

Asbestos Surveys

At

**Mescalero Service Unit
Mescalero, New Mexico**

For

Albuquerque Area Indian Health Service
Division of Health Facilities
5300 Homestead Road, NE
Albuquerque, New Mexico 87110

By

U.S. Public Health Service
Federal Occupational Health
2201 Sixth Avenue, M/S Rx-21
Seattle, Washington 98121-2500

September 2007

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Asbestos Building Inspections
Albuquerque Area Indian Health Service
Mescalero Service Unit
Mescalero, New Mexico

1.0 INTRODUCTION

As requested by the Albuquerque Area Indian Health Service, bulk sampling of suspect asbestos-containing building materials was conducted on twelve (12) buildings at the Mescalero Service Unit in Mescalero, New Mexico. Sampling occurred on August 13 – August 23, 2007. Bulk samples of suspect asbestos-containing materials (ACMs) were collected throughout the interior and exterior of each building. Non-destructive sampling practices were utilized during the inspections.

Federal Occupational Health (FOH) representatives Mr. Landon Johnson and Mrs. Suzette Numkena performed the asbestos inspections of the subject properties. Each inspector holds current Asbestos Hazard Emergency Response Act (AHERA) accreditation as Asbestos Building Inspectors. Certifications for each inspector can be found in Appendix 4.

Sampling of suspect asbestos-containing materials was conducted using procedures similar to the Environmental Protection Agency (EPA) AHERA regulation, 40 CFR 763. Samples were analyzed by Fiberquant Analytical Services in Phoenix, Arizona. Fiberquant is fully accredited by the EPA-required National Voluntary Laboratory Accreditation Program (NVLAP) for analysis of asbestos bulk samples using polarized light microscopy, and is also an American Industrial Hygiene Association (AIHA) accredited laboratory.

2.0 DESCRIPTION OF BUILDINGS INSPECTED

Eight (8) of the twelve (12) buildings inspected were residential housing units ranging between one and two stories. The residential building types included single-family and multi-family units. The residences ranged in size from single bedroom units to three bedrooms units. In addition to the residential buildings, inspectors also inspected the Mescalero Medical Center, Maintenance shop, Administration office and the Optometry office. Building floor plans for each type of structure are located in Appendix 1.

Examples of suspect building materials identified and sampled throughout each building included various floor tiles and associated mastics, sheet vinyl flooring and associated mastics, carpet mastic, ceramic tile, ceramic tile grout, residual black mastic, gypsum drywall materials, wall texture, plaster wall materials, stucco, brick mortar, stone mortar, gypsum drywall ceiling panels, fiberboard ceiling tiles, putty, fiberglass insulation, pipe elbow insulation, sink undercoating, covebase and mastic, various caulks, vapor barrier paper, roof materials, various penetration mastics.

3.0 SURVEY PROCEDURES

Each room of each building was assigned a unique functional space number. Each functional space was visually inspected for suspect asbestos-containing materials. Materials were mapped and quantified on maps provided by the IHS or hand drawn maps.

Each suspect ACM was designated as a distinct homogeneous area, which is a single material, uniform in texture and appearance, installed at one time, and unlikely to consist of more than one type or formulation of material. The inspector touched each suspect material in order to determine friability.

A sufficient number of samples were collected of each material to satisfy the Occupational Safety and Health Administration (OSHA) and the National Emission Standard for Hazardous Air Pollutants (NESHAP) regulations for the determination of asbestos content. Bulk sample logs are located in Appendix 1.

Each sample was assigned a unique sample identification number and assessed for damage and friability classifications. The samples, with Chain of Custody documentation were delivered to Fiberquant Analytical Services in Phoenix, Arizona. Fiberquant is fully accredited by the EPA-required National Voluntary Laboratory Accreditation Program (NVLAP) for analysis of asbestos bulk samples using polarized light microscopy, and is also an American Industrial Hygiene Association (AIHA) accredited laboratory. Laboratory analysis reports are located in Appendix 3.

4.0 FINDINGS AND COST ESTIMATES

Table 1 summarizes each building inspected and provides hyperlinks (electronic copy) to Bulk Sample Results & Cost Estimate Tables and Analytical Laboratory Results. The information is also located in the appendices.

Table 1: Buildings Inspected for Asbestos Containing Materials and Associated Hyperlinks
(electronic version only)

Location	Building Number	Unit Type (Appendix 1)	Asbestos Present	Bulk Sample Results and Cost Estimates (Appendix 2)	Analytical Laboratory Results (Appendix 3)
Mescalero	02000	Hospital	Yes	✓	□
Mescalero	02001	3BR – SFH	Yes	✓	□
Mescalero	02002	3BR – SFH	Yes	✓	□
Mescalero	02003	3BR – SFH	Yes	✓	□
Mescalero	02004	3BR – Duplex	Yes	✓	□
Mescalero	02005	3BR – Duplex	Yes	✓	□
Mescalero	02006	3BR – Duplex	Yes	✓	□
Mescalero	02007	3BR – SFH	Yes	✓	□
Mescalero	02008	1BR – Duplex	Yes	✓	□
Mescalero	02009	Optometry	No	✓	□
Mescalero	02010	Administration	Yes	✓	□
Mescalero	02011	Maintenance Shop	Yes	✓	□

The Bulk Sample Results Table (Appendix 2) provides detailed information on materials that tested positive or negative for asbestos content. A separate Bulk Sample Results Table is provided for each building inspected.

Programming Cost Estimates (Appendix 2) were developed for positive asbestos-containing materials found in each Building. The Programming Cost Estimates were derived by use of the Means Cost Guide and by consultation with experienced local contractors. The pricing reflects current industry rates. Future fluctuations in industry pricing, both natural and seasonal, may affect this estimate. In addition, Service Units outside of metropolitan areas may incur additional costs due to travel requirements on the part of abatement contractors. For purposes of this estimate, an 18% mark-up for logistical costs is included.

This estimate is for abatement contractor costs only. Additional costs, which are not included in this estimate, are those of an environmental consultant and replacement of building materials that have been removed. The total estimated cost for the removal of asbestos-containing materials from the Mescalero Service Unit is **\$170,407.93**.

5.0 ACM DESCRIPTIONS

Descriptions of materials found to contain asbestos are as follows:

Floor tile is classified as a non-friable NESHAP Category I material. This material is currently in good condition and intact floor tile poses little to no health threat. Removal or disturbance to this material should be performed by appropriately trained and certified personnel. Removed flooring material should be disposed at a landfill that accepts non-friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Floor tile mastic is classified as a non-friable NESHAP Category I material. This material is currently in good condition. Floor tile mastic that is beneath floor tile, i.e., inaccessible, poses little to no health threat. Removal or disturbance to this material should be performed by appropriately trained and certified personnel. Removed flooring material should be disposed at a landfill that accepts non-friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Sheet vinyl flooring and associated materials are classified as friable NESHAP Regulated Asbestos-Containing Material (RACM). The material is currently in good condition and intact sheet vinyl flooring poses little to no health threat. Removal or disturbance to this material should be performed by appropriately trained and certified personnel. Removed sheet vinyl flooring and associated materials should be disposed at a landfill that is approved by the Environmental Protection Agency (EPA) for acceptance of friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Joint compound is classified as a friable NESHAP Regulated Asbestos-Containing Material (RACM). The material is currently in good condition and undamaged joint compound poses little to no health threat. Removal of this material should be performed by appropriately trained and certified personnel. Removal or disturbance to this material is considered an OSHA class I removal. Removed joint compound should be disposed at a landfill that is approved by the Environmental Protection Agency (EPA) for acceptance of friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Wall texture is classified as a friable NESHAP Regulated Asbestos-Containing Material (RACM). The material is currently in good condition and undamaged wall texture poses little to no health threat. Removal of this material should be performed by appropriately trained and certified personnel. Removal or disturbance to this material is considered an OSHA class I removal. Removed wall texture should be disposed at a landfill that is approved by the Environmental Protection Agency (EPA) for acceptance of friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Exterior stucco is classified as a friable NESHAP Regulated Asbestos-Containing Material (RACM). The material is currently in good condition and undamaged stucco poses little to no health threat. Removal of this material should be performed by appropriately trained and certified personnel. Removal or disturbance to this material is considered an OSHA class I removal. Removed materials should be disposed at a landfill that is approved by the Environmental Protection Agency (EPA) for acceptance of friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Pipe elbow/fitting insulation is classified as friable NESHAP Regulated Asbestos-Containing Material (RACM). Intact pipe insulation poses little to no health threat. Pipe insulation inside wall cavities also poses little to no health threat. Removal or disturbance to this material is considered an OSHA Class I action, and should be performed by appropriately trained and certified personnel. Removed insulation should be disposed at a landfill that is approved by the Environmental Protection Agency (EPA) for acceptance of friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Duct seam mastic is classified as non-friable NESHAP Category I material. The intact duct seam poses little to no health threat. Removal or disturbance to this material should be performed by appropriately trained and certified personnel. Removed duct seam mastic should be disposed at a landfill that is approved by the Environmental Protection Agency (EPA) for acceptance of non-friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Sink undercoating is classified as non-friable NESHAP Category II material. The material is currently in good condition and undamaged sink undercoating poses little to no health threat. Removal of this material typically involves the physical removal of the entire sink (whole) and should be performed by appropriately trained and certified personnel. Removed materials should be disposed at a landfill that accepts non-friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

Roof penetration mastic is classified as non-friable NESHAP Category I material. Removal or disturbance to this material should be performed by appropriately trained and certified personnel. Removed penetration mastic should be disposed at a landfill that accepts non-friable asbestos waste. Landfills should be checked for acceptance of this material prior to disposal.

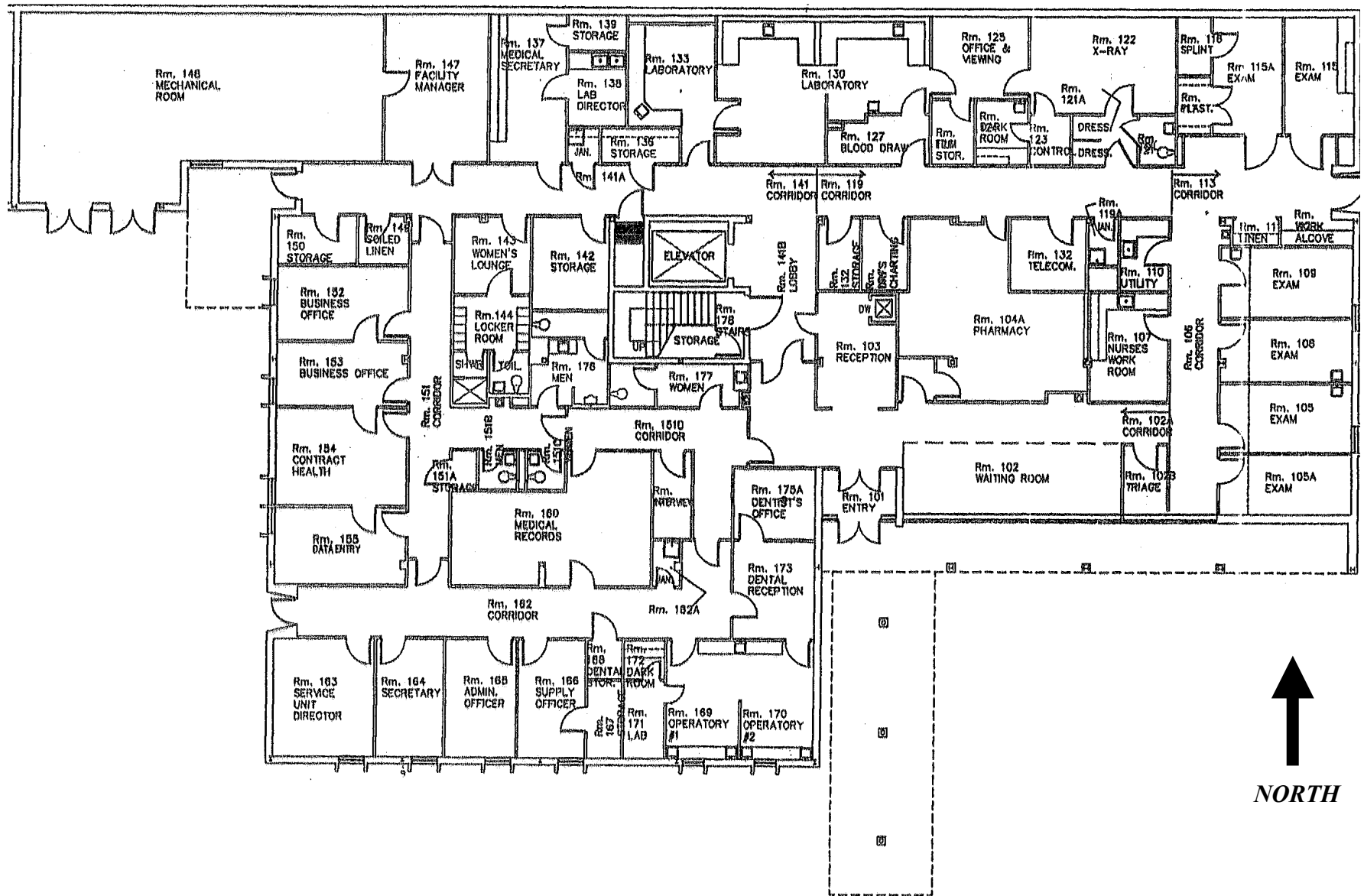
6.0 PROJECT LIMITATIONS

This Project was performed using, as a minimum, practices consistent with standards acceptable within the industry at this time, and a level of diligence typically exercised by industrial hygiene and environmental consultants performing similar services.

The procedures used in this investigation attempt to establish a balance between the competing goals of limiting investigative and reporting costs and time, and reducing the uncertainty about unknown conditions. Therefore, because the findings of this report were derived from the scope, costs, time, and other limitations, the conclusions should not be construed as a guarantee that all environmental or occupational hazards have been identified and fully evaluated. Where sample collection and testing have been performed, FOH's professional opinions are based in part on the interpretation of data from discrete sampling locations that may not represent conditions at non-sampled locations. FOH assumes no responsibility for omissions or errors resulting from inaccurate information, or data, provided by sources outside of FOH or from omissions or errors in public records.

Furthermore, it is emphasized that the final decision on how much risk to accept always remains with the client since FOH is not in a position to fully understand all of the client's needs. Clients with a greater aversion to risk may want to take additional actions while others, with less aversion to risk, may want to take no further action.

APPENDIX 1
Functional Space Maps
Bulk Sample Logs

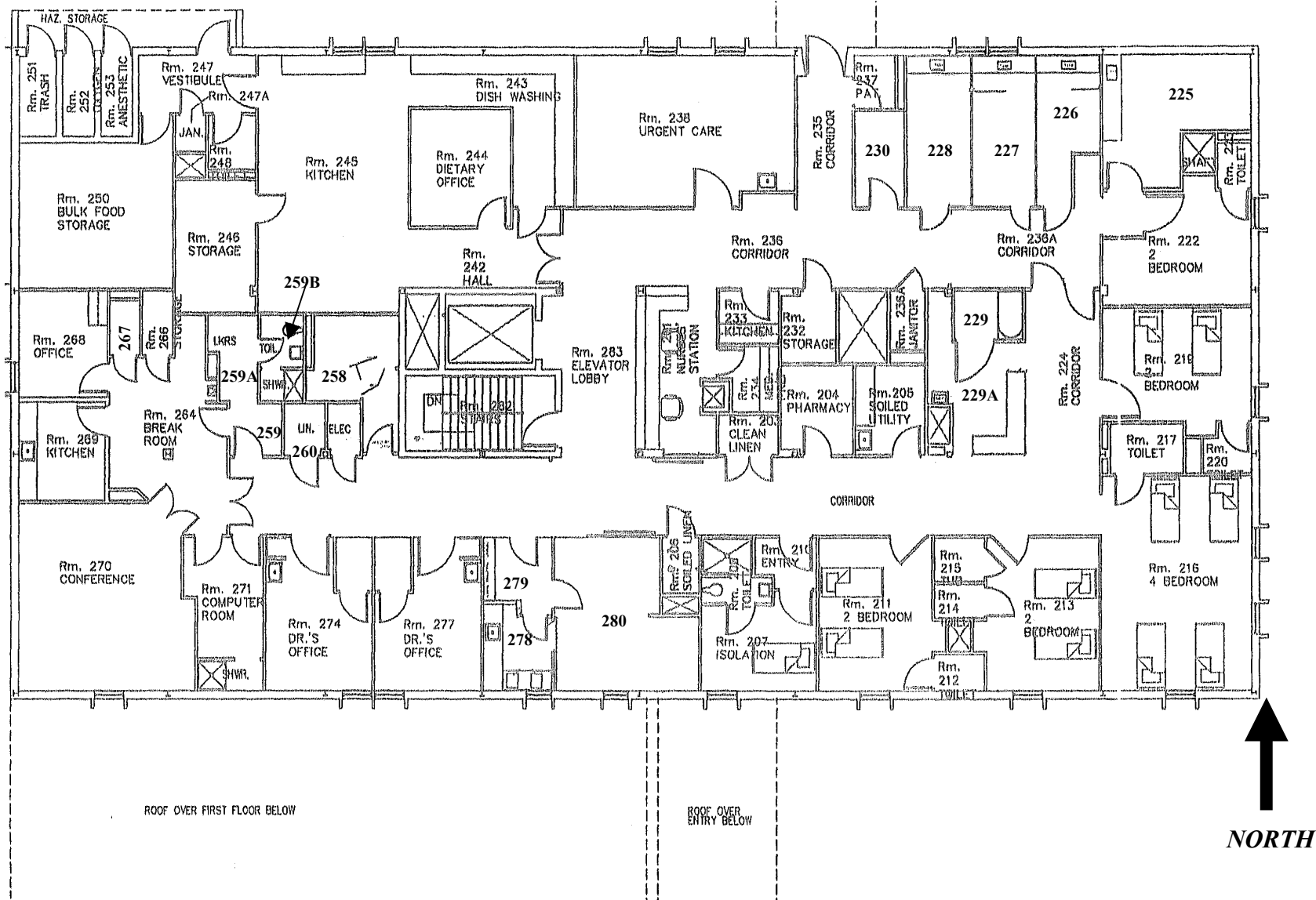


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Project:

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MESCALERO SERVICE UNIT
Mescalero, New Mexico

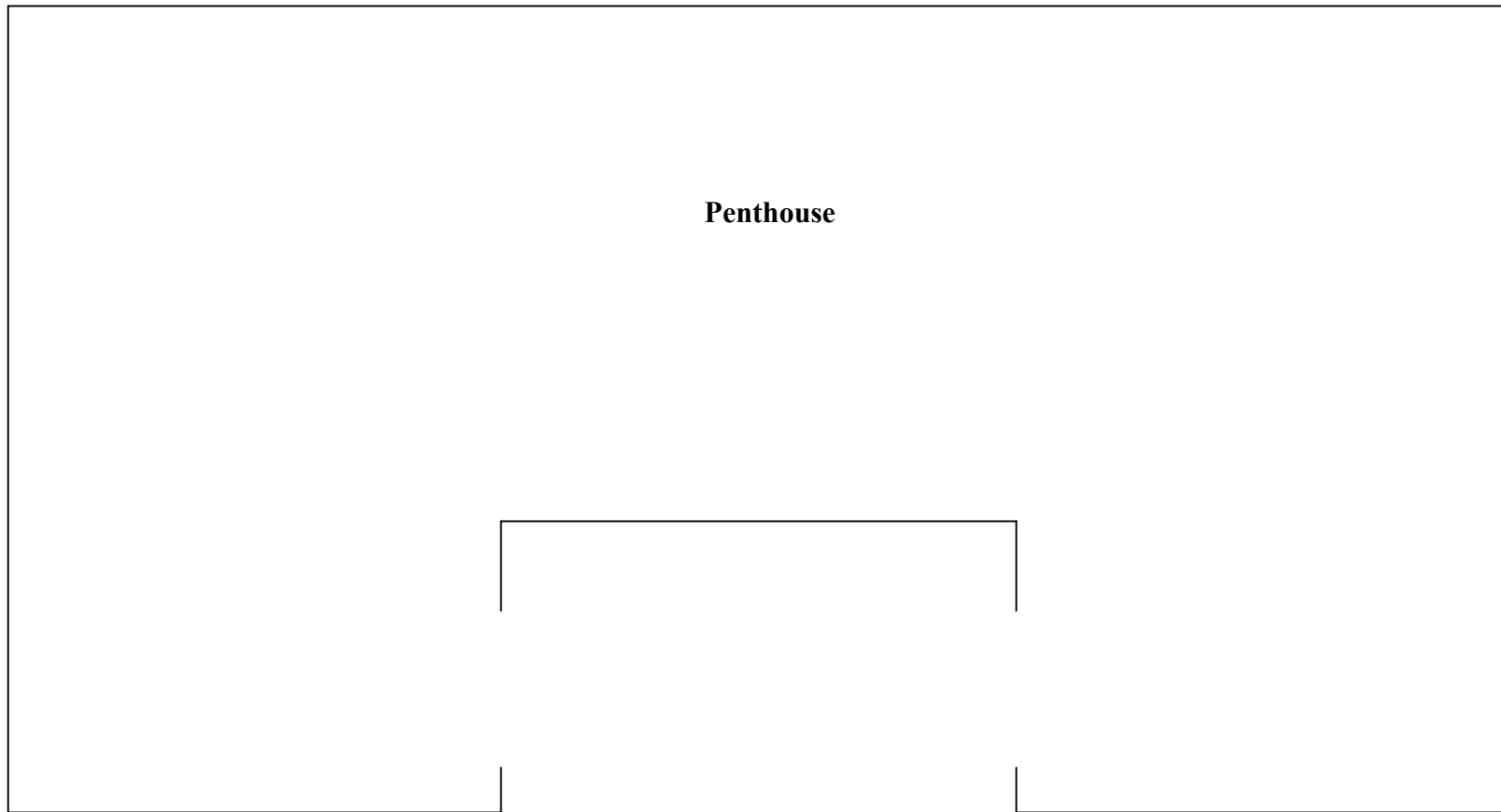
Functional Space Map
Building 2000
Hospital
First Floor Plan



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Mescalero, New Mexico

Functional Space Map
Building 2000
Hospital
Second Floor Plan



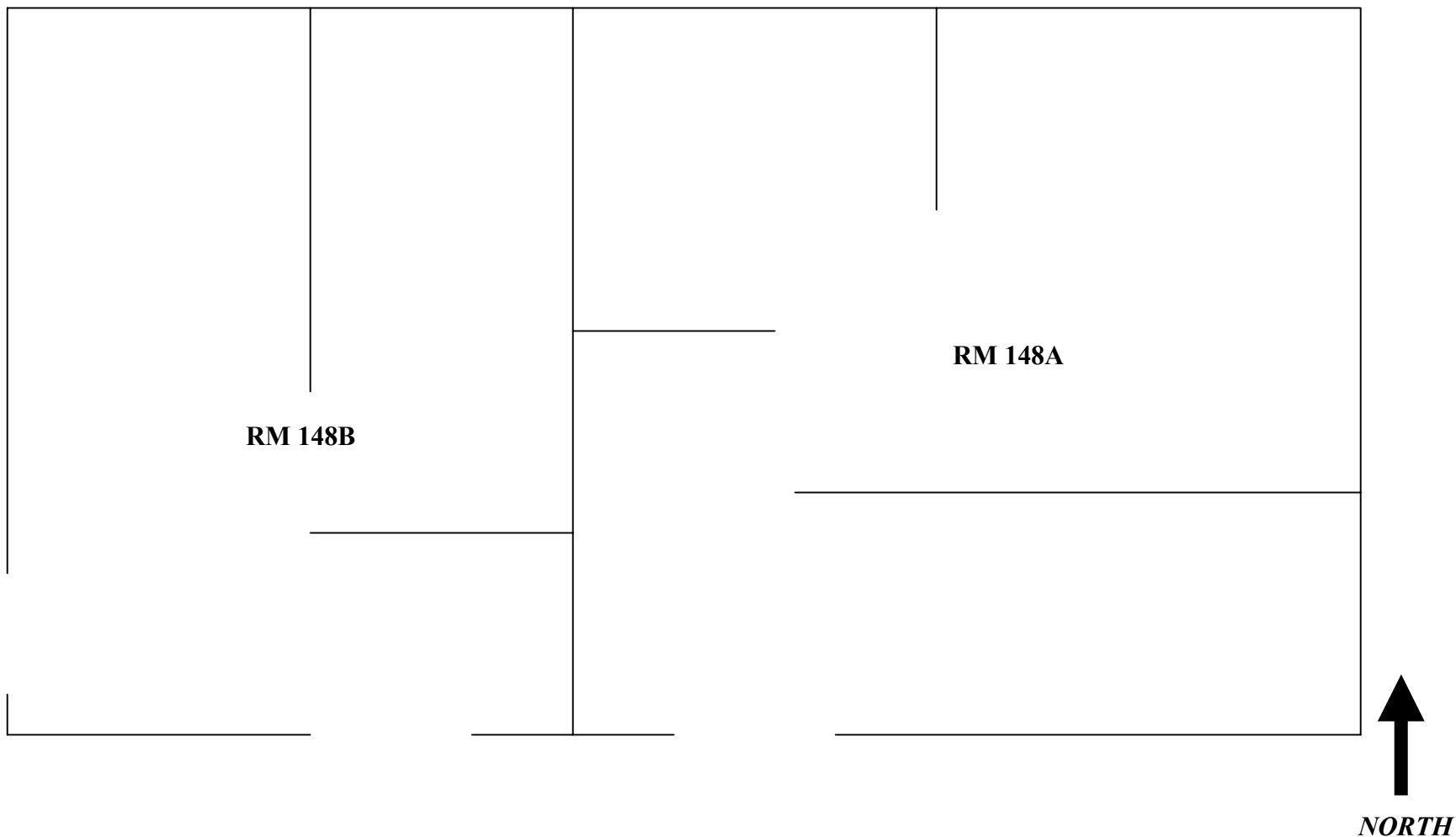
NORTH

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Mescalero, New Mexico

Functional Space Map
Building 2000
Hospital
Penthouse Floor Plan

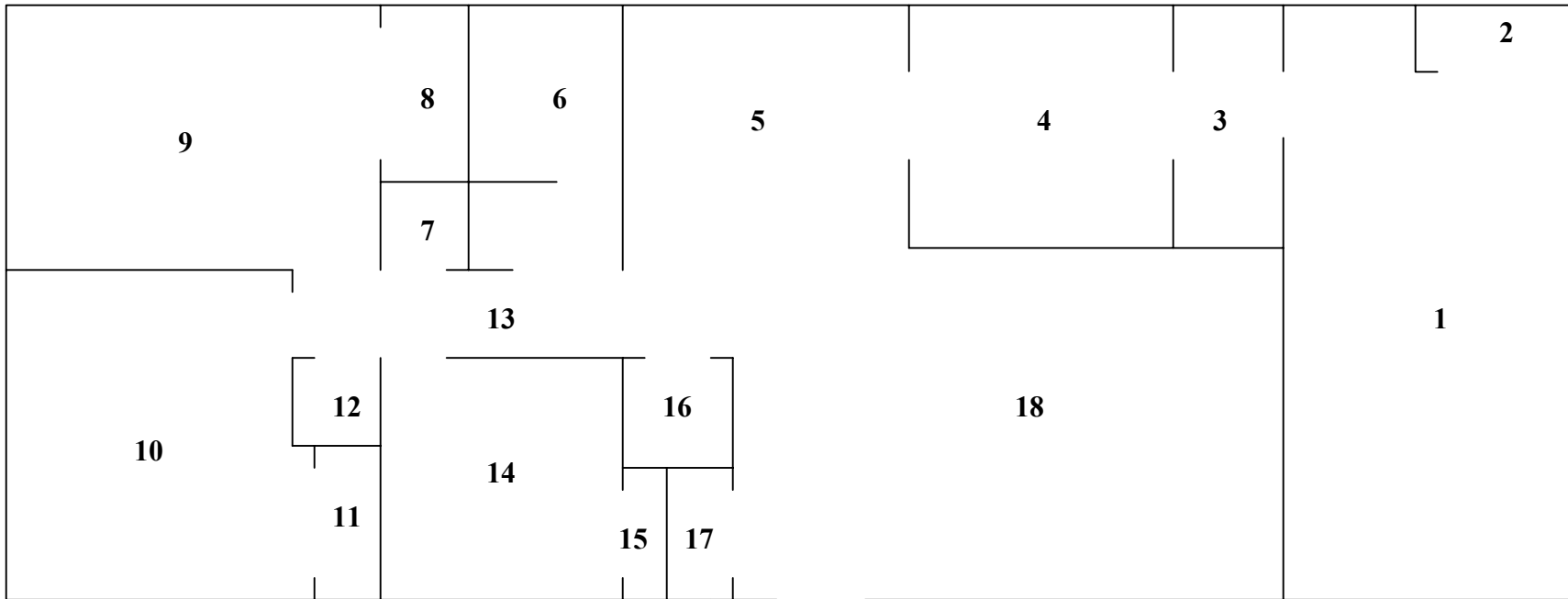


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MESCALERO SERVICE UNIT
Mescalero, New Mexico

Functional Space Map
Building 2000
Hospital Room 148 A and B

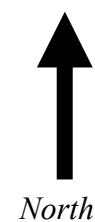
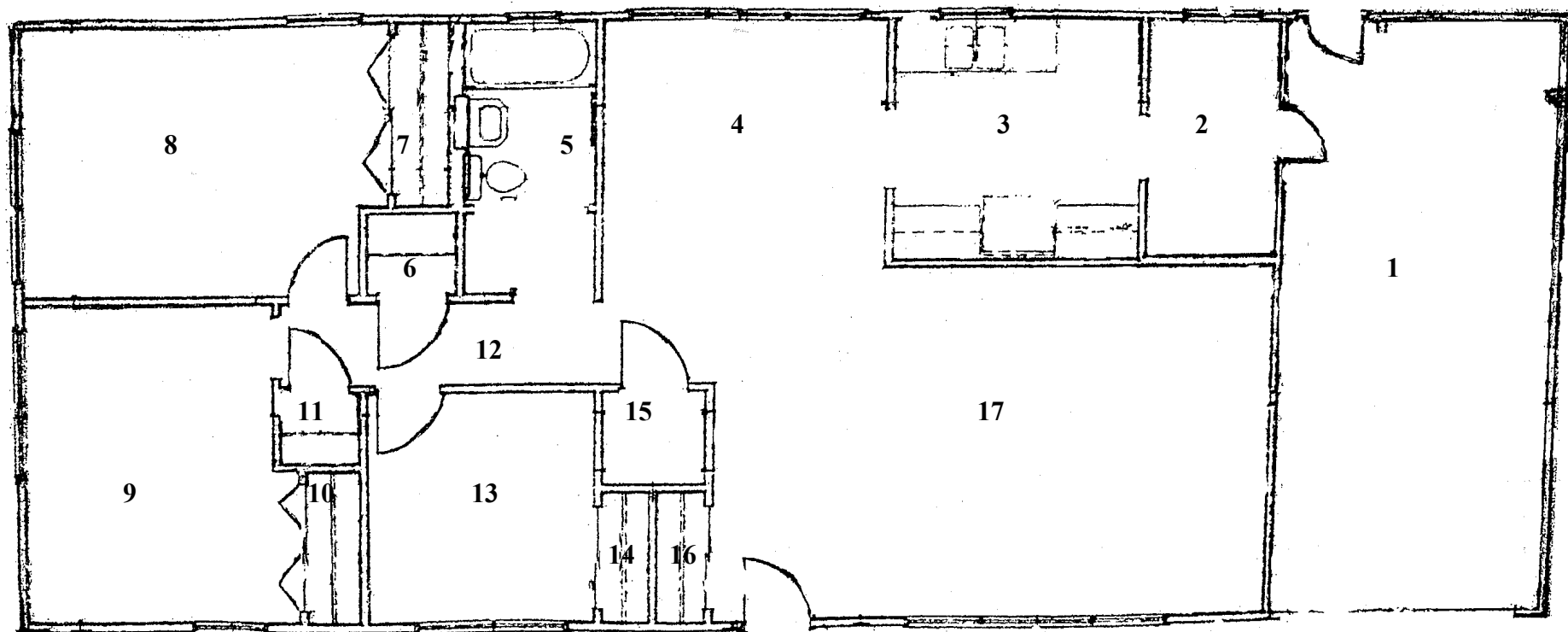


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Mescalero, New Mexico

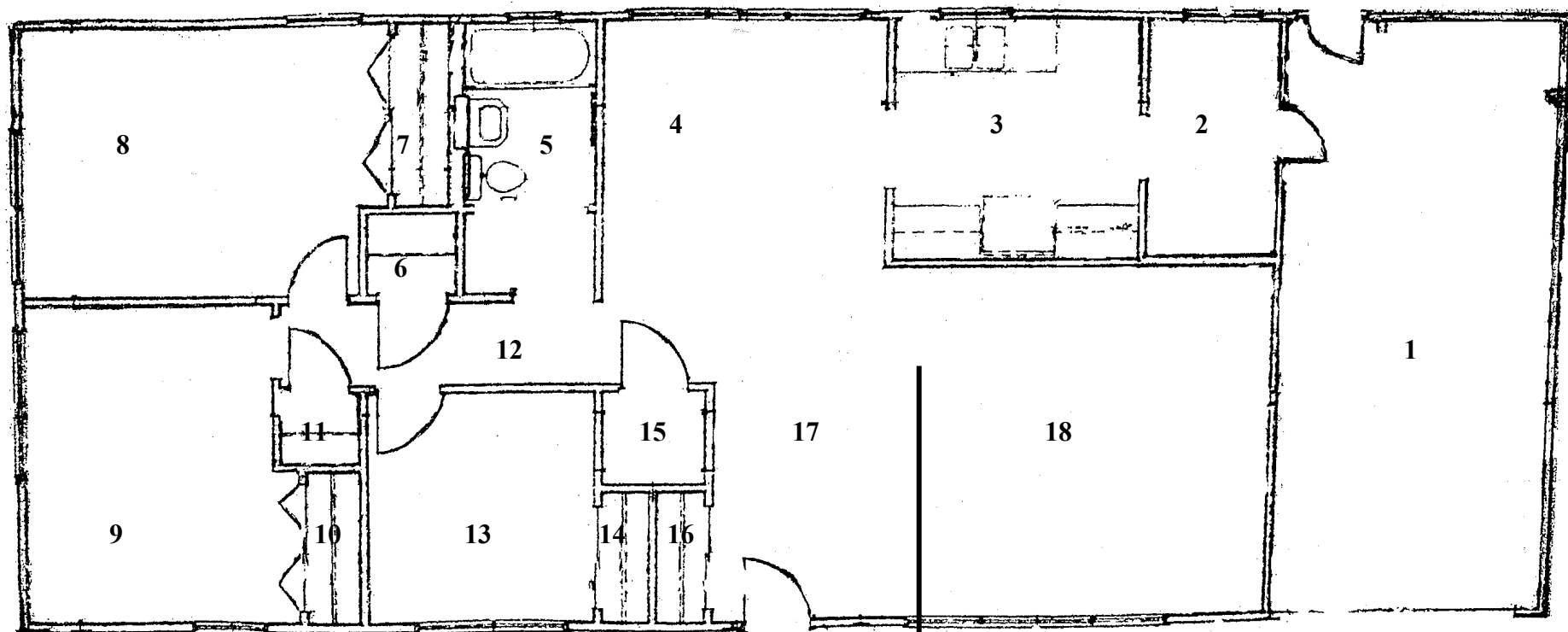
Functional Space Map
Building 2001
3 Bedroom



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Mescalero, New Mexico

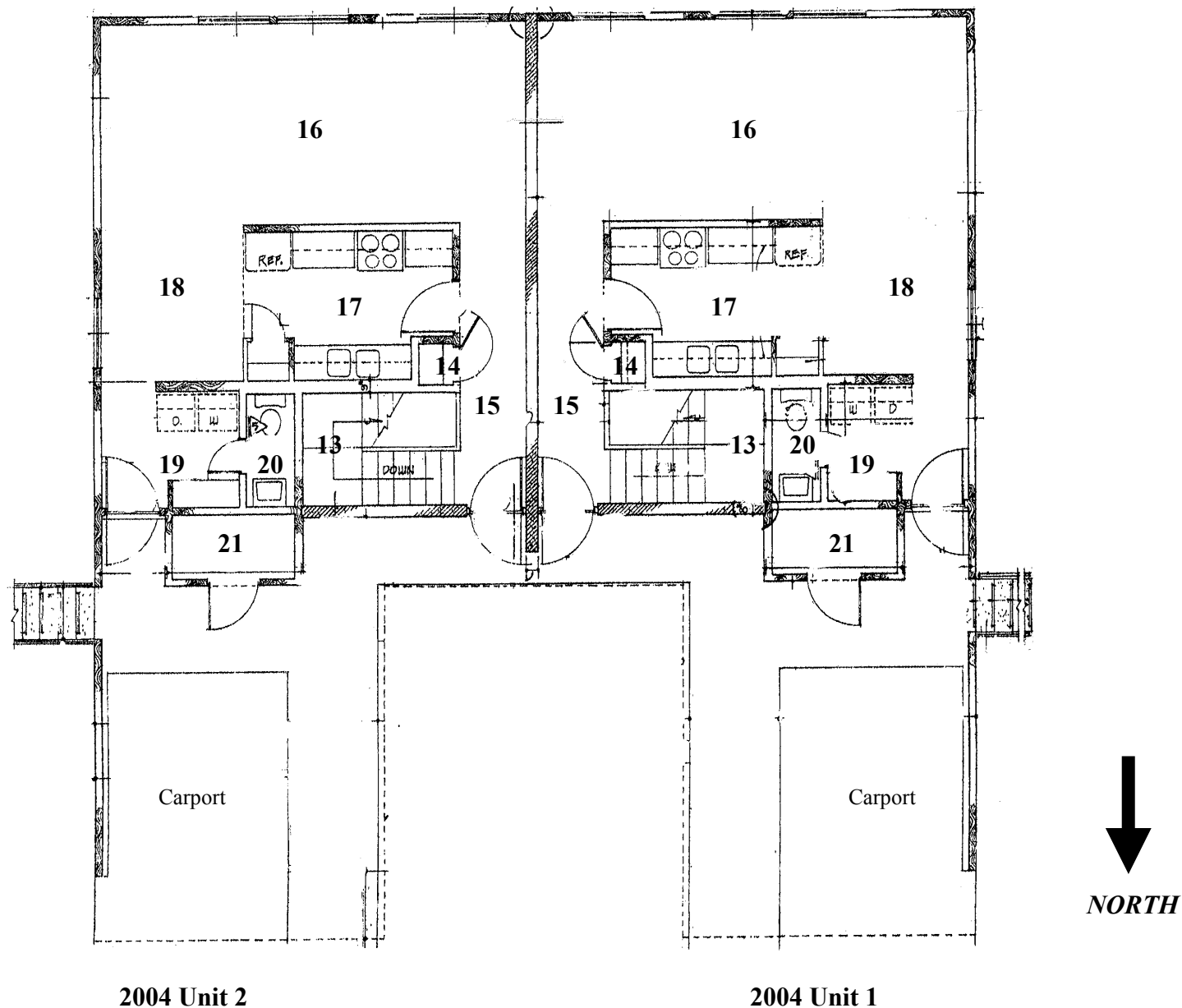
Functional Space Map
Building 2002
3 Bedroom



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MESCALERO SERVICE UNIT
Mescalero, New Mexico

Functional Space Map
Building 2003
3 Bedroom



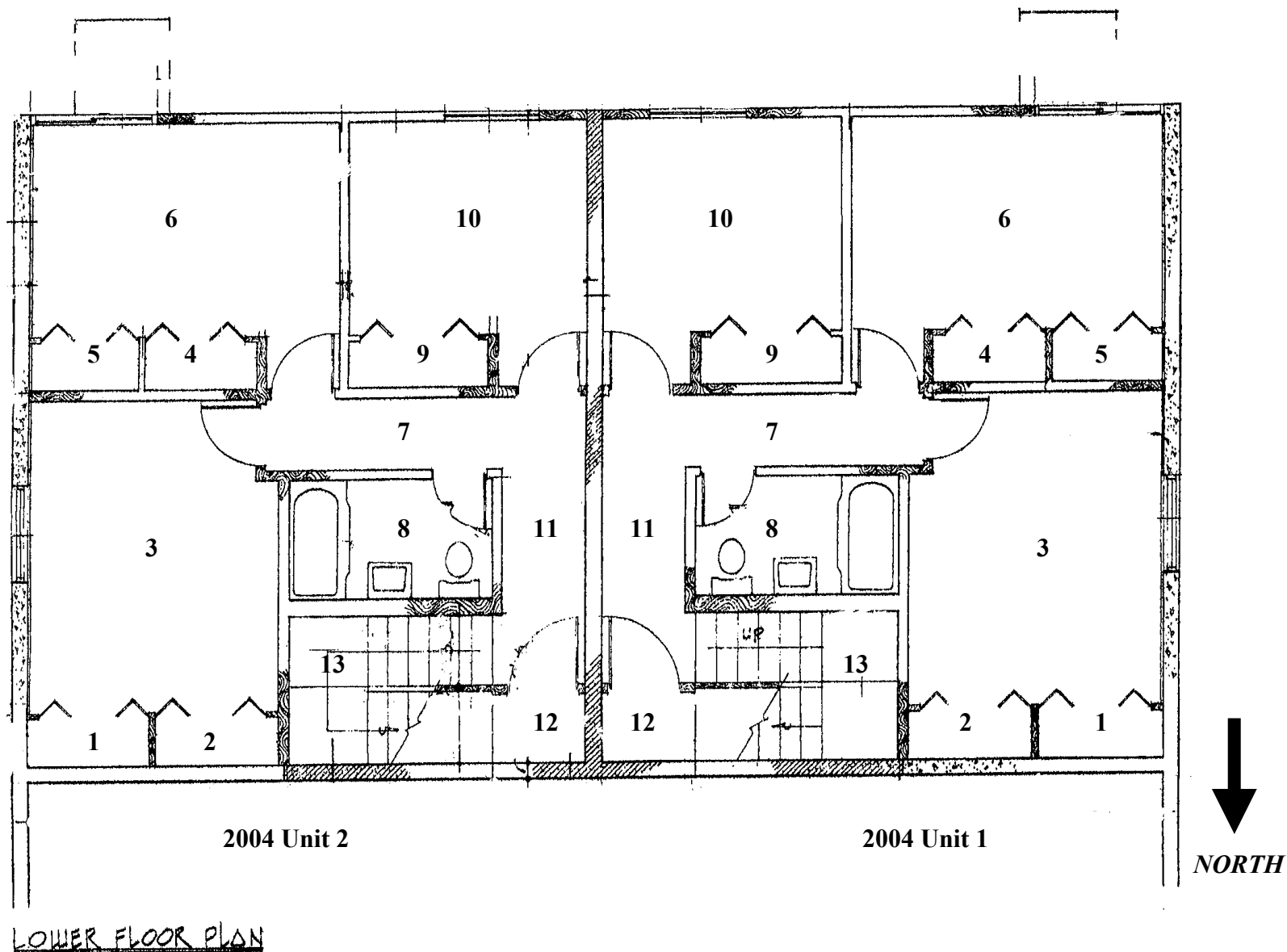
2004 Unit 2

2004 Unit 1

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ALBUQUERQUE AREA INDIAN HEALTH SERVICE
MESCALERO SERVICE UNIT
Mescalero, New Mexico

