	n.d.	-	-	-	-
3	drywall core	45	white	3	<=1%	<=1%	-	-	-	-
	Total %	100		Overall %	30-40%	<=1%	-	-	-	-
				Fiber Identification:	cellulose fiber	glass fiber				

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample TR-ACM-004d **Lab Number** 2011-05827- 40 **Sampled:** 6/1/2011 12:59 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	85	gray	1	n.d.	-	-	-	-	-
2	mastic	3	yellow	2	n.d.	-	-	-	-	-
3	leveling compound	12	off-white	3	n.d.	-	-	-	-	-
	Total %	100		Overall %	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample TR-ACM-005e **Lab Number** 2011-05827- 41 **Sampled:** 6/1/2011 13:01 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	100	gray	1	n.d.	-	-	-	-	-
	Total %	100		Overall %	n.d.	-	-	-	-	-
				Fiber Identification:	none					

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	none												
2													
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample TR-ACM-006f **Lab Number** 2011-05827- 42 **Sampled:** 6/1/2011 13:02 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	90	gray	1	n.d.	n.d.	-	-	-	-
2	mastic	7	yellow	1	2-5%	<=1%	-	-	-	-
3	debris	3	gray	3	20-30%	n.d.	-	-	-	-
	Total %	100		Overall %	>1-2%	<=1%	-	-	-	-
				Fiber Identification:	synthetic fiber (extr	hair				

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	synthetic fiber (extruded)	W	E	N	N	H	+	P					
2	hair	BR	E	N									
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample TR-ACM-007g **Lab Number** 2011-05827- 43 **Sampled:** 6/1/2011 13:03 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Acoustical Tile Fibrous Mat
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	5	off-white	1	n.d.	-	-	-	-	-
2	acoustical tile	95	brown	3	90-100%	-	-	-	-	-
	Total %	100		Overall %	90-100%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of acoustical tile using acid.

Sample TR-ACM-008h **Lab Number** 2011-05827- 44 **Sampled:** 6/1/2011 13:04 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Acoustical Tile Fibrous Mat
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	5	off-white	1	n.d.	-	-	-	-	-
2	acoustical tile	95	brown	3	90-100%	-	-	-	-	-
	Total %	100		Overall %	90-100%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of acoustical tile using acid.

Sample TR-ACM-009i **Lab Number** 2011-05827- 45 **Sampled:** 6/1/2011 13:05 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Acoustical Tile Fibrous Mat
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	10	off-white	1	n.d.	-	-	-	-	-
2	acoustical tile	90	brown	3	90-100%	-	-	-	-	-
	Total %	100		Overall %	80-90%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of acoustical tile using acid.

Sample KT-ACM-001a **Lab Number** 2011-05827- 46 **Sampled:** 6/1/2011 13:10 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	90	white	1	n.d.	-	-	-	-	-
2	mastic	10	black	1	10-20%	-	-	-	-	-
	Total %	100		Overall %	>1-2%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample KT-ACM-002b **Lab Number** 2011-05827- 47 **Sampled:** 6/1/2011 13:12 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability
1	floor tile	85	white	1
2	mastic	5	black	1
3	leveling compound	10	off-white	3
	Total %	100		**Overall %**

Percents of Each Fiber

Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
n.d.	-	-	-	-	-
10-20%	-	-	-	-	-
2-5%	-	-	-	-	-
>1-2%	-	-	-	-	-
cellulose fiber					

Fiber Identification:

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2								
3								
4								
5								
6								

Refractive Index Determinations

Oil	Col Par	Col Per	RI Par	RI Per

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample KT-ACM-003c **Lab Number** 2011-05827- 48 **Sampled:** 6/1/2011 13:14 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability
1	floor tile	80	white	1
2	bitumen-paper	20	black	1
	Total %	100		**Overall %**