Functional Space Map
Buildings 2004, 2005, 2006
General Residential Complex
Upper Floor Plan

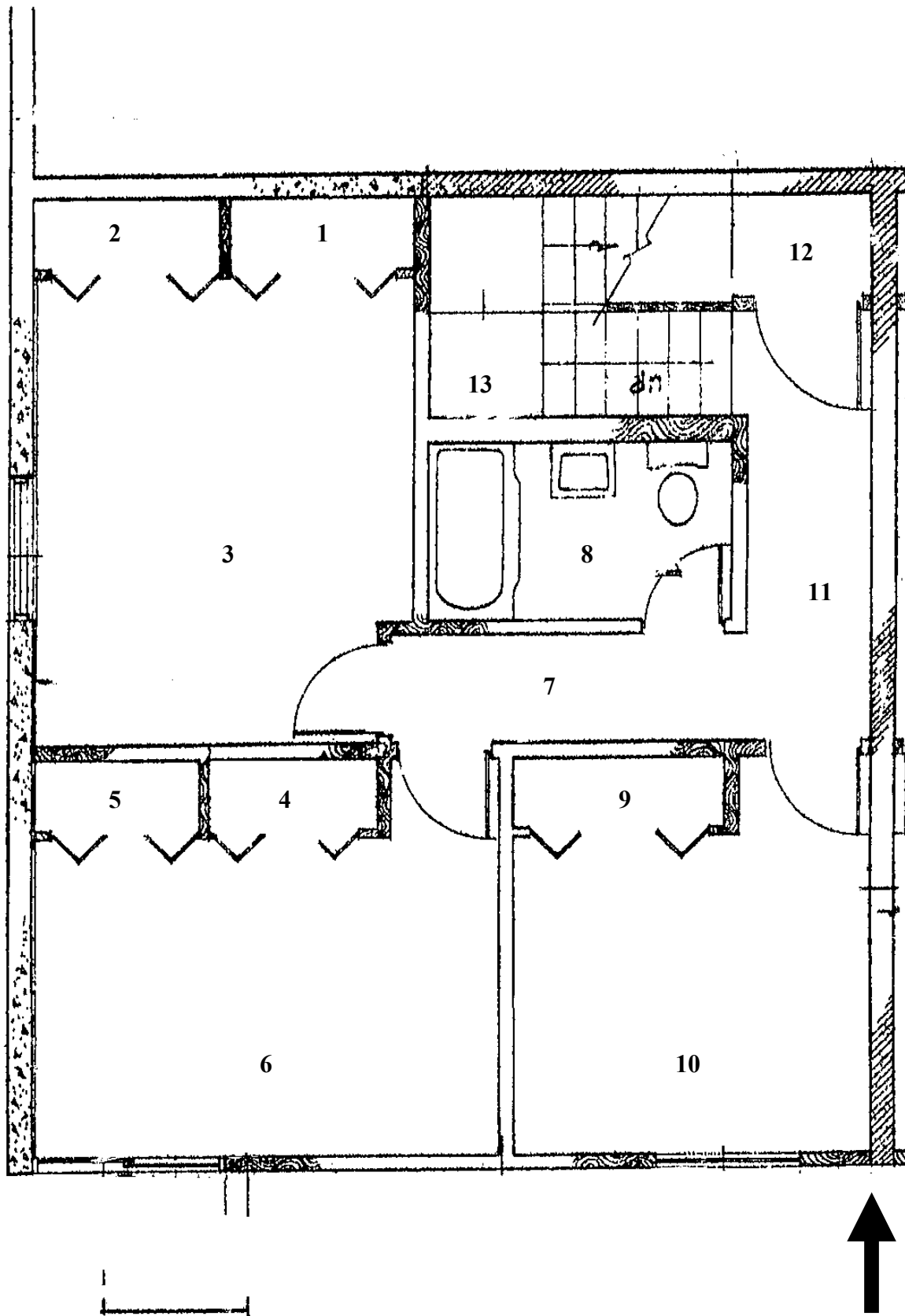


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ALBUQUERQUE AREA INDIAN HEALTH SERVICE
MESCALERO SERVICE UNIT
Mescalero, New Mexico

Functional Space Map
Buildings 2004, 2005, 2006
General Residential Complex
Lower Floor Plan



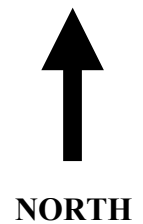
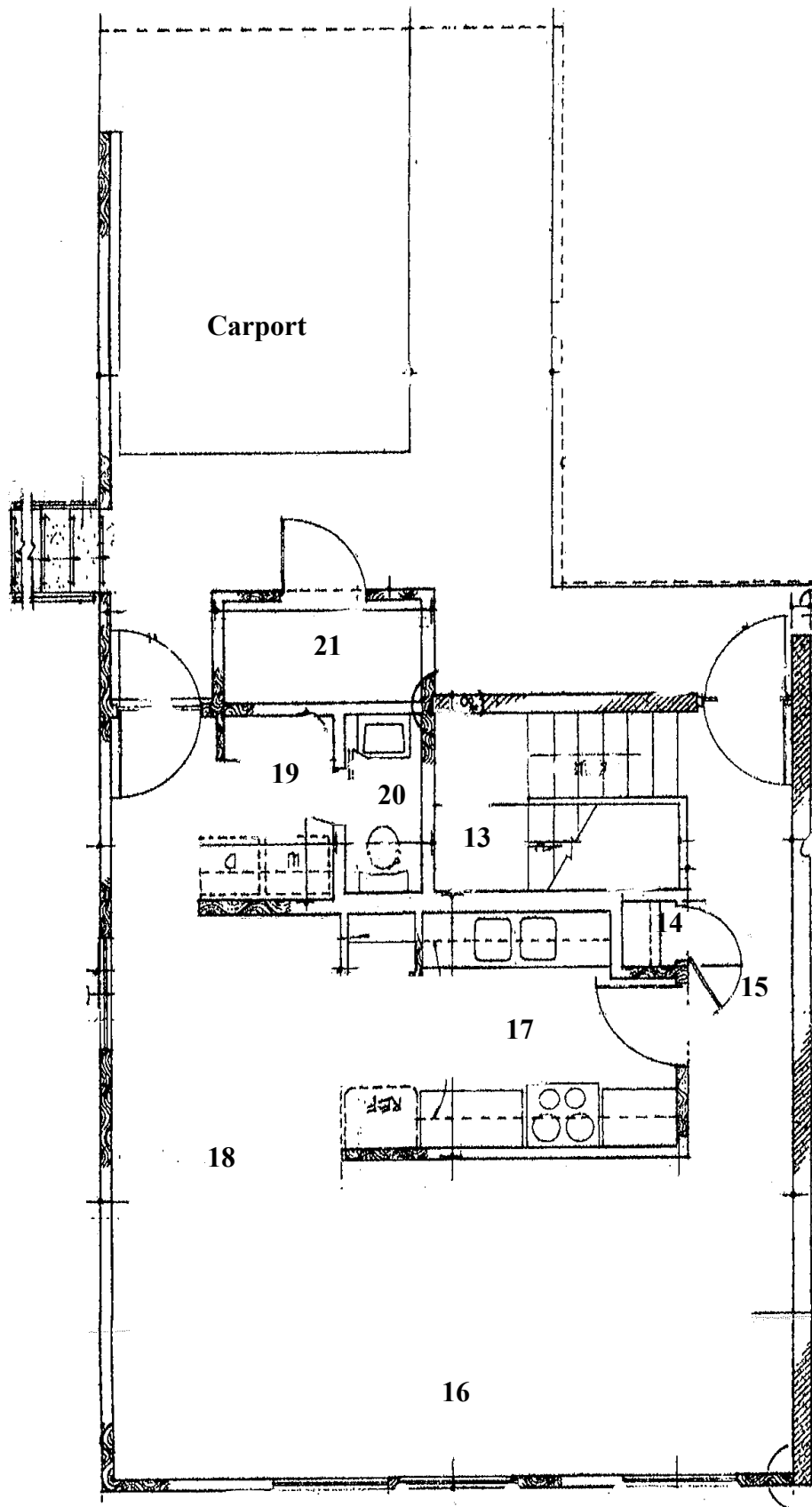
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Project:

ALBUQUERQUE AREA INDIAN HEALTH SERVICE
MESCALERO SERVICE UNIT
Mescalero, New Mexico

Functional Space Map
Building 2007
3 Bedrooms
Upper Floor Plan

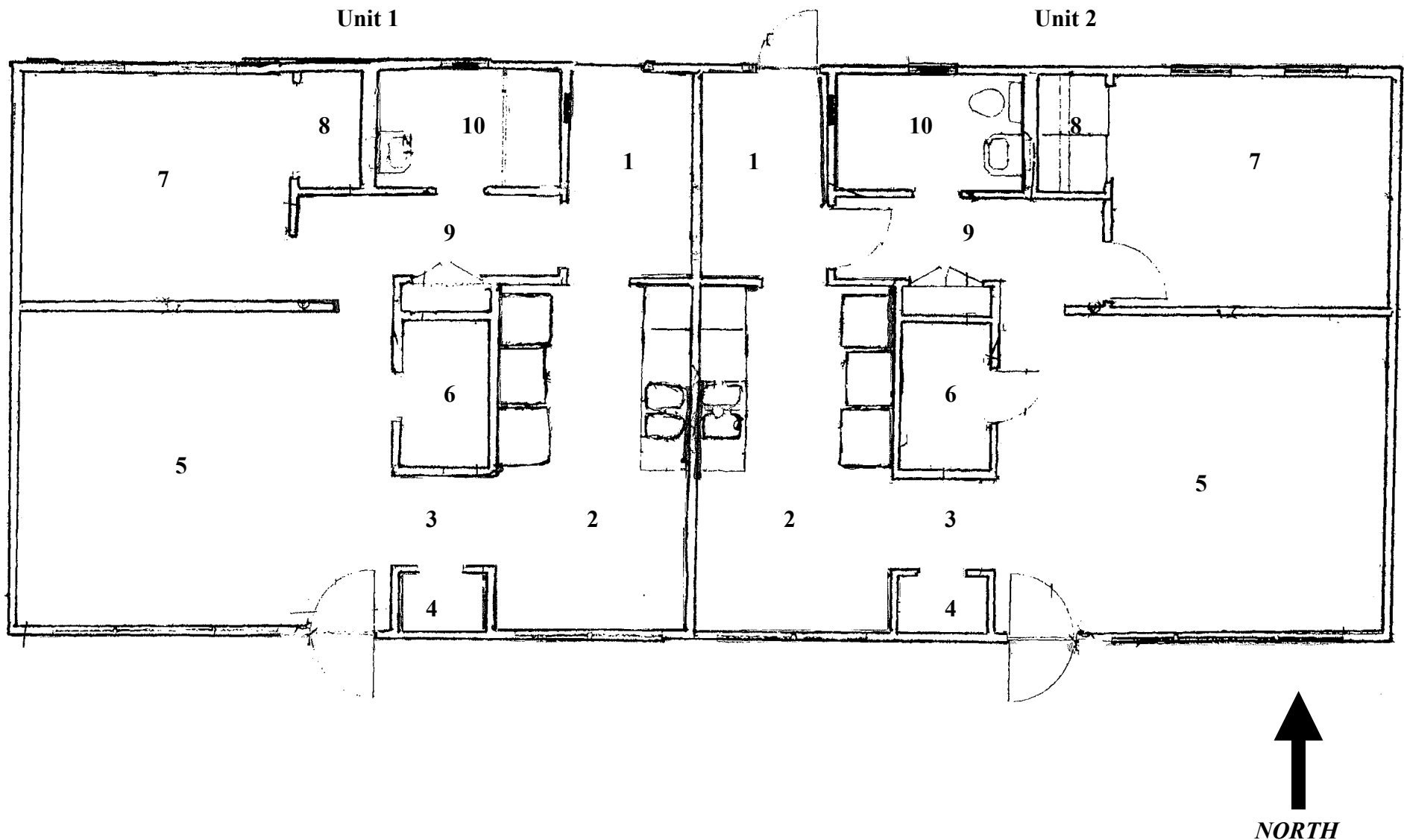


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MESCALERO SERVICE UNIT
Mescalero, New Mexico

Functional Space Map
Building 2007
3 Bedrooms
Lower Floor Plan

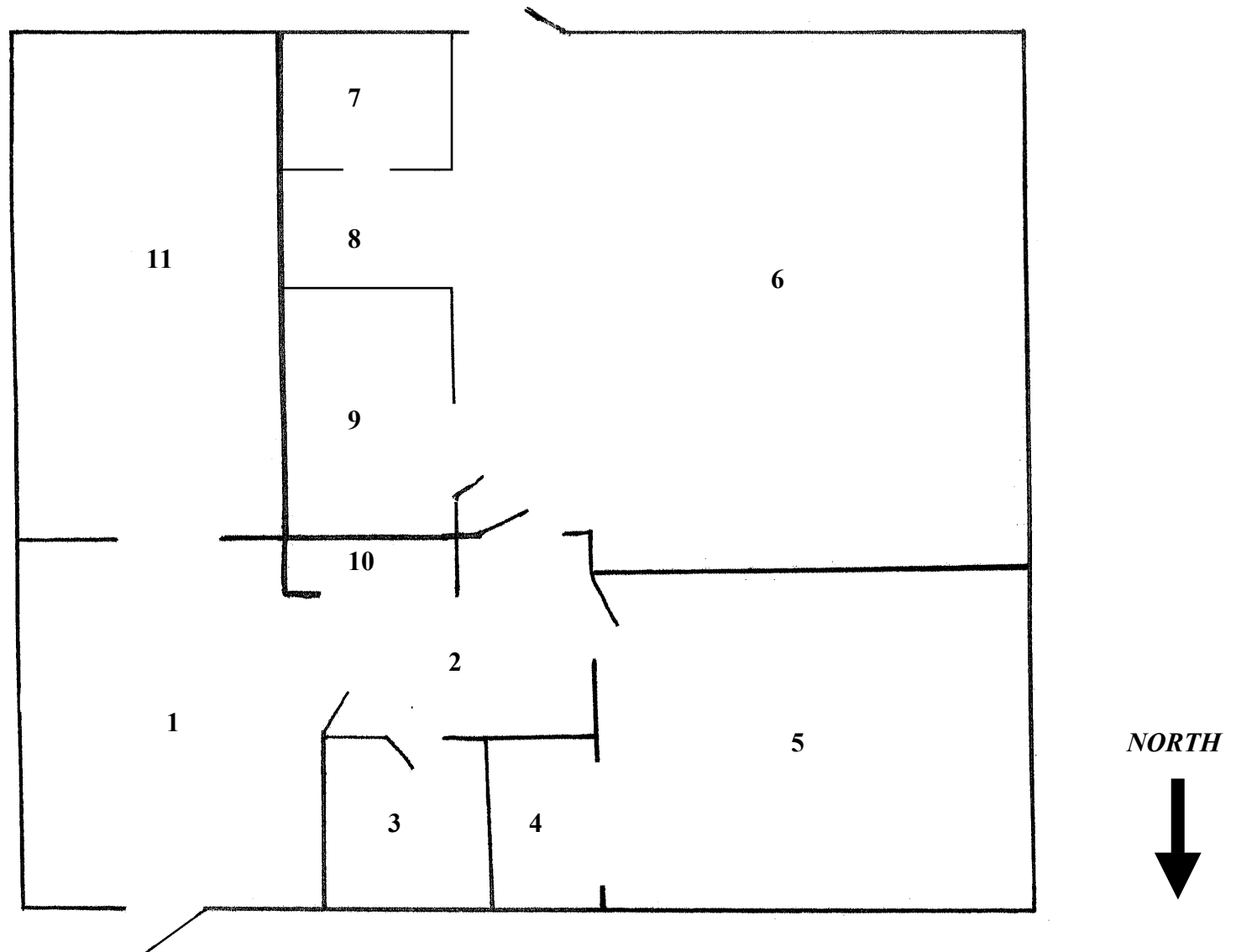


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MESCALERO SERVICE UNIT
Mescalero, New Mexico

Functional Space Map
Building 2008
General Residence Complex

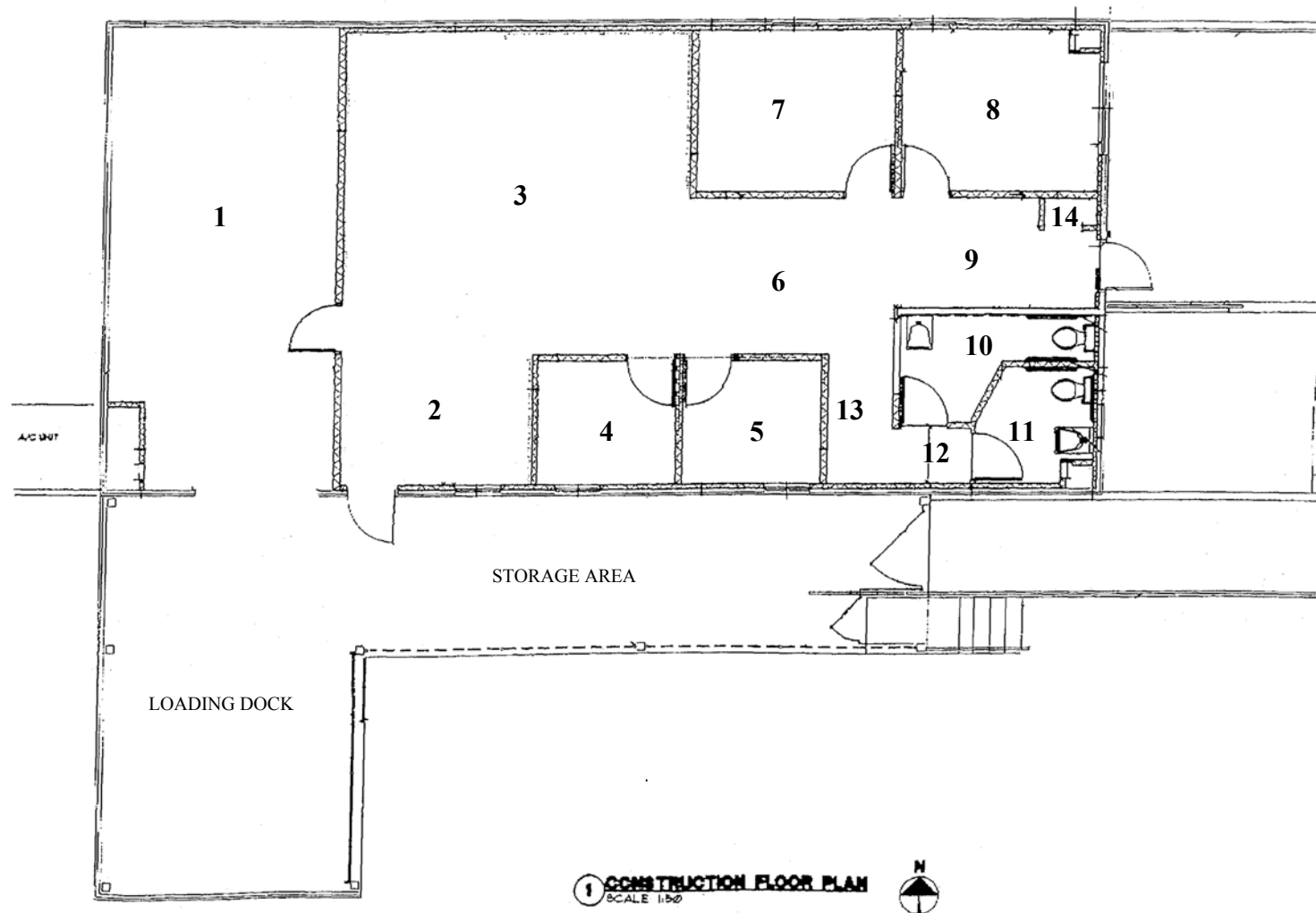


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ALBUQUERQUE AREA INDIAN HEALTH SERVICE
MESCALERO SERVICE UNIT
Mescalero, New Mexico

Functional Space Map
Building 2009
Optometry
1500sf

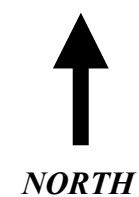
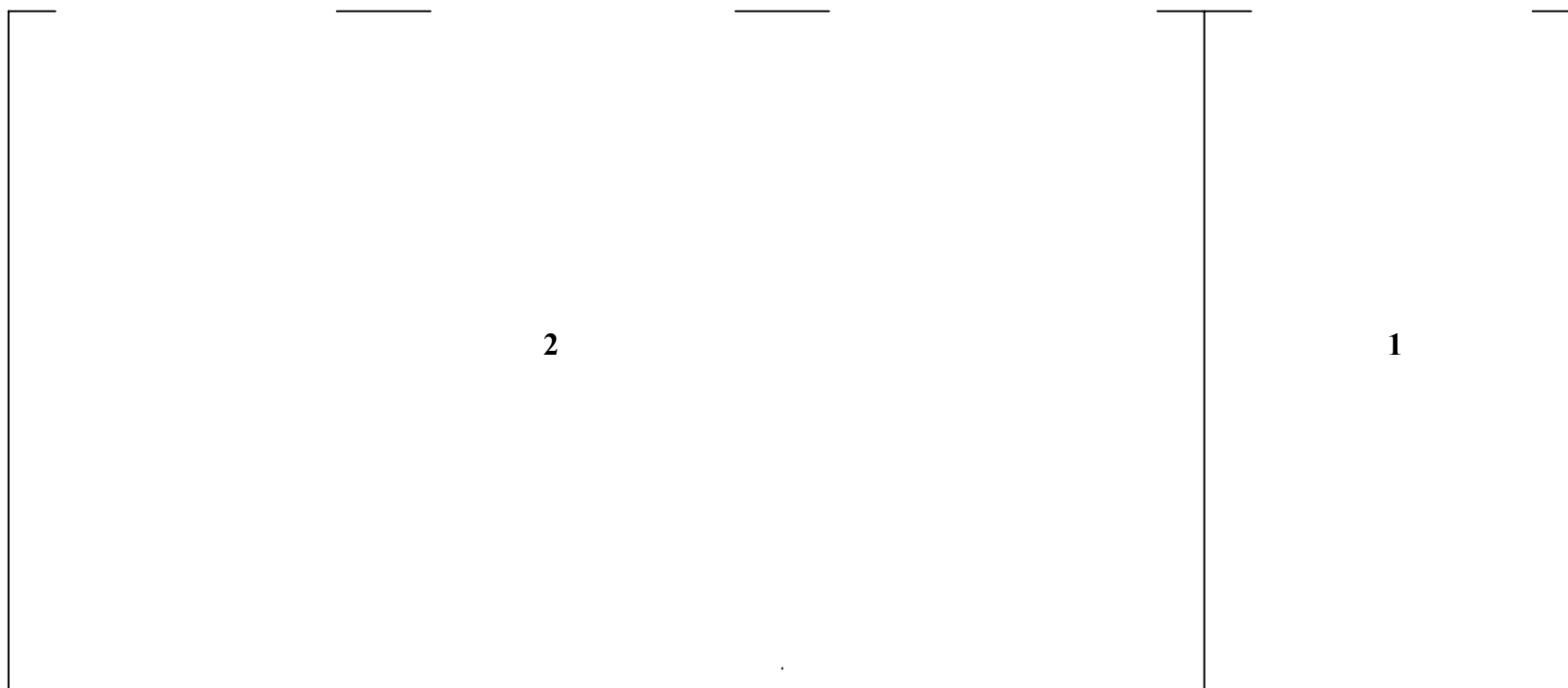


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MESCALERO SERVICE UNIT
Mescalero, New Mexico

Functional Space Map
Building 2010
Administration



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MESCALERO SERVICE UNIT
Mescalero, New Mexico

Functional Space Map
Building 2011
Maintenance Shop

APPENDIX 2
Bulk Sample Results and
Cost Estimates

**Building 2000
Bulk Sample Results
Mescalero Service Unit
September 05, 2007**

HA #	Material	Functional Space	ACM	Condition	Quantity
1A	Beige Pebble Sheet Vinyl Flooring	Throughout Except: 102A, 103, 104, 104A, 107, 110, 121, 122, 125, 131, 138, 144, 147, 148, 148A, 148B, 177, 178, 204, 205, 208, 212, 215, 225, 226, 227, 228, 229, 229A, 230, 242, 243, 245, 246, 247, 247A, 250, 258, 259B, 270, 278, 279	Yes: 5-10% Chrysotile	Good	9,951 sf
1B	12"x12" Dark Brown/Tan Floor Tile & Mastic	147	No	Good	361 sf
1C	Blue Grout	144, 259B	No	Good	40 sf
1D	Blue Pattern Ceramic Tile Grout	107, 110, 204, 205, 215	No	Good	317 sf
1E	12"x12" Beige Square Pattern Floor Tile & Grout	138	No	Good	90 sf
1F	White Sheet Vinyl Flooring	121, 122	No	Good	258 sf
1G	12"x12" Maroon Floor Tile & Mastic	125	No	Good	156 sf
1H	Beige Grout	123, 124	No	Good	92 sf
1I	Gray Grout	177, 178, 208, 212, 242, 243, 244, 245, 246, 247, 247A, 250, 259B, 278, 279	No	Good	2,237 sf
1J	Tan Carpet Mastic	102A, 103, 270	Yes: 2-5% Chrysotile	Good	1,090 sf
1K	12"x12" White/Gray Floor Tile & Mastic	104, 104A, 131, 230, 258	Yes: 1-2% Chrysotile Mastic Only	Good	596 sf
1L	12"x12" Light Brown Floor Tile & Mastic	225, 226, 227, 228	No	Good	496 sf
1M	12"x12" Blue Floor Tile & Mastic	229, 229A	No	Good	180 sf

HA #	Material	Functional Space	ACM	Condition	Quantity
2A	Gypsum Drywall	102, 102B, 127, 130, 147, 148, 148A, 148B, 149, 151D Corridor, Interview Room, 204, 225, 226, 227, 228, 229A, 230, South Corridor 2 nd Floor, 269, 279	No	Good	5,551 sf
2B	Joint Compound	102, 102B, 127, 130, 147, 148, 148A, 148B, 149, 151D Corridor, Interview Room, 204, 225, 226, 227, 228, 229A, 230, South Corridor 2 nd Floor, 269, 279	Yes: 1-2% Chrysotile	Good	5,551 sf
2C	Texture 1	102, 102B, , 127, 147, 148, 149, 150, 161, 151D Corridor, 225, 229A, 258, 269, 279	Yes: 1-2% Chrysotile	Good	1,702 sf
2D	Texture 2	148A, 226, 227, 228, 230	No	Good	1,980 sf
2E	Skim Coat	Throughout	No	Good	65,485 sf
2F	Brown Coat	Throughout	No	Good	65,485 sf
2G	Stucco	Exterior	No	Good	232 sf
2H	Brick	148 & Exterior	No	Good	3,777 sf
2I	Mortar	148 & Exterior	No	Good	3,777 sf
2J	Texture 3	Exterior	No	Good	600 sf
2K	White Ceramic Wall Tile Grout	102, 107, 110, 144, 177, 178, 204, 205, 208, 215, 217, 243, 258, 259B	No	Good	3,229 sf
2L	1/2"x1/2" Decorative Ceramic Wall Tile	102, 175A	No	Good	139 sf
2M	Stone Mortar	Exterior	No	Good	15,000 sf
3A	2'x4' White Fissured & Pinhole Ceiling Tile	Throughout Except: 102B, 106, 117, 118, 138, 155, 169, 170, 171, 211, 213, 219, 238, 242, 244, 245, 264, 259, 259A	No	Good	8,700 sf
3B	2'x4' White Pinhole Ceiling Tile	102B, 106, 138, 155, 169, 170, 171, 211, 213, 219, 259, 259A	No	Good	1,471 sf
3C	2'x4' Fiberboard	117, 118, 238, 242, 244, 245, 264	No	Good	1,340 sf

HA #	Material	Functional Space	ACM	Condition	Quantity
5A	TSI Hard Pack Elbow (Old)	Plenum Throughout	Yes: 2-5% Chrysotile	Good	255 Elbows
5B	TSI Hard Pack (New)	148	No	Good	10 sf
7A	Brown Covebase Mastic	130, 138, 147, 225	No	Good	261 sf
7B	Beige Covebase Mastic	104A, 229A, 230	No	Good	585 sf
7C	White Ceramic Tile Window Grout	105, 108, 109, 152, 153, 154, 155, 207, 211, 213, 216, 219, 222, 227, 228, 238, 245, 268, 270, 274, 277, 279, 280	No	Good	170 sf
7D	Interior Door Caulk	113	No	Good	10 sf
7E	Black Mastic	Penthouse Plenum (On Duct Seams)	Yes: 10-20% Chrysotile	Good	2,100 sf
7F	White Sink Undercoat	133, 166	Yes: 1-2% Chrysotile	Good	3 sinks
7G	Black Sink Undercoat	107, 169, 170, 171, 205, 269	Yes: 10-20% Chrysotile	Good	8 sinks
7H	White Interior Caulk	107, 117, 130, 205, 214, 215, 217, 243, 269, Elevator	No	Good	159 sf
7I	Expanding Caulk	Exterior	No	Good	140 sf
7J	White Exterior Caulk	Exterior	No	Good	170 sf
7K	Black Exterior Caulk (Door Frame)	Exterior	No	Good	10 sf
8A	Roof Core	Exterior	No	Good	4,339 sf
8B	Black Penetration Mastic	Exterior	No	Good	70 sf

Building 2000
Programming Cost Estimate
Mescalero Service Unit

Asbestos-Containing Material	Quantity of Material (sf)	Unit Cost (per sf)	Logistical Markup	Price
Beige Pebble Sheet Vinyl Flooring	9,951 sf	\$4.50	18%	\$52,839.81
12"X12" White/Gray Floor Tile & Mastic	596 sf	\$3.00	18%	\$2,109.84
Tan Carpet Mastic	1,090 sf	\$3.50	18%	\$4,501.70
Joint Compound	5,551 sf	\$3.00	18%	\$19,650.54
Texture 1	1,702 sf	\$3.00	18%	\$6,025.08
TSI Hard Pack Elbow (Old)	255 Elbows	\$25.00	18%	\$7,522.50
Black Mastic	2,100 sf	\$3.50	18%	\$8,673.00
White Sink Undercoat	3 sinks	\$200.00	18%	\$708.00
Black Sink Undercoat	8 sinks	\$200.00	18%	\$1,888.00
Total				\$103,918.47

Building 2001
Bulk Sample Results
Mescalero Service Unit
August 21, 2007

HA #	Material	Functional Space	ACM	Condition	Quantity
1A	White Sheet Vinyl Flooring	3, 4	No	Good	160 sf
1B	12"x12" Tan Floor Tile & Mastic	3, 4	Yes: 2-5% Chrysotile Black Mastic	Good	160 sf
1C	12"x12" White/Gray Speckled Floor Tile & Mastic	5, 17, 18	Yes: >1-2% Chrysotile Floor Tile Yes: 2-5% Chrysotile Black Mastic	Good	452 sf
1D	9"x9" Maroon Floor Tile & Mastic	7-15	Yes: 2-5% Chrysotile Floor Tile Yes: 5-10% Chrysotile Black Mastic	Good	573 sf
1E	Stone Sheet Vinyl Flooring	6	No	Good	55 sf
1F	Tan Carpet Mastic	1, 2	No	Good	264 sf
2A	Gypsum Drywall	Throughout	No	Good	5,996 sf
2B	Joint Compound	Throughout	No	Good	5,996 sf
2C	Texture	Throughout	No	Good	5,996 sf
2D	Stucco	Exterior	No	Good	1,528 sf
7A	White Sink Undercoat	4	No	Good	2 Sinks
7B	Tan Covebase Mastic	6	No	Good	10 sf
7C	White Interior Caulk	4, 6	No	Good	14 sf
7D	Brown Exterior Caulk	Exterior	No	Good	20 sf
7E	Hard Pack Insulation Elbows	17	Yes: 10-20% Chysotile	Good	1 elbow
8A	Brown Shingles and Felt	Exterior	No	Good	2,048 sf
8B	Black Penetration Mastic	Exterior	Yes: 5-10% Chrysotile	Good	19 sf

Building 2001
Programming Cost Estimate
Mescalero Service Unit

Asbestos-Containing Material	Quantity of Material (sf)	Unit Cost (per sf)	Logistical Markup	Price
Floor Tile & Mastic	1185 sf	\$3.00	18%	\$4,194.90
TSI- Hard Pack Elbows	1 elbow	\$25.00	18%	\$ 29.50
Roof Penetration Mastic	19 sf	\$20.00	18%	\$ 448.40
Total				\$4,672.80

**Building 2002
Bulk Sample Results
Mescalero Service Unit
August 20, 2007**

HA #	Material	Functional Space	ACM	Condition	Quantity
1A	9"x9" Tan Floor Tile and Mastic	4, 6-14, 17	Yes: 2-5% Chrysotile Floor Tile Yes: 5-10% Chrysotile Black Mastic	Good	1,400 sf
1B	Stone Sheet Vinyl Flooring	2, 3, 5, 17	No	Good	321 sf
1C	Leveling Compound	3, 5, 17	No	Good	300 sf
1D	Beige Sheet Vinyl Flooring	1	No	Good	385 sf
1E	12"x12" Beige Floor Tile and Mastic	1	Yes: >1-2% Chrysotile Floor Tile	Good	385 sf
2A	Drywall	Throughout	No	Good	5,996 sf
2B	Joint Compound	Throughout	No	Good	5,996 sf
2C	Texture 1	Throughout Except: 15	No	Good	5,298 sf
2D	Texture 2	15	No	Good	164 sf
2E	Stucco	Exterior	No	Good	1,578 sf
3A	Spray-On Acoustical Ceiling	2-4, 12, 17	No	Good	648 sf
7A	Tan Covebase Mastic	2, 3, 5-11, 13, 14, 16	No	Good	81 sf
7B	Interior Caulk	3, 5	No	Good	12 sf
7C	Exterior Caulk	Exterior	No	Good	24 sf
8A	Brown Shingles and Felt	Roof	No	Good	2,048 sf
8B	Black Penetration Mastic	Roof	Yes: 5-10% Chrysotile	Good	15 sf

**Building 2002
Programming Cost Estimate
Mescalero Service Unit**

Asbestos-Containing Material	Quantity of Material (sf)	Unit Cost (per sf)	Logistical Markup	Price
Floor Tile and Mastic	1,785 sf	\$3.00	18%	\$6,318.90
Black Penetration Mastic	15 sf	\$20.00	18%	\$ 354.00
Total				\$6,672.90

**Building 2003
Bulk Sample Results
Mescalero Service Unit
August 17, 2007**

HA #	Material	Functional Space	ACM	Condition	Quantity
1A	Residual Black Mastic	2-14, 16-18	Yes: 2-5% Chrysotile	Good	1,106 sf
1B	Tan Carpet Mastic	1, 6-14, 17, 18	No	Good	1,023 sf
1C	Beige Sheet Vinyl Flooring	2- 5	No	Good	347 sf
2A	Gypsum Drywall	Throughout	No	Good	6,049 sf
2B	Joint Compound	Throughout	No	Good	6,049 sf
2C	Texture 1	Throughout Except: 1	Yes: 1-2% Chrysotile	Good	5,041 sf
2D	Texture 2	1, 17, 18	No	Good	656 sf
2E	Stucco	Exterior	Yes: >1-2% Chrysotile	Good	1,578 sf
3A	2' x 4' Fissured/Pinhole Ceiling Tile	1	No	Good	264 sf
7A	Black Sink Undercoat	3	Yes: >1-2% Chrysotile	Good	1 Sink
7B	White Interior Caulk	3, 5	No	Good	15 sf
7C	White Exterior Caulk	Exterior	No	Good	12 sf
7D	Hard Pack Insulation Elbow	16	Yes: 10-20% Chrysotile	Good	1 Elbow
7E	Black Vapor Paper	Exterior	No	Good	1,578 sf
8A	Brown Shingles & Felt	Roof	No	Good	2,048 sf
8B	Black Penetration Mastic	Roof	Yes: 2-5% Chrysotile	Good	15 sf
8C	Brown Rolled Roofing & Felt	Roof	No	Good	259 sf

**Building 2003
Programming Cost Estimate
Mescalero Service Unit**

Asbestos-Containing Material	Quantity of Material (sf)	Unit Cost (per sf)	Logistical Markup	Price
Residual Black Mastic	1,106 sf	\$4.00	18%	\$5,220.32
Texture 1	5,041 sf	\$3.00	18%	\$17,845.14
Stucco	1,578 sf	\$5.00	18%	\$9,310.20
Sink Undercoating	1 sink	\$200.00	18%	\$ 236.00
Hard Pack Insulation Elbow	1 elbow	\$25.00	18%	\$ 29.50
Roof Penetration Mastic	15 sf	\$20.00	18%	\$ 354.00
Total				\$32,995.16

**Building 2004
Bulk Sample Results
Mescalero Service Unit
August 22, 2007**

HA #	Material	Functional Space	ACM	Condition	Quantity
1A	White & Diamond Pattern Sheet Vinyl Flooring	Unit 2: 14-20	No	Good	644 sf
1B	Fiberboard Flooring	Unit 1:15-20 Unit 2: 14-20	No		1,288 sf
1C	9"x9" Tan/Grey Speckled Floor Tile & Mastic	Unit 1: 13 Unit 2: 13	Yes: 2-5% Chrysotile Floor Tile	Good	72 sf
1D	9"x9" Green Floor Tile & Mastic	Unit 1&2: 1-7, 9-12	Yes: 2-5% Chrysotile Floor Tile Yes: <=1% Chrysotile Black Mastic	Good	1,184 sf
1E	Gray Tile Grout	Unit 2: 8	No	Good	36 sf
1F	Tan & Beige Speckled Sheet Vinyl Flooring	Unit 1: 8, 15-20	No	Good	703 sf
1G	9"x9" Beige Floor Tile & Mastic	Unit 1 & 2: 13	Yes: 2-5% Chrysotile Floor Tile	Good	16 sf
2A	Gypsum Drywall	Throughout	No	Good	11,234 sf
2B	Joint Compound	Throughout	No	Good	11,234 sf
2C	Texture	Throughout	No	Good	11,234 sf
2D	Brick	Unit 1&2: 10-12, 15, 16	No	Good	610 sf
2E	Mortar	Unit 1&2: 10-12, 15, 16	No	Good	610 sf
7A	Beige Covebase Mastic	Unit 1: 8, 14, 16-20, 22 Unit 2: 8, 14-20, 22	No	Good	59 sf
7B	White Sink Undercoat	Unit 2: 17	No	Good	2 sinks
7C	White Interior Caulk	Unit 1: 8, 17 Unit 2: 3, 8, 17	No	Good	14 sf
7D	White Heater Caulk	Unit 1: 10, 11, 12, 15	No	Good	18 sf
7E	Exterior Caulk	Exterior	No	Good	16 sf
7F	Hard Pack Insulation Elbows	Unit 1: 12, 13, 21 Unit 2: 1, 12, 13, 21	Yes: 2-5% Chrysotile	Good	34 elbows

HA #	Material	Functional Space	ACM	Condition	Quantity
8A	Brown Shingles and Felt	Roof	No	Good	1,976 sf
8B	Brown Rolled Roofing	Roof	No	Good	714 sf
8C	Black Penetration Mastic	Roof	Yes: 5-10% Chrysotile	Good	25 sf

Building 2004
Programming Cost Estimate
Mescalero Service Unit

Asbestos-Containing Material	Quantity of Material (sf)	Unit Cost (per sf)	Logistical Markup	Price
Floor Tile & Mastic	1,272 sf	\$3.00	18%	\$4,502.88
Hard Pack Insulation Elbows	34 elbows	\$25.00	18%	\$1,003.00
Roof Penetration Mastic	25 sf	\$20.00	18%	\$ 590.00
Total				\$6,095.88

Building 2005
Bulk Sample Results
Mescalero Service Unit
August 22, 2007

HA #	Material	Functional Space	ACM	Condition	Quantity
1A	12"x12" Beige/Gray Speckled Floor Tile and Mastic	Unit 1: 14-20 Unit 2: 15, 16, 18	No	Good	1062 sf
1B	9"x9" Green Floor Tile and Mastic	Unit 1: 1, 2, 4, 5, 9 Unit 2: 7, 8, 11, 12, 14	Yes: 2-5% Chrysotile Floor Tile	Good	254 sf
1C	White/Beige Square Sheet Vinyl Flooring	Unit 2: 8, 17, 19, 20, 22	No	Good	244 sf
1D	Yellow Sheet Vinyl Flooring	Unit 1&2: 13	No	Good	72 sf
1E	9"x9" Beige/Gray Speckled Floor Tile and Mastic	Unit 1&2: 13	Yes: 2-5% Chrysotile Floor Tile	Good	40 sf
1F	12"x12" Tan/Gray Speckled Floor Tile and Mastic	Unit 1: 3, 6, 7, 10, 11, 12 Unit 2: 1-6, 10, 17	No	Good	1,032 sf
1G	Maroon Stone Square Sheet Vinyl Flooring	Unit 1: 8, 14, 15, 19, 20	No	Good	188 sf
1H	Beige Square Pattern Sheet Vinyl Flooring	Unit 1: 12, 16-18	No	Good	536 sf
1I	12"x12" Beige Square Pattern Floor Tile and Mastic	Unit 1: 9, 12	No	Good	66 sf
1J	White/Blue Square Pattern Sheet Vinyl Flooring	Unit 1: 4-6	No	Good	163 sf
2A	Drywall	Throughout	No	Good	11,234 sf
2B	Joint Compound	Throughout	No	Good	11,234 sf
2C	Texture	Throughout	No	Good	11,234 sf
2D	Brick	Unit 1&2: 10-13, 15, 16	No	Good	610 sf
2E	Mortar	Unit 1&2: 10-13, 15, 16	No	Good	610 sf
7A	Beige Covebase Mastic	Unit 1: 8, 19, 20	No	Good	21 sf
7B	White Interior Caulk	Unit 1: 8, 17 Unit 2: 8, 17, 20	No	Good	14 sf
7C	White Exterior Caulk	Exterior	No	Good	12 sf
7D	Old White Exterior Caulk	Exterior	No	Good	4 sf
7E	Hard Pack Insulation Elbows	Unit 1: 1, 12, 21 Unit 2: 21	Yes: >1-2% Chrysotile	Good	32 elbows

HA #	Material	Functional Space	ACM	Condition	Quantity
8A	Brown Shingles and Felt	Roof	No	Good	1,976 sf
8B	Brown Rolled Roofing and Felt	Roof	No	Good	714 sf
8C	Black Penetration Mastic	Roof	Yes: 5-10% Chrysotile	Good	25 sf

Building 2005
Programming Cost Estimate
Mescalero Service Unit

Asbestos-Containing Material	Quantity of Material (sf)	Unit Cost (per sf)	Logistical Markup	Price
Floor Tile	294 sf	\$3.00	18%	\$1,040.76
TSI- Hard Pack Elbows	32 elbows	\$25.00	18%	\$ 944.00
Roof Penetration Mastic	25 sf	\$20.00	18%	\$ 590.00
Total				\$2,574.76

**Building 2006
Bulk Sample Results
Mescalero Service Unit
August 21, 2007**

HA #	Material	Functional Space	ACM	Condition	Quantity
1A	9"x9" Green Floor Tile and Mastic	Unit 1: 1-5, 7, 9-12, 14-16, 18 Unit 2: 1-7, 9-12, 14-16, 18	Yes: 2-5% Chrysotile Floor Tile Yes: <=1% Chrysotile Black Mastic	Good	1,913 sf
1B	12"x12" White Floor Tile and Mastic	Unit 1: 6	Yes: 2-5% Chrysotile Floor Tile Yes: <=1% Chrysotile Yellow Mastic	Good	143 sf
1C	Gray Grout	Unit 1&2: 8	No	Good	36 sf
1D	White Sheet Vinyl Flooring	Unit 1: 17, 19, 20 Unit 2: 17, 19, 22	No	Good	544 sf
1E	Beige Sheet Vinyl Flooring	Unit 1: 17	No	Good	120 sf
1F	Stone Sheet Vinyl Flooring	Unit 2: 17, 19, 20, 22	No	Good	208 sf
2A	Drywall	Throughout	No	Good	11,234 sf
2B	Joint Compound	Throughout	No	Good	11,234 sf
2C	Texture	Throughout	No	Good	11,234 sf
2D	Brick	Unit 1&2: 10-13, 15, 16	No	Good	610 sf
2E	Mortar	Unit 1&2: 10-13, 15, 16	No	Good	610 sf
7A	White Sink Undercoat	Unit 2: 17	No	Good	2 sinks
7B	White Interior Caulk	Unit 1: 8, 17, 20 Unit 2: 8, 17	No	Good	18 sf
7C	White Exterior Caulk	Exterior	No	Good	12 sf
7D	Hard Pack Insulation Elbows	Unit 1&2: 2, 12, 21	Yes: 2-5% Chrysotile Yes: >1-2% Crocidolite	Good	31 elbows
7E	Beige Covebase Mastic	Unit 1&2: 8, 19, 20, 22	No	Good	50 sf

HA #	Material	Functional Space	ACM	Condition	Quantity
8A	Brown Shingles and Felt	Roof	No	Good	1,976 sf
8B	Black Penetration Mastic	Roof	Yes: 5-10% Chrysotile	Good	25 sf
8C	Brown Rolled Roofing and Felt	Roof	No	Good	714 sf

Building 2006
Programming Cost Estimate
Mescalero Service Unit

Asbestos-Containing Material	Quantity of Material (sf)	Unit Cost (per sf)	Logistical Markup	Price
Floor Tile & Mastic	2,056 sf	\$3.00	18%	\$7,278.24
Hard Pack Insulation Elbows	31 elbows	\$25.00	18%	\$ 914.50
Roof Penetration Mastic	25 sf	\$20.00	18%	\$ 590.00
Total				\$8,782.74

**Building 2007
Bulk Sample Results
Mescalero Service Unit
August 23, 2007**

HA #	Material	Functional Space	ACM	Condition	Quantity
1A	12"x12" Tan/Gray Speckled Floor Tile and Mastic	1-7, 9-12, 14-16, 18	No	Good	1,017 sf
1B	Beige Square Pattern Sheet Vinyl Flooring	12, 15, 17, 19, 20, 22	No	Good	208 sf
1C	Yellow Sheet Vinyl Flooring	13	No	Good	36 sf
1D	9"x9" Gray Floor Tile and Mastic	13	Yes: 5-10% Chrysotile Floor Tile	Good	24 sf
1E	White Sheet Vinyl Flooring	8	No	Good	54 sf
1F	White/Blue Square Sheet Vinyl Flooring	8	No	Good	54 sf
2A	Drywall	Throughout	No	Good	5,377 sf
2B	Joint Compound	Throughout	No	Good	5,377 sf
2C	Texture	Throughout	No	Good	5,377 sf
2D	Brick	10-13, 15, 16	No	Good	529 sf
2E	Brick Mortar	10-13, 15, 16	No	Good	529 sf
7A	Beige Covebase Mastic	8, 17, 20, 22	No	Good	26 sf
7B	White Interior Caulk	8, 17, 19, 20	No	Good	14 sf
7C	Black Sink Undercoating	17	Yes: 1-2% Chrysotile	Good	2 sinks
7D	Hard Packed Insulation Elbows	2, 12, 21	Yes: 2-5% Chrysotile Yes: <=1% Crocidolite	Good	20 elbows
7E	Exterior White Caulk	Exterior	No	Good	8 sf
8A	Brown Roof Shingles and Felt	Roof	No	Good	900 sf
8B	Brown Rolled Roofing and Felt	Roof	No	Good	340 sf
8C	Gray Penetration Mastic	Roof	Yes: 5-10% Chrysotile	Good	15 sf

Building 2007
Programming Cost Estimate
Mescalero Service Unit

Asbestos-Containing Material	Quantity of Material (sf)	Unit Cost (per sf)	Logistical Markup	Price
Floor Tile	24 sf	\$3.00	18%	\$ 84.96
Sink Undercoating	2 sinks	\$200.00	18%	\$ 472.00
Hard Pack Insulation Elbows	20 elbows	\$25.00	18%	\$ 590.00
Roof Penetration Mastic	15 sf	\$20.00	18%	\$ 354.00
Total				\$1,500.96

**Building 2008
Bulk Sample Results
Mescalero Service Unit
August 23, 2007**

HA #	Material	Functional Space	ACM	Condition	Quantity
1A	12"x12" Blue Floor Tile and Mastic	Unit 2: 1, 2, 9, 10	Yes: 2-5% Chrysotile Black Mastic	Good	249 sf
1B	12"x12" Tan/Gray Speckled Floor Tile and Mastic	Unit 1: 5-8 Unit 2: 3-8	No	Good	864 sf
1C	12"x12" Green Floor Tile and Mastic	Unit 1: 1-4, 9, 10	No	Good	277 sf
2A	Drywall	Throughout	No	Good	6,094 sf
2B	Joint Compound	Throughout	No	Good	6,094 sf
2C	Texture	Throughout	No	Good	6,094 sf
2D	Stucco	Exterior	No	Good	1,524 sf
7A	Beige Covebase Mastic	Unit 1: 1-6, 9, 10 Unit 2: 1, 2, 10, 9	No	Good	66 sf
7B	White Interior Caulk	Unit 1&2: 2, 10	No	Good	12 sf
7C	White Exterior Caulk	Exterior	No	Good	10 sf
7D	Brown Exterior Caulk	Exterior	No	Good	16 sf
8A	Brown Shingles and Felt	Roof	No	Good	1,953 sf
8B	Brown Rolled Roofing and Felt	Roof	No	Good	136 sf
8C	Black Penetration Mastic	Roof	Yes: 10-20% Chrysotile	Good	12 sf

**Building 2008
Programming Cost Estimate
Mescalero Service Unit**

Asbestos-Containing Material	Quantity of Material (sf)	Unit Cost (per sf)	Logistical Markup	Price
Floor Tile Mastic	249 sf	\$3.00	18%	\$ 881.46
Roof Penetration Mastic	12 sf	\$20.00	18%	\$ 283.20
Total				\$1,164.66

**Building 2009
Bulk Sample Results
Mescalero Service Unit
August 20, 2007**

HA #	Material	Functional Space	ACM	Condition	Quantity
1A	Gray Grout	Unit 1&2: 1, 3	No	Good	164 sf
1B	Carpet Mastic	Unit 1: 1, 2, 4-9, 11	No	Good	735 sf
1C	12"x12" Beige w/Gray Speckled Floor Tile & Mastic	Unit 1: 1, 2, 4-9, 11	No	Good	615 sf
1D	Fiberboard Floorings	Unit 1&2: 1, 3	No	Good	164 sf
1E	12"x12" Tan Floor Tile & Mastic	Unit 2: 2, 4-9	No	Good	471 sf
1F	White Sheet Vinyl Flooring	Unit 2: 1, 3, 11	No	Good	214 sf
2A	Gypsum Drywall	Throughout	No	Good	6,074 sf
2B	Joint Compound	Throughout	No	Good	6,074 sf
2C	Texture	Throughout	No	Good	6,074 sf
2D	Stucco	Exterior	No	Good	1,584 sf
7A	Tan Covebase Mastic	Unit 1: 1-6, 8, 11 Unit 2: 1, 3, 11	No	Good	99 sf
7B	Interior White Caulk	Unit 1: 3, 11 Unit 2: 3	No	Good	16 sf
7C	Exterior White Caulk	Exterior	No	Good	19 sf
8A	Brown Shingles and Felt	Roof	No	Good	2,015 sf
8B	Brown Rolled Roofing w/Felt	Roof	No	Good	234 sf

**Building 2010
Bulk Sample Results
Mescalero Service Unit
August 16, 2007**

HA #	Material	Functional Space	ACM	Condition	Quantity
1A	Beige Carpet Mastic	2-9, 13	No	Good	1,631 sf
1B	Gray Ceramic Tile Grout	9-12, 14	No	Good	205 sf
2A	Drywall	Throughout	No	Good	1,776 sf
2B	Joint Compound	Throughout	No	Good	1,776 sf
3A	2'x4' Fissured/Pinhole Ceiling Tiles	2-9, 13	No	Good	1,630 sf
7A	Beige Covebase Mastic	2-9, 12, 13	No	Good	74 sf
7B	White Ceramic Wall Tile Grout	10, 11	No	Good	608 sf
7C	White Sink Undercoating	9	No	Good	1 sink
7D	White Interior Caulk	9-11	No	Good	15 sf
7E	Gray HVAC Mastic	Exterior	No	Good	4 sf
7F	Black Window Caulk	Exterior	No	Good	18 sf
8A	Brown Rolled Roofing	Roof	No	Good	231 sf
8B	Roof Penetration Mastic	Roof	Yes: 10-20% Chrysotile	Good	84 sf

**Building 2010
Programming Cost Estimate
Mescalero Service Unit**

Asbestos-Containing Material	Quantity of Material (sf)	Unit Cost (per sf)	Logistical Markup	Price
Roof Penetration Mastic	84 sf	\$20.00	18%	\$1,982.40
Total				\$1,982.40

**Building 2011
Bulk Sample Results
Mescalero Service Unit
August 16, 2007**

HA #	Material	Functional Space	ACM	Condition	Quantity
1A	CMU	1, 2	No	Good	1,296 sf
1B	Mortar	1, 2	No	Good	1,296 sf
1C	Stucco	Exterior	No	Good	1,440sf
8A	Old Gray Roof Shingle w/Felt	Roof	No	Good	1,664 sf
8B	Gray Penetration Mastic	Roof	Yes: 2-5% Chrysotile	Good	2 sf

**Building 2011
Programming Cost Estimate
Mescalero Service Unit**

Asbestos-Containing Material	Quantity of Material (sf)	Unit Cost (per sf)	Logistical Markup	Price
Roof Penetration Mastic	2 sf	\$20.00	18%	\$ 47.20
Total				\$ 47.20

APPENDIX 3
Laboratory Results



Polarized Light Microscope (PLM) Analysis for Asbestos

JobNumber: 200707426

Client:

IHI ENVIRONMENTAL

(PHOENIX OFFICE)

4527 N 16th ST STE 105

PHOENIX, AZ

85016-0000

Office Phone: (602) 776-0300

FAX: (602) 776-0301

Samples: 144 **PLM** **Rec:** 8/28/2007 **Method:** Interim (EPA/600/M4-82-020) **PLM analysis for asbestos in bulk smp**

Client Job: IHS-Mescalero Bldg# 2000

PO Number: 07P-3031

Report Date: 10/1/2007

Date Analyzed: 9/27/2007

Routing Number: -

Method and Analysis Information:

Fiberquant Internal SOP: PLMi

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, NESHAP and OSHA regulations designate a result of $\leq 1\%$ 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 Interim Method (EPA Method 600/M4-82-020). 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 $\leq 1\%$ asbestos are point counted using 400 points, and the results listed on the detail analysis sheet. Such point counting is required by NESHAP (National Emission Standards for Hazardous Air Pollutants, Nov. 1990) in order to rely on analytical results that are $\leq 1\%$. 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 $\leq 1\%$ as "borderline negative", and results where asbestos was $> 1\%$ but $\leq 2\%$ as "borderline positive" to indicate the uncertainty in assigning a "positive" or "negative" label. In the sample summary, a "ND" means that no asbestos was detected during the analysis. A "Tr" or "Trace" of asbestos is defined for our purposes as the detection of several asbestos fibers during the analysis; an amount essentially at the limit of detection for the method. 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 is a degreed geologist or mineralogist, 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 monthly. 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 (#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.

The "Analysis Results" below are the averages for all layers of each sample listed. The "+ Layer" column indicates whether any of the layers in the sample were >1% asbestos. Please refer to each detailed analysis sheet to determine which layer(s) of a sample was(were) positive.

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:

Single layer sample analysis as per client request. Any material or layer other than that indicated on the chain of custody was not analyzed, even if a suspect material.

The samples listed as 1I1-25, 1I2-26... to 1M3-39 on the COC were labelled 1I1-24, 1I2-25...to 1M3-38 on the sample bags.

PLM Analysis Summary:

Job Number:

200707426

IHS-Mescalero Bldg# 2000

Sample Number			Lab Number	Apparent Sample Type *	Positive Layer Yes or No
Layer	Color	Apparent Layer Type *	Asbestos Results		
Sample #	<u>IHS-M-2000-1A1-1</u>		2007-07426- 1	Flooring	Positive Layer? Yes
Layer # 1	off-white	sheet floor		2-5% chrysotile asbestos	
Sample #	<u>IHS-M-2000-1A2-2</u>		2007-07426- 2	Flooring	Positive Layer? Yes
Layer # 1	off-white	sheet floor		5-10% chrysotile asbestos	
Sample #	<u>IHS-M-2000-1A3-3</u>		2007-07426- 3	Flooring	Positive Layer? Yes
Layer # 1	off-white	sheet floor		2-5% chrysotile asbestos	
Sample #	<u>IHS-M-2000-1B1-4</u>		2007-07426- 4	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile		no asbestos detected	
Layer # 2	Yellow	mastic		no asbestos detected	
Sample #	<u>IHS-M-2000-1B2-5</u>		2007-07426- 5	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile		no asbestos detected	
Layer # 2	Yellow	mastic		no asbestos detected	
Sample #	<u>IHS-M-2000-1B3-6</u>		2007-07426- 6	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile		no asbestos detected	
Sample #	<u>IHS-M-2000-1C1-7</u>		2007-07426- 7	Cementitious	Positive Layer? No
Layer # 1	White	grout		no asbestos detected	
Sample #	<u>IHS-M-2000-1C2-8</u>		2007-07426- 8	Cementitious	Positive Layer? No
Layer # 1	White	grout		no asbestos detected	
Sample #	<u>IHS-M-2000-1C3-9</u>		2007-07426- 9	Cementitious	Positive Layer? No
Layer # 1	White	grout		no asbestos detected	
Sample #	<u>IHS-M-2000-1D1-10</u>		2007-07426- 10	Cementitious	Positive Layer? No
Layer # 1	Gray	grout		no asbestos detected	
Sample #	<u>IHS-M-2000-1D2-11</u>		2007-07426- 11	Cementitious	Positive Layer? No
Layer # 1	Gray	grout		no asbestos detected	
Sample #	<u>IHS-M-2000-1D3-12</u>		2007-07426- 12	Cementitious	Positive Layer? No
Layer # 1	Gray	grout		no asbestos detected	
Sample #	<u>IHS-M-2000-1E1-13</u>		2007-07426- 13	Flooring	Positive Layer? No
Layer # 1	White	floor tile		no asbestos detected	
Layer # 2	Clear	mastic		no asbestos detected	
Sample #	<u>IHS-M-2000-1E2-14</u>		2007-07426- 14	Flooring	Positive Layer? No
Layer # 1	White	floor tile		no asbestos detected	
Layer # 2	Clear	mastic		no asbestos detected	
Sample #	<u>IHS-M-2000-1E3-15</u>		2007-07426- 15	Flooring	Positive Layer? No
Layer # 1	White	floor tile		no asbestos detected	
Layer # 2	Clear	mastic		no asbestos detected	
Sample #	<u>IHS-M-2000-1F1-16</u>		2007-07426- 16	Flooring	Positive Layer? No
Layer # 1	White	sheet floor		no asbestos detected	
Sample #	<u>IHS-M-2000-1F2-17</u>		2007-07426- 17	Flooring	Positive Layer? No
Layer # 1	White	sheet floor		no asbestos detected	
Sample #	<u>IHS-M-2000-1F3-18</u>		2007-07426- 18	Flooring	Positive Layer? No
Layer # 1	White	sheet floor		no asbestos detected	
Sample #	<u>IHS-M-2000-1G1-19</u>		2007-07426- 19	Cementitious	Positive Layer? No
Layer # 1	Gray	grout		no asbestos detected	
Sample #	<u>IHS-M-2000-1G2-20</u>		2007-07426- 20	Cementitious	Positive Layer? No
Layer # 1	Gray	grout		no asbestos detected	
Sample #	<u>IHS-M-2000-1G3-21</u>		2007-07426- 21	Cementitious	Positive Layer? No
Layer # 1	Gray	grout		no asbestos detected	
Sample #	<u>IHS-M-2000-1H1-22</u>		2007-07426- 22	Flooring	Positive Layer? No
Layer # 1	Red	floor tile		no asbestos detected	
Layer # 2	Yellow	mastic		no asbestos detected	
Sample #	<u>IHS-M-2000-1H2-23</u>		2007-07426- 23	Flooring	Positive Layer? No
Layer # 1	Red	floor tile		no asbestos detected	
Sample #	<u>IHS-M-2000-1H3-24</u>		2007-07426- 24	Flooring	Positive Layer? No
Layer # 1	Red	floor tile		no asbestos detected	
Layer # 2	Yellow	mastic		no asbestos detected	
Sample #	<u>IHS-M-2000-1I1-24</u>		2007-07426- 25	Cementitious	Positive Layer? No
Layer # 1	Gray	grout		no asbestos detected	

Sample # <u>IHS-M-2000-112-25</u>	2007-07426- 26	Cementitious	Positive Layer? No
Layer # 1 Gray grout		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-113-26</u>	2007-07426- 27	Cementitious	Positive Layer? No
Layer # 1 Gray grout		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-1J1-27</u>	2007-07426- 28	Adhesive/caulk	Positive Layer? No
Layer # 1 Various mastic		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-1J2-28</u>	2007-07426- 29	Adhesive/caulk	Positive Layer? Yes
Layer # 1 Various mastic		<i>2-5% chrysotile asbestos</i>	
Sample # <u>IHS-M-2000-1J3-29</u>	2007-07426- 30	Adhesive/caulk	Positive Layer? No
Layer # 1 Yellow mastic		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-1K1-30</u>	2007-07426- 31	Flooring	Positive Layer? No
Layer # 1 off-white floor tile		<i>no asbestos detected</i>	
Layer # 2 Yellow mastic		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-1K2-31</u>	2007-07426- 32	Flooring	Positive Layer? Yes
Layer # 1 off-white floor tile		<i>no asbestos detected</i>	
Layer # 2 Black mastic		<i>>1-2% chrysotile asbestos</i>	
Sample # <u>IHS-M-2000-1K3-32</u>	2007-07426- 33	Flooring	Positive Layer? Yes
Layer # 1 off-white floor tile		<i>no asbestos detected</i>	
Layer # 2 Black mastic		<i>>1-2% chrysotile asbestos</i>	
Layer # 3 Yellow mastic		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-1L1-33</u>	2007-07426- 34	Flooring	Positive Layer? No
Layer # 1 off-white floor tile		<i>no asbestos detected</i>	
Layer # 2 Yellow mastic		<i>no asbestos detected</i>	
Layer # 3 Black mastic		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-1L2-34</u>	2007-07426- 35	Flooring	Positive Layer? No
Layer # 1 off-white floor tile		<i>no asbestos detected</i>	
Layer # 2 Yellow mastic		<i>no asbestos detected</i>	
Layer # 3 Black mastic		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-1L3-35</u>	2007-07426- 36	Flooring	Positive Layer? No
Layer # 1 off-white floor tile		<i>no asbestos detected</i>	
Layer # 2 Yellow mastic		<i>no asbestos detected</i>	
Layer # 3 Black mastic		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-1M1-36</u>	2007-07426- 37	Flooring	Positive Layer? No
Layer # 1 Blue floor tile		<i>no asbestos detected</i>	
Layer # 2 Tan mastic		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-1M2-37</u>	2007-07426- 38	Flooring	Positive Layer? No
Layer # 1 Blue floor tile		<i>no asbestos detected</i>	
Layer # 2 Tan mastic		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-1M3-38</u>	2007-07426- 39	Flooring	Positive Layer? No
Layer # 1 Blue floor tile		<i>no asbestos detected</i>	
Layer # 2 Tan mastic		<i>no asbestos detected</i>	
Layer # 3 Black mastic		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-2A1-40</u>	2007-07426- 40	Wall System	Positive Layer? No
Layer # 1 White powder		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-2A2-41</u>	2007-07426- 41	Wall System	Positive Layer? No
Layer # 1 White powder		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-2A3-42</u>	2007-07426- 42	Wall System	Positive Layer? No
Layer # 1 White powder		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-2B1-43</u>	2007-07426- 43	Wall System	Positive Layer? Yes
Layer # 1 white texture/joint compound		<i>>1-2% chrysotile asbestos</i>	
Sample # <u>IHS-M-2000-2B2-44</u>	2007-07426- 44	Wall System	Positive Layer? No
Layer # 1 white texture/joint compound		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-2B3-45</u>	2007-07426- 45	Wall System	Positive Layer? No
Layer # 1 white texture/joint compound		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-2C1-46</u>	2007-07426- 46	Wall System	Positive Layer? Yes
Layer # 1 white texture/joint compound		<i>>1-2% chrysotile asbestos</i>	
Sample # <u>IHS-M-2000-2C2-47</u>	2007-07426- 47	Wall System	Positive Layer? No
Layer # 1 white texture/joint compound		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-2C3-48</u>	2007-07426- 48	Wall System	Positive Layer? No
Layer # 1 white texture/joint compound		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-2C4-49</u>	2007-07426- 49	Wall System	Positive Layer? No
Layer # 1 white texture/joint compound		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-2C5-50</u>	2007-07426- 50	Wall System	Positive Layer? No
Layer # 1 white texture/joint compound		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-2D1-51</u>	2007-07426- 51	Wall System	Positive Layer? No
Layer # 1 white texture/joint compound		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-2D2-52</u>	2007-07426- 52	Wall System	Positive Layer? No
Layer # 1 white texture/joint compound		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-2D3-53</u>	2007-07426- 53	Wall System	Positive Layer? No
Layer # 1 white texture/joint compound		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-2D4-54</u>	2007-07426- 54	Wall System	Positive Layer? No
Layer # 1 white texture/joint compound		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-2D5-55</u>	2007-07426- 55	Wall System	Positive Layer? No
Layer # 1 white texture/joint compound		<i>no asbestos detected</i>	

Sample #	<u>IHS-M-2000-2E1-56</u>	2007-07426- 56	Wall System	Positive Layer?	No
	Layer # 1 White plaster (top coat)		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2E2-57</u>	2007-07426- 57	Wall System	Positive Layer?	No
	Layer # 1 White plaster (top coat)		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2E3-58</u>	2007-07426- 58	Wall System	Positive Layer?	No
	Layer # 1 White plaster (top coat)		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2E4-59</u>	2007-07426- 59	Wall System	Positive Layer?	No
	Layer # 1 White plaster (top coat)		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2E5-60</u>	2007-07426- 60	Wall System	Positive Layer?	No
	Layer # 1 White plaster (top coat)		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2E6-61</u>	2007-07426- 61	Wall System	Positive Layer?	No
	Layer # 1 White plaster (top coat)		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2E7-62</u>	2007-07426- 62	Wall System	Positive Layer?	No
	Layer # 1 White plaster (top coat)		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2F1-63</u>	2007-07426- 63	Wall System	Positive Layer?	No
	Layer # 1 Tan plaster (scratch coat)		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2F2-64</u>	2007-07426- 64	Wall System	Positive Layer?	No
	Layer # 1 Tan plaster (scratch coat)		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2F3-65</u>	2007-07426- 65	Wall System	Positive Layer?	No
	Layer # 1 Tan plaster (scratch coat)		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2F4-66</u>	2007-07426- 66	Wall System	Positive Layer?	No
	Layer # 1 Tan plaster (scratch coat)		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2F5-67</u>	2007-07426- 67	Wall System	Positive Layer?	No
	Layer # 1 Tan plaster (scratch coat)		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2F6-68</u>	2007-07426- 68	Wall System	Positive Layer?	No
	Layer # 1 Tan plaster (scratch coat)		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2F7-69</u>	2007-07426- 69	Wall System	Positive Layer?	No
	Layer # 1 Tan plaster (scratch coat)		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2G1-70</u>	2007-07426- 70	Wall System	Positive Layer?	No
	Layer # 1 Gray stucco		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2G2-71</u>	2007-07426- 71	Wall System	Positive Layer?	No
	Layer # 1 Gray stucco		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2G3-72</u>	2007-07426- 72	Wall System	Positive Layer?	No
	Layer # 1 Gray stucco		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2H1-73</u>	2007-07426- 73	Cementitious	Positive Layer?	No
	Layer # 1 Gray brick		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2H2-74</u>	2007-07426- 74	Cementitious	Positive Layer?	No
	Layer # 1 Gray brick		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2H3-75</u>	2007-07426- 75	Cementitious	Positive Layer?	No
	Layer # 1 Gray brick		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2I1-76</u>	2007-07426- 76	Cementitious	Positive Layer?	No
	Layer # 1 Gray mortar		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2I2-77</u>	2007-07426- 77	Cementitious	Positive Layer?	No
	Layer # 1 Gray mortar		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2I3-78</u>	2007-07426- 78	Cementitious	Positive Layer?	No
	Layer # 1 Gray mortar		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2J1-79</u>	2007-07426- 79	Wall System	Positive Layer?	No
	Layer # 1 White plaster (top coat)		<i><=1% chrysotile asbestos</i>		
Sample #	<u>IHS-M-2000-2J2-80</u>	2007-07426- 80	Wall System	Positive Layer?	No
	Layer # 1 White plaster (top coat)		<i><=1% chrysotile asbestos</i>		
Sample #	<u>IHS-M-2000-2J3-81</u>	2007-07426- 81	Wall System	Positive Layer?	No
	Layer # 1 White plaster (top coat)		<i><=1% chrysotile asbestos</i>		
Sample #	<u>IHS-M-2000-2K1-82</u>	2007-07426- 82	Cementitious	Positive Layer?	No
	Layer # 1 White grout		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2K2-83</u>	2007-07426- 83	Cementitious	Positive Layer?	No
	Layer # 1 White grout		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2K3-84</u>	2007-07426- 84	Cementitious	Positive Layer?	No
	Layer # 1 White grout		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2L1-85</u>	2007-07426- 85	Cementitious	Positive Layer?	No
	Layer # 1 White grout		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2L2-86</u>	2007-07426- 86	Cementitious	Positive Layer?	No
	Layer # 1 White grout		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2L3-87</u>	2007-07426- 87	Cementitious	Positive Layer?	No
	Layer # 1 White grout		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2M1-88</u>	2007-07426- 88	Cementitious	Positive Layer?	No
	Layer # 1 Gray mortar		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2M2-89</u>	2007-07426- 89	Cementitious	Positive Layer?	No
	Layer # 1 Tan mortar		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-2M3-90</u>	2007-07426- 90	Cementitious	Positive Layer?	No
	Layer # 1 Tan mortar		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-3A1-91</u>	2007-07426- 91	Ceiling Tile	Positive Layer?	No
	Layer # 1 off-white ceiling tile		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-3A2-92</u>	2007-07426- 92	Ceiling Tile	Positive Layer?	No
	Layer # 1 off-white ceiling tile		<i>no asbestos detected</i>		

Sample #	<u>IHS-M-2000-3A3-93</u>	2007-07426- 93	Ceiling Tile	Positive Layer?	No
	Layer # 1 off-white ceiling tile		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-3B1-94</u>	2007-07426- 94	Ceiling Tile	Positive Layer?	No
	Layer # 1 Tan ceiling tile		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-3B2-95</u>	2007-07426- 95	Ceiling Tile	Positive Layer?	No
	Layer # 1 Tan ceiling tile		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-3B3-96</u>	2007-07426- 96	Ceiling Tile	Positive Layer?	No
	Layer # 1 Tan ceiling tile		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-3C1-97</u>	2007-07426- 97	Miscellaneous	Positive Layer?	No
	Layer # 1 Tan fiber-board		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-3C2-98</u>	2007-07426- 98	Miscellaneous	Positive Layer?	No
	Layer # 1 Tan fiber-board		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-3C3-99</u>	2007-07426- 99	Miscellaneous	Positive Layer?	No
	Layer # 1 Tan fiber-board		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-5A1-100</u>	2007-07426- 100	Insulation	Positive Layer?	Yes
	Layer # 1 Off-white insulation		2-5% chrysotile asbestos <=1% crocidolite asbestos		
Sample #	<u>IHS-M-2000-5A2-101</u>	2007-07426- 101	Insulation	Positive Layer?	Yes
	Layer # 1 Off-white insulation		2-5% chrysotile asbestos <=1% crocidolite asbestos		
Sample #	<u>IHS-M-2000-5A3-102</u>	2007-07426- 102	Insulation	Positive Layer?	Yes
	Layer # 1 Off-white insulation		2-5% chrysotile asbestos <=1% crocidolite asbestos		
Sample #	<u>IHS-M-2000-5B1-103</u>	2007-07426- 103	Insulation	Positive Layer?	No
	Layer # 1 White insulation		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-5B2-104</u>	2007-07426- 104	Insulation	Positive Layer?	No
	Layer # 1 White insulation		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-5B3-105</u>	2007-07426- 105	Insulation	Positive Layer?	No
	Layer # 1 White insulation		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7A1-106</u>	2007-07426- 106	Adhesive/caulk	Positive Layer?	No
	Layer # 1 Gray mastic		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7A2-107</u>	2007-07426- 107	Adhesive/caulk	Positive Layer?	No
	Layer # 1 Brown mastic		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7A3-108</u>	2007-07426- 108	Adhesive/caulk	Positive Layer?	No
	Layer # 1 Brown mastic		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7B1-109</u>	2007-07426- 109	Adhesive/caulk	Positive Layer?	No
	Layer # 1 Tan mastic		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7B2-110</u>	2007-07426- 110	Adhesive/caulk	Positive Layer?	No
	Layer # 1 Tan mastic		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7B3-111</u>	2007-07426- 111	Adhesive/caulk	Positive Layer?	No
	Layer # 1 Tan mastic		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7C1-112</u>	2007-07426- 112	Cementitious	Positive Layer?	No
	Layer # 1 White grout		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7C2-113</u>	2007-07426- 113	Cementitious	Positive Layer?	No
	Layer # 1 White grout		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7C3-114</u>	2007-07426- 114	Cementitious	Positive Layer?	No
	Layer # 1 White grout		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7D1-115</u>	2007-07426- 115	Adhesive/caulk	Positive Layer?	No
	Layer # 1 white caulk		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7D2-116</u>	2007-07426- 116	Adhesive/caulk	Positive Layer?	No
	Layer # 1 white caulk		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7D3-117</u>	2007-07426- 117	Adhesive/caulk	Positive Layer?	No
	Layer # 1 white caulk		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7E1-118</u>	2007-07426- 118	Adhesive/caulk	Positive Layer?	Yes
	Layer # 1 Black mastic		10-20% chrysotile asbestos		
Sample #	<u>IHS-M-2000-7E2-119</u>	2007-07426- 119	Adhesive/caulk	Positive Layer?	Yes
	Layer # 1 Black mastic		10-20% chrysotile asbestos		
Sample #	<u>IHS-M-2000-7E3-120</u>	2007-07426- 120	Adhesive/caulk	Positive Layer?	No
	Layer # 1 Black mastic		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7F1-121</u>	2007-07426- 121	Insulation	Positive Layer?	Yes
	Layer # 1 White coating		>1-2% chrysotile asbestos		
Sample #	<u>IHS-M-2000-7F2-122</u>	2007-07426- 122	Insulation	Positive Layer?	No
	Layer # 1 White coating		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7F3-123</u>	2007-07426- 123	Insulation	Positive Layer?	No
	Layer # 1 White coating		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7G1-124</u>	2007-07426- 124	Insulation	Positive Layer?	Yes
	Layer # 1 Black coating		10-20% chrysotile asbestos		
Sample #	<u>IHS-M-2000-7G2-125</u>	2007-07426- 125	Insulation	Positive Layer?	Yes
	Layer # 1 Black coating		10-20% chrysotile asbestos		
Sample #	<u>IHS-M-2000-7G3-126</u>	2007-07426- 126	Insulation	Positive Layer?	Yes
	Layer # 1 Black coating		10-20% chrysotile asbestos		
Sample #	<u>IHS-M-2000-7H1-127</u>	2007-07426- 127	Adhesive/caulk	Positive Layer?	No
	Layer # 1 white caulk		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7H2-128</u>	2007-07426- 128	Adhesive/caulk	Positive Layer?	No
	Layer # 1 white caulk		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2000-7H3-129</u>	2007-07426- 129	Adhesive/caulk	Positive Layer?	No
	Layer # 1 white caulk		<i>no asbestos detected</i>		

Sample # <u>IHS-M-2000-7I1-130</u>	2007-07426- 130 Adhesive/caulk	Positive Layer? No
Layer # 1 Gray caulk	<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-7I2-131</u>	2007-07426- 131 Adhesive/caulk	Positive Layer? No
Layer # 1 Gray caulk	<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-7I3-132</u>	2007-07426- 132 Adhesive/caulk	Positive Layer? No
Layer # 1 Gray caulk	<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-7J1-133</u>	2007-07426- 133 Adhesive/caulk	Positive Layer? No
Layer # 1 Tan caulk	<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-7J2-134</u>	2007-07426- 134 Adhesive/caulk	Positive Layer? No
Layer # 1 Tan caulk	<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-7J3-135</u>	2007-07426- 135 Adhesive/caulk	Positive Layer? No
Layer # 1 Gray caulk	<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-7K1-136</u>	2007-07426- 136 Adhesive/caulk	Positive Layer? No
Layer # 1 Black caulk	<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-7K2-137</u>	2007-07426- 137 Adhesive/caulk	Positive Layer? No
Layer # 1 Black caulk	<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-7K3-138</u>	2007-07426- 138 Adhesive/caulk	Positive Layer? No
Layer # 1 Black caulk	<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-8A1-139</u>	2007-07426- 139 Roofing	Positive Layer? No
Layer # 1 Gray surface	<i>no asbestos detected</i>	
Layer # 2 White foam	<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-8A2-140</u>	2007-07426- 140 Roofing	Positive Layer? No
Layer # 1 Gray surface	<i>no asbestos detected</i>	
Layer # 2 Black roof ply	<i>no asbestos detected</i>	
Layer # 3 White foam	<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-8A3-141</u>	2007-07426- 141 Roofing	Positive Layer? No
Layer # 1 Gray surface	<i>no asbestos detected</i>	
Layer # 2 Black roof ply	<i>no asbestos detected</i>	
Layer # 3 White foam	<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-8B1-142</u>	2007-07426- 142 Roofing	Positive Layer? No
Layer # 1 Black caulk	<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-8B2-143</u>	2007-07426- 143 Roofing	Positive Layer? No
Layer # 1 Black caulk	<i>no asbestos detected</i>	
Sample # <u>IHS-M-2000-8B3-144</u>	2007-07426- 144 Roofing	Positive Layer? No
Layer # 1 Black caulk	<i>no asbestos detected</i>	

* 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.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-1A1-1 **Lab Number** 2007-07426- 1 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet floor	100	off-white	2	2-5%	2-5%	-	-	-	-
Total %		100	Average %		2-5%	2-5%	-	-	-	-
Fiber Identification:					chrysotile asbestos	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2000-1A2-2 **Lab Number** 2007-07426- 2 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet floor	100	off-white	2	5-10%	5-10%	-	-	-	-
Total %		100	Average %		5-10%	5-10%	-	-	-	-
Fiber Identification:					chrysotile asbestos	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2000-1A3-3 **Lab Number** 2007-07426- 3 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet floor	100	off-white	2	2-5%	2-5%	-	-	-	-
Total %		100	Average %		2-5%	2-5%	-	-	-	-
Fiber Identification:					chrysotile asbestos	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-1B1-4 **Lab Number** 2007-07426- 4 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	95	Tan	1	n.d.	-	-	-	-	-
2	mastic	5	Yellow	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2000-1B2-5 **Lab Number** 2007-07426- 5 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	95	Tan	1	n.d.	-	-	-	-	-
2	mastic	5	Yellow	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2000-1B3-6 **Lab Number** 2007-07426- 6 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **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					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	100	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-1C1-7 **Lab Number** 2007-07426- 7 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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 dilute HCl acid.

Sample IHS-M-2000-1C2-8 **Lab Number** 2007-07426- 8 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

Sample IHS-M-2000-1C3-9 **Lab Number** 2007-07426- 9 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-1D1-10 **Lab Number** 2007-07426- 10 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

Sample IHS-M-2000-1D2-11 **Lab Number** 2007-07426- 11 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:				none						

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

Sample IHS-M-2000-1D3-12 **Lab Number** 2007-07426- 12 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-1E1-13 **Lab Number** 2007-07426- 13 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	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	Clear	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using solvent.

Sample IHS-M-2000-1E2-14 **Lab Number** 2007-07426- 14 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	White	1	n.d.	-	-	-	-	-
2	mastic	2	Clear	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
	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 IHS-M-2000-1E3-15 **Lab Number** 2007-07426- 15 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	White	1	n.d.	-	-	-	-	-
2	mastic	2	Clear	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
	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.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-1F1-16 **Lab Number** 2007-07426- 16 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet floor	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using solvent.

Sample IHS-M-2000-1F2-17 **Lab Number** 2007-07426- 17 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet floor	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using solvent.

Sample IHS-M-2000-1F3-18 **Lab Number** 2007-07426- 18 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet floor	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using solvent.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-1G1-19 **Lab Number** 2007-07426- 19 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-1G2-20 **Lab Number** 2007-07426- 20 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
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 matrix using dilute HCl acid.

Sample IHS-M-2000-1G3-21 **Lab Number** 2007-07426- 21 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-1H1-22 **Lab Number** 2007-07426- 22 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	Red	1	n.d.	-	-	-	-	-
2	mastic	1	Yellow	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using solvent.

Sample IHS-M-2000-1H2-23 **Lab Number** 2007-07426- 23 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **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					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	100	Red	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using solvent.

Sample IHS-M-2000-1H3-24 **Lab Number** 2007-07426- 24 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	Red	1	n.d.	-	-	-	-	-
2	mastic	1	Yellow	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using solvent.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-111-24 **Lab Number** 2007-07426- 25 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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 dilute HCl acid.

Sample IHS-M-2000-112-25 **Lab Number** 2007-07426- 26 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

Sample IHS-M-2000-113-26 **Lab Number** 2007-07426- 27 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

PLM Analysis Details

Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-111-27 **Lab Number** 2007-07426- 28 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Sticky**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Various	1	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					synthetic fiber (extr					

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

Sample Analytical Note

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

Sample IHS-M-2000-112-28 **Lab Number** 2007-07426- 29 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Sticky**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Various	1	2-5%	>1-2%	-	-	-	-
Total %		100	Average %		2-5%	>1-2%	-	-	-	-
Fiber Identification:					chrysotile asbestos	synthetic fiber (extr				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	chrysotile asbestos	W	A	N	N	L	+	P	Oil	Col Par	Col Per	RI Par	RI Per
2	synthetic fiber (extruded)	W	E	N	N	H	+	P	1.550	vb/g	pb/r	1.556	1.549
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2000-113-29 **Lab Number** 2007-07426- 30 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Sticky**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Yellow	1	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					synthetic fiber (extr					

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

Sample Analytical Note

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

PLM Analysis Details

Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-1K1-30 **Lab Number** 2007-07426- 31 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	off-white	1	n.d.	-	-	-	-	-
2	mastic	1	Yellow	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1K2-31 **Lab Number** 2007-07426- 32 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **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, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99.5	off-white	1	n.d.	n.d.	-	-	-	-
2	mastic	0.5	Black	1	>1-2%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					chrysotile asbestos	cellulose fiber				

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-1K3-32 **Lab Number** 2007-07426- 33 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** Yes **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	off-white	1	n.d.	n.d.	-	-	-	-
2	mastic	0.5	Black	1	>1-2%	<=1%	-	-	-	-
3	mastic	0.5	Yellow	1	n.d.	>1-2%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					chrysotile asbestos	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2000-1L1-33 **Lab Number** 2007-07426- 34 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98.5	off-white	1	n.d.	-	-	-	-	-
2	mastic	1	Yellow	1	<=1%	-	-	-	-	-
3	mastic	0.5	Black	1	>1-2%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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.

PLM Analysis Details
Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-1L2-34 **Lab Number** 2007-07426- 35 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	97	off-white	1	n.d.	-	-	-	-	-
2	mastic	1	Yellow	1	<=1%	-	-	-	-	-
3	mastic	2	Black	1	>1-2%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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 IHS-M-2000-1L3-35 **Lab Number** 2007-07426- 36 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98.5	off-white	1	n.d.	n.d.	-	-	-	-
2	mastic	0.5	Yellow	1	<=1%	n.d.	-	-	-	-
3	mastic	1	Black	1	>1-2%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					cellulose fiber	synthetic fiber (extr				

Fibers									Refractive Index Determinations				
		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	synthetic fiber (extruded)	W	E	N	N	H	+	P					
3													
4													
5													
6													

Sample Analytical Note

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

PLM Analysis Details

Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-1M1-36 **Lab Number** 2007-07426- 37 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Blue	1	n.d.	-	-	-	-	-
2	mastic	2	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-1M2-37 **Lab Number** 2007-07426- 38 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	Blue	1	n.d.	-	-	-	-	-
2	mastic	1	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-1M3-38 **Lab Number** 2007-07426- 39 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/27/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98.5	Blue	1	n.d.	-	-	-	-	-
2	mastic	1	Tan	1	n.d.	-	-	-	-	-
3	mastic	0.5	Black	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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 IHS-M-2000-2A1-40 **Lab Number** 2007-07426- 40 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	powder	100	White	4	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					cellulose					

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose	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 IHS-M-2000-2A2-41 **Lab Number** 2007-07426- 41 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	powder	100	White	4	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					cellulose					

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose	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.