Percents of Each Fiber

Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
n.d.	-	-	-	-	-
70-80%	-	-	-	-	-
10-20%	-	-	-	-	-
cellulose fiber					

Fiber Identification:

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2								
3								
4								
5								
6								

Refractive Index Determinations

Oil	Col Par	Col Per	RI Par	RI Per

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample KT-ACM-004d **Lab Number** 2011-05827- 49 **Sampled:** 6/1/2011 13:17 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Acoustical Tile Fibrous Mat
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	4	off-white	1	n.d.	-	-	-	-	-
2	acoustical tile	96	brown	3	90-100%	-	-	-	-	-
	Total %	100		Overall %	90-100%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample KT-ACM-005e **Lab Number** 2011-05827- 50 **Sampled:** 6/1/2011 13:16 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Acoustical Tile Fibrous Mat
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	4	off-white	1	n.d.	-	-	-	-	-
2	acoustical tile	96	brown	3	90-100%	-	-	-	-	-
	Total %	100		Overall %	90-100%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample KT-ACM-006f **Lab Number** 2011-05827- 51 **Sampled:** 6/1/2011 13:18 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Acoustical Tile Fibrous Mat
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	10	off-white	1	n.d.	-	-	-	-	-
2	acoustical tile	90	brown	3	90-100%	-	-	-	-	-
	Total %	100		Overall %	80-90%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample KT-ACM-007g **Lab Number** 2011-05827- 52 **Sampled:** 6/1/2011 13:23 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability
1	paint	15	off-white	1
2	texture/joint compound	85	off-white	3
	Total %	100		**Overall %**

Percents of Each Fiber

Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
n.d.	-	-	-	-	-
<=1%	-	-	-	-	-
<=1%	-	-	-	-	-
chrysotile asbestos					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of joint compound/texture matrix using acid. Point Count: Layer Number 2; 0 asbestos counts per 400 total counts = Trace percent.

Sample KT-ACM-008h **Lab Number** 2011-05827- 53 **Sampled:** 6/1/2011 13:26 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability
1	paint	15	off-white	1
2	texture/joint compound	85	off-white	3
	Total %	100		**Overall %**

Percents of Each Fiber

Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
n.d.	-	-	-	-	-
<=1%	-	-	-	-	-
<=1%	-	-	-	-	-
chrysotile asbestos					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of paint matrix using solvent. Procedure: dissolution of joint compound/texture matrix using acid. Point Count: Layer Number 2; 0 asbestos counts per 400 total counts = Trace percent.

Sample KT-ACM-009i **Lab Number** 2011-05827- 54 **Sampled:** 6/1/2011 13:30 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Wall System Fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	20	off-white	1	n.d.	n.d.	-	-	-	-
2	paper/cardboard	60	tan	2	90-100%	n.d.	-	-	-	-
3	drywall core	20	white	3	<=1%	<=1%	-	-	-	-
	Total %	100		Overall %	50-60%	<=1%	-	-	-	-
				Fiber Identification:	cellulose fiber	glass fiber				

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample KT-ACM-010j **Lab Number** 2011-05827- 55 **Sampled:** 6/1/2011 13:33 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Miscellaneous Rubbery
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): polymer, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	base cove	94	black	1	n.d.	-	-	-	-	-
2	mastic	6	brown	1	2-5%	-	-	-	-	-
	Total %	100		Overall %	<=1%	-	-	-	-	-
				Fiber Identification:	wollastonite					

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	wollastonite	W	G	N	N	M	B	P					
2													
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of polymer matrix using solvent. Minor adhering wall paint and/or texture, etc. not analyzed.

Sample KT-ACM-011k **Lab Number** 2011-05827- 56 **Sampled:** 6/1/2011 13:37 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Miscellaneous Rubbery
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): polymer, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	base cove	98	black	1	n.d.	-	-	-	-	-
2	mastic	2	off-white	1	>1-2%	-	-	-	-	-
	Total %	100		Overall %	<=1%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of polymer matrix using solvent. Minor adhering wall paint and/or texture, etc. not analyzed.