PLM Analysis Details
Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-2A3-42 **Lab Number** 2007-07426- 42 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	powder	100	White	4	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					cellulose					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose	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 IHS-M-2000-2B1-43 **Lab Number** 2007-07426- 43 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 4
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	chrysotile asbestos	W	A	N	N	L	+	P
2								
3								
4								
5								
6								

Refractive Index Determinations				
Oil	Col Par	Col Per	RI Par	RI Per
1.550	vb/g	pb/r	1.556	1.549

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2B2-44 **Lab Number** 2007-07426- 44 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-2B3-45 **Lab Number** 2007-07426- 45 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2C1-46 **Lab Number** 2007-07426- 46 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers			Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations							
1	2	3	4	5	6	Oil	Col Par	Col Per	RI Par	RI Per							
1	chrysotile asbestos					W	A	N	N	L	+	P	1.550	vb/g	pb/r	1.556	1.549
2																	
3																	
4																	
5																	
6																	

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2C2-47 **Lab Number** 2007-07426- 47 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

PLM Analysis Details

Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-2C3-48 **Lab Number** 2007-07426- 48 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.
Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2000-2C4-49 **Lab Number** 2007-07426- 49 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2C5-50 **Lab Number** 2007-07426- 50 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.
Note: sample size was too small - analysis may not be representative of whole.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-2D1-51 **Lab Number** 2007-07426- 51 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
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 matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2D2-52 **Lab Number** 2007-07426- 52 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:				none						

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.
 Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2000-2D3-53 **Lab Number** 2007-07426- 53 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-2D4-54 **Lab Number** 2007-07426- 54 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.
 Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2000-2D5-55 **Lab Number** 2007-07426- 55 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2E1-56 **Lab Number** 2007-07426- 56 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-2E2-57 **Lab Number** 2007-07426- 57 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2E3-58 **Lab Number** 2007-07426- 58 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2E4-59 **Lab Number** 2007-07426- 59 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-2E5-60 **Lab Number** 2007-07426- 60 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2E6-61 **Lab Number** 2007-07426- 61 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2E7-62 **Lab Number** 2007-07426- 62 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:				none						

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

Sample Analytical Note

Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-2F1-63 **Lab Number** 2007-07426- 63 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (scratch coat)	100	Tan	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2F2-64 **Lab Number** 2007-07426- 64 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (scratch coat)	100	Tan	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2F3-65 **Lab Number** 2007-07426- 65 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (scratch coat)	100	Tan	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-2F4-66 **Lab Number** 2007-07426- 66 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (scratch coat)	100	Tan	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2F5-67 **Lab Number** 2007-07426- 67 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (scratch coat)	100	Tan	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2F6-68 **Lab Number** 2007-07426- 68 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (scratch coat)	100	Tan	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-2F7-69 **Lab Number** 2007-07426- 69 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (scratch coat)	100	Tan	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: grinding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2G1-70 **Lab Number** 2007-07426- 70 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
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 matrix using dilute HCl acid.

Sample IHS-M-2000-2G2-71 **Lab Number** 2007-07426- 71 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using dilute HCl acid.

PLM Analysis Details

Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-2G3-72 **Lab Number** 2007-07426- 72 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2000-2H1-73 **Lab Number** 2007-07426- 73 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2000-2H2-74 **Lab Number** 2007-07426- 74 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-2H3-75 **Lab Number** 2007-07426- 75 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using dilute HCl acid.

Sample IHS-M-2000-2I1-76 **Lab Number** 2007-07426- 76 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:				none						

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
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 matrix using dilute HCl acid.

Sample IHS-M-2000-2I2-77 **Lab Number** 2007-07426- 77 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-213-78 **Lab Number** 2007-07426- 78 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using dilute HCl acid.

Sample IHS-M-2000-211-79 **Lab Number** 2007-07426- 79 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
	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: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-212-80 **Lab Number** 2007-07426- 80 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
	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: ginding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

PLM Analysis Details

Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-213-81 **Lab Number** 2007-07426- 81 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	plaster (top coat)	100	White	2	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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: grinding using mortar and pestle. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-2K1-82 **Lab Number** 2007-07426- 82 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2000-2K2-83 **Lab Number** 2007-07426- 83 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-2K3-84 **Lab Number** 2007-07426- 84 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
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 matrix using dilute HCl acid.

Sample IHS-M-2000-2L1-85 **Lab Number** 2007-07426- 85 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:				none						

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
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 matrix using dilute HCl acid.

Sample IHS-M-2000-2L2-86 **Lab Number** 2007-07426- 86 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-2L3-87 **Lab Number** 2007-07426- 87 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-2M1-88 **Lab Number** 2007-07426- 88 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using dilute HCl acid.

Sample IHS-M-2000-2M2-89 **Lab Number** 2007-07426- 89 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Tan	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-2M3-90 **Lab Number** 2007-07426- 90 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, rock, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Tan	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2000-3A1-91 **Lab Number** 2007-07426- 91 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Ceiling Tile Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): perlite, filler, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	ceiling tile	100	off-white	3	30-40%	2-5%	-	-	-	-
Total %		100	Average %		30-40%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

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

Sample Analytical Note

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

Sample IHS-M-2000-3A2-92 **Lab Number** 2007-07426- 92 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Ceiling Tile Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): perlite, filler, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	ceiling tile	100	off-white	3	30-40%	2-5%	-	-	-	-
Total %		100	Average %		30-40%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

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

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-3A3-93 **Lab Number** 2007-07426- 93 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Ceiling Tile **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): perlite, filler, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	ceiling tile	100	off-white	3	30-40%	2-5%	-	-	-	-
Total %		100	Average %		30-40%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2	glass fiber	CL	D	Y				
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 acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-3B1-94 **Lab Number** 2007-07426- 94 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Ceiling Tile **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	ceiling tile	100	Tan	3	20-30%	20-30%	-	-	-	-
Total %		100	Average %		20-30%	20-30%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2	glass fiber	CL	D	Y				
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 acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-3B2-95 **Lab Number** 2007-07426- 95 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Ceiling Tile **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	ceiling tile	100	Tan	3	20-30%	20-30%	-	-	-	-
Total %		100	Average %		20-30%	20-30%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2	glass fiber	CL	D	Y				
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 acid. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-3B3-96 **Lab Number** 2007-07426- 96 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Ceiling Tile **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	ceiling tile	100	Tan	3	20-30%	20-30%	-	-	-	-
Total %		100	Average %		20-30%	20-30%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2	glass fiber	CL	D	Y				
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 acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-3C1-97 **Lab Number** 2007-07426- 97 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Miscellaneous **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	fiber-board	100	Tan	3	10-20%	40-50%	-	-	-	-
Total %		100	Average %		10-20%	40-50%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2	glass fiber	CL	D	Y				
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 acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-3C2-98 **Lab Number** 2007-07426- 98 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Miscellaneous **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	fiber-board	100	Tan	3	10-20%	40-50%	-	-	-	-
Total %		100	Average %		10-20%	40-50%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2	glass fiber	CL	D	Y				
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 acid. Procedure: dissolution of matrix using solvent.

PLM Analysis Details

Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-3C3-99 **Lab Number** 2007-07426- 99 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Miscellaneous **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	fiber-board	100	Tan	3	10-20%	40-50%	-	-	-	-
Total %		100	Average %		10-20%	40-50%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2	glass fiber	CL	D	Y				
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 acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-5A1-100 **Lab Number** 2007-07426- 100 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Insulation **Fibrous Mat**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Off-white	3	2-5%	<=1%	30-40%	-	-	-
Total %		100	Average %		2-5%	<=1%	30-40%	-	-	-
Fiber Identification:					chrysotile asbestos	crocidolite asbesto	glass fiber			

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	chrysotile asbestos	W	A	N	N	L	+	P
2	crocidolite asbestos	BL	C	N	Y	L	-	P
3	glass fiber	CL	D	Y				
4								
5								
6								

Refractive Index Determinations				
Oil	Col Par	Col Per	RI Par	RI Per
1.550	db/ly	sb/o	1.556	1.553
1.700			<1.70	>1.70

Sample Analytical Note

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

Sample IHS-M-2000-5A2-101 **Lab Number** 2007-07426- 101 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Insulation **Fibrous Mat**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Off-white	3	2-5%	<=1%	30-40%	-	-	-
Total %		100	Average %		2-5%	<=1%	30-40%	-	-	-
Fiber Identification:					chrysotile asbestos	crocidolite asbesto	glass fiber			

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	chrysotile asbestos	W	A	N	N	L	+	P
2	crocidolite asbestos	BL	C	N	Y	L	-	P
3	glass fiber	CL	D	Y				
4								
5								
6								

Refractive Index Determinations				
Oil	Col Par	Col Per	RI Par	RI Per
1.550	db/ly	sb/o	1.556	1.553
1.700			<1.70	>1.70

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-5A3-102 **Lab Number** 2007-07426- 102 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Insulation **Fibrous Mat**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Off-white	3	2-5%	<=1%	30-40%	-	-	-
Total %		100	Average %		2-5%	<=1%	30-40%	-	-	-
Fiber Identification:					chrysotile asbestos	crocidolite asbesto	glass fiber			

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.556	1.553
2	crocidolite asbestos	BL	C	N	Y	L	-	P	1.700			<1.70	>1.70
3	glass fiber	CL	D	Y									
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2000-5B1-103 **Lab Number** 2007-07426- 103 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Insulation **Fibrous Mat**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	White	3	5-10%	>1-2%	<=1%	-	-	-
Total %		100	Average %		5-10%	>1-2%	<=1%	-	-	-
Fiber Identification:					cellulose fiber	synthetic fiber (extr	glass fiber			

Fibers									Refractive Index Determinations				
		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	synthetic fiber (extruded)	W	E	N	N	H	+	P					
3	glass fiber	CL	D	Y									
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2000-5B2-104 **Lab Number** 2007-07426- 104 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Insulation **Fibrous Mat**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	White	3	5-10%	>1-2%	<=1%	-	-	-
Total %		100	Average %		5-10%	>1-2%	<=1%	-	-	-
Fiber Identification:					cellulose fiber	synthetic fiber (extr	glass fiber			

Fibers									Refractive Index Determinations				
		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	synthetic fiber (extruded)	W	E	N	N	H	+	P					
3	glass fiber	CL	D	Y									
4													
5													
6													

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-5B3-105 **Lab Number** 2007-07426- 105 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Insulation Fibrous Mat
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	White	3	5-10%	>1-2%	<=1%	-	-	-
Total %		100	Average %		5-10%	>1-2%	<=1%	-	-	-
Fiber Identification:					cellulose fiber	synthetic fiber (extr	glass fiber			

Fibers									Refractive Index Determinations				
		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	synthetic fiber (extruded)	W	E	N	N	H	+	P					
3	glass fiber	CL	D	Y									
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2000-7A1-106 **Lab Number** 2007-07426- 106 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Gray	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:				none						

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2000-7A2-107 **Lab Number** 2007-07426- 107 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Brown	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-7A3-108 **Lab Number** 2007-07426- 108 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Brown	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 IHS-M-2000-7B1-109 **Lab Number** 2007-07426- 109 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 IHS-M-2000-7B2-110 **Lab Number** 2007-07426- 110 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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.

PLM Analysis Details
Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-7B3-111 **Lab Number** 2007-07426- 111 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2000-7C1-112 **Lab Number** 2007-07426- 112 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
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 matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7C2-113 **Lab Number** 2007-07426- 113 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-7C3-114 **Lab Number** 2007-07426- 114 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2000-7D1-115 **Lab Number** 2007-07426- 115 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					synthetic fiber (shr					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	synthetic fiber (shredded)	W	A	N	N	H	+	P
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 IHS-M-2000-7D2-116 **Lab Number** 2007-07426- 116 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:				synthetic fiber (shr						

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	synthetic fiber (shredded)	W	A	N	N	H	+	P
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.

PLM Analysis Details
Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-7D3-117 **Lab Number** 2007-07426- 117 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					synthetic fiber (shr					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	synthetic fiber (shredded)	W	A	N	N	H	+	P	Oil	Col Par	Col Per	RI Par	RI Per
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2000-7E1-118 **Lab Number** 2007-07426- 118 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	chrysotile asbestos	W	A	N	N	L	+	P	Oil	Col Par	Col Per	RI Par	RI Per
2									1.550	db/ly	sb/o	1.561	1.553
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2000-7E2-119 **Lab Number** 2007-07426- 119 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	chrysotile asbestos	W	A	N	N	L	+	P	Oil	Col Par	Col Per	RI Par	RI Per
2									1.550	db/ly	sb/o	1.561	1.553
3													
4													
5													
6													

Sample Analytical Note

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

PLM Analysis Details

Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-7E3-120 **Lab Number** 2007-07426- 120 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Sticky**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2000-7F1-121 **Lab Number** 2007-07426- 121 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 4
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-

Fiber Identification:

chrysotile asbestos

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2000-7F2-122 **Lab Number** 2007-07426- 122 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-

Fiber Identification:

cellulose fiber

Fibers									Refractive Index Determinations				
		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.

PLM Analysis Details

Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-7F3-123 **Lab Number** 2007-07426- 123 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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 IHS-M-2000-7G1-124 **Lab Number** 2007-07426- 124 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation **Sticky**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	Black	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2000-7G2-125 **Lab Number** 2007-07426- 125 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation **Sticky**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	Black	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-7G3-126 **Lab Number** 2007-07426- 126 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	Black	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2000-7H1-127 **Lab Number** 2007-07426- 127 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:				none						

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2000-7H2-128 **Lab Number** 2007-07426- 128 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-7H3-129 **Lab Number** 2007-07426- 129 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

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

Sample IHS-M-2000-7I1-130 **Lab Number** 2007-07426- 130 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Gray	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:				none						

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

Sample Analytical Note

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

Sample IHS-M-2000-7I2-131 **Lab Number** 2007-07426- 131 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Gray	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707426
IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-713-132 **Lab Number** 2007-07426- 132 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Gray	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 IHS-M-2000-711-133 **Lab Number** 2007-07426- 133 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 IHS-M-2000-712-134 **Lab Number** 2007-07426- 134 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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.

PLM Analysis Details

Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-7J3-135 **Lab Number** 2007-07426- 135 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Sticky**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Gray	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using solvent.

Sample IHS-M-2000-7K1-136 **Lab Number** 2007-07426- 136 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Rubbery**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					synthetic fiber (shr					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	synthetic fiber (shredded)	W	A	N	N	H	+	P	Oil	Col Par	Col Per	RI Par	RI Per
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2000-7K2-137 **Lab Number** 2007-07426- 137 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Rubbery**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					synthetic fiber (shr					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	synthetic fiber (shredded)	W	A	N	N	H	+	P					
2													
3													
4													
5													
6													

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-7K3-138 **Lab Number** 2007-07426- 138 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					synthetic fiber (shr					

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	synthetic fiber (shredded)	W	A	N	N	H	+	P					
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2000-8A1-139 **Lab Number** 2007-07426- 139 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Roofing Rubbery
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): polymer foam, filler, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	surface	15	Gray	1	n.d.	-	-	-	-	-
2	foam	85	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2000-8A2-140 **Lab Number** 2007-07426- 140 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Roofing Rubbery
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): polymer foam, bitumen, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	surface	10	Gray	1	n.d.	-	-	-	-	-
2	roof ply	15	Black	1	60-70%	-	-	-	-	-
3	foam	75	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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.

PLM Analysis Details
Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-8A3-141 **Lab Number** 2007-07426- 141 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Roofing Rubbery
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): polymer foam, bitumen, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	surface	10	Gray	1	n.d.	-	-	-	-	-
2	roof ply	15	Black	1	60-70%	-	-	-	-	-
3	foam	75	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1									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 IHS-M-2000-8B1-142 **Lab Number** 2007-07426- 142 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Roofing Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1									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 matrix using solvent.

Sample IHS-M-2000-8B2-143 **Lab Number** 2007-07426- 143 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Roofing Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1									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.

PLM Analysis Details

Job Number: 200707426

IHS-Mescalero Bldg# 2000

Sample IHS-M-2000-8B3-144 **Lab Number** 2007-07426- 144 **Sampled:** 8/14/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Roofing **Sticky**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
	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.

Fr=Friability: 1=very non-friable; 2= non-friable; 3=friable; 4=highly friable

Colors: B=black;BL=blue;BR=brown;CL=clear;G=Green;GY=gray;OR=orange;OW=off-white;PN=pink;PU=purple;R=red;TN=tan;W=white;Y=yellow;V=various

Fiber Morphology: A=fine fibers/bundles, white, sinewy, flexible; B=fine fibers/bundles, w-br, straight, broomed ends; C=fine fibers/bundles, blue, straight, broomed ends;

D=fine to coarse fibers, CL-B, brittle; E=coarse fibers,CL or dyed, striated; F=coarse fibers or splinters, W-BR, ribbon-like; G=lath-like or shards, low aspect ratio, may taper

Iso=isotropism - may be yes or no; Pleo=pleochroism - may be yes or no; Bi=birefringence - may be None, Low, Medium or High

Elg=sign of elongation - may be + or -; Ext=extinction - may be Parallel, Oblique, None or Undulating; Oil=medium used to for dispersion staining

Col Par=dispersion staining colors parallel to the fiber (fiber/halo): b/w=black/white; dg/py=dark gray/pale yellow; vg/y=violet gray/yellow; db/ly=dark blue/lemon yellow;

vb/g= vivid blue/gold; sb/o=sky blue/orange; pb/r=pale blue/red; gb/dr=gray blue/dark red; w/b=white/black. Col Perp=same only perpendicular to fiber.

RI Par=refractive index parallel to fiber; RI Perp=refractive index perpendicular to fiber



Analyst: UWE .. STEIMLE

Printed: 01-Oct-07

Original Print Date: 29-Sep-07



Larry S. Pierce, Approved Accreditation Signatory



Polarized Light Microscope (PLM) Analysis for Asbestos

JobNumber: 200707371

Client:

IHI ENVIRONMENTAL

(PHOENIX OFFICE)

4527 N 16th ST STE 105

PHOENIX, AZ

85016-0000

Office Phone: (602) 776-0300

FAX: (602) 776-0301

Samples: 57 **PLM** **Rec:** 8/27/2007 **Method:** Interim (EPA/600/M4-82-020) **PLM analysis for asbestos in bulk smp**

Client Job: IHS-Mescalero Bldg# 2001

PO Number: 07P-3031

Report Date: 9/12/2007

Date Analyzed: 9/12/2007

Routing Number: -

Method and Analysis Information:

Fiberquant Internal SOP: PLMi

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, NESHAP and OSHA regulations designate a result of $\leq 1\%$ 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 Interim Method (EPA Method 600/M4-82-020). 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 $\leq 1\%$ asbestos are point counted using 400 points, and the results listed on the detail analysis sheet. Such point counting is required by NESHAP (National Emission Standards for Hazardous Air Pollutants, Nov. 1990) in order to rely on analytical results that are $\leq 1\%$. 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 $\leq 1\%$ as "borderline negative", and results where asbestos was $> 1\%$ but $\leq 2\%$ as "borderline positive" to indicate the uncertainty in assigning a "positive" or "negative" label. In the sample summary, a "ND" means that no asbestos was detected during the analysis. A "Tr" or "Trace" of asbestos is defined for our purposes as the detection of several asbestos fibers during the analysis; an amount essentially at the limit of detection for the method. 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 is a degreed geologist or mineralogist, 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 monthly. 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 (#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.

The "Analysis Results" below are the averages for all layers of each sample listed. The "+ Layer" column indicates whether any of the layers in the sample were >1% asbestos. Please refer to each detailed analysis sheet to determine which layer(s) of a sample was(were) positive.

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:

Single layer sample analysis as per client request. Any material or layer other than that indicated on the chain of custody was not analyzed, even if a suspect material.

PLM Analysis Summary:

Job Number: 200707371

IHS-Mescalero Bldg# 2001

Sample Number			Lab Number	Apparent Sample Type *	Positive Layer Yes or No
Layer	Color	Apparent Layer Type *	Asbestos Results		
Sample #	<u>IHS-M-2001-1A1-1</u>		2007-07371- 1	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2001-1A2-2</u>		2007-07371- 2	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2001-1A3-3</u>		2007-07371- 3	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2001-1B1-4</u>		2007-07371- 4	Flooring	Positive Layer? Yes
Layer # 1	Tan	floor tile	no asbestos detected		
Layer # 2	Black	mastic	>1-2% chrysotile asbestos		
Sample #	<u>IHS-M-2001-1B2-5</u>		2007-07371- 5	Flooring	Positive Layer? Yes
Layer # 1	Tan	floor tile	no asbestos detected		
Layer # 2	Black	mastic	2-5% chrysotile asbestos		
Sample #	<u>IHS-M-2001-1B3-6</u>		2007-07371- 6	Flooring	Positive Layer? Yes
Layer # 1	Tan	floor tile	no asbestos detected		
Layer # 2	Black	mastic	2-5% chrysotile asbestos		
Sample #	<u>IHS-M-2001-1C1-7</u>		2007-07371- 7	Flooring	Positive Layer? Yes
Layer # 1	Off-white	floor tile	<=1% chrysotile asbestos		
Layer # 2	Black	mastic	2-5% chrysotile asbestos		
Sample #	<u>IHS-M-2001-1C2-8</u>		2007-07371- 8	Flooring	Positive Layer? Yes
Layer # 1	Off-white	floor tile	<=1% chrysotile asbestos		
Layer # 2	Black	mastic	2-5% chrysotile asbestos		
Sample #	<u>IHS-M-2001-1C3-9</u>		2007-07371- 9	Flooring	Positive Layer? Yes
Layer # 1	White	mastic	no asbestos detected		
Layer # 2	Off-white	floor tile	>1-2% chrysotile asbestos		
Layer # 3	Black	mastic	2-5% chrysotile asbestos		
Sample #	<u>IHS-M-2001-1D1-10</u>		2007-07371- 10	Flooring	Positive Layer? Yes
Layer # 1	Black	mastic	5-10% chrysotile asbestos		
Layer # 2	Tan	floor tile	2-5% chrysotile asbestos		
Layer # 3	White	mastic	no asbestos detected		
Sample #	<u>IHS-M-2001-1D2-11</u>		2007-07371- 11	Flooring	Positive Layer? Yes
Layer # 1	Black	mastic	2-5% chrysotile asbestos		
Layer # 2	Tan	floor tile	2-5% chrysotile asbestos		
Layer # 3	White	mastic	no asbestos detected		
Sample #	<u>IHS-M-2001-1D3-12</u>		2007-07371- 12	Flooring	Positive Layer? Yes
Layer # 1	Black	mastic	5-10% chrysotile asbestos		
Layer # 2	Tan	floor tile	2-5% chrysotile asbestos		
Layer # 3	White	mastic	no asbestos detected		
Sample #	<u>IHS-M-2001-1E1-13</u>		2007-07371- 13	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2001-1E2-14</u>		2007-07371- 14	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2001-1E3-15</u>		2007-07371- 15	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2001-1F1-16</u>		2007-07371- 16	Adhesive/caulk	Positive Layer? No
Layer # 1	tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2001-1F2-17</u>		2007-07371- 17	Adhesive/caulk	Positive Layer? No
Layer # 1	tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2001-1F3-18</u>		2007-07371- 18	Adhesive/caulk	Positive Layer? No
Layer # 1	tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2001-2A1-19</u>		2007-07371- 19	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2001-2A2-20</u>		2007-07371- 20	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2001-2A3-21</u>		2007-07371- 21	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2001-2B1-22</u>		2007-07371- 22	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2001-2B2-23</u>		2007-07371- 23	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		

Sample #	<u>IHS-M-2001-2B3-24</u>	2007-07371- 24	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2001-2C1-25</u>	2007-07371- 25	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2001-2C2-26</u>	2007-07371- 26	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2001-2C3-27</u>	2007-07371- 27	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	no asbestos detected		
Sample #	<u>IHS-M-2001-2C4-28</u>	2007-07371- 28	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2001-2C5-29</u>	2007-07371- 29	Wall System	Positive Layer? No
Layer # 1	Off-white paint	no asbestos detected		
Sample #	<u>IHS-M-2001-2C6-30</u>	2007-07371- 30	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	no asbestos detected		
Sample #	<u>IHS-M-2001-2C7-31</u>	2007-07371- 31	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2001-2D1-32</u>	2007-07371- 32	Wall System	Positive Layer? No
Layer # 1	Tan stucco	no asbestos detected		
Sample #	<u>IHS-M-2001-2D2-33</u>	2007-07371- 33	Wall System	Positive Layer? No
Layer # 1	Tan stucco	no asbestos detected		
Sample #	<u>IHS-M-2001-2D3-34</u>	2007-07371- 34	Wall System	Positive Layer? No
Layer # 1	Tan surface	no asbestos detected		
Layer # 2	Green stucco	no asbestos detected		
Sample #	<u>IHS-M-2001-2D4-35</u>	2007-07371- 35	Wall System	Positive Layer? No
Layer # 1	Tan surface	no asbestos detected		
Layer # 2	Green stucco	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2001-2D3-36</u>	2007-07371- 36	Wall System	Positive Layer? No
Layer # 1	Tan surface	no asbestos detected		
Layer # 2	Green stucco	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2001-7A1-37</u>	2007-07371- 37	Miscellaneous	Positive Layer? No
Layer # 1	White coating	no asbestos detected		
Sample #	<u>IHS-M-2001-7A2-38</u>	2007-07371- 38	Miscellaneous	Positive Layer? No
Layer # 1	White coating	no asbestos detected		
Sample #	<u>IHS-M-2001-7A3-39</u>	2007-07371- 39	Miscellaneous	Positive Layer? No
Layer # 1	White coating	no asbestos detected		
Sample #	<u>IHS-M-2001-7B1-40</u>	2007-07371- 40	Adhesive/caulk	Positive Layer? No
Layer # 1	Off-white mastic	no asbestos detected		
Sample #	<u>IHS-M-2001-7B2-41</u>	2007-07371- 41	Adhesive/caulk	Positive Layer? No
Layer # 1	Off-white mastic	no asbestos detected		
Sample #	<u>IHS-M-2001-7B3-42</u>	2007-07371- 42	Adhesive/caulk	Positive Layer? No
Layer # 1	Off-white mastic	no asbestos detected		
Sample #	<u>IHS-M-2001-7C1-43</u>	2007-07371- 43	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2001-7C2-44</u>	2007-07371- 44	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2001-7C3-45</u>	2007-07371- 45	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2001-7D1-46</u>	2007-07371- 46	Adhesive/caulk	Positive Layer? No
Layer # 1	Tan caulk	no asbestos detected		
Sample #	<u>IHS-M-2001-7D2-47</u>	2007-07371- 47	Adhesive/caulk	Positive Layer? No
Layer # 1	Tan caulk	no asbestos detected		
Sample #	<u>IHS-M-2001-7D3-48</u>	2007-07371- 48	Adhesive/caulk	Positive Layer? No
Layer # 1	Tan caulk	no asbestos detected		
Sample #	<u>IHS-M-2001-7E1-49</u>	2007-07371- 49	Insulation	Positive Layer? Yes
Layer # 1	White insulation	10-20% chrysotile asbestos		
Sample #	<u>IHS-M-2001-7E2-50</u>	2007-07371- 50	Insulation	Positive Layer? Yes
Layer # 1	White insulation	10-20% chrysotile asbestos		
Sample #	<u>IHS-M-2001-7E3-51</u>	2007-07371- 51	Insulation	Positive Layer? Yes
Layer # 1	White insulation	10-20% chrysotile asbestos		
Sample #	<u>IHS-M-2001-8A1-52</u>	2007-07371- 52	Roofing	Positive Layer? No
Layer # 1	black roofing roll/shingle	no asbestos detected		
Layer # 2	black bitumen sheeting	no asbestos detected		
Sample #	<u>IHS-M-2001-8A2-53</u>	2007-07371- 53	Roofing	Positive Layer? No
Layer # 1	black roofing roll/shingle	no asbestos detected		
Layer # 2	black bitumen sheeting	no asbestos detected		
Sample #	<u>IHS-M-2001-8A3-54</u>	2007-07371- 54	Roofing	Positive Layer? No
Layer # 1	black roofing roll/shingle	no asbestos detected		
Layer # 2	black bitumen sheeting	no asbestos detected		
Sample #	<u>IHS-M-2001-8B1-55</u>	2007-07371- 55	Roofing	Positive Layer? Yes
Layer # 1	Black mastic	5-10% chrysotile asbestos		
Sample #	<u>IHS-M-2001-8B2-56</u>	2007-07371- 56	Roofing	Positive Layer? Yes
Layer # 1	Black mastic	2-5% chrysotile asbestos		
Sample #	<u>IHS-M-2001-8B3-57</u>	2007-07371- 57	Roofing	Positive Layer? Yes
Layer # 1	Black mastic	2-5% chrysotile asbestos		

* 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.

PLM Analysis Details
Job Number: 200707371 IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-1A1-1 **Lab Number** 2007-07371- 1 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers									Refractive Index Determinations				
		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 IHS-M-2001-1A2-2 **Lab Number** 2007-07371- 2 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers									Refractive Index Determinations				
		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 IHS-M-2001-1A3-3 **Lab Number** 2007-07371- 3 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:				cellulose fiber		glass fiber				

Fibers									Refractive Index Determinations				
		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.

PLM Analysis Details
Job Number: 200707371

IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-1B1-4 **Lab Number** 2007-07371- 4 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Tan	1	n.d.	-	-	-	-	-
2	mastic	2	Black	1	>1-2%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2001-1B2-5 **Lab Number** 2007-07371- 5 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Tan	1	n.d.	-	-	-	-	-
2	mastic	2	Black	1	2-5%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2001-1B3-6 **Lab Number** 2007-07371- 6 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Tan	1	n.d.	-	-	-	-	-
2	mastic	2	Black	1	2-5%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details

Job Number: 200707371

IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-1C1-7 **Lab Number** 2007-07371- 7 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Off-white	1	<=1%	-	-	-	-	-
2	mastic	2	Black	1	2-5%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2001-1C2-8 **Lab Number** 2007-07371- 8 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Off-white	1	<=1%	-	-	-	-	-
2	mastic	2	Black	1	2-5%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number: 200707371

IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-1C3-9 **Lab Number** 2007-07371- 9 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** Yes **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	1	White	1	n.d.	-	-	-	-	-
2	floor tile	97	Off-white	1	>1-2%	-	-	-	-	-
3	mastic	2	Black	1	2-5%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2001-1D1-10 **Lab Number** 2007-07371- 10 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** Yes **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	5	Black	1	5-10%	-	-	-	-	-
2	floor tile	85	Tan	1	2-5%	-	-	-	-	-
3	mastic	10	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number: 200707371

IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-1D2-11 **Lab Number** 2007-07371- 11 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** Yes **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	5	Black	1	2-5%	-	-	-	-	-
2	floor tile	85	Tan	1	2-5%	-	-	-	-	-
3	mastic	10	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2001-1D3-12 **Lab Number** 2007-07371- 12 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** Yes **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	5	Black	1	5-10%	-	-	-	-	-
2	floor tile	85	Tan	1	2-5%	-	-	-	-	-
3	mastic	10	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number: 200707371
IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-1E1-13 **Lab Number** 2007-07371- 13 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 4
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2	glass fiber	CL	D	Y				
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 IHS-M-2001-1E2-14 **Lab Number** 2007-07371- 14 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 4
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2	glass fiber	CL	D	Y				
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 IHS-M-2001-1E3-15 **Lab Number** 2007-07371- 15 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 4
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2	glass fiber	CL	D	Y				
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.

PLM Analysis Details
Job Number: 200707371
IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-1F1-16 **Lab Number** 2007-07371- 16 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

Sample IHS-M-2001-1F2-17 **Lab Number** 2007-07371- 17 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:				none						

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

Sample IHS-M-2001-1F3-18 **Lab Number** 2007-07371- 18 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

PLM Analysis Details
Job Number: 200707371
IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-2A1-19 **Lab Number** 2007-07371- 19 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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.

Sample IHS-M-2001-2A2-20 **Lab Number** 2007-07371- 20 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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.

Sample IHS-M-2001-2A3-21 **Lab Number** 2007-07371- 21 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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.

PLM Analysis Details

Job Number: 200707371

IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-2B1-22 **Lab Number** 2007-07371- 22 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2001-2B2-23 **Lab Number** 2007-07371- 23 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2001-2B3-24 **Lab Number** 2007-07371- 24 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707371

IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-2C1-25 **Lab Number** 2007-07371- 25 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2001-2C2-26 **Lab Number** 2007-07371- 26 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2001-2C3-27 **Lab Number** 2007-07371- 27 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

PLM Analysis Details
Job Number: 200707371
IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-2C4-28 **Lab Number** 2007-07371- 28 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2001-2C5-29 **Lab Number** 2007-07371- 29 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	100	Off-white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using solvent. There was no texture/joint compound observed in this sample.

Sample IHS-M-2001-2C6-30 **Lab Number** 2007-07371- 30 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

PLM Analysis Details
Job Number: 200707371

IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-2C7-31 **Lab Number** 2007-07371- 31 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2001-2D1-32 **Lab Number** 2007-07371- 32 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Tan	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2001-2D2-33 **Lab Number** 2007-07371- 33 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Tan	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707371
IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-2D3-34 **Lab Number** 2007-07371- 34 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **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): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	surface	10	Tan	1	n.d.	-	-	-	-	-
2	stucco	90	Green	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2001-2D4-35 **Lab Number** 2007-07371- 35 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **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): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	surface	30	Tan	1	n.d.	-	-	-	-	-
2	stucco	70	Green	2	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2001-2D3-36 **Lab Number** 2007-07371- 36 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **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): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	surface	20	Tan	1	n.d.	-	-	-	-	-
2	stucco	80	Green	2	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707371
IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-7A1-37 **Lab Number** 2007-07371- 37 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Miscellaneous Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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 IHS-M-2001-7A2-38 **Lab Number** 2007-07371- 38 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Miscellaneous Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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 IHS-M-2001-7A3-39 **Lab Number** 2007-07371- 39 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Miscellaneous Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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.

PLM Analysis Details
Job Number: 200707371

IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-7B1-40 **Lab Number** 2007-07371- 40 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Off-white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

Sample IHS-M-2001-7B2-41 **Lab Number** 2007-07371- 41 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Off-white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

Sample IHS-M-2001-7B3-42 **Lab Number** 2007-07371- 42 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Off-white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

PLM Analysis Details
Job Number: 200707371
IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-7C1-43 **Lab Number** 2007-07371- 43 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

Sample IHS-M-2001-7C2-44 **Lab Number** 2007-07371- 44 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:				none						

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

Sample IHS-M-2001-7C3-45 **Lab Number** 2007-07371- 45 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

PLM Analysis Details

Job Number: 200707371

IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-7D1-46 **Lab Number** 2007-07371- 46 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using solvent.

Sample IHS-M-2001-7D2-47 **Lab Number** 2007-07371- 47 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using solvent.

Sample IHS-M-2001-7D3-48 **Lab Number** 2007-07371- 48 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using solvent.

PLM Analysis Details
Job Number: 200707371
IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-7E1-49 **Lab Number** 2007-07371- 49 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Insulation **Fibrous Mat**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	White	3	10-20%	2-5%	-	-	-	-
Total %		100	Average %		10-20%	2-5%	-	-	-	-
Fiber Identification:					chrysotile asbestos	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	chrysotile asbestos	W	A	N	N	L	+	P
2	glass fiber	CL	D	Y				
3								
4								
5								
6								

Refractive Index Determinations				
Oil	Col Par	Col Per	RI Par	RI Per
1.550	vb/g	pb/r	1.556	1.549

Sample Analytical Note

Procedure: tweased apart using forceps.

Sample IHS-M-2001-7E2-50 **Lab Number** 2007-07371- 50 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Insulation **Fibrous Mat**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	White	3	10-20%	2-5%	-	-	-	-
Total %		100	Average %		10-20%	2-5%	-	-	-	-
Fiber Identification:					chrysotile asbestos	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	chrysotile asbestos	W	A	N	N	L	+	P
2	glass fiber	CL	D	Y				
3								
4								
5								
6								

Refractive Index Determinations				
Oil	Col Par	Col Per	RI Par	RI Per
1.550	vb/g	pb/r	1.556	1.549

Sample Analytical Note

Procedure: tweased apart using forceps.

Sample IHS-M-2001-7E3-51 **Lab Number** 2007-07371- 51 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Insulation **Fibrous Mat**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	White	3	10-20%	2-5%	-	-	-	-
Total %		100	Average %		10-20%	2-5%	-	-	-	-
Fiber Identification:					chrysotile asbestos	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	chrysotile asbestos	W	A	N	N	L	+	P
2	glass fiber	CL	D	Y				
3								
4								
5								
6								

Refractive Index Determinations				
Oil	Col Par	Col Per	RI Par	RI Per
1.550	vb/g	pb/r	1.556	1.549

Sample Analytical Note

Procedure: tweased apart using forceps.

PLM Analysis Details
Job Number: 200707371
IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-8A1-52 **Lab Number** 2007-07371- 52 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Roofing Sticky
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber										
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6					
1	roofing roll/shingle	80	black	1	5-10%	n.d.	-	-	-	-					
2	bitumen sheeting	20	black	1	n.d.	60-70%	-	-	-	-					
Total %		100	Average %		5-10%	10-20%	-	-	-	-					
Fiber Identification:					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	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 matrix using solvent.

Sample IHS-M-2001-8A2-53 **Lab Number** 2007-07371- 53 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Roofing Sticky
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber										
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6					
1	roofing roll/shingle	80	black	1	5-10%	n.d.	-	-	-	-					
2	bitumen sheeting	20	black	1	n.d.	60-70%	-	-	-	-					
Total %		100	Average %		5-10%	10-20%	-	-	-	-					
Fiber Identification:					glass fiber	cellulose fiber									
Fibers				Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	glass fiber			CL	D	Y					Oil	Col Par	Col Per	RI Par	RI Per
2	cellulose fiber			W	F	N	N	H	+	U					
3															
4															
5															
6															

Sample Analytical Note

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

Sample IHS-M-2001-8A3-54 **Lab Number** 2007-07371- 54 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Roofing Sticky
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber										
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6					
1	roofing roll/shingle	80	black	1	5-10%	n.d.	-	-	-	-					
2	bitumen sheeting	20	black	1	n.d.	60-70%	-	-	-	-					
Total %		100	Average %		5-10%	10-20%	-	-	-	-					
Fiber Identification:					glass fiber	cellulose fiber									
Fibers				Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
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 matrix using solvent.

PLM Analysis Details
Job Number: 200707371
IHS-Mescalero Bldg# 2001

Sample IHS-M-2001-8B1-55 **Lab Number** 2007-07371- 55 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Roofing Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2001-8B2-56 **Lab Number** 2007-07371- 56 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Roofing Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	2-5%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2001-8B3-57 **Lab Number** 2007-07371- 57 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/12/2007 **An?** OK **Apparent Smp Type** Roofing Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	2-5%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Fr=Friability: 1=very non-friable; 2= non-friable; 3=friable; 4=highly friable

Colors: B=black;BL=blue;BR=brown;CL=clear;G=Green;GY=gray;OR=orange;OW=off-white;PN=pink;PU=purple;R=red;TN=tan;W=white;Y=yellow;V=various

Fiber Morphology: A=fine fibers/bundles, white, sinewy, flexible; B=fine fibers/bundles, w-br, straight, broomed ends; C=fine fibers/bundles, blue, straight, broomed ends; D=fine to coarse fibers, CL-B, brittle; E=coarse fibers,CL or dyed, striated; F=coarse fibers or splinters, W-BR, ribbon-like; G=lath-like or shards, low aspect ratio, may taper

Iso=isotropism - may be yes or no; Pleo=pleochroism - may be yes or no; Bi=birefringence - may be None, Low, Medium or High

Elg=sign of elongation - may be +, - or B (both); Ext=extinction - may be Parallel, Oblique, None or Undulating; Oil=medium used to for dispersion staining

Col Par=dispersion staining colors parallel to the fiber (fiber/halo): b/w=black/white; dg/py=dark gray/pale yellow; vg/y=violet gray/yellow; db/ly=dark blue/lemon yellow;

vb/g= vivid blue/gold; sb/o=sky blue/orange; pb/r=pale blue/red; gb/dr=gray blue/dark red; w/b=white/black. Col Perp=same only perpendicular to fiber.

RI Par=refractive index parallel to fiber; RI Perp=refractive index perpendicular to fiber

Galina B. Volkova

Analyst: GALINA B. VOLKOVA

Printed: 12-Sep-07

Original Print Date: 12-Sep-07

Larry S. Pierce

Larry S. Pierce, Approved Accreditation Signatory



Polarized Light Microscope (PLM) Analysis for Asbestos

JobNumber: 200707372

Client: IHI ENVIRONMENTAL

(PHOENIX OFFICE)

4527 N 16th ST STE 105

PHOENIX, AZ

85016-0000

Office Phone: (602) 776-0300

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Samples: 52 **PLM** **Rec:** 8/27/2007 **Method:** Interim (EPA/600/M4-82-020) **PLM analysis for asbestos in bulk smp**

Client Job: IHS-Mescalero Bldg# 2002

PO Number: 07P-3031

Report Date: 9/17/2007

Date Analyzed: 9/14/2007

Routing Number: -

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

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, NESHAP and OSHA regulations designate a result of $\leq 1\%$ 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 Interim Method (EPA Method 600/M4-82-020). 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 $\leq 1\%$ asbestos are point counted using 400 points, and the results listed on the detail analysis sheet. Such point counting is required by NESHAP (National Emission Standards for Hazardous Air Pollutants, Nov. 1990) in order to rely on analytical results that are $\leq 1\%$. 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 $\leq 1\%$ as "borderline negative", and results where asbestos was $> 1\%$ but $\leq 2\%$ as "borderline positive" to indicate the uncertainty in assigning a "positive" or "negative" label. In the sample summary, a "ND" means that no asbestos was detected during the analysis. A "Tr" or "Trace" of asbestos is defined for our purposes as the detection of several asbestos fibers during the analysis; an amount essentially at the limit of detection for the method. 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 is a degreed geologist or mineralogist, 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 monthly. 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 (#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.

The "Analysis Results" below are the averages for all layers of each sample listed. The "+ Layer" column indicates whether any of the layers in the sample were >1% asbestos. Please refer to each detailed analysis sheet to determine which layer(s) of a sample was(were) positive.

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:

Single layer sample analysis as per client request. Any material or layer other than that indicated on the chain of custody was not analyzed, even if a suspect material.

PLM Analysis Summary:

Job Number:

200707372

IHS-Mescalero Bldg# 2002

Sample Number			Lab Number	Apparent Sample Type *	Positive Layer Yes or No
Layer	Color	Apparent Layer Type *	Asbestos Results		
Sample #	<u>IHS-M-2002-1A1-1</u>		2007-07372- 1	Flooring	Positive Layer? Yes
Layer # 1	off-white	floor tile	2-5% chrysotile asbestos		
Layer # 2	Black	mastic	5-10% chrysotile asbestos		
Sample #	<u>IHS-M-2002-1A2-2</u>		2007-07372- 2	Flooring	Positive Layer? Yes
Layer # 1	off-white	floor tile	>1-2% chrysotile asbestos		
Layer # 2	Black	mastic	2-5% chrysotile asbestos		
Sample #	<u>IHS-M-2002-1A3-3</u>		2007-07372- 3	Flooring	Positive Layer? Yes
Layer # 1	off-white	floor tile	>1-2% chrysotile asbestos		
Layer # 2	Black	mastic	5-10% chrysotile asbestos		
Sample #	<u>IHS-M-2002-1B1-4</u>		2007-07372- 4	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2002-1B2-5</u>		2007-07372- 5	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2002-1B3-6</u>		2007-07372- 6	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2002-1C1-7</u>		2007-07372- 7	Flooring	Positive Layer? No
Layer # 1	Off-white	leveling compound	no asbestos detected		
Sample #	<u>IHS-M-2002-1C2-8</u>		2007-07372- 8	Flooring	Positive Layer? No
Layer # 1	Off-white	leveling compound	no asbestos detected		
Sample #	<u>IHS-M-2002-1C3-9</u>		2007-07372- 9	Flooring	Positive Layer? No
Layer # 1	Off-white	leveling compound	no asbestos detected		
Sample #	<u>IHS-M-2002-1D1-10</u>		2007-07372- 10	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2002-1D2-11</u>		2007-07372- 11	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2002-1D3-12</u>		2007-07372- 12	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2002-1E1-13</u>		2007-07372- 13	Flooring	Positive Layer? Yes
Layer # 1	Yellow	mastic	no asbestos detected		
Layer # 2	off-white	floor tile	>1-2% chrysotile asbestos		
Layer # 3	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2002-1E2-14</u>		2007-07372- 14	Flooring	Positive Layer? Yes
Layer # 1	Yellow	mastic	no asbestos detected		
Layer # 2	off-white	floor tile	>1-2% chrysotile asbestos		
Layer # 3	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2002-1E3-15</u>		2007-07372- 15	Flooring	Positive Layer? Yes
Layer # 1	Yellow	mastic	no asbestos detected		
Layer # 2	off-white	floor tile	>1-2% chrysotile asbestos		
Layer # 3	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2002-2A1-16</u>		2007-07372- 16	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2002-2A2-17</u>		2007-07372- 17	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2002-2A3-18</u>		2007-07372- 18	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2002-2B1-19</u>		2007-07372- 19	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2002-2B2-20</u>		2007-07372- 20	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	no asbestos detected		
Sample #	<u>IHS-M-2002-2B3-21</u>		2007-07372- 21	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	no asbestos detected		
Sample #	<u>IHS-M-2002-2C1-22</u>		2007-07372- 22	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	no asbestos detected		
Sample #	<u>IHS-M-2002-2C2-23</u>		2007-07372- 23	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	no asbestos detected		
Sample #	<u>IHS-M-2002-2C3-24</u>		2007-07372- 24	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	no asbestos detected		

Sample #	<u>IHS-M-2002-2C4-25</u>	2007-07372- 25	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	no asbestos detected		
Sample #	<u>IHS-M-2002-2C5-26</u>	2007-07372- 26	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2002-2D1-27</u>	2007-07372- 27	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2002-2D2-28</u>	2007-07372- 28	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2002-2D3-29</u>	2007-07372- 29	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2002-2E1-30</u>	2007-07372- 30	Wall System	Positive Layer? No
Layer # 1	off-white stucco	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2002-2E2-31</u>	2007-07372- 31	Wall System	Positive Layer? No
Layer # 1	off-white stucco	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2002-2E3-32</u>	2007-07372- 32	Wall System	Positive Layer? No
Layer # 1	Gray stucco	no asbestos detected		
Sample #	<u>IHS-M-2002-2E4-33</u>	2007-07372- 33	Wall System	Positive Layer? No
Layer # 1	Off-white stucco	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2002-2E5-34</u>	2007-07372- 34	Wall System	Positive Layer? No
Layer # 1	Off-white stucco	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2002-3A1-35</u>	2007-07372- 35	Sprayed Material	Positive Layer? No
Layer # 1	white spray-on ceiling	no asbestos detected		
Sample #	<u>IHS-M-2002-3A2-36</u>	2007-07372- 36	Sprayed Material	Positive Layer? No
Layer # 1	white spray-on ceiling	no asbestos detected		
Sample #	<u>IHS-M-2002-3A3-37</u>	2007-07372- 37	Sprayed Material	Positive Layer? No
Layer # 1	white spray-on ceiling	no asbestos detected		
Sample #	<u>IHS-M-2002-7A1-38</u>	2007-07372- 38	Adhesive/caulk	Positive Layer? No
Layer # 1	tan mastic	no asbestos detected		
Sample #	<u>IHS-M-2002-7A2-39</u>	2007-07372- 39	Adhesive/caulk	Positive Layer? No
Layer # 1	tan mastic	no asbestos detected		
Sample #	<u>IHS-M-2002-7A3-40</u>	2007-07372- 40	Adhesive/caulk	Positive Layer? No
Layer # 1	tan mastic	no asbestos detected		
Layer # 2	Yellow mastic	no asbestos detected		
Sample #	<u>IHS-M-2002-7B1-41</u>	2007-07372- 41	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2002-7B2-42</u>	2007-07372- 42	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2002-7B3-43</u>	2007-07372- 43	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2002-7C1-44</u>	2007-07372- 44	Adhesive/caulk	Positive Layer? No
Layer # 1	Brown caulk	no asbestos detected		
Layer # 2	Pink caulk	no asbestos detected		
Sample #	<u>IHS-M-2002-7C2-45</u>	2007-07372- 45	Adhesive/caulk	Positive Layer? No
Layer # 1	Brown caulk	no asbestos detected		
Sample #	<u>IHS-M-2002-7C3-46</u>	2007-07372- 46	Adhesive/caulk	Positive Layer? No
Layer # 1	Brown caulk	no asbestos detected		
Layer # 2	Pink caulk	no asbestos detected		
Sample #	<u>IHS-M-2002-8A1-47</u>	2007-07372- 47	Roofing	Positive Layer? No
Layer # 1	black roofing roll/shingle	no asbestos detected		
Layer # 2	black bitumen sheeting	no asbestos detected		
Sample #	<u>IHS-M-2002-8A2-48</u>	2007-07372- 48	Roofing	Positive Layer? No
Layer # 1	black roofing roll/shingle	no asbestos detected		
Layer # 2	black bitumen sheeting	no asbestos detected		
Sample #	<u>IHS-M-2002-8A3-49</u>	2007-07372- 49	Roofing	Positive Layer? No
Layer # 1	black roofing roll/shingle	no asbestos detected		
Layer # 2	black bitumen sheeting	no asbestos detected		
Sample #	<u>IHS-M-2002-8B1-50</u>	2007-07372- 50	Roofing	Positive Layer? No
Layer # 1	Black mastic	no asbestos detected		
Sample #	<u>IHS-M-2002-8B2-51</u>	2007-07372- 51	Roofing	Positive Layer? Yes
Layer # 1	Black mastic	5-10% chrysotile asbestos		
Sample #	<u>IHS-M-2002-8B3-52</u>	2007-07372- 52	Roofing	Positive Layer? Yes
Layer # 1	Black mastic	5-10% chrysotile asbestos		

* 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.

PLM Analysis Details

Job Number: 200707372

IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-1A1-1 **Lab Number** 2007-07372- 1 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/14/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	97	off-white	1	2-5%	-	-	-	-	-
2	mastic	3	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2002-1A2-2 **Lab Number** 2007-07372- 2 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/14/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	97	off-white	1	>1-2%	-	-	-	-	-
2	mastic	3	Black	1	2-5%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2002-1A3-3 **Lab Number** 2007-07372- 3 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/14/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	97	off-white	1	>1-2%	-	-	-	-	-
2	mastic	3	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number:
200707372
IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-1B1-4 **Lab Number** 2007-07372- 4 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/14/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					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	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2002-1B2-5 **Lab Number** 2007-07372- 5 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/14/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					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	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2002-1B3-6 **Lab Number** 2007-07372- 6 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/14/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					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	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Sample Analytical Note

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

PLM Analysis Details

Job Number:

200707372

IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-1C1-7 Lab Number 2007-07372- 7 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/14/2007 An? OK Apparent Smp Type Flooring Fibrous Solid
Homogeneous No # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	leveling compound	100	Off-white	3	n.d.	-	-	-	-	-						
Total %		100	Average %		n.d.	-	-	-	-	-						
Fiber Identification:					none											
Fibers					Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6							Oil	Col Par	Col Per	RI Par	RI Per
	none															

Sample Analytical Note

Procedure: tweased apart using forceps. Note: At client request, this sample was analyzed as a 'single layer', i.e., the only layer analyzed is the type of material listed on the chain of custody or other paperwork. However, this sample was found to contain the following other suspect material types, which are noted here to ensure that the client is aware of their presence and can act accordingly: mastic.

Sample IHS-M-2002-1C2-8 Lab Number 2007-07372- 8 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/14/2007 An? OK Apparent Smp Type Flooring Fibrous Solid
Homogeneous No # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	leveling compound	100	Off-white	3	n.d.	-	-	-	-	-						
Total %		100	Average %		n.d.	-	-	-	-	-						
Fiber Identification:					none											
Fibers					Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
Oil	Col Par	Col Per	RI Par	RI Per												
1	none															
2																
3																
4																
5																
6																

Sample Analytical Note

Procedure: tweased apart using forceps. Note: At client request, this sample was analyzed as a 'single layer', i.e., the only layer analyzed is the type of material listed on the chain of custody or other paperwork. However, this sample was found to contain the following other suspect material types, which are noted here to ensure that the client is aware of their presence and can act accordingly: mastic.

PLM Analysis Details

Job Number: 200707372

IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-1C3-9 **Lab Number** 2007-07372- 9 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/14/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous No **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	leveling compound	100	Off-white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Note: At client request, this sample was analyzed as a 'single layer', i.e., the only layer analyzed is the type of material listed on the chain of custody or other paperwork. However, this sample was found to contain the following other suspect material types, which are noted here to ensure that the client is aware of their presence and can act accordingly: mastic.

Sample IHS-M-2002-1D1-10 **Lab Number** 2007-07372- 10 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/14/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Tan	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2002-1D2-11 **Lab Number** 2007-07372- 11 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/14/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Tan	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

PLM Analysis Details

Job Number:

200707372

IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-1D3-12 **Lab Number** 2007-07372- 12 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/14/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Tan	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers									Refractive Index Determinations				
		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 IHS-M-2002-1E1-13 **Lab Number** 2007-07372- 13 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/14/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 3 **Pos Layer?** Yes **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	3	Yellow	1	n.d.	-	-	-	-	-
2	floor tile	90	off-white	1	>1-2%	-	-	-	-	-
3	mastic	7	Yellow	1	n.d.	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details

Job Number:

200707372

IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-1E2-14 **Lab Number** 2007-07372- 14 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/14/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 3 **Pos Layer?** Yes **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	1	Yellow	1	n.d.	-	-	-	-	-
2	floor tile	90	off-white	1	>1-2%	-	-	-	-	-
3	mastic	9	Yellow	1	n.d.	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1									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 matrix using solvent.

Sample IHS-M-2002-1E3-15 **Lab Number** 2007-07372- 15 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/14/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 3 **Pos Layer?** Yes **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	3	Yellow	1	n.d.	-	-	-	-	-
2	floor tile	90	off-white	1	>1-2%	-	-	-	-	-
3	mastic	7	Yellow	1	n.d.	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1									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 matrix using solvent.

PLM Analysis Details

Job Number:

200707372

IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-2A1-16 Lab Number 2007-07372- 16 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/14/2007 An? OK Apparent Smp Type Wall System Fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification:

cellulose fiber

Fibers									Refractive Index Determinations				
		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.

Sample IHS-M-2002-2A2-17 Lab Number 2007-07372- 17 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/14/2007 An? OK Apparent Smp Type Wall System Fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification:

cellulose fiber

Fibers									Refractive Index Determinations				
		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.

Sample IHS-M-2002-2A3-18 Lab Number 2007-07372- 18 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/14/2007 An? OK Apparent Smp Type Wall System Fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification:

cellulose fiber

Fibers									Refractive Index Determinations				
		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.

PLM Analysis Details

Job Number: 200707372

IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-2B1-19 Lab Number 2007-07372- 19 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/14/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-						
Total %		100	Average %		<=1%	-	-	-	-	-						
Fiber Identification:					chrysotile asbestos											
Fibers					Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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: teased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2002-2B2-20 Lab Number 2007-07372- 20 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/14/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: teased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2002-2B3-21 Lab Number 2007-07372- 21 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/14/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-						
Total %		100	Average %		n.d.	-	-	-	-	-						
Fiber Identification:					none											
Fibers					Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	Oil	Col Par	Col Per	RI Par	RI Per						
1	none															
2																
3																
4																
5																
6																

Sample Analytical Note

Procedure: teased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707372
IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-2C1-22 **Lab Number** 2007-07372- 22 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/14/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using dilute HCl acid.

Sample IHS-M-2002-2C2-23 **Lab Number** 2007-07372- 23 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/14/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using dilute HCl acid.

Sample IHS-M-2002-2C3-24 **Lab Number** 2007-07372- 24 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/14/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using dilute HCl acid.

PLM Analysis Details

Job Number: 200707372

IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-2C4-25 Lab Number 2007-07372- 25 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/14/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:				none						

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	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 matrix using dilute HCl acid.

Sample IHS-M-2002-2C5-26 Lab Number 2007-07372- 26 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/14/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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																
3																
4																
5																
6																

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2002-2D1-27 Lab Number 2007-07372- 27 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/14/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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																
3																
4																
5																
6																

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details

Job Number: 200707372

IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-2D2-28 Lab Number 2007-07372- 28 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/14/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
	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 matrix using dilute HCl acid.

Sample IHS-M-2002-2D3-29 Lab Number 2007-07372- 29 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/14/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2002-2E1-30 Lab Number 2007-07372- 30 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/17/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	stucco	100	off-white	2	<=1%	-	-	-	-	-						
Total %		100	Average %		<=1%	-	-	-	-	-						
Fiber Identification:					chrysotile asbestos											
Fibers					Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	chrysotile asbestos				W	A	N	N	L	+	P	Oil	Col Par	Col Per	RI Par	RI Per
2												1.550	vb/g	sb/o	1.556	1.553
3																
4																
5																
6																

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details

Job Number: 200707372

IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-2E2-31 Lab Number 2007-07372- 31 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/17/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	off-white	2	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2002-2E3-32 Lab Number 2007-07372- 32 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/17/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2002-2E4-33 Lab Number 2007-07372- 33 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/17/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Off-white	2	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

PLM Analysis Details

Job Number:

200707372

IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-2E5-34 Lab Number 2007-07372- 34 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/17/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Off-white	2	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2002-3A1-35 Lab Number 2007-07372- 35 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/17/2007 An? OK Apparent Smp Type Sprayed Material Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): polymer foam, powder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	spray-on ceiling	100	white	3	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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 dilute HCl acid.

Sample IHS-M-2002-3A2-36 Lab Number 2007-07372- 36 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/17/2007 An? OK Apparent Smp Type Sprayed Material Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): polymer foam, powder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	spray-on ceiling	100	white	3	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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 dilute HCl acid.

PLM Analysis Details

Job Number:

200707372

IHS-Mescalero Bldg# 2002

Sample	IHS-M-2002-3A3-37	Lab Number	2007-07372- 37	Sampled:	8/20/2007	Condition:	acceptable
Analyzed By	GV 9/17/2007	An?	OK	Apparent Smp Type	Sprayed Material	Non-fibrous Solid	
Homogeneous	Yes	# Layers	1	Pos Layer?	No	# Sub-Samples 3	
Non-Fibrous Components (in approx. decreasing order): polymer foam, powder,							
Layers				Percents of Each Fiber			

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	spray-on ceiling	100	white	3	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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: teased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample	IHS-M-2002-7A1-38	Lab Number	2007-07372- 38	Sampled:	8/20/2007	Condition:	acceptable
Analyzed By	GV 9/17/2007	An?	OK	Apparent Smp Type	Adhesive/caulk	Non-fibrous Solid	
Homogeneous	Yes	# Layers	1	Pos Layer?	No	# Sub-Samples 3	
Non-Fibrous Components (in approx. decreasing order): filler, polymer,							
Layers				Percents of Each Fiber			

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

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

Sample	IHS-M-2002-7A2-39	Lab Number	2007-07372- 39	Sampled:	8/20/2007	Condition:	acceptable
Analyzed By	GV 9/17/2007	An?	OK	Apparent Smp Type	Adhesive/caulk	Non-fibrous Solid	
Homogeneous	Yes	# Layers	1	Pos Layer?	No	# Sub-Samples 3	
Non-Fibrous Components (in approx. decreasing order): filler, polymer,							
Layers				Percents of Each Fiber			

#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

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

PLM Analysis Details
Job Number:
200707372
IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-7A3-40 **Lab Number** 2007-07372- 40 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	45	tan	1	n.d.	-	-	-	-	-
2	mastic	55	Yellow	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2002-7B1-41 **Lab Number** 2007-07372- 41 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers										Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2002-7B2-42 **Lab Number** 2007-07372- 42 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers										Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details

Job Number: 200707372

IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-7B3-43 Lab Number 2007-07372- 43 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/17/2007 An? OK Apparent Smp Type Adhesive/caulk Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

Sample IHS-M-2002-7C1-44 Lab Number 2007-07372- 44 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/17/2007 An? OK Apparent Smp Type Adhesive/caulk Non-fibrous Solid
Homogeneous No # Layers 2 Pos Layer? No # Sub-Samples 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	60	Brown	1	n.d.	-	-	-	-	-
2	caulk	40	Pink	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

Sample IHS-M-2002-7C2-45 Lab Number 2007-07372- 45 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/17/2007 An? OK Apparent Smp Type Adhesive/caulk Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Brown	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

PLM Analysis Details

Job Number: 200707372

IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-7C3-46 Lab Number 2007-07372- 46 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/17/2007 An? OK Apparent Smp Type Adhesive/caulk Non-fibrous Solid
Homogeneous No # Layers 2 Pos Layer? No # Sub-Samples 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	60	Brown	1	n.d.	-	-	-	-	-
2	caulk	40	Pink	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2002-8A1-47 Lab Number 2007-07372- 47 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/17/2007 An? OK Apparent Smp Type Roofing Sticky
Homogeneous No # Layers 2 Pos Layer? No # Sub-Samples 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	70	black	1	5-10%	n.d.	-	-	-	-
2	bitumen sheeting	30	black	1	n.d.	90-100%	-	-	-	-
Total %		100	Average %		2-5%	20-30%	-	-	-	-

Fiber Identification:

glass fiber cellulose fiber

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2002-8A2-48 Lab Number 2007-07372- 48 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/17/2007 An? OK Apparent Smp Type Roofing Sticky
Homogeneous No # Layers 2 Pos Layer? No # Sub-Samples 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	70	black	1	5-10%	n.d.	-	-	-	-
2	bitumen sheeting	30	black	1	n.d.	90-100%	-	-	-	-
Total %		100	Average %		2-5%	20-30%	-	-	-	-

Fiber Identification:

glass fiber cellulose fiber

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number:
200707372

IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-8A3-49 **Lab Number** 2007-07372- 49 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/17/2007 **An?** OK **Apparent Smp Type** Roofing Sticky
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	70	black	1	5-10%	n.d.	-	-	-	-
2	bitumen sheeting	30	black	1	n.d.	90-100%	-	-	-	-
Total %		100	Average %		2-5%	20-30%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2002-8B1-50 **Lab Number** 2007-07372- 50 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/17/2007 **An?** OK **Apparent Smp Type** Roofing Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2002-8B2-51 **Lab Number** 2007-07372- 51 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/17/2007 **An?** OK **Apparent Smp Type** Roofing Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

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

PLM Analysis Details
Job Number:
200707372

IHS-Mescalero Bldg# 2002

Sample IHS-M-2002-8B3-52 **Lab Number** 2007-07372- 52 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/17/2007 **An?** OK **Apparent Smp Type** Roofing Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

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

Fr=Friability: 1=very non-friable; 2= non-friable; 3=friable; 4=highly friable

 Colors: B=black;BL=blue;BR=brown;CL=clear;G=Green;GY=gray;OR=orange;OW=off-white;PN=pink;PU=purple;R=red;TN=tan;W=white;Y=yellow;V=various
 Fiber Morphology: A=fine fibers/bundles, white, sinewy, flexible; B=fine fibers/bundles, w-br, straight, broomed ends; C=fine fibers/bundles, blue, straight, broomed ends;
 D=fine to coarse fibers, CL-B, brittle; E=coarse fibers,CL or dyed, striated; F=coarse fibers or splinters, W-BR, ribbon-like; G=lath-like or shards, low aspect ratio, may taper

Iso=isotropism - may be yes or no; Pleo=pleochroism - may be yes or no; Bi=birefringence - may be None, Low, Medium or High

Elg=sign of elongation - may be +, - or B (both); Ext=extinction - may be Parallel, Oblique, None or Undulating; Oil=medium used to for dispersion staining

Col Par=dispersion staining colors parallel to the fiber (fiber/halo): b/w=black/white; dg/py=dark gray/pale yellow; vg/y=violet gray/yellow; db/ly=dark blue/lemon yellow; vb/g= vivid blue/gold; sb/o=sky blue/orange; pb/r=pale blue/red; gb/dr=gray blue/dark red; w/b=white/black. Col Perp=same only perpendicular to fiber.

RI Par=refractive index parallel to fiber; RI Perp=refractive index perpendicular to fiber

Galina B. Volkova

Analyst: GALINA B. VOLKOVA

Printed: 17-Sep-07

Original Print Date: 17-Sep-07

Larry S. Pierce

Larry S. Pierce, Approved Accreditation Signatory



Polarized Light Microscope (PLM) Analysis for Asbestos

JobNumber: 200707373

Client:

IHI ENVIRONMENTAL

(PHOENIX OFFICE)

4527 N 16th ST STE 105

PHOENIX, AZ

85016-0000

Office Phone: (602) 776-0300

FAX: (602) 776-0301

Samples: 55 **PLM** **Rec:** 8/27/2007 **Method:** Interim (EPA/600/M4-82-020) **PLM analysis for asbestos in bulk smp**

Client Job: IHS-Mescalero Bldg# 2003

PO Number: 07P-3031

Report Date: 9/17/2007

Date Analyzed: 9/17/2007

Routing Number: -

Method and Analysis Information:

Fiberquant Internal SOP: PLMi

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, NESHAP and OSHA regulations designate a result of $\leq 1\%$ 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 Interim Method (EPA Method 600/M4-82-020). 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 $\leq 1\%$ asbestos are point counted using 400 points, and the results listed on the detail analysis sheet. Such point counting is required by NESHAP (National Emission Standards for Hazardous Air Pollutants, Nov. 1990) in order to rely on analytical results that are $\leq 1\%$. 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 $\leq 1\%$ as "borderline negative", and results where asbestos was $> 1\%$ but $\leq 2\%$ as "borderline positive" to indicate the uncertainty in assigning a "positive" or "negative" label. In the sample summary, a "ND" means that no asbestos was detected during the analysis. A "Tr" or "Trace" of asbestos is defined for our purposes as the detection of several asbestos fibers during the analysis; an amount essentially at the limit of detection for the method. 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 is a degreed geologist or mineralogist, 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 monthly. 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 (#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.

The "Analysis Results" below are the averages for all layers of each sample listed. The "+ Layer" column indicates whether any of the layers in the sample were >1% asbestos. Please refer to each detailed analysis sheet to determine which layer(s) of a sample was(were) positive.

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:

Single layer sample analysis as per client request. Any material or layer other than that indicated on the chain of custody was not analyzed, even if a suspect material.

PLM Analysis Summary:

Job Number: 200707373

IHS-Mescalero Bldg# 2003

Sample Number			Lab Number	Apparent Sample Type *	Positive Layer Yes or No
Layer	Color	Apparent Layer Type *	Asbestos Results		
Sample #	<u>IHS-M-2003-1A1-1</u>		2007-07373- 1	Adhesive/caulk	Positive Layer? Yes
Layer # 1	Black	mastic		2-5% chrysotile asbestos	
Sample #	<u>IHS-M-2003-1A2-2</u>		2007-07373- 2	Adhesive/caulk	Positive Layer? Yes
Layer # 1	Black	mastic		2-5% chrysotile asbestos	
Sample #	<u>IHS-M-2003-1A3-3</u>		2007-07373- 3	Adhesive/caulk	Positive Layer? Yes
Layer # 1	Black	mastic		2-5% chrysotile asbestos	
Sample #	<u>IHS-M-2003-1B1-4</u>		2007-07373- 4	Adhesive/caulk	Positive Layer? No
Layer # 1	Yellow	mastic		no asbestos detected	
Sample #	<u>IHS-M-2003-1B2-5</u>		2007-07373- 5	Adhesive/caulk	Positive Layer? No
Layer # 1	Yellow	mastic		no asbestos detected	
Sample #	<u>IHS-M-2003-1B3-6</u>		2007-07373- 6	Adhesive/caulk	Positive Layer? No
Layer # 1	Yellow	mastic		no asbestos detected	
Sample #	<u>IHS-M-2003-1C1-7</u>		2007-07373- 7	Flooring	Positive Layer? No
Layer # 1	Off-white	sheet flooring		no asbestos detected	
Sample #	<u>IHS-M-2003-1C2-8</u>		2007-07373- 8	Flooring	Positive Layer? No
Layer # 1	Off-white	sheet flooring		no asbestos detected	
Sample #	<u>IHS-M-2003-1C3-9</u>		2007-07373- 9	Flooring	Positive Layer? No
Layer # 1	Off-white	sheet flooring		no asbestos detected	
Sample #	<u>IHS-M-2003-2A1-10</u>		2007-07373- 10	Wall System	Positive Layer? No
Layer # 1	white	drywall core		no asbestos detected	
Sample #	<u>IHS-M-2003-2A2-11</u>		2007-07373- 11	Wall System	Positive Layer? No
Layer # 1	white	drywall core		no asbestos detected	
Sample #	<u>IHS-M-2003-2A3-12</u>		2007-07373- 12	Wall System	Positive Layer? No
Layer # 1	white	drywall core		no asbestos detected	
Sample #	<u>IHS-M-2003-2B1-13</u>		2007-07373- 13	Wall System	Positive Layer? No
Layer # 1	Off-white	texture/joint compound		<=1% chrysotile asbestos	
Sample #	<u>IHS-M-2003-2B2-14</u>		2007-07373- 14	Wall System	Positive Layer? No
Layer # 1	Off-white	texture/joint compound		<=1% chrysotile asbestos	
Sample #	<u>IHS-M-2003-2B3-15</u>		2007-07373- 15	Wall System	Positive Layer? No
Layer # 1	Off-white	texture/joint compound		<=1% chrysotile asbestos	
Sample #	<u>IHS-M-2003-2C1-16</u>		2007-07373- 16	Wall System	Positive Layer? Yes
Layer # 1	Off-white	texture/joint compound		>1-2% chrysotile asbestos	
Sample #	<u>IHS-M-2003-2C2-17</u>		2007-07373- 17	Wall System	Positive Layer? Yes
Layer # 1	Off-white	texture/joint compound		>1-2% chrysotile asbestos	
Sample #	<u>IHS-M-2003-2C3-18</u>		2007-07373- 18	Wall System	Positive Layer? No
Layer # 1	Off-white	texture/joint compound		<=1% chrysotile asbestos	
Sample #	<u>IHS-M-2003-2C4-19</u>		2007-07373- 19	Wall System	Positive Layer? Yes
Layer # 1	Off-white	texture/joint compound		>1-2% chrysotile asbestos	
Sample #	<u>IHS-M-2003-2C5-20</u>		2007-07373- 20	Wall System	Positive Layer? Yes
Layer # 1	Off-white	texture/joint compound		>1-2% chrysotile asbestos	
Sample #	<u>IHS-M-2003-2D1-21</u>		2007-07373- 21	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound		no asbestos detected	
Sample #	<u>IHS-M-2003-2D2-22</u>		2007-07373- 22	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound		no asbestos detected	
Sample #	<u>IHS-M-2003-2D3-23</u>		2007-07373- 23	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound		no asbestos detected	
Sample #	<u>IHS-M-2003-2E1-24</u>		2007-07373- 24	Trowelled Material	Positive Layer? Yes
Layer # 1	Orange	stucco		>1-2% chrysotile asbestos	
Layer # 2	Gray	stucco		no asbestos detected	
Sample #	<u>IHS-M-2003-2E2-25</u>		2007-07373- 25	Wall System	Positive Layer? No
Layer # 1	Gray	stucco		no asbestos detected	
Sample #	<u>IHS-M-2003-2E3-26</u>		2007-07373- 26	Wall System	Positive Layer? No
Layer # 1	Gray	stucco		no asbestos detected	
Sample #	<u>IHS-M-2003-2E4-27</u>		2007-07373- 27	Wall System	Positive Layer? No
Layer # 1	Gray	stucco		no asbestos detected	
Sample #	<u>IHS-M-2003-2E5-28</u>		2007-07373- 28	Wall System	Positive Layer? No
Layer # 1	Gray	stucco		no asbestos detected	
Sample #	<u>IHS-M-2003-3A1-29</u>		2007-07373- 29	Acoustic Tile	Positive Layer? No
Layer # 1	Off-white	acoustical tile		no asbestos detected	

Sample # <u>IHS-M-2003-3A2-30</u>	2007-07373- 30	Acoustic Tile	Positive Layer? No
Layer # 1 Off-white acoustical tile		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2003-3A3-31</u>	2007-07373- 31	Acoustic Tile	Positive Layer? No
Layer # 1 Off-white acoustical tile		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2003-7A1-32</u>	2007-07373- 32	Adhesive/caulk	Positive Layer? Yes
Layer # 1 Black coating		<i>>1-2% chrysotile asbestos</i>	
Sample # <u>IHS-M-2003-7A2-33</u>	2007-07373- 33	Adhesive/caulk	Positive Layer? Yes
Layer # 1 Black coating		<i>>1-2% chrysotile asbestos</i>	
Sample # <u>IHS-M-2003-7A3-34</u>	2007-07373- 34	Adhesive/caulk	Positive Layer? Yes
Layer # 1 Black coating		<i>>1-2% chrysotile asbestos</i>	
Sample # <u>IHS-M-2003-7B1-35</u>	2007-07373- 35	Adhesive/caulk	Positive Layer? No
Layer # 1 White caulk		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2003-7B2-36</u>	2007-07373- 36	Adhesive/caulk	Positive Layer? No
Layer # 1 White caulk		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2003-7B3-37</u>	2007-07373- 37	Adhesive/caulk	Positive Layer? No
Layer # 1 White caulk		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2003-7C1-38</u>	2007-07373- 38	Adhesive/caulk	Positive Layer? No
Layer # 1 White caulk		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2003-7C2-39</u>	2007-07373- 39	Adhesive/caulk	Positive Layer? No
Layer # 1 White caulk		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2003-7C3-40</u>	2007-07373- 40	Adhesive/caulk	Positive Layer? No
Layer # 1 White caulk		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2003-7D1-41</u>	2007-07373- 41	TSI	Positive Layer? Yes
Layer # 1 White insulation		<i>10-20% chrysotile asbestos</i>	
Sample # <u>IHS-M-2003-7D2-42</u>	2007-07373- 42	TSI	Positive Layer? Yes
Layer # 1 White insulation		<i>10-20% chrysotile asbestos</i>	
Sample # <u>IHS-M-2003-7D3-43</u>	2007-07373- 43	TSI	Positive Layer? Yes
Layer # 1 White insulation		<i>10-20% chrysotile asbestos</i>	
Sample # <u>IHS-M-2003-7E1-44</u>	2007-07373- 44	Miscellaneous	Positive Layer? No
Layer # 1 Brown fiber-board		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2003-7E2-45</u>	2007-07373- 45	Miscellaneous	Positive Layer? No
Layer # 1 Brown fiber-board		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2003-7E3-46</u>	2007-07373- 46	Miscellaneous	Positive Layer? No
Layer # 1 Brown fiber-board		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2003-8A1-47</u>	2007-07373- 47	Roofing	Positive Layer? No
Layer # 1 Black roofing roll/shingle		<i>no asbestos detected</i>	
Layer # 2 Black roof ply		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2003-8A2-48</u>	2007-07373- 48	Roofing	Positive Layer? No
Layer # 1 Black roofing roll/shingle		<i>no asbestos detected</i>	
Layer # 2 Black roof ply		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2003-8A3-49</u>	2007-07373- 49	Roofing	Positive Layer? No
Layer # 1 Black roofing roll/shingle		<i>no asbestos detected</i>	
Layer # 2 Black roof ply		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2003-8B1-50</u>	2007-07373- 50	Adhesive/caulk	Positive Layer? Yes
Layer # 1 Black caulk		<i>2-5% chrysotile asbestos</i>	
Sample # <u>IHS-M-2003-8B2-51</u>	2007-07373- 51	Adhesive/caulk	Positive Layer? Yes
Layer # 1 Black caulk		<i>2-5% chrysotile asbestos</i>	
Sample # <u>IHS-M-2003-8B3-52</u>	2007-07373- 52	Adhesive/caulk	Positive Layer? Yes
Layer # 1 Black caulk		<i>2-5% chrysotile asbestos</i>	
Sample # <u>IHS-M-2003-8C1-53</u>	2007-07373- 53	Roofing	Positive Layer? No
Layer # 1 Black roofing roll/shingle		<i>no asbestos detected</i>	
Layer # 2 Black roof ply		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2003-8C2-54</u>	2007-07373- 54	Roofing	Positive Layer? No
Layer # 1 Black roofing roll/shingle		<i>no asbestos detected</i>	
Layer # 2 Black roof ply		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2003-8C3-55</u>	2007-07373- 55	Roofing	Positive Layer? No
Layer # 1 Black roofing roll/shingle		<i>no asbestos detected</i>	
Layer # 2 Black roof ply		<i>no asbestos detected</i>	

* 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.

PLM Analysis Details

Job Number: 200707373

IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-1A1-1 **Lab Number** 2007-07373- 1 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): bitumen, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	2-5%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2003-1A2-2 **Lab Number** 2007-07373- 2 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): bitumen, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	2-5%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2003-1A3-3 **Lab Number** 2007-07373- 3 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): bitumen, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	2-5%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

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

PLM Analysis Details

Job Number: 200707373

IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-1B1-4 **Lab Number** 2007-07373- 4 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					synthetic fiber (extr					

Fibers									Refractive Index Determinations				
		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													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2003-1B2-5 **Lab Number** 2007-07373- 5 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					synthetic fiber (extr					

Fibers									Refractive Index Determinations				
		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													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2003-1B3-6 **Lab Number** 2007-07373- 6 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					synthetic fiber (extr					

Fibers									Refractive Index Determinations				
		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													
3													
4													
5													
6													

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707373
IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-1C1-7 **Lab Number** 2007-07373- 7 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): polymer, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Off-white	2	10-20%	2-5%	-	-	-	-
Total %		100	Average %		10-20%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2	glass fiber	CL	D	Y				
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 IHS-M-2003-1C2-8 **Lab Number** 2007-07373- 8 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): polymer, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Off-white	2	10-20%	2-5%	-	-	-	-
Total %		100	Average %		10-20%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2	glass fiber	CL	D	Y				
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 IHS-M-2003-1C3-9 **Lab Number** 2007-07373- 9 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): polymer, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Off-white	2	10-20%	2-5%	-	-	-	-
Total %		100	Average %		10-20%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2	glass fiber	CL	D	Y				
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.

PLM Analysis Details
Job Number: 200707373
IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-2A1-10 **Lab Number** 2007-07373- 10 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose					

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

Sample Analytical Note

Procedure: tweased apart using forceps.

Sample IHS-M-2003-2A2-11 **Lab Number** 2007-07373- 11 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose					

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

Sample Analytical Note

Procedure: tweased apart using forceps.

Sample IHS-M-2003-2A3-12 **Lab Number** 2007-07373- 12 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose					

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

Sample Analytical Note

Procedure: tweased apart using forceps.

PLM Analysis Details
Job Number: 200707373
IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-2B1-13 **Lab Number** 2007-07373- 13 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Point Count: Layer Number 1; 3 asbestos counts per 400 total counts = .75 percent.

Sample IHS-M-2003-2B2-14 **Lab Number** 2007-07373- 14 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Point Count: Layer Number 1; 4 asbestos counts per 400 total counts = 1 percent.

Sample IHS-M-2003-2B3-15 **Lab Number** 2007-07373- 15 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Point Count: Layer Number 1; 3 asbestos counts per 400 total counts = 0.75 percent.

PLM Analysis Details
Job Number: 200707373
IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-2C1-16 **Lab Number** 2007-07373- 16 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Point Count: Layer Number 1; 5 asbestos counts per 400 total counts = 1.25 percent.

Sample IHS-M-2003-2C2-17 **Lab Number** 2007-07373- 17 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole. Not enough material to point-count.

Sample IHS-M-2003-2C3-18 **Lab Number** 2007-07373- 18 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Point Count: Layer Number 1; 4 asbestos counts per 400 total counts = 1 percent.

PLM Analysis Details
Job Number: 200707373
IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-2C4-19 **Lab Number** 2007-07373- 19 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole. Not enough material to point count.

Sample IHS-M-2003-2C5-20 **Lab Number** 2007-07373- 20 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 8
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Point Count: Layer Number 1; 5 asbestos counts per 400 total counts = 1.25 percent.

Sample IHS-M-2003-2D1-21 **Lab Number** 2007-07373- 21 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707373
IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-2D2-22 **Lab Number** 2007-07373- 22 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2003-2D3-23 **Lab Number** 2007-07373- 23 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2003-2E1-24 **Lab Number** 2007-07373- 24 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Trowelled Material **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	10	Orange	2	>1-2%	-	-	-	-	-
2	stucco	90	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
	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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707373
IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-2E2-25 **Lab Number** 2007-07373- 25 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using dilute HCl acid.

Sample IHS-M-2003-2E3-26 **Lab Number** 2007-07373- 26 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using dilute HCl acid.

Sample IHS-M-2003-2E4-27 **Lab Number** 2007-07373- 27 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707373
IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-2E5-28 **Lab Number** 2007-07373- 28 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2003-3A1-29 **Lab Number** 2007-07373- 29 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Acoustic Tile **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	acoustical tile	100	Off-white	3	20-30%	10-20%	-	-	-	-
Total %		100	Average %		20-30%	10-20%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2003-3A2-30 **Lab Number** 2007-07373- 30 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Acoustic Tile **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	acoustical tile	100	Off-white	3	20-30%	10-20%	-	-	-	-
Total %		100	Average %		20-30%	10-20%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details

Job Number: 200707373

IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-3A3-31 **Lab Number** 2007-07373- 31 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Acoustic Tile **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	acoustical tile	100	Off-white	3	20-30%	10-20%	-	-	-	-
Total %		100	Average %		20-30%	10-20%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				
Fibers				Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber			W	F	N	N	H	+	U
2	glass fiber			CL	D	Y				
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 dilute HCl acid.

Sample IHS-M-2003-7A1-32 **Lab Number** 2007-07373- 32 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Sticky**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	Black	1	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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	pb/r	1.556	1.549
2																
3																
4																
5																
6																

Sample Analytical Note

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

Sample IHS-M-2003-7A2-33 **Lab Number** 2007-07373- 33 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Sticky**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	Black	1	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
		Oil	Col Par	Col Per	RI Par	RI Per							
1	chrysotile asbestos	1.550	vb/g	pb/r	1.556	1.549	W	A	N	N	L	+	P
2													
3													
4													
5													
6													

Sample Analytical Note

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

PLM Analysis Details

Job Number: 200707373

IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-7A3-34 **Lab Number** 2007-07373- 34 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Sticky**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	Black	1	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2003-7B1-35 **Lab Number** 2007-07373- 35 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Rubbery**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

Sample IHS-M-2003-7B2-36 **Lab Number** 2007-07373- 36 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Rubbery**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using solvent.

PLM Analysis Details
Job Number: 200707373
IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-7B3-37 **Lab Number** 2007-07373- 37 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Rubbery**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

Sample IHS-M-2003-7C1-38 **Lab Number** 2007-07373- 38 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Rubbery**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:				none						

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

Sample IHS-M-2003-7C2-39 **Lab Number** 2007-07373- 39 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Rubbery**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

PLM Analysis Details

Job Number: 200707373

IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-7C3-40 **Lab Number** 2007-07373- 40 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Condition:** Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using solvent.

Sample IHS-M-2003-7D1-41 **Lab Number** 2007-07373- 41 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** TSI **Condition:** Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	White	4	10-20%	10-20%	-	-	-	-
Total %		100	Average %		10-20%	10-20%	-	-	-	-
Fiber Identification:					chrysotile asbestos	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	chrysotile asbestos	W	A	N	N	L	+	P	Oil	Col Par	Col Per	RI Par	RI Per
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2003-7D2-42 **Lab Number** 2007-07373- 42 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** TSI **Condition:** Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	White	4	10-20%	10-20%	-	-	-	-
Total %		100	Average %		10-20%	10-20%	-	-	-	-
Fiber Identification:					chrysotile asbestos	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	pb/r	1.556	1.549
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707373
IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-7D3-43 **Lab Number** 2007-07373- 43 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** TSI **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	White	4	10-20%	10-20%	-	-	-	-
Total %		100	Average %		10-20%	10-20%	-	-	-	-
Fiber Identification:					chrysotile asbestos	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	pb/r	1.556	1.549
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2003-7E1-44 **Lab Number** 2007-07373- 44 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Miscellaneous **Fibrous Mat**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	fiber-board	100	Brown	4	90-100%	-	-	-	-	-
Total %		100	Average %		90-100%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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.

Sample IHS-M-2003-7E2-45 **Lab Number** 2007-07373- 45 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Miscellaneous **Fibrous Mat**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	fiber-board	100	Brown	4	90-100%	-	-	-	-	-
Total %		100	Average %		90-100%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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.

PLM Analysis Details
Job Number: 200707373
IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-7E3-46 **Lab Number** 2007-07373- 46 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Miscellaneous **Fibrous Mat**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	fiber-board	100	Brown	4	90-100%	-	-	-	-	-
Total %		100	Average %		90-100%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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.