Sample KT-ACM-012l **Lab Number** 2011-05827- 57 **Sampled:** 6/1/2011 13:40 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Miscellaneous Rubbery
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): polymer, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	base cove	85	black	1	n.d.	n.d.	-	-	-	-
2	mastic	3	off-white	1	>1-2%	n.d.	-	-	-	-
3	mastic	12	brown	1	<=1%	2-5%	-	-	-	-
	Total %	100		Overall %	<=1%	<=1%	-	-	-	-
				Fiber Identification:	cellulose fiber	wollastonite				

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2	wollastonite	W	G	N	N	M	B	P					
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of polymer matrix using solvent. Minor adhering wall paint and/or texture, etc. not analyzed.

Sample MR-ACM-001a **Lab Number** 2011-05827- 58 **Sampled:** 6/1/2011 13:50 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	97	gray	1	n.d.	-	-	-	-	-
2	mastic	3	yellow	1	<=1%	-	-	-	-	-
	Total %	100		**Overall %**	<=1%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample MR-ACM-002b **Lab Number** 2011-05827- 59 **Sampled:** 6/1/2011 13:51 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 4 **Pos Layer?** No **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	87	gray	1	n.d.	-	-	-	-	-
2	mastic	3	yellow	1	<=1%	-	-	-	-	-
3	leveling compound	5	off-white	3	>1-2%	-	-	-	-	-
4	wood	5	brown	2	90-100%	-	-	-	-	-
	Total %	100		**Overall %**	2-5%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Percents of Each Fiber

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Refractive Index Determinations

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample MR-ACM-003c **Lab Number** 2011-05827- 60 **Sampled:** 6/1/2011 13:52 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 4 **Pos Layer?** No **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	87	gray	1	n.d.	-	-	-	-	-
2	mastic	3	yellow	1	<=1%	-	-	-	-	-
3	leveling compound	5	off-white	3	>1-2%	-	-	-	-	-
4	wood	5	brown	2	90-100%	-	-	-	-	-
	Total %	100		**Overall %**	2-5%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample MR-ACM-004d **Lab Number** 2011-05827- 61 **Sampled:** 6/1/2011 13:53 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	87	gray	1	n.d.	-	-	-	-	-
2	mastic	3	yellow	1	<=1%	-	-	-	-	-
3	leveling compound	10	off-white	3	>1-2%	-	-	-	-	-
	Total %	100		**Overall %**	<=1%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample MR-ACM-005e **Lab Number** 2011-05827- 62 **Sampled:** 6/1/2011 13:55 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 4 **Pos Layer?** No **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	87	gray	1	n.d.	-	-	-	-	-
2	mastic	1	yellow	1	<=1%	-	-	-	-	-
3	leveling compound	2	off-white	3	>1-2%	-	-	-	-	-
4	wood	10	brown	2	90-100%	-	-	-	-	-
	Total %	100		**Overall %**	5-10%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of floor tile matrix and mastic using solvent.

Sample MR-ACM-006f **Lab Number** 2011-05827- 63 **Sampled:** 6/1/2011 13:57 **Condition:** acceptable
Analyzed By US 6/16/2011 **An?** OK **Apparent Smp Type** Miscellaneous Rubbery
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): polymer, binder,

Layers

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	base cove	90	black	1	n.d.	-	-	-	-	-
2	mastic	10	off-white	1	<=1%	-	-	-	-	-
	Total %	100		**Overall %**	<=1%	-	-	-	-	-
				Fiber Identification:	cellulose fiber					

Fibers

		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose fiber	W	F	N	N	H	+	U					
2													
3													
4													
5													
6													

Sample Analytical Note
Procedure: tweased apart using forceps. Procedure: dissolution of polymer matrix using solvent. Minor adhering wall paint and/or texture, etc. not analyzed.