Sample IHS-M-2003-8A1-47 **Lab Number** 2007-07373- 47 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	65	Black	1	10-20%	n.d.	-	-	-	-
2	roof ply	35	Black	1	n.d.	60-70%	-	-	-	-
Total %		100	Average %		5-10%	20-30%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2003-8A2-48 **Lab Number** 2007-07373- 48 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	65	Black	1	10-20%	n.d.	-	-	-	-
2	roof ply	35	Black	1	n.d.	60-70%	-	-	-	-
Total %		100	Average %		5-10%	20-30%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number: 200707373
IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-8A3-49 **Lab Number** 2007-07373- 49 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	65	Black	1	10-20%	n.d.	-	-	-	-
2	roof ply	35	Black	1	n.d.	60-70%	-	-	-	-
Total %		100	Average %		5-10%	20-30%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2003-8B1-50 **Lab Number** 2007-07373- 50 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	2-5%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	chrysotile asbestos	W	A	N	N	L	+	P	Oil	Col Par	Col Per	RI Par	RI Per
2									1.550	vb/g	pb/r	1.556	1.549
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2003-8B2-51 **Lab Number** 2007-07373- 51 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	2-5%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707373
IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-8B3-52 **Lab Number** 2007-07373- 52 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	2-5%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2003-8C1-53 **Lab Number** 2007-07373- 53 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	40	Black	1	10-20%	n.d.	-	-	-	-
2	roof ply	60	Black	1	n.d.	60-70%	-	-	-	-
Total %		100	Average %		5-10%	40-50%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2003-8C2-54 **Lab Number** 2007-07373- 54 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	40	Black	1	10-20%	n.d.	-	-	-	-
2	roof ply	60	Black	1	n.d.	60-70%	-	-	-	-
Total %		100	Average %		5-10%	40-50%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number: 200707373
IHS-Mescalero Bldg# 2003

Sample IHS-M-2003-8C3-55 **Lab Number** 2007-07373- 55 **Sampled:** 8/17/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

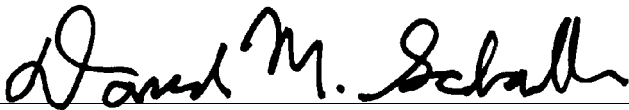
Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	40	Black	1	10-20%	n.d.	-	-	-	-
2	roof ply	60	Black	1	n.d.	60-70%	-	-	-	-
Total %		100	Average %		5-10%	40-50%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Fr=Friability: 1=very non-friable; 2= non-friable; 3=friable; 4=highly friable
 Colors: B=black; BL=blue; BR=brown; CL=clear; G=Green; GY=gray; OR=orange; OW=off-white; PN=pink; PU=purple; R=red; TN=tan; W=white; Y=yellow; V=various
 Fiber Morphology: A=fine fibers/bundles, white, sinewy, flexible; B=fine fibers/bundles, w-br, straight, broomed ends; C=fine fibers/bundles, blue, straight, broomed ends;
 D=fine to coarse fibers, CL-B, brittle; E=coarse fibers, CL or dyed, striated; F=coarse fibers or splinters, W-BR, ribbon-like; G=lath-like or shards, low aspect ratio, may taper
 Iso=isotropism - may be yes or no; Pleo=pleochroism - may be yes or no; Bi=birefringence - may be None, Low, Medium or High
 Elg=sign of elongation - may be +, - or B (both); Ext=extinction - may be Parallel, Oblique, None or Undulating; Oil=medium used to for dispersion staining
 Col Par=dispersion staining colors parallel to the fiber (fiber/halo): b/w=black/white; dg/py=dark gray/pale yellow; vg/y=violet gray/yellow; db/ly=dark blue/lemon yellow;
 vb/g= vivid blue/gold; sb/o=sky blue/orange; pb/r=pale blue/red; gb/dr=gray blue/dark red; w/b=white/black. Col Perp=same only perpendicular to fiber.
 RI Par=refractive index parallel to fiber; RI Perp=refractive index perpendicular to fiber



Analyst: DAVID M. SCHALLER

Printed: 17-Sep-07

Original Print Date: 17-Sep-07



Larry S. Pierce, Approved Accreditation Signatory



Polarized Light Microscope (PLM) Analysis for Asbestos

JobNumber: 200707375

Client:

IHI ENVIRONMENTAL

(PHOENIX OFFICE)

4527 N 16th ST STE 105

PHOENIX, AZ

85016-0000

Office Phone: (602) 776-0300

FAX: (602) 776-0301

Samples: 67 **PLM** **Rec:** 8/27/2007 **Method:** Interim (EPA/600/M4-82-020) **PLM analysis for asbestos in bulk smp**

Client Job: IHS-Mescalero Bldg# 2004

PO Number: 07P-3031

Report Date: 9/19/2007

Date Analyzed: 9/17/2007

Routing Number: -

Method and Analysis Information:

Fiberquant Internal SOP: PLMi

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, NESHAP and OSHA regulations designate a result of $\leq 1\%$ 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 Interim Method (EPA Method 600/M4-82-020). 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 $\leq 1\%$ asbestos are point counted using 400 points, and the results listed on the detail analysis sheet. Such point counting is required by NESHAP (National Emission Standards for Hazardous Air Pollutants, Nov. 1990) in order to rely on analytical results that are $\leq 1\%$. 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 $\leq 1\%$ as "borderline negative", and results where asbestos was $> 1\%$ but $\leq 2\%$ as "borderline positive" to indicate the uncertainty in assigning a "positive" or "negative" label. In the sample summary, a "ND" means that no asbestos was detected during the analysis. A "Tr" or "Trace" of asbestos is defined for our purposes as the detection of several asbestos fibers during the analysis; an amount essentially at the limit of detection for the method. 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 is a degreed geologist or mineralogist, 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 monthly. 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 (#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.

The "Analysis Results" below are the averages for all layers of each sample listed. The "+ Layer" column indicates whether any of the layers in the sample were >1% asbestos. Please refer to each detailed analysis sheet to determine which layer(s) of a sample was(were) positive.

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:

Single layer sample analysis as per client request. Any material or layer other than that indicated on the chain of custody was not analyzed, even if a suspect material.

PLM Analysis Summary:

Job Number: 200707375

IHS-Mescalero Bldg# 2004

Sample Number			Lab Number	Apparent Sample Type *	Positive Layer Yes or No
Layer	Color	Apparent Layer Type *	Asbestos Results		
Sample #	<u>IHS-M-2004-1A1-1</u>		2007-07375- 1	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2004-1A2-2</u>		2007-07375- 2	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2004-1A3-3</u>		2007-07375- 3	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2004-1B1-4</u>		2007-07375- 4	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2004-1B2-5</u>		2007-07375- 5	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2004-1B3-6</u>		2007-07375- 6	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2004-1C1-7</u>		2007-07375- 7	Flooring	Positive Layer? No
Layer # 1	off-white	floor tile	no asbestos detected		
Sample #	<u>IHS-M-2004-1C2-8</u>		2007-07375- 8	Flooring	Positive Layer? Yes
Layer # 1	off-white	floor tile	2-5% chrysotile asbestos		
Layer # 2	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2004-1C3-9</u>		2007-07375- 9	Flooring	Positive Layer? Yes
Layer # 1	off-white	floor tile	2-5% chrysotile asbestos		
Layer # 2	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2004-1D1-10</u>		2007-07375- 10	Flooring	Positive Layer? Yes
Layer # 1	Green	floor tile	2-5% chrysotile asbestos		
Layer # 2	Black	mastic	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2004-1D2-11</u>		2007-07375- 11	Flooring	Positive Layer? Yes
Layer # 1	Green	floor tile	2-5% chrysotile asbestos		
Layer # 2	Black	mastic	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2004-1D3-12</u>		2007-07375- 12	Flooring	Positive Layer? Yes
Layer # 1	Green	floor tile	2-5% chrysotile asbestos		
Layer # 2	Black	mastic	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2004-1E1-13</u>		2007-07375- 13	Cementitious	Positive Layer? No
Layer # 1	Gray	grout	no asbestos detected		
Sample #	<u>IHS-M-2004-1E2-14</u>		2007-07375- 14	Cementitious	Positive Layer? No
Layer # 1	Gray	grout	no asbestos detected		
Sample #	<u>IHS-M-2004-1E3-15</u>		2007-07375- 15	Cementitious	Positive Layer? No
Layer # 1	Gray	grout	no asbestos detected		
Sample #	<u>IHS-M-2004-1F1-16</u>		2007-07375- 16	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2004-1F2-17</u>		2007-07375- 17	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2004-1F3-18</u>		2007-07375- 18	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2004-1G1-19</u>		2007-07375- 19	Flooring	Positive Layer? Yes
Layer # 1	off-white	floor tile	2-5% chrysotile asbestos		
Layer # 2	White	mastic	no asbestos detected		
Sample #	<u>IHS-M-2004-1G2-20</u>		2007-07375- 20	Flooring	Positive Layer? Yes
Layer # 1	off-white	floor tile	2-5% chrysotile asbestos		
Layer # 2	White	mastic	no asbestos detected		
Sample #	<u>IHS-M-2004-1G3-21</u>		2007-07375- 21	Flooring	Positive Layer? Yes
Layer # 1	off-white	floor tile	2-5% chrysotile asbestos		
Layer # 2	White	mastic	no asbestos detected		
Sample #	<u>IHS-M-2004-2A1-22</u>		2007-07375- 22	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2004-2A2-23</u>		2007-07375- 23	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2004-2A3-24</u>		2007-07375- 24	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2004-2B1-25</u>		2007-07375- 25	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		

Sample #	<u>IHS-M-2004-2B2-26</u>	2007-07375- 26	Wall System	Positive Layer? No
	Layer # 1 white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2004-2B3-27</u>	2007-07375- 27	Wall System	Positive Layer? No
	Layer # 1 white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2004-2C1-28</u>	2007-07375- 28	Wall System	Positive Layer? No
	Layer # 1 Off-white paint	no asbestos detected		
Sample #	<u>IHS-M-2004-2C2-29</u>	2007-07375- 29	Wall System	Positive Layer? No
	Layer # 1 white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2004-2C3-30</u>	2007-07375- 30	Wall System	Positive Layer? No
	Layer # 1 white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2004-2C4-31</u>	2007-07375- 31	Wall System	Positive Layer? No
	Layer # 1 white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2004-2C5-32</u>	2007-07375- 32	Wall System	Positive Layer? No
	Layer # 1 white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2004-2C6-33</u>	2007-07375- 33	Wall System	Positive Layer? No
	Layer # 1 white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2004-2C7-34</u>	2007-07375- 34	Wall System	Positive Layer? No
	Layer # 1 white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2004-2D1-35</u>	2007-07375- 35	Cementitious	Positive Layer? No
	Layer # 1 Red brick	no asbestos detected		
Sample #	<u>IHS-M-2004-2D2-36</u>	2007-07375- 36	Cementitious	Positive Layer? No
	Layer # 1 Red brick	no asbestos detected		
Sample #	<u>IHS-M-2004-2D3-37</u>	2007-07375- 37	Cementitious	Positive Layer? No
	Layer # 1 Red brick	no asbestos detected		
Sample #	<u>IHS-M-2004-2E1-38</u>	2007-07375- 38	Cementitious	Positive Layer? No
	Layer # 1 Gray mortar	no asbestos detected		
Sample #	<u>IHS-M-2004-2E2-39</u>	2007-07375- 39	Cementitious	Positive Layer? No
	Layer # 1 Gray mortar	no asbestos detected		
Sample #	<u>IHS-M-2004-2E3-40</u>	2007-07375- 40	Cementitious	Positive Layer? No
	Layer # 1 Gray mortar	no asbestos detected		
Sample #	<u>IHS-M-2004-7A1-41</u>	2007-07375- 41	Adhesive/caulk	Positive Layer? No
	Layer # 1 tan mastic	no asbestos detected		
Sample #	<u>IHS-M-2004-7A2-42</u>	2007-07375- 42	Adhesive/caulk	Positive Layer? No
	Layer # 1 tan mastic	no asbestos detected		
Sample #	<u>IHS-M-2004-7A3-43</u>	2007-07375- 43	Adhesive/caulk	Positive Layer? No
	Layer # 1 tan mastic	no asbestos detected		
Sample #	<u>IHS-M-2004-7B1-44</u>	2007-07375- 44	Miscellaneous	Positive Layer? No
	Layer # 1 White coating	no asbestos detected		
Sample #	<u>IHS-M-2004-7B2-45</u>	2007-07375- 45	Miscellaneous	Positive Layer? No
	Layer # 1 White coating	no asbestos detected		
Sample #	<u>IHS-M-2004-7B3-46</u>	2007-07375- 46	Miscellaneous	Positive Layer? No
	Layer # 1 White coating	no asbestos detected		
Sample #	<u>IHS-M-2004-7C1-47</u>	2007-07375- 47	Adhesive/caulk	Positive Layer? No
	Layer # 1 white caulk	no asbestos detected		
Sample #	<u>IHS-M-2004-7C2-48</u>	2007-07375- 48	Adhesive/caulk	Positive Layer? No
	Layer # 1 white caulk	no asbestos detected		
Sample #	<u>IHS-M-2004-7C3-49</u>	2007-07375- 49	Adhesive/caulk	Positive Layer? No
	Layer # 1 white caulk	no asbestos detected		
Sample #	<u>IHS-M-2004-7D1-50</u>	2007-07375- 50	Adhesive/caulk	Positive Layer? No
	Layer # 1 white caulk	no asbestos detected		
Sample #	<u>IHS-M-2004-7D2-51</u>	2007-07375- 51	Adhesive/caulk	Positive Layer? No
	Layer # 1 white caulk	no asbestos detected		
Sample #	<u>IHS-M-2004-7D3-52</u>	2007-07375- 52	Adhesive/caulk	Positive Layer? No
	Layer # 1 white caulk	no asbestos detected		
Sample #	<u>IHS-M-2004-7E1-53</u>	2007-07375- 53	Adhesive/caulk	Positive Layer? No
	Layer # 1 Off-white caulk	no asbestos detected		
Sample #	<u>IHS-M-2004-7E2-54</u>	2007-07375- 54	Adhesive/caulk	Positive Layer? No
	Layer # 1 Off-white caulk	no asbestos detected		
Sample #	<u>IHS-M-2004-7E3-55</u>	2007-07375- 55	Adhesive/caulk	Positive Layer? No
	Layer # 1 Off-white caulk	no asbestos detected		
Sample #	<u>IHS-M-2004-7F1-56</u>	2007-07375- 56	Insulation	Positive Layer? Yes
	Layer # 1 Off-white insulation	2-5% chrysotile asbestos		
Sample #	<u>IHS-M-2004-7F2-57</u>	2007-07375- 57	Insulation	Positive Layer? Yes
	Layer # 1 Off-white insulation	2-5% chrysotile asbestos		
Sample #	<u>IHS-M-2004-7F3-58</u>	2007-07375- 58	Insulation	Positive Layer? Yes
	Layer # 1 Off-white insulation	2-5% chrysotile asbestos		
Sample #	<u>IHS-M-2004-8A1-59</u>	2007-07375- 59	Roofing	Positive Layer? No
	Layer # 1 black roofing roll/shingle	no asbestos detected		
	Layer # 2 black bitumen sheeting	no asbestos detected		
Sample #	<u>IHS-M-2004-8A2-60</u>	2007-07375- 60	Roofing	Positive Layer? No
	Layer # 1 black roofing roll/shingle	no asbestos detected		
	Layer # 2 black bitumen sheeting	no asbestos detected		
Sample #	<u>IHS-M-2004-8A3-61</u>	2007-07375- 61	Roofing	Positive Layer? No
	Layer # 1 black roofing roll/shingle	no asbestos detected		
	Layer # 2 black bitumen sheeting	no asbestos detected		

Sample #	<u>IHS-M-2004-8B1-62</u>	2007-07375- 62	Roofing	Positive Layer?	No
Layer # 1	black	roofing roll/shingle	<i>no asbestos detected</i>		
Layer # 2	Black	roof ply	<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2004-8B2-63</u>	2007-07375- 63	Roofing	Positive Layer?	No
Layer # 1	black	roofing roll/shingle	<i>no asbestos detected</i>		
Layer # 2	Black	roof ply	<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2004-8B3-64</u>	2007-07375- 64	Roofing	Positive Layer?	No
Layer # 1	black	roofing roll/shingle	<i>no asbestos detected</i>		
Layer # 2	Black	roof ply	<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2004-8C1-65</u>	2007-07375- 65	Roofing	Positive Layer?	Yes
Layer # 1	Black	mastic	<i>5-10% chrysotile asbestos</i>		
Sample #	<u>IHS-M-2004-8C2-66</u>	2007-07375- 66	Roofing	Positive Layer?	Yes
Layer # 1	Black	mastic	<i>5-10% chrysotile asbestos</i>		
Sample #	<u>IHS-M-2004-8C3-67</u>	2007-07375- 67	Roofing	Positive Layer?	Yes
Layer # 1	Black	mastic	<i>5-10% chrysotile asbestos</i>		

* 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.

PLM Analysis Details
Job Number:
200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-1A1-1 **Lab Number** 2007-07375- 1 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/17/2007 **An?** OK **Apparent Smp Type** Flooring Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers									Refractive Index Determinations				
		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 IHS-M-2004-1A2-2 **Lab Number** 2007-07375- 2 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/17/2007 **An?** OK **Apparent Smp Type** Flooring Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers									Refractive Index Determinations				
		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 IHS-M-2004-1A3-3 **Lab Number** 2007-07375- 3 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/17/2007 **An?** OK **Apparent Smp Type** Flooring Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers									Refractive Index Determinations				
		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.

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-1B1-4 **Lab Number** 2007-07375- 4 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/17/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	40-50%	-	-	-	-	-
Total %		100	Average %		40-50%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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 IHS-M-2004-1B2-5 **Lab Number** 2007-07375- 5 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/17/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	40-50%	-	-	-	-	-
Total %		100	Average %		40-50%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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 IHS-M-2004-1B3-6 **Lab Number** 2007-07375- 6 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/17/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	40-50%	-	-	-	-	-
Total %		100	Average %		40-50%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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.

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-1C1-7 **Lab Number** 2007-07375- 7 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/17/2007 **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					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	100	off-white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using solvent.

Sample IHS-M-2004-1C2-8 **Lab Number** 2007-07375- 8 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/17/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	95	off-white	1	2-5%	-	-	-	-	-
2	mastic	5	Yellow	1	n.d.	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
	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 matrix using solvent.

Sample IHS-M-2004-1C3-9 **Lab Number** 2007-07375- 9 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	95	off-white	1	2-5%	-	-	-	-	-
2	mastic	5	Yellow	1	n.d.	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
	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 matrix using solvent.

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-1D1-10 **Lab Number** 2007-07375- 10 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Green	1	2-5%	-	-	-	-	-
2	mastic	2	Black	1	<=1%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent. Note: the asbestos fragments in mastic might have been a contamination from the layer number 1 (floor tile).

Sample IHS-M-2004-1D2-11 **Lab Number** 2007-07375- 11 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Green	1	2-5%	-	-	-	-	-
2	mastic	2	Black	1	<=1%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent. Note: the asbestos fragments in mastic might have been a contamination from the layer number 1 (floor tile).

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-1D3-12 **Lab Number** 2007-07375- 12 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Green	1	2-5%	-	-	-	-	-
2	mastic	2	Black	1	<=1%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
	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: teased apart using forceps. Procedure: dissolution of matrix using solvent. Note: the asbestos fragments in mastic might have been a contamination from the layer number 1 (floor tile).

Sample IHS-M-2004-1E1-13 **Lab Number** 2007-07375- 13 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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: teased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2004-1E2-14 **Lab Number** 2007-07375- 14 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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: teased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-1E3-15 **Lab Number** 2007-07375- 15 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using dilute HCl acid.

Sample IHS-M-2004-1F1-16 **Lab Number** 2007-07375- 16 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Flooring Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	40-50%	-	-	-	-	-
Total %		100	Average %		40-50%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 IHS-M-2004-1F2-17 **Lab Number** 2007-07375- 17 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Flooring Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	40-50%	-	-	-	-	-
Total %		100	Average %		40-50%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-1F3-18 **Lab Number** 2007-07375- 18 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	40-50%	-	-	-	-	-
Total %		100	Average %		40-50%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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 IHS-M-2004-1G1-19 **Lab Number** 2007-07375- 19 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	off-white	1	2-5%	-	-	-	-	-
2	mastic	1	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2004-1G2-20 **Lab Number** 2007-07375- 20 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	off-white	1	2-5%	-	-	-	-	-
2	mastic	1	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-1G3-21 **Lab Number** 2007-07375- 21 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	off-white	1	2-5%	-	-	-	-	-
2	mastic	1	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2004-2A1-22 **Lab Number** 2007-07375- 22 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Wall System Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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: teased apart using forceps.

Sample IHS-M-2004-2A2-23 **Lab Number** 2007-07375- 23 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Wall System Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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: teased apart using forceps.

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-2A3-24 **Lab Number** 2007-07375- 24 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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.

Sample IHS-M-2004-2B1-25 **Lab Number** 2007-07375- 25 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2004-2B2-26 **Lab Number** 2007-07375- 26 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:				chrysotile asbestos						

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

PLM Analysis Details

Job Number: 200707375

IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-2B3-27 **Lab Number** 2007-07375- 27 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2004-2C1-28 **Lab Number** 2007-07375- 28 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	paint	100	Off-white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Note: texture/joint compound sample was too small to analyze.

Sample IHS-M-2004-2C2-29 **Lab Number** 2007-07375- 29 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-2C3-30 **Lab Number** 2007-07375- 30 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2004-2C4-31 **Lab Number** 2007-07375- 31 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2004-2C5-32 **Lab Number** 2007-07375- 32 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-2C6-33 **Lab Number** 2007-07375- 33 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2004-2C7-34 **Lab Number** 2007-07375- 34 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2004-2D1-35 **Lab Number** 2007-07375- 35 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Red	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-2D2-36 **Lab Number** 2007-07375- 36 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Red	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

Sample IHS-M-2004-2D3-37 **Lab Number** 2007-07375- 37 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Red	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

Sample IHS-M-2004-2E1-38 **Lab Number** 2007-07375- 38 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:				none						

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-2E2-39 **Lab Number** 2007-07375- 39 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

Sample IHS-M-2004-2E3-40 **Lab Number** 2007-07375- 40 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:				none						

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

Sample IHS-M-2004-7A1-41 **Lab Number** 2007-07375- 41 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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.

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-7A2-42 **Lab Number** 2007-07375- 42 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2004-7A3-43 **Lab Number** 2007-07375- 43 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
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 matrix using solvent.

Sample IHS-M-2004-7B1-44 **Lab Number** 2007-07375- 44 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Miscellaneous Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	2-5%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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.

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-7B2-45 **Lab Number** 2007-07375- 45 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Miscellaneous Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	2-5%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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 IHS-M-2004-7B3-46 **Lab Number** 2007-07375- 46 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Miscellaneous Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	2-5%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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 IHS-M-2004-7C1-47 **Lab Number** 2007-07375- 47 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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.

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-7C2-48 **Lab Number** 2007-07375- 48 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
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 matrix using solvent.

Sample IHS-M-2004-7C3-49 **Lab Number** 2007-07375- 49 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
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 matrix using solvent.

Sample IHS-M-2004-7D1-50 **Lab Number** 2007-07375- 50 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using solvent.

PLM Analysis Details

Job Number: 200707375

IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-7D2-51 **Lab Number** 2007-07375- 51 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2004-7D3-52 **Lab Number** 2007-07375- 52 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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.

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-7E1-53 **Lab Number** 2007-07375- 53 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Off-white	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					talc and transitional	non-fibrous tremolit				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	talc and transitional talc fiber	W	B	N	N	H	+	P	1.605	sb/o	w/b	1.607	<1.60
2	non-fibrous tremolite/actinolite	W	G	N	N	M	+	O	1.605	vg/y	sb/o	1.619	1.607
3													
4													
5													
6													

Sample Analytical Note

Procedure: teased apart using forceps. Procedure: dissolution of matrix using solvent. Note: sample contained transitional talc and/or non-fibrous tremolite/actinolite. Transitional talc is an intimate mixture of anthophyllite and talc. Even though it may have been asbestos once, the EPA has ruled not to regulate 'fibers of mixed mineral assemblage'. However, these fibers may be regulated when analyzed by TEM, since some are indistinguishable from anthophyllite asbestos. Likewise, non-fibrous tremolite/actinolite, while not regulated by EPA, may be counted (and thus regulated) when analyzed by TEM.

Sample IHS-M-2004-7E2-54 **Lab Number** 2007-07375- 54 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Off-white	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					talc and transitional	non-fibrous tremolit				

Fibers										Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	talc and transitional talc fiber	W	B	N	N	H	+	P		1.605	sb/o	w/b	1.607	<1.60
2	non-fibrous tremolite/actinolite	W	G	N	N	M	+	O		1.605	vg/y	sb/o	1.619	1.607
3														
4														
5														
6														

Sample Analytical Note

Procedure: teased apart using forceps. Procedure: dissolution of matrix using solvent. Note: sample contained transitional talc and/or non-fibrous tremolite/actinolite. Transitional talc is an intimate mixture of anthophyllite and talc. Even though it may have been asbestos once, the EPA has ruled not to regulate 'fibers of mixed mineral assemblage'. However, these fibers may be regulated when analyzed by TEM, since some are indistinguishable from anthophyllite asbestos. Likewise, non-fibrous tremolite/actinolite, while not regulated by EPA, may be counted (and thus regulated) when analyzed by TEM.

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-7E3-55 **Lab Number** 2007-07375- 55 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Off-white	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					talc and transitional	non-fibrous tremolit				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	talc and transitional talc fiber	W	B	N	N	H	+	P	1.605	sb/o	w/b	1.607	<1.60
2	non-fibrous tremolite/actinolite	W	G	N	N	M	+	O	1.605	vg/y	sb/o	1.619	1.607
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent. Note: sample contained transitional talc and/or non-fibrous tremolite/actinolite. Transitional talc is an intimate mixture of anthophyllite and talc. Even though it may have been asbestos once, the EPA has ruled not to regulate 'fibers of mixed mineral assemblage'. However, these fibers may be regulated when analyzed by TEM, since some are indistinguishable from anthophyllite asbestos. Likewise, non-fibrous tremolite/actinolite, while not regulated by EPA, may be counted (and thus regulated) when analyzed by TEM.

Sample IHS-M-2004-7F1-56 **Lab Number** 2007-07375- 56 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Insulation Fibrous Mat
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Off-white	3	5-10%	2-5%	>1-2%	-	-	-
Total %		100	Average %		5-10%	2-5%	>1-2%	-	-	-
Fiber Identification:					glass fiber	chrysotile asbestos	cellulose fiber			

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

Sample Analytical Note

Procedure: tweased apart using forceps.

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-7F2-57 **Lab Number** 2007-07375- 57 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Insulation **Fibrous Mat**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Off-white	3	5-10%	2-5%	>1-2%	-	-	-
Total %		100	Average %		5-10%	2-5%	>1-2%	-	-	-
Fiber Identification:					glass fiber	chrysotile asbestos	cellulose fiber			

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

Sample Analytical Note

Procedure: tweased apart using forceps.

Sample IHS-M-2004-7F3-58 **Lab Number** 2007-07375- 58 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Insulation **Fibrous Mat**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Off-white	3	5-10%	2-5%	>1-2%	-	-	-
Total %		100	Average %		5-10%	2-5%	>1-2%	-	-	-
Fiber Identification:					glass fiber	chrysotile asbestos	cellulose fiber			

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

Sample Analytical Note

Procedure: tweased apart using forceps.

Sample IHS-M-2004-8A1-59 **Lab Number** 2007-07375- 59 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Roofing **Sticky**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	45	black	1	10-20%	n.d.	-	-	-	-
2	bitumen sheeting	55	black	1	n.d.	50-60%	-	-	-	-
Total %		100	Average %		5-10%	30-40%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details

Job Number: 200707375

IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-8A2-60 **Lab Number** 2007-07375- 60 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Roofing **Sticky**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber										
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6					
1	roofing roll/shingle	45	black	1	10-20%	n.d.	-	-	-	-					
2	bitumen sheeting	55	black	1	n.d.	50-60%	-	-	-	-					
Total %		100	Average %		5-10%	30-40%	-	-	-	-					
Fiber Identification:					glass fiber	cellulose fiber									
Fibers				Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	glass fiber			CL	D	Y					Oil	Col Par	Col Per	RI Par	RI Per
2	cellulose fiber			W	F	N	N	H	+	U					
3															
4															
5															
6															

Sample Analytical Note

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

Sample IHS-M-2004-8A3-61 **Lab Number** 2007-07375- 61 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Roofing **Sticky**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber										
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6					
1	roofing roll/shingle	45	black	1	10-20%	n.d.	-	-	-	-					
2	bitumen sheeting	55	black	1	n.d.	50-60%	-	-	-	-					
Total %		100	Average %		5-10%	30-40%	-	-	-	-					
Fiber Identification:					glass fiber	cellulose fiber									
Fibers				Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	glass fiber			CL	D	Y					Oil	Col Par	Col Per	RI Par	RI Per
2	cellulose fiber			W	F	N	N	H	+	U					
3															
4															
5															
6															

Sample Analytical Note

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

Sample IHS-M-2004-8B1-62 **Lab Number** 2007-07375- 62 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Roofing **Sticky**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber										
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6					
1	roofing roll/shingle	45	black	1	10-20%	-	-	-	-	-					
2	roof ply	55	Black	1	5-10%	-	-	-	-	-					
Total %		100	Average %		10-20%	-	-	-	-	-					
Fiber Identification:					glass fiber										
Fibers				Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	glass fiber			CL	D	Y					Oil	Col Par	Col Per	RI Par	RI Per
2															
3															
4															
5															
6															

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707375
IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-8B2-63 **Lab Number** 2007-07375- 63 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Roofing Sticky
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	45	black	1	10-20%	-	-	-	-	-
2	roof ply	55	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					glass fiber					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2004-8B3-64 **Lab Number** 2007-07375- 64 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Roofing Sticky
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	45	black	1	10-20%	-	-	-	-	-
2	roof ply	55	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					glass fiber					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2004-8C1-65 **Lab Number** 2007-07375- 65 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Roofing Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number: 200707375

IHS-Mescalero Bldg# 2004

Sample IHS-M-2004-8C2-66 **Lab Number** 2007-07375- 66 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Roofing Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2004-8C3-67 **Lab Number** 2007-07375- 67 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By GV 9/19/2007 **An?** OK **Apparent Smp Type** Roofing Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Fr=Friability: 1=very non-friable; 2= non-friable; 3=friable; 4=highly friable

Colors: B=black;BL=blue;BR=brown;CL=clear;G=Green;GY=gray;OR=orange;OW=off-white;PN=pink;PU=purple;R=red;TN=tan;W=white;Y=yellow;V=various

Fiber Morphology: A=fine fibers/bundles, white, sinewy, flexible; B=fine fibers/bundles, w-br, straight, broomed ends; C=fine fibers/bundles, blue, straight, broomed ends;

D=fine to coarse fibers, CL-B, brittle; E=coarse fibers,CL or dyed, striated; F=coarse fibers or splinters, W-BR, ribbon-like; G=lath-like or shards, low aspect ratio, may taper

Iso=isotropism - may be yes or no; Pleo=pleochroism - may be yes or no; Bi=birefringence - may be None, Low, Medium or High

Elg=sign of elongation - may be +, - or B (both); Ext=extinction - may be Parallel, Oblique, None or Undulating; Oil=medium used to for dispersion staining

Col Par=dispersion staining colors parallel to the fiber (fiber/halo): b/w=black/white; dg/py=dark gray/pale yellow; vg/y=violet gray/yellow; db/ly=dark blue/lemon yellow;

vb/g= vivid blue/gold; sb/o=sky blue/orange; pb/r=pale blue/red; gb/dr=gray blue/dark red; w/b=white/black. Col Perp=same only perpendicular to fiber.

RI Par=refractive index parallel to fiber; RI Perp=refractive index perpendicular to fiber

Galina B. Volkova

Analyst: GALINA B. VOLKOVA

Printed: 19-Sep-07

Original Print Date: 19-Sep-07

Larry S. Pierce

Larry S. Pierce, Approved Accreditation Signatory



Polarized Light Microscope (PLM) Analysis for Asbestos

JobNumber: 200707376

Client:

IHI ENVIRONMENTAL

(PHOENIX OFFICE)

4527 N 16th ST STE 105

PHOENIX, AZ

85016-0000

Office Phone: (602) 776-0300

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Samples: 73 **PLM** **Rec:** 8/27/2007 **Method:** Interim (EPA/600/M4-82-020) **PLM analysis for asbestos in bulk smp**

Client Job: IHS-Mescalero Bldg# 2005

PO Number: 07P-3031

Report Date: 9/18/2007

Date Analyzed: 9/18/2007

Routing Number: -

Method and Analysis Information:

Fiberquant Internal SOP: PLMi

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, NESHAP and OSHA regulations designate a result of $\leq 1\%$ 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 Interim Method (EPA Method 600/M4-82-020). 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 $\leq 1\%$ asbestos are point counted using 400 points, and the results listed on the detail analysis sheet. Such point counting is required by NESHAP (National Emission Standards for Hazardous Air Pollutants, Nov. 1990) in order to rely on analytical results that are $\leq 1\%$. 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 $\leq 1\%$ as "borderline negative", and results where asbestos was $> 1\%$ but $\leq 2\%$ as "borderline positive" to indicate the uncertainty in assigning a "positive" or "negative" label. In the sample summary, a "ND" means that no asbestos was detected during the analysis. A "Tr" or "Trace" of asbestos is defined for our purposes as the detection of several asbestos fibers during the analysis; an amount essentially at the limit of detection for the method. 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 is a degreed geologist or mineralogist, 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 monthly. 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 (#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.

The "Analysis Results" below are the averages for all layers of each sample listed. The "+ Layer" column indicates whether any of the layers in the sample were >1% asbestos. Please refer to each detailed analysis sheet to determine which layer(s) of a sample was(were) positive.

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:

Single layer sample analysis as per client request. Any material or layer other than that indicated on the chain of custody was not analyzed, even if a suspect material.

PLM Analysis Summary:

Job Number: 200707376

IHS-Mescalero Bldg# 2005

Sample Number			Lab Number	Apparent Sample Type *	Positive Layer Yes or No
Layer	Color	Apparent Layer Type *	Asbestos Results		
Sample #	<u>IHS-M-2005-1A1-1</u>		2007-07376- 1	Flooring	Positive Layer? No
Layer # 1	off-white	floor tile	no asbestos detected		
Layer # 2	Tan	mastic	no asbestos detected		
Layer # 3	Black	mastic	no asbestos detected		
Sample #	<u>IHS-M-2005-1A2-2</u>		2007-07376- 2	Flooring	Positive Layer? No
Layer # 1	off-white	floor tile	no asbestos detected		
Layer # 2	Tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2005-1A3-3</u>		2007-07376- 3	Flooring	Positive Layer? No
Layer # 1	off-white	floor tile	no asbestos detected		
Layer # 2	Tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2005-1B1-4</u>		2007-07376- 4	Flooring	Positive Layer? Yes
Layer # 1	Green	floor tile	2-5% chrysotile asbestos		
Layer # 2	Black	mastic	no asbestos detected		
Sample #	<u>IHS-M-2005-1B2-5</u>		2007-07376- 5	Flooring	Positive Layer? Yes
Layer # 1	Green	floor tile	2-5% chrysotile asbestos		
Layer # 2	Black	mastic	no asbestos detected		
Sample #	<u>IHS-M-2005-1B3-6</u>		2007-07376- 6	Flooring	Positive Layer? Yes
Layer # 1	Green	floor tile	2-5% chrysotile asbestos		
Layer # 2	Black	mastic	no asbestos detected		
Sample #	<u>IHS-M-2005-1C1-7</u>		2007-07376- 7	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2005-1C2-8</u>		2007-07376- 8	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2005-1C3-9</u>		2007-07376- 9	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2005-1D1-10</u>		2007-07376- 10	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2005-1D2-11</u>		2007-07376- 11	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2005-1D3-12</u>		2007-07376- 12	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2005-1E1-13</u>		2007-07376- 13	Flooring	Positive Layer? Yes
Layer # 1	Off-White	floor tile	2-5% chrysotile asbestos		
Layer # 2	Tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2005-1E2-14</u>		2007-07376- 14	Flooring	Positive Layer? Yes
Layer # 1	Off-White	floor tile	2-5% chrysotile asbestos		
Layer # 2	Tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2005-1E3-15</u>		2007-07376- 15	Flooring	Positive Layer? Yes
Layer # 1	Off-White	floor tile	2-5% chrysotile asbestos		
Layer # 2	Tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2005-1F1-16</u>		2007-07376- 16	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile	no asbestos detected		
Layer # 2	Tan	mastic	no asbestos detected		
Layer # 3	Black	mastic	no asbestos detected		
Sample #	<u>IHS-M-2005-1F2-17</u>		2007-07376- 17	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile	no asbestos detected		
Layer # 2	Tan	mastic	no asbestos detected		
Layer # 3	Black	mastic	no asbestos detected		
Sample #	<u>IHS-M-2005-1F3-18</u>		2007-07376- 18	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile	no asbestos detected		
Layer # 2	Tan	mastic	no asbestos detected		
Layer # 3	Black	mastic	no asbestos detected		
Sample #	<u>IHS-M-2005-1G1-19</u>		2007-07376- 19	Flooring	Positive Layer? No
Layer # 1	Various	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2005-1G2-20</u>		2007-07376- 20	Flooring	Positive Layer? No
Layer # 1	Various	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2005-1G3-21</u>		2007-07376- 21	Flooring	Positive Layer? No
Layer # 1	Various	sheet flooring	no asbestos detected		

Sample #	<u>IHS-M-2005-1H1-22</u>	2007-07376- 22	Flooring	Positive Layer?	No
	Layer # 1 Off-white sheet flooring		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-1H2-23</u>	2007-07376- 23	Flooring	Positive Layer?	No
	Layer # 1 Off-white sheet flooring		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-1H3-24</u>	2007-07376- 24	Flooring	Positive Layer?	No
	Layer # 1 Off-white sheet flooring		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-1I1-25</u>	2007-07376- 25	Flooring	Positive Layer?	No
	Layer # 1 Off-White floor tile		<i>no asbestos detected</i>		
	Layer # 2 Clear mastic		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-1I2-26</u>	2007-07376- 26	Flooring	Positive Layer?	No
	Layer # 1 Off-White floor tile		<i>no asbestos detected</i>		
	Layer # 2 Clear mastic		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-1I3-27</u>	2007-07376- 27	Flooring	Positive Layer?	No
	Layer # 1 Off-White floor tile		<i>no asbestos detected</i>		
	Layer # 2 Clear mastic		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-1J1-28</u>	2007-07376- 28	Flooring	Positive Layer?	No
	Layer # 1 Various sheet flooring		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-1J2-29</u>	2007-07376- 29	Flooring	Positive Layer?	No
	Layer # 1 Various sheet flooring		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-1J3-30</u>	2007-07376- 30	Flooring	Positive Layer?	No
	Layer # 1 Various sheet flooring		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-2A1-31</u>	2007-07376- 31	Wall System	Positive Layer?	No
	Layer # 1 white drywall core		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-2A2-32</u>	2007-07376- 32	Wall System	Positive Layer?	No
	Layer # 1 white drywall core		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-2A3-33</u>	2007-07376- 33	Wall System	Positive Layer?	No
	Layer # 1 white drywall core		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-2B1-34</u>	2007-07376- 34	Wall System	Positive Layer?	No
	Layer # 1 white texture/joint compound		<i><=1% chrysotile asbestos</i>		
Sample #	<u>IHS-M-2005-2B2-35</u>	2007-07376- 35	Wall System	Positive Layer?	No
	Layer # 1 white texture/joint compound		<i><=1% chrysotile asbestos</i>		
Sample #	<u>IHS-M-2005-2B3-36</u>	2007-07376- 36	Wall System	Positive Layer?	No
	Layer # 1 white texture/joint compound		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-2C1-37</u>	2007-07376- 37	Wall System	Positive Layer?	No
	Layer # 1 white texture/joint compound		<i><=1% chrysotile asbestos</i>		
Sample #	<u>IHS-M-2005-2C2-38</u>	2007-07376- 38	Wall System	Positive Layer?	No
	Layer # 1 white texture/joint compound		<i><=1% chrysotile asbestos</i>		
Sample #	<u>IHS-M-2005-2C3-39</u>	2007-07376- 39	Wall System	Positive Layer?	No
	Layer # 1 white texture/joint compound		<i><=1% chrysotile asbestos</i>		
Sample #	<u>IHS-M-2005-2C4-40</u>	2007-07376- 40	Wall System	Positive Layer?	No
	Layer # 1 white texture/joint compound		<i><=1% chrysotile asbestos</i>		
Sample #	<u>IHS-M-2005-2C5-41</u>	2007-07376- 41	Wall System	Positive Layer?	No
	Layer # 1 white texture/joint compound		<i><=1% chrysotile asbestos</i>		
Sample #	<u>IHS-M-2005-2C6-42</u>	2007-07376- 42	Wall System	Positive Layer?	No
	Layer # 1 white texture/joint compound		<i><=1% chrysotile asbestos</i>		
Sample #	<u>IHS-M-2005-2C7-43</u>	2007-07376- 43	Wall System	Positive Layer?	No
	Layer # 1 white texture/joint compound		<i><=1% chrysotile asbestos</i>		
Sample #	<u>IHS-M-2005-2D1-44</u>	2007-07376- 44	Cementitious	Positive Layer?	No
	Layer # 1 Brown brick		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-2D2-45</u>	2007-07376- 45	Cementitious	Positive Layer?	No
	Layer # 1 Brown brick		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-2D3-46</u>	2007-07376- 46	Cementitious	Positive Layer?	No
	Layer # 1 Brown brick		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-2E1-47</u>	2007-07376- 47	Cementitious	Positive Layer?	No
	Layer # 1 Gray mortar		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-2E2-48</u>	2007-07376- 48	Cementitious	Positive Layer?	No
	Layer # 1 Gray mortar		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-2E3-49</u>	2007-07376- 49	Cementitious	Positive Layer?	No
	Layer # 1 Gray mortar		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-7A1-50</u>	2007-07376- 50	Adhesive/caulk	Positive Layer?	No
	Layer # 1 Off-white mastic		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-7A2-51</u>	2007-07376- 51	Adhesive/caulk	Positive Layer?	No
	Layer # 1 Off-white mastic		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-7A3-52</u>	2007-07376- 52	Adhesive/caulk	Positive Layer?	No
	Layer # 1 Off-white mastic		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-7B1-53</u>	2007-07376- 53	Adhesive/caulk	Positive Layer?	No
	Layer # 1 White caulk		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-7B2-54</u>	2007-07376- 54	Adhesive/caulk	Positive Layer?	No
	Layer # 1 White caulk		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-7B3-55</u>	2007-07376- 55	Adhesive/caulk	Positive Layer?	No
	Layer # 1 White caulk		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-7C1-56</u>	2007-07376- 56	Adhesive/caulk	Positive Layer?	No
	Layer # 1 White caulk		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2005-7C2-57</u>	2007-07376- 57	Adhesive/caulk	Positive Layer?	No
	Layer # 1 White caulk		<i>no asbestos detected</i>		

Sample # <u>IHS-M-2005-7C3-58</u>	2007-07376- 58	Adhesive/caulk	Positive Layer? No
Layer # 1 White caulk		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2005-7D1-59</u>	2007-07376- 59	Adhesive/caulk	Positive Layer? No
Layer # 1 White caulk		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2005-7D2-60</u>	2007-07376- 60	Adhesive/caulk	Positive Layer? No
Layer # 1 White caulk		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2005-7D3-61</u>	2007-07376- 61	Adhesive/caulk	Positive Layer? No
Layer # 1 White caulk		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2005-7E1-62</u>	2007-07376- 62	Insulation	Positive Layer? Yes
Layer # 1 Gray insulation		<i>>1-2% chrysotile asbestos</i>	
Sample # <u>IHS-M-2005-7E2-63</u>	2007-07376- 63	Insulation	Positive Layer? Yes
Layer # 1 Gray insulation		<i>>1-2% chrysotile asbestos</i>	
Sample # <u>IHS-M-2005-7E3-64</u>	2007-07376- 64	Insulation	Positive Layer? Yes
Layer # 1 Gray insulation		<i>>1-2% chrysotile asbestos</i>	
Sample # <u>IHS-M-2005-8A1-65</u>	2007-07376- 65	Roofing	Positive Layer? No
Layer # 1 black roofing roll/shingle		<i>no asbestos detected</i>	
Layer # 2 Black roof ply		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2005-8A2-66</u>	2007-07376- 66	Roofing	Positive Layer? No
Layer # 1 black roofing roll/shingle		<i>no asbestos detected</i>	
Layer # 2 Black roof ply		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2005-8A3-67</u>	2007-07376- 67	Roofing	Positive Layer? No
Layer # 1 black roofing roll/shingle		<i>no asbestos detected</i>	
Layer # 2 Black roof ply		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2005-8B1-68</u>	2007-07376- 68	Roofing	Positive Layer? No
Layer # 1 black roofing roll/shingle		<i>no asbestos detected</i>	
Layer # 2 Black roof ply		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2005-8B2-69</u>	2007-07376- 69	Roofing	Positive Layer? No
Layer # 1 black roofing roll/shingle		<i>no asbestos detected</i>	
Layer # 2 Black roof ply		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2005-8B3-70</u>	2007-07376- 70	Roofing	Positive Layer? No
Layer # 1 black roofing roll/shingle		<i>no asbestos detected</i>	
Layer # 2 Black roof ply		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2005-8C1-71</u>	2007-07376- 71	Roofing	Positive Layer? No
Layer # 1 Black caulk		<i>no asbestos detected</i>	
Sample # <u>IHS-M-2005-8C2-72</u>	2007-07376- 72	Roofing	Positive Layer? Yes
Layer # 1 Black caulk		<i>5-10% chrysotile asbestos</i>	
Sample # <u>IHS-M-2005-8C3-73</u>	2007-07376- 73	Roofing	Positive Layer? Yes
Layer # 1 Black caulk		<i>5-10% chrysotile asbestos</i>	

* 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.

PLM Analysis Details
Job Number:
200707376

IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-1A1-1 **Lab Number** 2007-07376- 1 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring Fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	97	off-white	1	<=1%	n.d.	-	-	-	-
2	mastic	2	Tan	1	n.d.	n.d.	-	-	-	-
3	mastic	1	Black	1	n.d.	>1-2%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					synthetic fiber (extr	cellulose fiber				

Fibers									Refractive Index Determinations				
		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	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2005-1A2-2 **Lab Number** 2007-07376- 2 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring Fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	95	off-white	1	<=1%	n.d.	-	-	-	-
2	mastic	5	Tan	1	n.d.	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					synthetic fiber (extr	cellulose fiber				

Fibers									Refractive Index Determinations				
		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	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707376
IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-1A3-3 **Lab Number** 2007-07376- 3 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	97	off-white	1	<=1%	n.d.	-	-	-	-
2	mastic	3	Tan	1	n.d.	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					synthetic fiber (extr	cellulose fiber				

Fibers									Refractive Index Determinations				
		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	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2005-1B1-4 **Lab Number** 2007-07376- 4 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Green	1	2-5%	n.d.	-	-	-	-
2	mastic	2	Black	1	n.d.	>1-2%	-	-	-	-
Total %		100	Average %		2-5%	<=1%	-	-	-	-
Fiber Identification:					chrysotile asbestos	cellulose fiber				

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	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 matrix using solvent.

Sample IHS-M-2005-1B2-5 **Lab Number** 2007-07376- 5 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Green	1	2-5%	n.d.	-	-	-	-
2	mastic	2	Black	1	n.d.	>1-2%	-	-	-	-
Total %		100	Average %		2-5%	<=1%	-	-	-	-
Fiber Identification:					chrysotile asbestos	cellulose fiber				

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	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 matrix using solvent.

PLM Analysis Details
Job Number: 200707376
IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-1B3-6 **Lab Number** 2007-07376- 6 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Green	1	2-5%	n.d.	-	-	-	-
2	mastic	2	Black	1	n.d.	>1-2%	-	-	-	-
Total %		100	Average %		2-5%	<=1%	-	-	-	-
Fiber Identification:					chrysotile asbestos	cellulose fiber				

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.553
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2005-1C1-7 **Lab Number** 2007-07376- 7 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Tan	2	30-40%	>1-2%	-	-	-	-
Total %		100	Average %		30-40%	>1-2%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2005-1C2-8 **Lab Number** 2007-07376- 8 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Tan	2	50-60%	2-5%	-	-	-	-
Total %		100	Average %		50-60%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number: 200707376
IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-1C3-9 **Lab Number** 2007-07376- 9 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Tan	2	50-60%	2-5%	-	-	-	-
Total %		100	Average %		50-60%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2	glass fiber	CL	D	Y				
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 IHS-M-2005-1D1-10 **Lab Number** 2007-07376- 10 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **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): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Tan	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 IHS-M-2005-1D2-11 **Lab Number** 2007-07376- 11 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **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): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Tan	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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.

PLM Analysis Details
Job Number: 200707376
IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-1D3-12 **Lab Number** 2007-07376- 12 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **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): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Tan	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using solvent.

Sample IHS-M-2005-1E1-13 **Lab Number** 2007-07376- 13 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	97	Off-White	1	2-5%	-	-	-	-	-
2	mastic	3	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
	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	db/ly	sb/o	1.561	1.553
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2005-1E2-14 **Lab Number** 2007-07376- 14 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	92	Off-White	1	2-5%	-	-	-	-	-
2	mastic	8	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
	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	db/ly	sb/o	1.561	1.553
2													
3													
4													
5													
6													

Sample Analytical Note

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

PLM Analysis Details

Job Number: 200707376

IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-1E3-15 **Lab Number** 2007-07376- 15 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	94	Off-White	1	2-5%	-	-	-	-	-
2	mastic	6	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.553
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2005-1F1-16 **Lab Number** 2007-07376- 16 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	95	Tan	1	n.d.	-	-	-	-	-
2	mastic	2	Tan	1	n.d.	-	-	-	-	-
3	mastic	3	Black	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number: 200707376

IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-1F2-17 **Lab Number** 2007-07376- 17 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	93	Tan	1	n.d.	-	-	-	-	-
2	mastic	4	Tan	1	n.d.	-	-	-	-	-
3	mastic	3	Black	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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 IHS-M-2005-1F3-18 **Lab Number** 2007-07376- 18 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	94	Tan	1	n.d.	-	-	-	-	-
2	mastic	3	Tan	1	n.d.	-	-	-	-	-
3	mastic	3	Black	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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.

PLM Analysis Details

Job Number: 200707376

IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-1G1-19 **Lab Number** 2007-07376- 19 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Various	2	30-40%	>1-2%	-	-	-	-
Total %		100	Average %		30-40%	>1-2%	-	-	-	-

Fiber Identification:

cellulose fiber

glass fiber

Fibers									Refractive Index Determinations				
		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 IHS-M-2005-1G2-20 **Lab Number** 2007-07376- 20 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Various	2	30-40%	>1-2%	-	-	-	-
Total %		100	Average %		30-40%	>1-2%	-	-	-	-

Fiber Identification:

cellulose fiber

glass fiber

Fibers									Refractive Index Determinations				
		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 IHS-M-2005-1G3-21 **Lab Number** 2007-07376- 21 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Various	2	30-40%	>1-2%	-	-	-	-
Total %		100	Average %		30-40%	>1-2%	-	-	-	-

Fiber Identification:

cellulose fiber

glass fiber

Fibers									Refractive Index Determinations				
		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.

PLM Analysis Details
Job Number: 200707376
IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-1H1-22 **Lab Number** 2007-07376- 22 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Off-white	2	30-40%	>1-2%	-	-	-	-
Total %		100	Average %		30-40%	>1-2%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2	glass fiber	CL	D	Y				
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 IHS-M-2005-1H2-23 **Lab Number** 2007-07376- 23 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Off-white	2	30-40%	>1-2%	-	-	-	-
Total %		100	Average %		30-40%	>1-2%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2	glass fiber	CL	D	Y				
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 IHS-M-2005-1H3-24 **Lab Number** 2007-07376- 24 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Off-white	2	30-40%	>1-2%	-	-	-	-
Total %		100	Average %		30-40%	>1-2%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose fiber	W	F	N	N	H	+	U
2	glass fiber	CL	D	Y				
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.

PLM Analysis Details
Job Number: 200707376
IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-111-25 **Lab Number** 2007-07376- 25 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Off-White	1	n.d.	-	-	-	-	-
2	mastic	2	Clear	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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

Surface is off-white. Procedure: teased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2005-112-26 **Lab Number** 2007-07376- 26 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	97	Off-White	1	n.d.	-	-	-	-	-
2	mastic	3	Clear	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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

Surface is off-white. Procedure: teased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2005-113-27 **Lab Number** 2007-07376- 27 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Off-White	1	n.d.	-	-	-	-	-
2	mastic	2	Clear	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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

Surface is off-white. Procedure: teased apart using forceps. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number: 200707376
IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-111-28 **Lab Number** 2007-07376- 28 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Various	2	30-40%	2-5%	-	-	-	-
Total %		100	Average %		30-40%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

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

Refractive Index Determinations				
Oil	Col Par	Col Per	RI Par	RI Per

Sample Analytical Note

Surface is off-white. Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2005-112-29 **Lab Number** 2007-07376- 29 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Various	2	30-40%	2-5%	-	-	-	-
Total %		100	Average %		30-40%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

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

Refractive Index Determinations				
Oil	Col Par	Col Per	RI Par	RI Per

Sample Analytical Note

Surface is off-white. Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2005-113-30 **Lab Number** 2007-07376- 30 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Various	2	30-40%	2-5%	-	-	-	-
Total %		100	Average %		30-40%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

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

Refractive Index Determinations				
Oil	Col Par	Col Per	RI Par	RI Per

Sample Analytical Note

Surface is off-white. Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number: 200707376
IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-2A1-31 **Lab Number** 2007-07376- 31 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					glass fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	glass fiber	CL	D	Y				
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.

Sample IHS-M-2005-2A2-32 **Lab Number** 2007-07376- 32 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose	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.

Sample IHS-M-2005-2A3-33 **Lab Number** 2007-07376- 33 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:				cellulose						

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	cellulose	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.

PLM Analysis Details

Job Number: 200707376

IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-2B1-34 **Lab Number** 2007-07376- 34 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.553
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2005-2B2-35 **Lab Number** 2007-07376- 35 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.553
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2005-2B3-36 **Lab Number** 2007-07376- 36 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

PLM Analysis Details

Job Number: 200707376

IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-2C1-37 **Lab Number** 2007-07376- 37 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.533
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2005-2C2-38 **Lab Number** 2007-07376- 38 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.533
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2005-2C3-39 **Lab Number** 2007-07376- 39 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.533
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details

Job Number: 200707376

IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-2C4-40 **Lab Number** 2007-07376- 40 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification:

chrysotile asbestos

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.533
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2005-2C5-41 **Lab Number** 2007-07376- 41 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification:

chrysotile asbestos

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.533
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2005-2C6-42 **Lab Number** 2007-07376- 42 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification:

chrysotile asbestos

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.533
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details

Job Number: 200707376

IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-2C7-43 **Lab Number** 2007-07376- 43 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.533
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2005-2D1-44 **Lab Number** 2007-07376- 44 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Cementitious **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Brown	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2005-2D2-45 **Lab Number** 2007-07376- 45 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Cementitious **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Brown	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707376
IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-2D3-46 **Lab Number** 2007-07376- 46 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Brown	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

Sample IHS-M-2005-2E1-47 **Lab Number** 2007-07376- 47 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

Sample IHS-M-2005-2E2-48 **Lab Number** 2007-07376- 48 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

PLM Analysis Details
Job Number: 200707376
IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-2E3-49 **Lab Number** 2007-07376- 49 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2005-7A1-50 **Lab Number** 2007-07376- 50 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Off-white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:				none						

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2005-7A2-51 **Lab Number** 2007-07376- 51 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Off-white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using solvent.

PLM Analysis Details
Job Number: 200707376
IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-7A3-52 **Lab Number** 2007-07376- 52 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Off-white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2005-7B1-53 **Lab Number** 2007-07376- 53 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:				none						

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

Sample Analytical Note

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

Sample IHS-M-2005-7B2-54 **Lab Number** 2007-07376- 54 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

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

PLM Analysis Details

Job Number: 200707376

IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-7B3-55 **Lab Number** 2007-07376- 55 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2005-7C1-56 **Lab Number** 2007-07376- 56 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					talc and transitional	non-fibrous tremolit				

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	talc and transitional talc fiber	W	B	N	N	H	+	P	1.605	db/ly	w/b	1.616	<1.60
2	non-fibrous tremolite/actinolite	W	G	N	N	M	+	O	1.605	vg/y	sb/o	1.619	1.607
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent. Note: sample contained transitional talc and/or non-fibrous tremolite/actinolite. Transitional talc is an intimate mixture of anthophyllite and talc. Even though it may have been asbestos once, the EPA has ruled not to regulate 'fibers of mixed mineral assemblage'. However, these fibers may be regulated when analyzed by TEM, since some are indistinguishable from anthophyllite asbestos. Likewise, non-fibrous tremolite/actinolite, while not regulated by EPA, may be counted (and thus regulated) when analyzed by TEM.

PLM Analysis Details
Job Number: 200707376
IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-7C2-57 **Lab Number** 2007-07376- 57 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					talc and transitional	non-fibrous tremolit				

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	talc and transitional talc fiber	W	B	N	N	H	+	P	1.605	db/ly	w/b	1.616	<1.60
2	non-fibrous tremolite/actinolite	W	G	N	N	M	+	O	1.605	vg/y	sb/o	1.619	1.607
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent. Note: sample contained transitional talc and/or non-fibrous tremolite/actinolite. Transitional talc is an intimate mixture of anthophyllite and talc. Even though it may have been asbestos once, the EPA has ruled not to regulate 'fibers of mixed mineral assemblage'. However, these fibers may be regulated when analyzed by TEM, since some are indistinguishable from anthophyllite asbestos. Likewise, non-fibrous tremolite/actinolite, while not regulated by EPA, may be counted (and thus regulated) when analyzed by TEM.

Sample IHS-M-2005-7C3-58 **Lab Number** 2007-07376- 58 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					talc and transitional	non-fibrous tremolit				

Fibers										Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	talc and transitional talc fiber	W	B	N	N	H	+	P		1.605	db/ly	w/b	1.616	<1.60
2	non-fibrous tremolite/actinolite	W	G	N	N	M	+	O		1.605	vg/y	sb/o	1.619	1.607
3														
4														
5														
6														

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent. Note: sample contained transitional talc and/or non-fibrous tremolite/actinolite. Transitional talc is an intimate mixture of anthophyllite and talc. Even though it may have been asbestos once, the EPA has ruled not to regulate 'fibers of mixed mineral assemblage'. However, these fibers may be regulated when analyzed by TEM, since some are indistinguishable from anthophyllite asbestos. Likewise, non-fibrous tremolite/actinolite, while not regulated by EPA, may be counted (and thus regulated) when analyzed by TEM.

PLM Analysis Details

Job Number: 200707376

IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-7D1-59 **Lab Number** 2007-07376- 59 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					talc and transitional	non-fibrous tremolit				

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	talc and transitional talc fiber	W	B	N	N	H	+	P	1.605	db/ly	w/b	1.616	<1.60
2	non-fibrous tremolite/actinolite	W	G	N	N	M	+	O	1.605	vg/y	sb/o	1.619	1.607
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent. Note: sample contained transitional talc and/or non-fibrous tremolite/actinolite. Transitional talc is an intimate mixture of anthophyllite and talc. Even though it may have been asbestos once, the EPA has ruled not to regulate 'fibers of mixed mineral assemblage'. However, these fibers may be regulated when analyzed by TEM, since some are indistinguishable from anthophyllite asbestos. Likewise, non-fibrous tremolite/actinolite, while not regulated by EPA, may be counted (and thus regulated) when analyzed by TEM.

Sample IHS-M-2005-7D2-60 **Lab Number** 2007-07376- 60 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					talc and transitional	non-fibrous tremolit				

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	talc and transitional talc fiber	W	B	N	N	H	+	P	1.605	db/ly	w/b	1.616	<1.60
2	non-fibrous tremolite/actinolite	W	G	N	N	M	+	O	1.605	vg/y	sb/o	1.619	1.607
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent. Note: sample contained transitional talc and/or non-fibrous tremolite/actinolite. Transitional talc is an intimate mixture of anthophyllite and talc. Even though it may have been asbestos once, the EPA has ruled not to regulate 'fibers of mixed mineral assemblage'. However, these fibers may be regulated when analyzed by TEM, since some are indistinguishable from anthophyllite asbestos. Likewise, non-fibrous tremolite/actinolite, while not regulated by EPA, may be counted (and thus regulated) when analyzed by TEM.

PLM Analysis Details

Job Number: 200707376

IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-7D3-61 **Lab Number** 2007-07376- 61 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					talc and transitional	non-fibrous tremolit				

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	talc and transitional talc fiber	W	B	N	N	H	+	P	1.605	db/ly	w/b	1.616	<1.60
2	non-fibrous tremolite/actinolite	W	G	N	N	M	+	O	1.605	vg/y	sb/o	1.619	1.607
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent. Note: sample contained transitional talc and/or non-fibrous tremolite/actinolite. Transitional talc is an intimate mixture of anthophyllite and talc. Even though it may have been asbestos once, the EPA has ruled not to regulate 'fibers of mixed mineral assemblage'. However, these fibers may be regulated when analyzed by TEM, since some are indistinguishable from anthophyllite asbestos. Likewise, non-fibrous tremolite/actinolite, while not regulated by EPA, may be counted (and thus regulated) when analyzed by TEM.

Sample IHS-M-2005-7E1-62 **Lab Number** 2007-07376- 62 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Insulation **Powder**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Gray	3	30-40%	>1-2%	<=1%	-	-	-
Total %		100	Average %		30-40%	>1-2%	<=1%	-	-	-
Fiber Identification:					glass fiber	chrysotile asbestos	cellulose fiber			

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	glass fiber	CL	D	Y									
2	chrysotile asbestos	W	A	N	N	L	+	P	1.550	db/ly	sb/o	1.561	1.553
3	cellulose fiber	W	F	N	N	H	+	U					
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707376
IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-7E2-63 **Lab Number** 2007-07376- 63 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Insulation Powder
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Gray	3	30-40%	>1-2%	<=1%	-	-	-
Total %		100	Average %		30-40%	>1-2%	<=1%	-	-	-
Fiber Identification:					glass fiber	chrysotile asbestos	cellulose fiber			

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	glass fiber	CL	D	Y					1.550	db/ly	sb/o	1.561	1.553
2	chrysotile asbestos	W	A	N	N	L	+	P					
3	cellulose fiber	W	F	N	N	H	+	U					
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2005-7E3-64 **Lab Number** 2007-07376- 64 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Insulation Powder
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Gray	3	30-40%	>1-2%	>1-2%	-	-	-
Total %		100	Average %		30-40%	>1-2%	>1-2%	-	-	-
Fiber Identification:					glass fiber	chrysotile asbestos	cellulose fiber			

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	glass fiber	CL	D	Y					1.550	db/ly	sb/o	1.561	1.553
2	chrysotile asbestos	W	A	N	N	L	+	P					
3	cellulose fiber	W	F	N	N	H	+	U					
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2005-8A1-65 **Lab Number** 2007-07376- 65 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Roofing Fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	50	black	1	10-20%	n.d.	-	-	-	-
2	roof ply	50	Black	1	n.d.	50-60%	-	-	-	-
Total %		100	Average %		5-10%	20-30%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number: 200707376
IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-8A2-66 **Lab Number** 2007-07376- 66 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	50	black	1	10-20%	n.d.	-	-	-	-
2	roof ply	50	Black	1	n.d.	50-60%	-	-	-	-
Total %		100	Average %		5-10%	20-30%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2005-8A3-67 **Lab Number** 2007-07376- 67 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	47	black	1	10-20%	n.d.	-	-	-	-
2	roof ply	53	Black	1	n.d.	50-60%	-	-	-	-
Total %		100	Average %		5-10%	20-30%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2005-8B1-68 **Lab Number** 2007-07376- 68 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	47	black	1	10-20%	-	-	-	-	-
2	roof ply	53	Black	1	20-30%	-	-	-	-	-
Total %		100	Average %		20-30%	-	-	-	-	-
Fiber Identification:					glass fiber					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number: 200707376

IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-8B2-69 **Lab Number** 2007-07376- 69 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	roofing roll/shingle	54	black	1	10-20%	-	-	-	-	-						
2	roof ply	46	Black	1	20-30%	-	-	-	-	-						
Total %		100	Average %		20-30%	-	-	-	-	-						
Fiber Identification:					glass fiber											
Fibers					Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	glass fiber			CL	D	Y						Oil	Col Par	Col Per	RI Par	RI Per
2																
3																
4																
5																
6																

Sample Analytical Note

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

Sample IHS-M-2005-8B3-70 **Lab Number** 2007-07376- 70 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber										
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6					
1	roofing roll/shingle	48	black	1	10-20%	-	-	-	-	-					
2	roof ply	52	Black	1	20-30%	-	-	-	-	-					
Total %		100	Average %		20-30%	-	-	-	-	-					
Fiber Identification:					glass fiber										
Fibers					Refractive Index Determinations										
			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 matrix using solvent.

Sample IHS-M-2005-8C1-71 **Lab Number** 2007-07376- 71 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Roofing **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): bitumen, filler,

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	caulk	100	Black	1	10-20%	-	-	-	-	-						
Total %		100	Average %		10-20%	-	-	-	-	-						
Fiber Identification:					cellulose fiber											
Fibers					Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	cellulose fiber			W	F	N	N	H	+	U		Oil	Col Par	Col Per	RI Par	RI Per
2																
3																
4																
5																
6																

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707376
IHS-Mescalero Bldg# 2005

Sample IHS-M-2005-8C2-72 **Lab Number** 2007-07376- 72 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Roofing Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): bitumen, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.553
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2005-8C3-73 **Lab Number** 2007-07376- 73 **Sampled:** 8/22/2007 **Condition:** acceptable
Analyzed By MAC 9/18/2007 **An?** OK **Apparent Smp Type** Roofing Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): bitumen, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.553
2													
3													
4													
5													
6													

Sample Analytical Note

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

Fr=Friability: 1=very non-friable; 2= non-friable; 3=friable; 4=highly friable

Colors: B=black;BL=blue;BR=brown;CL=clear;G=Green;GY=gray;OR=orange;OW=off-white;PN=pink;PU=purple;R=red;TN=tan;W=white;Y=yellow;V=various

Fiber Morphology: A=fine fibers/bundles, white, sinewy, flexible; B=fine fibers/bundles, w-br, straight, broomed ends; C=fine fibers/bundles, blue, straight, broomed ends;

D=fine to coarse fibers, CL-B, brittle; E=coarse fibers,CL or dyed, striated; F=coarse fibers or splinters, W-BR, ribbon-like; G=lath-like or shards, low aspect ratio, may taper

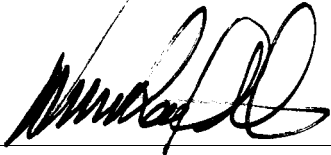
Iso=isotropism - may be yes or no; Pleo=pleochroism - may be yes or no; Bi=birefringence - may be None, Low, Medium or High

Elg=sign of elongation - may be + or -; Ext=extinction - may be Parallel, Oblique, None or Undulating; Oil=medium used to for dispersion staining

Col Par=dispersion staining colors parallel to the fiber (fiber/halo): b/w=black/white; dg/py=dark gray/pale yellow; vg/y=violet gray/yellow; db/ly=dark blue/lemon yellow;

vb/g= vivid blue/gold; sb/o=sky blue/orange; pb/r=pale blue/red; gb/dr=gray blue/dark red; w/b=white/black. Col Perp=same only perpendicular to fiber.

RI Par=refractive index parallel to fiber; RI Perp=refractive index perpendicular to fiber



Analyst: MICHAEL A. COOK

Printed: 18-Sep-07

Original Print Date: 18-Sep-07



Larry S. Pierce, Approved Accreditation Signatory



Polarized Light Microscope (PLM) Analysis for Asbestos

JobNumber: 200707379

Client:

IHI ENVIRONMENTAL

(PHOENIX OFFICE)

4527 N 16th ST STE 105

PHOENIX, AZ

85016-0000

Office Phone: (602) 776-0300

FAX: (602) 776-0301

Samples: 61 PLM Rec: 8/27/2007 Method: Interim (EPA/600/M4-82-020) PLM analysis for asbestos in bulk smp
Client Job: IHS-Mescalero Bldg# 2006 PO Number: 07P-3031
Report Date: 9/26/2007 Date Analyzed: 9/26/2007 Routing Number: -

Method and Analysis Information: Fiberquant Internal SOP: PLMi

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, NESHAP and OSHA regulations designate a result of $\leq 1\%$ 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 Interim Method (EPA Method 600/M4-82-020). 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 $\leq 1\%$ asbestos are point counted using 400 points, and the results listed on the detail analysis sheet. Such point counting is required by NESHAP (National Emission Standards for Hazardous Air Pollutants, Nov. 1990) in order to rely on analytical results that are $\leq 1\%$. 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 $\leq 1\%$ as "borderline negative", and results where asbestos was $>1\%$ but $\leq 2\%$ as "borderline positive" to indicate the uncertainty in assigning a "positive" or "negative" label. In the sample summary, a "ND" means that no asbestos was detected during the analysis. A "Tr" or "Trace" of asbestos is defined for our purposes as the detection of several asbestos fibers during the analysis; an amount essentially at the limit of detection for the method. 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 is a degreed geologist or mineralogist, 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 monthly. 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 (#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.

The "Analysis Results" below are the averages for all layers of each sample listed. The "+ Layer" column indicates whether any of the layers in the sample were >1% asbestos. Please refer to each detailed analysis sheet to determine which layer(s) of a sample was(were) positive.

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:

Single layer sample analysis as per client request. Any material or layer other than that indicated on the chain of custody was not analyzed, even if a suspect material.

PLM Analysis Summary:

Job Number:

200707379

IHS-Mescalero Bldg# 2006

Sample Number			Lab Number	Apparent Sample Type *	Positive Layer Yes or No
Layer	Color	Apparent Layer Type *	Asbestos Results		
Sample #	<u>IHS-M-2006-1A1-1</u>		2007-07379- 1	Flooring	Positive Layer? Yes
Layer # 1	Green	floor tile	2-5% chrysotile asbestos		
Layer # 2	Black	mastic	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2006-1A2-2</u>		2007-07379- 2	Flooring	Positive Layer? Yes
Layer # 1	Green	floor tile	2-5% chrysotile asbestos		
Layer # 2	Black	mastic	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2006-1A3-3</u>		2007-07379- 3	Flooring	Positive Layer? Yes
Layer # 1	Green	floor tile	2-5% chrysotile asbestos		
Layer # 2	Black	mastic	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2006-1B1-4</u>		2007-07379- 4	Flooring	Positive Layer? Yes
Layer # 1	Off-white	floor tile	2-5% chrysotile asbestos		
Layer # 2	Yellow	mastic	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2006-1B2-5</u>		2007-07379- 5	Flooring	Positive Layer? Yes
Layer # 1	Off-white	floor tile	2-5% chrysotile asbestos		
Layer # 2	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2006-1B3-6</u>		2007-07379- 6	Flooring	Positive Layer? Yes
Layer # 1	Off-white	floor tile	2-5% chrysotile asbestos		
Layer # 2	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2006-1C1-7</u>		2007-07379- 7	Flooring	Positive Layer? No
Layer # 1	Gray	grout	no asbestos detected		
Sample #	<u>IHS-M-2006-1C2-8</u>		2007-07379- 8	Flooring	Positive Layer? No
Layer # 1	Gray	grout	no asbestos detected		
Sample #	<u>IHS-M-2006-1C3-9</u>		2007-07379- 9	Flooring	Positive Layer? No
Layer # 1	Gray	grout	no asbestos detected		
Sample #	<u>IHS-M-2006-1D1-10</u>		2007-07379- 10	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Layer # 2	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2006-1D2-11</u>		2007-07379- 11	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Layer # 2	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2006-1D3-12</u>		2007-07379- 12	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2006-1E1-13</u>		2007-07379- 13	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2006-1E2-14</u>		2007-07379- 14	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2006-1E3-15</u>		2007-07379- 15	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2006-1F1-16</u>		2007-07379- 16	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Layer # 2	Off-white	mastic	no asbestos detected		
Sample #	<u>IHS-M-2006-1F2-17</u>		2007-07379- 17	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Layer # 2	Off-white	mastic	no asbestos detected		
Sample #	<u>IHS-M-2006-1F3-18</u>		2007-07379- 18	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Layer # 2	Off-white	mastic	no asbestos detected		
Sample #	<u>IHS-M-2006-2A1-19</u>		2007-07379- 19	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2006-2A2-20</u>		2007-07379- 20	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2006-2A3-21</u>		2007-07379- 21	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2006-2B1-22</u>		2007-07379- 22	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2006-2B2-23</u>		2007-07379- 23	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		

Sample #	<u>IHS-M-2006-2B3-24</u>	2007-07379- 24	Wall System	Positive Layer?	No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos			
Sample #	<u>IHS-M-2006-2C1-25</u>	2007-07379- 25	Wall System	Positive Layer?	No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos			
Sample #	<u>IHS-M-2006-2C2-26</u>	2007-07379- 26	Wall System	Positive Layer?	No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos			
Sample #	<u>IHS-M-2006-2C3-27</u>	2007-07379- 27	Wall System	Positive Layer?	No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos			
Sample #	<u>IHS-M-2006-2C4-28</u>	2007-07379- 28	Wall System	Positive Layer?	No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos			
Sample #	<u>IHS-M-2006-2C5-29</u>	2007-07379- 29	Wall System	Positive Layer?	No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos			
Sample #	<u>IHS-M-2006-2C6-30</u>	2007-07379- 30	Wall System	Positive Layer?	No
Layer # 1	white texture/joint compound	no asbestos detected			
Sample #	<u>IHS-M-2006-2C7-31</u>	2007-07379- 31	Wall System	Positive Layer?	No
Layer # 1	white texture/joint compound	no asbestos detected			
Sample #	<u>IHS-M-2006-2D1-32</u>	2007-07379- 32	Cementitious	Positive Layer?	No
Layer # 1	Red brick	no asbestos detected			
Sample #	<u>IHS-M-2006-2D2-33</u>	2007-07379- 33	Cementitious	Positive Layer?	No
Layer # 1	Red brick	no asbestos detected			
Sample #	<u>IHS-M-2006-2D3-34</u>	2007-07379- 34	Cementitious	Positive Layer?	No
Layer # 1	Red brick	no asbestos detected			
Sample #	<u>IHS-M-2006-2E1-35</u>	2007-07379- 35	Cementitious	Positive Layer?	No
Layer # 1	Gray mortar	no asbestos detected			
Sample #	<u>IHS-M-2006-2E2-36</u>	2007-07379- 36	Cementitious	Positive Layer?	No
Layer # 1	Gray mortar	no asbestos detected			
Sample #	<u>IHS-M-2006-2E3-37</u>	2007-07379- 37	Cementitious	Positive Layer?	No
Layer # 1	Gray mortar	no asbestos detected			
Sample #	<u>IHS-M-2006-7A1-38</u>	2007-07379- 38	Miscellaneous	Positive Layer?	No
Layer # 1	White coating	no asbestos detected			
Sample #	<u>IHS-M-2006-7A2-39</u>	2007-07379- 39	Miscellaneous	Positive Layer?	No
Layer # 1	White coating	no asbestos detected			
Sample #	<u>IHS-M-2006-7A3-40</u>	2007-07379- 40	Miscellaneous	Positive Layer?	No
Layer # 1	White coating	no asbestos detected			
Sample #	<u>IHS-M-2006-7B1-41</u>	2007-07379- 41	Adhesive/caulk	Positive Layer?	No
Layer # 1	white caulk	no asbestos detected			
Sample #	<u>IHS-M-2006-7B2-42</u>	2007-07379- 42	Adhesive/caulk	Positive Layer?	No
Layer # 1	white caulk	no asbestos detected			
Sample #	<u>IHS-M-2006-7B3-43</u>	2007-07379- 43	Adhesive/caulk	Positive Layer?	No
Layer # 1	white caulk	no asbestos detected			
Sample #	<u>IHS-M-2006-7C1-44</u>	2007-07379- 44	Adhesive/caulk	Positive Layer?	No
Layer # 1	white caulk	no asbestos detected			
Sample #	<u>IHS-M-2006-7C2-45</u>	2007-07379- 45	Adhesive/caulk	Positive Layer?	No
Layer # 1	white caulk	no asbestos detected			
Sample #	<u>IHS-M-2006-7C3-46</u>	2007-07379- 46	Adhesive/caulk	Positive Layer?	No
Layer # 1	white caulk	no asbestos detected			
Sample #	<u>IHS-M-2006-7D1-47</u>	2007-07379- 47	Insulation	Positive Layer?	Yes
Layer # 1	Off-white insulation	2-5% chrysotile asbestos	>1-2% crocidolite asbestos		
Sample #	<u>IHS-M-2006-7D2-48</u>	2007-07379- 48	Insulation	Positive Layer?	Yes
Layer # 1	Off-white insulation	2-5% chrysotile asbestos	>1-2% crocidolite asbestos		
Sample #	<u>IHS-M-2006-7D3-49</u>	2007-07379- 49	Insulation	Positive Layer?	Yes
Layer # 1	Off-white insulation	2-5% chrysotile asbestos	>1-2% crocidolite asbestos		
Sample #	<u>IHS-M-2006-7E1-50</u>	2007-07379- 50	Adhesive/caulk	Positive Layer?	No
Layer # 1	Tan mastic	<=1% chrysotile asbestos			
Sample #	<u>IHS-M-2006-7E2-51</u>	2007-07379- 51	Adhesive/caulk	Positive Layer?	No
Layer # 1	Tan mastic	<=1% chrysotile asbestos			
Sample #	<u>IHS-M-2006-7E3-52</u>	2007-07379- 52	Adhesive/caulk	Positive Layer?	No
Layer # 1	Tan mastic	<=1% chrysotile asbestos			
Sample #	<u>IHS-M-2006-8A1-53</u>	2007-07379- 53	Roofing	Positive Layer?	No
Layer # 1	black roofing roll/shingle	no asbestos detected			
Layer # 2	Black roof ply	no asbestos detected			
Sample #	<u>IHS-M-2006-8A2-54</u>	2007-07379- 54	Roofing	Positive Layer?	No
Layer # 1	black roofing roll/shingle	no asbestos detected			
Layer # 2	Black roof ply	no asbestos detected			
Sample #	<u>IHS-M-2006-8A3-55</u>	2007-07379- 55	Roofing	Positive Layer?	No
Layer # 1	black roofing roll/shingle	no asbestos detected			
Layer # 2	Black roof ply	no asbestos detected			
Sample #	<u>IHS-M-2006-8B1-56</u>	2007-07379- 56	Roofing	Positive Layer?	Yes
Layer # 1	Black mastic	5-10% chrysotile asbestos			
Sample #	<u>IHS-M-2006-8B2-57</u>	2007-07379- 57	Roofing	Positive Layer?	Yes
Layer # 1	Black mastic	5-10% chrysotile asbestos			
Sample #	<u>IHS-M-2006-8B3-58</u>	2007-07379- 58	Roofing	Positive Layer?	Yes
Layer # 1	Black mastic	5-10% chrysotile asbestos			

Sample #	<u>IHS-M-2006-8C1-59</u>	2007-07379- 59	Roofing	Positive Layer? No
Layer # 1	black	roofing roll/shingle	<i>no asbestos detected</i>	
Layer # 2	Black	roof ply	<i>no asbestos detected</i>	
Sample #	<u>IHS-M-2006-8C2-60</u>	2007-07379- 60	Roofing	Positive Layer? No
Layer # 1	black	roofing roll/shingle	<i>no asbestos detected</i>	
Layer # 2	Black	roof ply	<i>no asbestos detected</i>	
Sample #	<u>IHS-M-2006-8C3-61</u>	2007-07379- 61	Roofing	Positive Layer? No
Layer # 1	black	roofing roll/shingle	<i>no asbestos detected</i>	
Layer # 2	Black	roof ply	<i>no asbestos detected</i>	

* 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.

PLM Analysis Details
Job Number: 200707379
IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-1A1-1 **Lab Number** 2007-07379- 1 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Green	1	2-5%	-	-	-	-	-
2	mastic	2	Black	1	<=1%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2006-1A2-2 **Lab Number** 2007-07379- 2 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Green	1	2-5%	-	-	-	-	-
2	mastic	2	Black	1	<=1%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2006-1A3-3 **Lab Number** 2007-07379- 3 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Green	1	2-5%	-	-	-	-	-
2	mastic	2	Black	1	<=1%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details

Job Number:

200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-1B1-4 Lab Number 2007-07379- 4 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 An? OK Apparent Smp Type Flooring Non-fibrous Solid
Homogeneous No # Layers 2 Pos Layer? Yes # Sub-Samples 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Off-white	1	2-5%	-	-	-	-	-
2	mastic	2	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent. Asbestos fragments in mastic may be a contamination from the layer number 1 (floor tile).

Sample IHS-M-2006-1B2-5 Lab Number 2007-07379- 5 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 An? OK Apparent Smp Type Flooring Non-fibrous Solid
Homogeneous No # Layers 2 Pos Layer? Yes # Sub-Samples 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Off-white	1	2-5%	-	-	-	-	-
2	mastic	2	Yellow	1	n.d.	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details

Job Number: 200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-1B3-6 Lab Number 2007-07379- 6 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 An? OK Apparent Smp Type Flooring Non-fibrous Solid
Homogeneous No # Layers 2 Pos Layer? Yes # Sub-Samples 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Off-white	1	2-5%	-	-	-	-	-
2	mastic	2	Yellow	1	n.d.	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2006-1C1-7 Lab Number 2007-07379- 7 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 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): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2006-1C2-8 Lab Number 2007-07379- 8 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 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): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

PLM Analysis Details

Job Number:

200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-1C3-9 **Lab Number** 2007-07379- 9 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **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): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %							
			n.d.							

Fiber Identification:

none

Fibers									Refractive Index Determinations				
	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 matrix using dilute HCl acid.

Sample IHS-M-2006-1D1-10 **Lab Number** 2007-07379- 10 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	99	off-white	2	20-30%	2-5%	-	-	-	-
2	mastic	1	Yellow	1	n.d.	n.d.	-	-	-	-
Total %		100	Average %							
			20-30% 2-5% - - - -							

Fiber Identification:

cellulose fiber

glass fiber

Fibers									Refractive Index Determinations				
	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 IHS-M-2006-1D2-11 **Lab Number** 2007-07379- 11 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	99	off-white	2	20-30%	2-5%	-	-	-	-
2	mastic	1	Yellow	1	n.d.	n.d.	-	-	-	-
Total %		100	Average %							
			20-30% 2-5% - - - -							

Fiber Identification:

cellulose fiber

glass fiber

Fibers									Refractive Index Determinations				
	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.

PLM Analysis Details
Job Number: 200707379
IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-1D3-12 **Lab Number** 2007-07379- 12 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-

Fiber Identification: 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	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 IHS-M-2006-1E1-13 **Lab Number** 2007-07379- 13 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Tan	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-

Fiber Identification: 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	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 IHS-M-2006-1E2-14 **Lab Number** 2007-07379- 14 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Tan	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-

Fiber Identification: 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	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.

PLM Analysis Details

Job Number: 200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-1E3-15 Lab Number 2007-07379- 15 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 An? OK Apparent Smp Type Flooring Fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Tan	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2006-1F1-16 Lab Number 2007-07379- 16 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 An? OK Apparent Smp Type Flooring Fibrous Solid
Homogeneous No # Layers 2 Pos Layer? No # Sub-Samples 6
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	sheet flooring	98	off-white	2	10-20%	2-5%	-	-	-	-						
2	mastic	2	Off-white	1	n.d.	n.d.	-	-	-	-						
Total %		100	Average %		10-20%	2-5%	-	-	-	-						
Fiber Identification:					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	cellulose fiber				W	F	N	N	H	+	U					
2	glass fiber				CL	D	Y									
3																
4																
5																
6																

Sample Analytical Note

Surface is pink. Procedure: teased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2006-1F2-17 Lab Number 2007-07379- 17 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 An? OK Apparent Smp Type Flooring Fibrous Solid
Homogeneous No # Layers 2 Pos Layer? No # Sub-Samples 6
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	sheet flooring	98	off-white	2	10-20%	2-5%	-	-	-	-						
2	mastic	2	Off-white	1	n.d.	n.d.	-	-	-	-						
Total %		100	Average %		10-20%	2-5%	-	-	-	-						
Fiber Identification:					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	cellulose fiber				W	F	N	N	H	+	U					
2	glass fiber				CL	D	Y									
3																
4																
5																
6																

Sample Analytical Note

Surface is pink. Procedure: teased apart using forceps. Procedure: dissolution of matrix using solvent.

PLM Analysis Details

Job Number: 200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-1F3-18 **Lab Number** 2007-07379- 18 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	98	off-white	2	10-20%	2-5%	-	-	-	-
2	mastic	2	Off-white	1	n.d.	n.d.	-	-	-	-
Total %		100	Average %		10-20%	2-5%	-	-	-	-

Fiber Identification:

cellulose fiber glass fiber

Fibers									Refractive Index Determinations				
		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

Surface is pink. Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2006-2A1-19 **Lab Number** 2007-07379- 19 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification:

cellulose

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

Sample Analytical Note

Procedure: tweased apart using forceps.

Sample IHS-M-2006-2A2-20 **Lab Number** 2007-07379- 20 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification:

cellulose

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

Sample Analytical Note

Procedure: tweased apart using forceps.

PLM Analysis Details

Job Number: 200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-2A3-21 Lab Number 2007-07379- 21 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 An? OK Apparent Smp Type Wall System Fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification: cellulose

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

Sample Analytical Note

Procedure: tweased apart using forceps.

Sample IHS-M-2006-2B1-22 Lab Number 2007-07379- 22 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2006-2B2-23 Lab Number 2007-07379- 23 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

PLM Analysis Details

Job Number: 200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-2B3-24 Lab Number 2007-07379- 24 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-						
Total %		100	Average %		<=1%	-	-	-	-	-						
Fiber Identification:					chrysotile asbestos											
Fibers					Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	chrysotile asbestos				W	A	N	N	L	+	P	Oil	Col Par	Col Per	RI Par	RI Per
2												1.550	vb/g	sb/o	1.556	1.553
3																
4																
5																
6																

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2006-2C1-25 Lab Number 2007-07379- 25 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber										
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6					
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-					
Total %		100	Average %		<=1%	-	-	-	-	-					
Fiber Identification:				chrysotile asbestos											
Fibers				Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	chrysotile asbestos			W	A	N	N	L	+	P	Oil	Col Par	Col Per	RI Par	RI Per
2											1.550	vb/g	sb/o	1.556	1.553
3															
4															
5															
6															

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2006-2C2-26 Lab Number 2007-07379- 26 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-						
Total %		100	Average %		<=1%	-	-	-	-	-						
Fiber Identification:					chrysotile asbestos											
Fibers					Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	chrysotile asbestos				W	A	N	N	L	+	P	Oil	Col Par	Col Per	RI Par	RI Per
2												1.550	vb/g	sb/o	1.556	1.553
3																
4																
5																
6																

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details

Job Number:

200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-2C3-27 **Lab Number** 2007-07379- 27 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

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													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2006-2C4-28 **Lab Number** 2007-07379- 28 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

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													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2006-2C5-29 **Lab Number** 2007-07379- 29 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

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													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details

Job Number: 200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-2C6-30 **Lab Number** 2007-07379- 30 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

Sample IHS-M-2006-2C7-31 **Lab Number** 2007-07379- 31 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

Sample IHS-M-2006-2D1-32 **Lab Number** 2007-07379- 32 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Red	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

PLM Analysis Details

Job Number: 200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-2D2-33 **Lab Number** 2007-07379- 33 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Red	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2006-2D3-34 **Lab Number** 2007-07379- 34 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Red	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2006-2E1-35 **Lab Number** 2007-07379- 35 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

PLM Analysis Details

Job Number: 200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-2E2-36 **Lab Number** 2007-07379- 36 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2006-2E3-37 **Lab Number** 2007-07379- 37 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2006-7A1-38 **Lab Number** 2007-07379- 38 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-

Fiber Identification:

cellulose fiber

Fibers									Refractive Index Determinations				
		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.

PLM Analysis Details

Job Number: 200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-7A2-39 **Lab Number** 2007-07379- 39 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 IHS-M-2006-7A3-40 **Lab Number** 2007-07379- 40 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Miscellaneous **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 IHS-M-2006-7B1-41 **Lab Number** 2007-07379- 41 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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.

PLM Analysis Details

Job Number: 200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-7B2-42 **Lab Number** 2007-07379- 42 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using solvent.

Sample IHS-M-2006-7B3-43 **Lab Number** 2007-07379- 43 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using solvent.

PLM Analysis Details

Job Number:

200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-7C1-44 Lab Number 2007-07379- 44 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 An? OK Apparent Smp Type Adhesive/caulk Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					talc and transitional	non-fibrous tremolit				

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	talc and transitional talc fiber	W	B	N	N	H	+	P	1.605	sb/o	w/b	1.607	<1.60
2	non-fibrous tremolite/actinolite	W	G	N	N	M	+	O	1.605	vg/y	sb/o	1.619	1.607
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent. Note: sample contained transitional talc and/or non-fibrous tremolite/actinolite. Transitional talc is an intimate mixture of anthophyllite and talc. Even though it may have been asbestos once, the EPA has ruled not to regulate 'fibers of mixed mineral assemblage'. However, these fibers may be regulated when analyzed by TEM, since some are indistinguishable from anthophyllite asbestos. Likewise, non-fibrous tremolite/actinolite, while not regulated by EPA, may be counted (and thus regulated) when analyzed by TEM.

Sample IHS-M-2006-7C2-45 Lab Number 2007-07379- 45 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 An? OK Apparent Smp Type Adhesive/caulk Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					talc and transitional	non-fibrous tremolit				

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	talc and transitional talc fiber	W	B	N	N	H	+	P	1.605	sb/o	w/b	1.607	<1.60
2	non-fibrous tremolite/actinolite	W	G	N	N	M	+	O	1.605	vg/y	sb/o	1.619	1.607
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent. Note: sample contained transitional talc and/or non-fibrous tremolite/actinolite. Transitional talc is an intimate mixture of anthophyllite and talc. Even though it may have been asbestos once, the EPA has ruled not to regulate 'fibers of mixed mineral assemblage'. However, these fibers may be regulated when analyzed by TEM, since some are indistinguishable from anthophyllite asbestos. Likewise, non-fibrous tremolite/actinolite, while not regulated by EPA, may be counted (and thus regulated) when analyzed by TEM.

PLM Analysis Details

Job Number: 200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-7C3-46 **Lab Number** 2007-07379- 46 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	caulk	100	white	1	<=1%	<=1%	-	-	-	-						
Total %		100	Average %		<=1%	<=1%	-	-	-	-						
Fiber Identification:					talc and transitional non-fibrous tremolit											
Fibers					Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	talc and transitional talc fiber				W	B	N	N	H	+	P	Oil	Col Par	Col Per	RI Par	RI Per
2	non-fibrous tremolite/actinolite				W	G	N	N	M	+	O	1.605	sb/o	w/b	1.607	<1.60
3												1.605	vg/y	sb/o	1.619	1.607
4																
5																
6																

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent. Note: sample contained transitional talc and/or non-fibrous tremolite/actinolite. Transitional talc is an intimate mixture of anthophyllite and talc. Even though it may have been asbestos once, the EPA has ruled not to regulate 'fibers of mixed mineral assemblage'. However, these fibers may be regulated when analyzed by TEM, since some are indistinguishable from anthophyllite asbestos. Likewise, non-fibrous tremolite/actinolite, while not regulated by EPA, may be counted (and thus regulated) when analyzed by TEM.

Sample IHS-M-2006-7D1-47 **Lab Number** 2007-07379- 47 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Insulation Fibrous Mat
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Off-white	3	10-20%	2-5%	>1-2%	>1-2%	-	-
Total %		100	Average %		10-20%	2-5%	>1-2%	>1-2%	-	-
Fiber Identification:					glass fiber	chrysotile asbestos	crocidolite asbesto	cellulose fiber		

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	glass fiber	CL	D	Y				
2	chrysotile asbestos	W	A	N	N	L	+	P
3	crocidolite asbestos	BL	C	N	Y	L	-	P
4	cellulose fiber	W	F	N	N	H	+	U
5								
6								

Refractive Index Determinations				
Oil	Col Par	Col Per	RI Par	RI Per
1.550	vb/g	sb/o	1.556	1.553
1.700	db/ly	db/ly	~1.70	~1.70

Sample Analytical Note

Procedure: tweased apart using forceps.

PLM Analysis Details

Job Number: 200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-7D2-48 **Lab Number** 2007-07379- 48 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Insulation **Fibrous Mat**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Off-white	3	10-20%	2-5%	>1-2%	>1-2%	-	-
Total %		100	Average %		10-20%	2-5%	>1-2%	>1-2%	-	-
Fiber Identification:					glass fiber	chrysotile asbestos	crocidolite asbestos	cellulose fiber		

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	glass fiber	CL	D	Y									
2	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
3	crocidolite asbestos	BL	C	N	Y	L	-	P	1.700	db/ly	db/ly	~1.70	~1.70
4	cellulose fiber	W	F	N	N	H	+	U					
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps.

Sample IHS-M-2006-7D3-49 **Lab Number** 2007-07379- 49 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Insulation **Fibrous Mat**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 5
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Off-white	3	10-20%	2-5%	>1-2%	>1-2%	-	-
Total %		100	Average %		10-20%	2-5%	>1-2%	>1-2%	-	-
Fiber Identification:					glass fiber	chrysotile asbestos	crocidolite asbesto	cellulose fiber		

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									Oil	Col Par	Col Per	RI Par	RI Per
1	glass fiber	CL	D	Y									
2	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	sb/o	1.556	1.553
3	crocidolite asbestos	BL	C	N	Y	L	-	P	1.700	db/ly	db/ly	~1.70	~1.70
4	cellulose fiber	W	F	N	N	H	+	U					
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps.

Sample IHS-M-2006-7E1-50 **Lab Number** 2007-07379- 50 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Tan	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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													
3													
4													
5													
6													

Sample Analytical Note

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

PLM Analysis Details

Job Number:

200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-7E2-51 **Lab Number** 2007-07379- 51 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Tan	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-

Fiber Identification: chrysotile asbestos cellulose fiber

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2006-7E3-52 **Lab Number** 2007-07379- 52 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Tan	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-

Fiber Identification: chrysotile asbestos cellulose fiber

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2006-8A1-53 **Lab Number** 2007-07379- 53 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Roofing **Sticky**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	60	black	1	5-10%	n.d.	-	-	-	-
2	roof ply	40	Black	1	n.d.	60-70%	-	-	-	-
Total %		100	Average %		5-10%	20-30%	-	-	-	-

Fiber Identification: glass fiber cellulose fiber

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details

Job Number: 200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-8A2-54 **Lab Number** 2007-07379- 54 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Roofing **Sticky**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	roofing roll/shingle	35	black	1	5-10%	n.d.	-	-	-	-						
2	roof ply	65	Black	1	n.d.	60-70%	-	-	-	-						
Total %		100	Average %		2-5%	40-50%	-	-	-	-						
Fiber Identification:					glass fiber	cellulose fiber										
Fibers					Refractive Index Determinations											
					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 matrix using solvent.

Sample IHS-M-2006-8A3-55 **Lab Number** 2007-07379- 55 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Roofing **Sticky**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	roofing roll/shingle	60	black	1	10-20%	n.d.	-	-	-	-						
2	roof ply	40	Black	1	n.d.	60-70%	-	-	-	-						
Total %		100	Average %		5-10%	20-30%	-	-	-	-						
Fiber Identification:					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	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 matrix using solvent.

Sample IHS-M-2006-8B1-56 **Lab Number** 2007-07379- 56 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Roofing **Sticky**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	mastic	100	Black	1	5-10%	-	-	-	-	-						
Total %		100	Average %		5-10%	-	-	-	-	-						
Fiber Identification:					chrysotile asbestos											
Fibers					Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	chrysotile asbestos				W	A	N	N	L	+	P	Oil	Col Par	Col Per	RI Par	RI Per
2												1.550	vb/g	pb/r	1.556	1.549
3																
4																
5																
6																

Sample Analytical Note

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

PLM Analysis Details

Job Number: 200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-8B2-57 **Lab Number** 2007-07379- 57 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Roofing **Sticky**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2006-8B3-58 **Lab Number** 2007-07379- 58 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Roofing **Sticky**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2006-8C1-59 **Lab Number** 2007-07379- 59 **Sampled:** 8/21/2007 **Condition:** acceptable
Analyzed By GV 9/26/2007 **An?** OK **Apparent Smp Type** Roofing **Sticky**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	40	black	1	5-10%	-	-	-	-	-
2	roof ply	60	Black	1	20-30%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-

Fiber Identification: glass fiber

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details

Job Number: 200707379

IHS-Mescalero Bldg# 2006

Sample IHS-M-2006-8C2-60 Lab Number 2007-07379- 60 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 An? OK Apparent Smp Type Roofing Sticky
Homogeneous No # Layers 2 Pos Layer? No # Sub-Samples 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	40	black	1	5-10%	-	-	-	-	-
2	roof ply	60	Black	1	20-30%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					glass fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using solvent.

Sample IHS-M-2006-8C3-61 Lab Number 2007-07379- 61 Sampled: 8/21/2007 Condition: acceptable
Analyzed By GV 9/26/2007 An? OK Apparent Smp Type Roofing Sticky
Homogeneous No # Layers 2 Pos Layer? No # Sub-Samples 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	40	black	1	5-10%	-	-	-	-	-
2	roof ply	60	Black	1	20-30%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					glass fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using solvent.

Fr=Friability: 1=very non-friable; 2= non-friable; 3=friable; 4=highly friable

Colors: B=black;BL=blue;BR=brown;CL=clear;G=Green;GY=gray;OR=orange;OW=off-white;PN=pink;PU=purple;R=red;TN=tan;W=white;Y=yellow;V=various

Fiber Morphology: A=fine fibers/bundles, white, sinewy, flexible; B=fine fibers/bundles, w-br, straight, broomed ends; C=fine fibers/bundles, blue, straight, broomed ends; D=fine to coarse fibers, CL-B, brittle; E=coarse fibers,CL or dyed, striated; F=coarse fibers or splinters, W-BR, ribbon-like; G=lath-like or shards, low aspect ratio, may taper

Iso=isotropism - may be yes or no; Pleo=pleochroism - may be yes or no; Bi=birefringence - may be None, Low, Medium or High

Elg=sign of elongation - may be +, - or B (both); Ext=extinction - may be Parallel, Oblique, None or Undulating; Oil=medium used to for dispersion staining

Col Par=dispersion staining colors parallel to the fiber (fiber/halo): b/w=black/white; dg/py=dark gray/pale yellow; vg/y=violet gray/yellow; db/ly=dark blue/lemon

yellow; vb/g= vivid blue/gold; sb/o=sky blue/orange; pb/r=pale blue/red; gb/dr=gray blue/dark red; w/b=white/black. Col Perp=same only perpendicular to fiber.

RI Par=refractive index parallel to fiber; RI Perp=refractive index perpendicular to fiber

Galina B. Volkova

Analyst: GALINA B. VOLKOVA

Printed: 26-Sep-07

Original Print Date: 26-Sep-07

Larry S. Pierce

Larry S. Pierce, Approved Accreditation Signatory



Polarized Light Microscope (PLM) Analysis for Asbestos

JobNumber: 200707380

Client:

IHI ENVIRONMENTAL

(PHOENIX OFFICE)

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85016-0000

Office Phone: (602) 776-0300

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Samples: 61 **PLM** **Rec:** 8/27/2007 **Method:** Interim (EPA/600/M4-82-020) **PLM analysis for asbestos in bulk smp**

Client Job: IHS-Mescalero Bldg# 2007

PO Number: 07P-3031

Report Date: 10/1/2007

Date Analyzed: 10/1/2007

Routing Number: -

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

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, NESHAP and OSHA regulations designate a result of $\leq 1\%$ 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 Interim Method (EPA Method 600/M4-82-020). 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 $\leq 1\%$ asbestos are point counted using 400 points, and the results listed on the detail analysis sheet. Such point counting is required by NESHAP (National Emission Standards for Hazardous Air Pollutants, Nov. 1990) in order to rely on analytical results that are $\leq 1\%$. 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 $\leq 1\%$ as "borderline negative", and results where asbestos was $> 1\%$ but $\leq 2\%$ as "borderline positive" to indicate the uncertainty in assigning a "positive" or "negative" label. In the sample summary, a "ND" means that no asbestos was detected during the analysis. A "Tr" or "Trace" of asbestos is defined for our purposes as the detection of several asbestos fibers during the analysis; an amount essentially at the limit of detection for the method. 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 is a degreed geologist or mineralogist, 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 monthly. 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 (#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.

The "Analysis Results" below are the averages for all layers of each sample listed. The "+ Layer" column indicates whether any of the layers in the sample were >1% asbestos. Please refer to each detailed analysis sheet to determine which layer(s) of a sample was(were) positive.

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:

Single layer sample analysis as per client request. Any material or layer other than that indicated on the chain of custody was not analyzed, even if a suspect material.

PLM Analysis Summary:

Job Number: 200707380

IHS-Mescalero Bldg# 2007

Sample Number			Lab Number	Apparent Sample Type *	Positive Layer Yes or No
Layer	Color	Apparent Layer Type *	Asbestos Results		
Sample #	<u>IHS-M-2007-1A1-1</u>		2007-07380- 1	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile	no asbestos detected		
Layer # 2	Black	mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-1A2-2</u>		2007-07380- 2	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile	no asbestos detected		
Layer # 2	Black	mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-1A3-3</u>		2007-07380- 3	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile	no asbestos detected		
Layer # 2	Black	mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-1B1-4</u>		2007-07380- 4	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Layer # 2	Tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-1B2-5</u>		2007-07380- 5	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Layer # 2	Tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-1B3-6</u>		2007-07380- 6	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Layer # 2	Tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-1C1-7</u>		2007-07380- 7	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2007-1C2-8</u>		2007-07380- 8	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2007-1C3-9</u>		2007-07380- 9	Flooring	Positive Layer? No
Layer # 1	Tan	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2007-1D1-10</u>		2007-07380- 10	Flooring	Positive Layer? Yes
Layer # 1	Tan	floor tile	2-5% chrysotile asbestos		
Layer # 2	Tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-1D2-11</u>		2007-07380- 11	Flooring	Positive Layer? Yes
Layer # 1	Tan	floor tile	5-10% chrysotile asbestos		
Layer # 2	Tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-1D3-12</u>		2007-07380- 12	Flooring	Positive Layer? Yes
Layer # 1	Tan	floor tile	5-10% chrysotile asbestos		
Layer # 2	Tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-1E1-13</u>		2007-07380- 13	Flooring	Positive Layer? No
Layer # 1	Off-white	sheet flooring	no asbestos detected		
Layer # 2	Tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-1E2-14</u>		2007-07380- 14	Flooring	Positive Layer? No
Layer # 1	Off-white	sheet flooring	no asbestos detected		
Layer # 2	Tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-1E3-15</u>		2007-07380- 15	Flooring	Positive Layer? No
Layer # 1	Off-white	sheet flooring	no asbestos detected		
Layer # 2	Tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-1F1-16</u>		2007-07380- 16	Flooring	Positive Layer? No
Layer # 1	White	sheet flooring	no asbestos detected		
Layer # 2	Tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-1F2-17</u>		2007-07380- 17	Flooring	Positive Layer? No
Layer # 1	White	sheet flooring	no asbestos detected		
Layer # 2	Tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-1F3-18</u>		2007-07380- 18	Flooring	Positive Layer? No
Layer # 1	White	sheet flooring	no asbestos detected		
Layer # 2	Tan	mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-2A1-19</u>		2007-07380- 19	Wall System	Positive Layer? No
Layer # 1	White	powder	no asbestos detected		
Sample #	<u>IHS-M-2007-2A2-20</u>		2007-07380- 20	Wall System	Positive Layer? No
Layer # 1	White	powder	no asbestos detected		
Sample #	<u>IHS-M-2007-2A3-21</u>		2007-07380- 21	Wall System	Positive Layer? No
Layer # 1	White	powder	no asbestos detected		

Sample #	<u>IHS-M-2007-2B1-22</u>	2007-07380- 22	Wall System	Positive Layer? No
Layer # 1	Off-white texture/joint compound	<=1%	chrysotile asbestos	
Sample #	<u>IHS-M-2007-2B2-23</u>	2007-07380- 23	Wall System	Positive Layer? No
Layer # 1	Off-white texture/joint compound	<=1%	chrysotile asbestos	
Sample #	<u>IHS-M-2007-2B3-24</u>	2007-07380- 24	Wall System	Positive Layer? No
Layer # 1	Off-white texture/joint compound	<=1%	chrysotile asbestos	
Sample #	<u>IHS-M-2007-2C1-25</u>	2007-07380- 25	Wall System	Positive Layer? No
Layer # 1	Off-white texture/joint compound	<=1%	chrysotile asbestos	
Sample #	<u>IHS-M-2007-2C2-26</u>	2007-07380- 26	Wall System	Positive Layer? No
Layer # 1	Off-white texture/joint compound	<=1%	chrysotile asbestos	
Sample #	<u>IHS-M-2007-2C3-27</u>	2007-07380- 27	Wall System	Positive Layer? No
Layer # 1	Off-white texture/joint compound	<=1%	chrysotile asbestos	
Sample #	<u>IHS-M-2007-2C4-28</u>	2007-07380- 28	Wall System	Positive Layer? No
Layer # 1	Off-white texture/joint compound	no asbestos detected		
Sample #	<u>IHS-M-2007-2C5-29</u>	2007-07380- 29	Wall System	Positive Layer? No
Layer # 1	Off-white texture/joint compound	no asbestos detected		
Sample #	<u>IHS-M-2007-2C6-30</u>	2007-07380- 30	Wall System	Positive Layer? No
Layer # 1	Off-white texture/joint compound	<=1%	chrysotile asbestos	
Sample #	<u>IHS-M-2007-2C7-31</u>	2007-07380- 31	Wall System	Positive Layer? No
Layer # 1	Off-white texture/joint compound	no asbestos detected		
Sample #	<u>IHS-M-2007-2D1-32</u>	2007-07380- 32	Cementitious	Positive Layer? No
Layer # 1	Red brick	no asbestos detected		
Sample #	<u>IHS-M-2007-2D2-33</u>	2007-07380- 33	Cementitious	Positive Layer? No
Layer # 1	Red brick	no asbestos detected		
Sample #	<u>IHS-M-2007-2D3-34</u>	2007-07380- 34	Cementitious	Positive Layer? No
Layer # 1	Red brick	no asbestos detected		
Sample #	<u>IHS-M-2007-2E1-35</u>	2007-07380- 35	Cementitious	Positive Layer? No
Layer # 1	Gray mortar	no asbestos detected		
Sample #	<u>IHS-M-2007-2E2-36</u>	2007-07380- 36	Cementitious	Positive Layer? No
Layer # 1	Gray mortar	no asbestos detected		
Sample #	<u>IHS-M-2007-2E3-37</u>	2007-07380- 37	Cementitious	Positive Layer? No
Layer # 1	Gray mortar	no asbestos detected		
Sample #	<u>IHS-M-2007-7A1-38</u>	2007-07380- 38	Adhesive/caulk	Positive Layer? No
Layer # 1	Off-white mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-7A2-39</u>	2007-07380- 39	Adhesive/caulk	Positive Layer? No
Layer # 1	Off-white mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-7A3-40</u>	2007-07380- 40	Adhesive/caulk	Positive Layer? No
Layer # 1	Off-white mastic	no asbestos detected		
Sample #	<u>IHS-M-2007-7B1-41</u>	2007-07380- 41	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2007-7B2-42</u>	2007-07380- 42	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2007-7B3-43</u>	2007-07380- 43	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2007-7C1-44</u>	2007-07380- 44	Insulation	Positive Layer? Yes
Layer # 1	Black coating	>1-2%	chrysotile asbestos	
Sample #	<u>IHS-M-2007-7C2-45</u>	2007-07380- 45	Insulation	Positive Layer? Yes
Layer # 1	Black coating	>1-2%	chrysotile asbestos	
Sample #	<u>IHS-M-2007-7C3-46</u>	2007-07380- 46	Insulation	Positive Layer? Yes
Layer # 1	Black coating	>1-2%	chrysotile asbestos	
Sample #	<u>IHS-M-2007-7D1-47</u>	2007-07380- 47	Insulation	Positive Layer? Yes
Layer # 1	Off-white insulation	2-5% chrysotile asbestos	<=1% crocidolite asbestos	
Sample #	<u>IHS-M-2007-7D2-48</u>	2007-07380- 48	Insulation	Positive Layer? Yes
Layer # 1	Off-white insulation	2-5% chrysotile asbestos	<=1% crocidolite asbestos	
Sample #	<u>IHS-M-2007-7D3-49</u>	2007-07380- 49	Insulation	Positive Layer? Yes
Layer # 1	Off-white insulation	2-5% chrysotile asbestos	<=1% crocidolite asbestos	
Sample #	<u>IHS-M-2007-7E1-50</u>	2007-07380- 50	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2007-7E2-51</u>	2007-07380- 51	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2007-7E3-52</u>	2007-07380- 52	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2007-8A1-53</u>	2007-07380- 53	Roofing	Positive Layer? No
Layer # 1	Black roofing roll/shingle	no asbestos detected		
Layer # 2	Black roof ply	no asbestos detected		
Sample #	<u>IHS-M-2007-8A2-54</u>	2007-07380- 54	Roofing	Positive Layer? No
Layer # 1	Black roofing roll/shingle	no asbestos detected		
Layer # 2	Black roof ply	no asbestos detected		
Sample #	<u>IHS-M-2007-8A3-55</u>	2007-07380- 55	Roofing	Positive Layer? No
Layer # 1	Black roofing roll/shingle	no asbestos detected		
Layer # 2	Black roof ply	no asbestos detected		
Sample #	<u>IHS-M-2007-8B1-56</u>	2007-07380- 56	Roofing	Positive Layer? No
Layer # 1	Black roofing roll/shingle	no asbestos detected		
Layer # 2	Black roof ply	no asbestos detected		

Sample #	<u>IHS-M-2007-8B2-57</u>	2007-07380- 57	Roofing	Positive Layer? No
Layer # 1	Black	roofing roll/shingle	<i>no asbestos detected</i>	
Layer # 2	Black	roof ply	<i>no asbestos detected</i>	
Sample #	<u>IHS-M-2007-8B3-58</u>	2007-07380- 58	Roofing	Positive Layer? No
Layer # 1	Black	roofing roll/shingle	<i>no asbestos detected</i>	
Layer # 2	Black	roof ply	<i>no asbestos detected</i>	
Sample #	<u>IHS-M-2007-8C1-59</u>	2007-07380- 59	Roofing	Positive Layer? Yes
Layer # 1	Black	caulk	<i>5-10% chrysotile asbestos</i>	
Sample #	<u>IHS-M-2007-8C2-60</u>	2007-07380- 60	Roofing	Positive Layer? Yes
Layer # 1	Black	caulk	<i>5-10% chrysotile asbestos</i>	
Sample #	<u>IHS-M-2007-8C3-61</u>	2007-07380- 61	Roofing	Positive Layer? Yes
Layer # 1	Black	caulk	<i>5-10% chrysotile asbestos</i>	

* 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.

PLM Analysis Details

Job Number: 200707380

IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-1A1-1 Lab Number 2007-07380- 1 Sampled: 8/23/2007 Condition: acceptable
Analyzed By MAC 9/27/2007 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					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	Tan	1	n.d.	-	-	-	-	-
2	mastic	1	Black	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification:

cellulose fiber

Fibers									Refractive Index Determinations				
		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 IHS-M-2007-1A2-2 Lab Number 2007-07380- 2 Sampled: 8/23/2007 Condition: acceptable
Analyzed By MAC 9/27/2007 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					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Tan	1	n.d.	-	-	-	-	-
2	mastic	2	Black	1	>1-2%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification:

cellulose fiber

Fibers									Refractive Index Determinations				
		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 IHS-M-2007-1A3-3 Lab Number 2007-07380- 3 Sampled: 8/23/2007 Condition: acceptable
Analyzed By MAC 9/27/2007 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					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Tan	1	n.d.	-	-	-	-	-
2	mastic	2	Black	1	>1-2%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification:

cellulose fiber

Fibers									Refractive Index Determinations				
		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.

PLM Analysis Details
Job Number:
200707380
IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-1B1-4 **Lab Number** 2007-07380- 4 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 9/27/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	96	Tan	2	10-20%	10-20%	-	-	-	-
2	mastic	4	Tan	1	n.d.	n.d.	-	-	-	-
Total %		100	Average %		10-20%	10-20%	-	-	-	-
Fiber Identification:					synthetic fiber (extr	cellulose fiber				

Fibers									Refractive Index Determinations				
		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	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2007-1B2-5 **Lab Number** 2007-07380- 5 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 9/27/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	98	Tan	2	10-20%	10-20%	-	-	-	-
2	mastic	2	Tan	1	n.d.	n.d.	-	-	-	-
Total %		100	Average %		10-20%	10-20%	-	-	-	-
Fiber Identification:					synthetic fiber (extr	cellulose fiber				

Fibers									Refractive Index Determinations				
		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	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2007-1B3-6 **Lab Number** 2007-07380- 6 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 9/27/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	97	Tan	2	10-20%	10-20%	-	-	-	-
2	mastic	3	Tan	1	n.d.	n.d.	-	-	-	-
Total %		100	Average %		10-20%	10-20%	-	-	-	-
Fiber Identification:					synthetic fiber (extr	cellulose fiber				

Fibers									Refractive Index Determinations				
		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	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note

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

PLM Analysis Details

Job Number:

200707380

IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-1C1-7 **Lab Number** 2007-07380- 7 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 9/27/2007 **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): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Tan	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers										Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2007-1C2-8 **Lab Number** 2007-07380- 8 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 9/27/2007 **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): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Tan	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers										Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2007-1C3-9 **Lab Number** 2007-07380- 9 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 9/27/2007 **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): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	Tan	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers										Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number: 200707380

IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-1D1-10 **Lab Number** 2007-07380- 10 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 9/27/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Tan	1	2-5%	-	-	-	-	-
2	mastic	2	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.553
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2007-1D2-11 **Lab Number** 2007-07380- 11 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 9/27/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Tan	1	5-10%	-	-	-	-	-
2	mastic	2	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.553
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2007-1D3-12 **Lab Number** 2007-07380- 12 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 9/27/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	97	Tan	1	5-10%	-	-	-	-	-
2	mastic	3	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.553
2													
3													
4													
5													
6													

Sample Analytical Note

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

PLM Analysis Details

Job Number: 200707380

IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-1E1-13 Lab Number 2007-07380- 13 Sampled: 8/23/2007 Condition: acceptable
Analyzed By MAC 9/27/2007 An? OK Apparent Smp Type Flooring Fibrous Solid
Homogeneous No # Layers 2 Pos Layer? No # Sub-Samples 5
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	98	Off-white	2	20-30%	2-5%	-	-	-	-
2	mastic	2	Tan	1	n.d.	n.d.	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers										Refractive Index Determinations				
		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 IHS-M-2007-1E2-14 Lab Number 2007-07380- 14 Sampled: 8/23/2007 Condition: acceptable
Analyzed By MAC 9/27/2007 An? OK Apparent Smp Type Flooring Fibrous Solid
Homogeneous No # Layers 2 Pos Layer? No # Sub-Samples 5
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	99	Off-white	2	20-30%	>1-2%	-	-	-	-
2	mastic	1	Tan	1	n.d.	n.d.	-	-	-	-
Total %		100	Average %		20-30%	>1-2%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers										Refractive Index Determinations				
		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 IHS-M-2007-1E3-15 Lab Number 2007-07380- 15 Sampled: 8/23/2007 Condition: acceptable
Analyzed By MAC 9/27/2007 An? OK Apparent Smp Type Flooring Fibrous Solid
Homogeneous No # Layers 2 Pos Layer? No # Sub-Samples 5
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	97	Off-white	2	20-30%	>1-2%	-	-	-	-
2	mastic	3	Tan	1	n.d.	n.d.	-	-	-	-
Total %		100	Average %		20-30%	>1-2%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers										Refractive Index Determinations				
		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.

PLM Analysis Details

Job Number: 200707380

IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-1F1-16 **Lab Number** 2007-07380- 16 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 9/27/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	95	White	2	n.d.	-	-	-	-	-
2	mastic	5	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2007-1F2-17 **Lab Number** 2007-07380- 17 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 9/27/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	97	White	2	n.d.	-	-	-	-	-
2	mastic	3	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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

Surface is blue patterned. Procedure: teased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2007-1F3-18 **Lab Number** 2007-07380- 18 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 9/27/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	97	White	2	n.d.	-	-	-	-	-
2	mastic	3	Tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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

Surface is white. Procedure: teased apart using forceps. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number:
200707380
IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-2A1-19 **Lab Number** 2007-07380- 19 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Wall System Powder
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	powder	100	White	4	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					cellulose					

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose	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 IHS-M-2007-2A2-20 **Lab Number** 2007-07380- 20 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Wall System Powder
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	powder	100	White	4	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					cellulose					

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose	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 IHS-M-2007-2A3-21 **Lab Number** 2007-07380- 21 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Wall System Powder
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	powder	100	White	4	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					cellulose					

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	cellulose	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.

PLM Analysis Details

Job Number: 200707380

IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-2B1-22 Lab Number 2007-07380- 22 Sampled: 8/23/2007 Condition: acceptable
Analyzed By US 9/29/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification:

chrysotile asbestos

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2007-2B2-23 Lab Number 2007-07380- 23 Sampled: 8/23/2007 Condition: acceptable
Analyzed By US 9/29/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification:

chrysotile asbestos

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2007-2B3-24 Lab Number 2007-07380- 24 Sampled: 8/23/2007 Condition: acceptable
Analyzed By US 9/29/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification:

chrysotile asbestos

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

PLM Analysis Details

Job Number: 200707380

IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-2C1-25 Lab Number 2007-07380- 25 Sampled: 8/23/2007 Condition: acceptable
Analyzed By US 9/29/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2007-2C2-26 Lab Number 2007-07380- 26 Sampled: 8/23/2007 Condition: acceptable
Analyzed By US 9/29/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2007-2C3-27 Lab Number 2007-07380- 27 Sampled: 8/23/2007 Condition: acceptable
Analyzed By US 9/29/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent. Note: sample size was too small - analysis may not be representative of whole.

PLM Analysis Details

Job Number: 200707380

IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-2C4-28 **Lab Number** 2007-07380- 28 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers									Refractive Index Determinations				
	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: teased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent. Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2007-2C5-29 **Lab Number** 2007-07380- 29 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers									Refractive Index Determinations				
	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: teased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent. Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2007-2C6-30 **Lab Number** 2007-07380- 30 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification:

chrysotile asbestos

Fibers									Refractive Index Determinations				
	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: teased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent. Note: sample size was too small - analysis may not be representative of whole.

PLM Analysis Details

Job Number: 200707380

IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-2C7-31 Lab Number 2007-07380- 31 Sampled: 8/23/2007 Condition: acceptable
Analyzed By US 9/29/2007 An? OK Apparent Smp Type Wall System Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	Off-white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid. Procedure: dissolution of matrix using solvent. Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2007-2D1-32 Lab Number 2007-07380- 32 Sampled: 8/23/2007 Condition: acceptable
Analyzed By US 9/29/2007 An? OK Apparent Smp Type Cementitious Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Red	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2007-2D2-33 Lab Number 2007-07380- 33 Sampled: 8/23/2007 Condition: acceptable
Analyzed By US 9/29/2007 An? OK Apparent Smp Type Cementitious Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Red	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

PLM Analysis Details

Job Number: 200707380

IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-2D3-34 Lab Number 2007-07380- 34 Sampled: 8/23/2007 Condition: acceptable
Analyzed By US 9/29/2007 An? OK Apparent Smp Type Cementitious Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	brick	100	Red	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers								Refractive Index Determinations				
	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 matrix using dilute HCl acid.

Sample IHS-M-2007-2E1-35 Lab Number 2007-07380- 35 Sampled: 8/23/2007 Condition: acceptable
Analyzed By US 9/29/2007 An? OK Apparent Smp Type Cementitious Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers								Refractive Index Determinations				
	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 matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2007-2E2-36 Lab Number 2007-07380- 36 Sampled: 8/23/2007 Condition: acceptable
Analyzed By US 9/29/2007 An? OK Apparent Smp Type Cementitious Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers								Refractive Index Determinations				
	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 matrix using dilute HCl acid.

PLM Analysis Details
Job Number:
200707380
IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-2E3-37 **Lab Number** 2007-07380- 37 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2007-7A1-38 **Lab Number** 2007-07380- 38 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Off-white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2007-7A2-39 **Lab Number** 2007-07380- 39 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Off-white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details

Job Number: 200707380

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Sample IHS-M-2007-7A3-40 Lab Number 2007-07380- 40 Sampled: 8/23/2007 Condition: acceptable
Analyzed By US 9/29/2007 An? OK Apparent Smp Type Adhesive/caulk Sticky
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Off-white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using solvent.

Sample IHS-M-2007-7B1-41 Lab Number 2007-07380- 41 Sampled: 8/23/2007 Condition: acceptable
Analyzed By US 9/29/2007 An? OK Apparent Smp Type Adhesive/caulk Rubbery
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using solvent.

Sample IHS-M-2007-7B2-42 Lab Number 2007-07380- 42 Sampled: 8/23/2007 Condition: acceptable
Analyzed By US 9/29/2007 An? OK Apparent Smp Type Adhesive/caulk Rubbery
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using solvent.

PLM Analysis Details

Job Number: 200707380

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Sample IHS-M-2007-7B3-43 **Lab Number** 2007-07380- 43 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2007-7C1-44 **Lab Number** 2007-07380- 44 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	Black	1	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2007-7C2-45 **Lab Number** 2007-07380- 45 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	Black	1	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number: 200707380
IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-7C3-46 **Lab Number** 2007-07380- 46 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 2
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	Black	1	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers										Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2007-7D1-47 **Lab Number** 2007-07380- 47 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation Fibrous Mat
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Off-white	3	2-5%	<=1%	30-40%	-	-	-
Total %		100	Average %		2-5%	<=1%	30-40%	-	-	-

Fiber Identification: chrysotile asbestos crocidolite asbesto glass fiber

Fibers										Refractive Index Determinations				
		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	pb/r	1.556	1.549
2	crocidolite asbestos	BL	C	N	Y	L	-	P		1.700	-	-	<1.70	>1.70
3	glass fiber	CL	D	Y										
4														
5														
6														

Sample Analytical Note

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

Sample IHS-M-2007-7D2-48 **Lab Number** 2007-07380- 48 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation Fibrous Mat
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Off-white	3	2-5%	<=1%	30-40%	-	-	-
Total %		100	Average %		2-5%	<=1%	30-40%	-	-	-

Fiber Identification: chrysotile asbestos crocidolite asbesto glass fiber

Fibers										Refractive Index Determinations				
		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	pb/r	1.556	1.549
2	crocidolite asbestos	BL	C	N	Y	L	-	P		1.700	-	-	<1.70	>1.70
3	glass fiber	CL	D	Y										
4														
5														
6														

Sample Analytical Note

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

PLM Analysis Details

Job Number: 200707380

IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-7D3-49 **Lab Number** 2007-07380- 49 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Insulation **Fibrous Mat**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, glass, binder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	insulation	100	Off-white	3	2-5%	<=1%	30-40%	-	-	-
Total %		100	Average %		2-5%	<=1%	30-40%	-	-	-
Fiber Identification:					chrysotile asbestos crocidolite asbestos glass fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1									Oil	Col Par	Col Per	RI Par	RI Per
1	chrysotile asbestos	W	A	N	N	L	+	P	1.550	vb/g	pb/r	1.556	1.549
2	crocidolite asbestos	BL	C	N	Y	L	-	P	1.700	-	-	<1.70	>1.70
3	glass fiber	CL	D	Y									
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2007-7E1-50 **Lab Number** 2007-07380- 50 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By US 9/29/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Rubbery**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					talc and transitional non-fibrous tremolit					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1									Oil	Col Par	Col Per	RI Par	RI Per
1	talc and transitional talc fiber	W	B	N	N	H	+	P	1.605	vb/g	gb/dr	1.610	0.601
2	non-fibrous tremolite/actinolite	W	G	N	N	M	+	O	1.605	db/ly	sb/o	1.613	1.607
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent. Note: sample contained transitional talc and/or non-fibrous tremolite/actinolite. Transitional talc is an intimate mixture of anthophyllite and talc. Even though it may have been asbestos once, the EPA has ruled not to regulate 'fibers of mixed mineral assemblage'. However, these fibers may be regulated when analyzed by TEM, since some are indistinguishable from anthophyllite asbestos. Likewise, non-fibrous tremolite/actinolite, while not regulated by EPA, may be counted (and thus regulated) when analyzed by TEM.

PLM Analysis Details

Job Number: 200707380

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Sample IHS-M-2007-7E2-51 Lab Number 2007-07380- 51 Sampled: 8/23/2007 Condition: acceptable
Analyzed By US 9/29/2007 An? OK Apparent Smp Type Adhesive/caulk Sticky
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
	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 matrix using solvent.

Sample IHS-M-2007-7E3-52 Lab Number 2007-07380- 52 Sampled: 8/23/2007 Condition: acceptable
Analyzed By US 9/29/2007 An? OK Apparent Smp Type Adhesive/caulk Rubbery
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-

Fiber Identification: talc and transitional non-fibrous tremolit

Fibers									Refractive Index Determinations				
	Color	Mrph	Iso	Pleo	Bi	Elg	Ext		Oil	Col Par	Col Per	RI Par	RI Per
1	talc and transitional talc fiber	W	B	N	N	H	+	P	1.605	vb/g	gb/dr	1.610	0.601
2	non-fibrous tremolite/actinolite	W	G	N	N	M	+	O	1.605	db/ly	sb/o	1.613	1.607
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent. Note: sample contained transitional talc and/or non-fibrous tremolite/actinolite. Transitional talc is an intimate mixture of anthophyllite and talc. Even though it may have been asbestos once, the EPA has ruled not to regulate 'fibers of mixed mineral assemblage'. However, these fibers may be regulated when analyzed by TEM, since some are indistinguishable from anthophyllite asbestos. Likewise, non-fibrous tremolite/actinolite, while not regulated by EPA, may be counted (and thus regulated) when analyzed by TEM.

PLM Analysis Details

Job Number:

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IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-8A1-53 **Lab Number** 2007-07380- 53 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 10/1/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	50	Black	1	10-20%	n.d.	-	-	-	-
2	roof ply	50	Black	1	n.d.	50-60%	-	-	-	-
Total %		100	Average %		5-10%	20-30%	-	-	-	-
Fiber Identification:					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	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 matrix using solvent.

Sample IHS-M-2007-8A2-54 **Lab Number** 2007-07380- 54 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 10/1/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	55	Black	1	10-20%	n.d.	-	-	-	-
2	roof ply	45	Black	1	n.d.	50-60%	-	-	-	-
Total %		100	Average %		5-10%	20-30%	-	-	-	-
Fiber Identification:					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	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 matrix using solvent.

Sample IHS-M-2007-8A3-55 **Lab Number** 2007-07380- 55 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 10/1/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	55	Black	1	10-20%	n.d.	-	-	-	-
2	roof ply	45	Black	1	n.d.	50-60%	-	-	-	-
Total %		100	Average %		5-10%	20-30%	-	-	-	-
Fiber Identification:					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	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 matrix using solvent.

PLM Analysis Details

Job Number: 200707380

IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-8B1-56 **Lab Number** 2007-07380- 56 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 10/1/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	45	Black	1	10-20%	-	-	-	-	-
2	roof ply	55	Black	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					glass fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using solvent.

Sample IHS-M-2007-8B2-57 **Lab Number** 2007-07380- 57 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 10/1/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	50	Black	1	10-20%	-	-	-	-	-
2	roof ply	50	Black	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					glass fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using solvent.

Sample IHS-M-2007-8B3-58 **Lab Number** 2007-07380- 58 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 10/1/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	45	Black	1	10-20%	-	-	-	-	-
2	roof ply	55	Black	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					glass fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using solvent.

PLM Analysis Details

Job Number: 200707380

IHS-Mescalero Bldg# 2007

Sample IHS-M-2007-8C1-59 **Lab Number** 2007-07380- 59 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 10/1/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): bitumen, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.553
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2007-8C2-60 **Lab Number** 2007-07380- 60 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 10/1/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): bitumen, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.553
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2007-8C3-61 **Lab Number** 2007-07380- 61 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By MAC 10/1/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): bitumen, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.561	1.553
2													
3													
4													
5													
6													

Sample Analytical Note

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

Fr=Friability: 1=very non-friable; 2= non-friable; 3=friable; 4=highly friable

Colors: B=black;BL=blue;BR=brown;CL=clear;G=Green;GY=gray;OR=orange;OW=off-white;PN=pink;PU=purple;R=red;TN=tan;W=white;Y=yellow;V=various

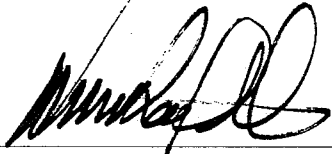
Fiber Morphology: A=fine fibers/bundles, white, sinewy, flexible; B=fine fibers/bundles, w-br, straight, broomed ends; C=fine fibers/bundles, blue, straight, broomed ends; D=fine to coarse fibers, CL-B, brittle; E=coarse fibers,CL or dyed, striated; F=coarse fibers or splinters, W-BR, ribbon-like; G=lath-like or shards, low aspect ratio, may taper

Iso=isotropism - may be yes or no; Pleo=pleochroism - may be yes or no; Bi=birefringence - may be None, Low, Medium or High

Elg=sign of elongation - may be + or -; Ext=extinction - may be Parallel, Oblique, None or Undulating; Oil=medium used to for dispersion staining

Col Par=dispersion staining colors parallel to the fiber (fiber/halo): b/w=black/white; dg/py=dark gray/pale yellow; vg/y=violet gray/yellow; db/ly=dark blue/lemon yellow; vb/g= vivid blue/gold; sb/o=sky blue/orange; pb/r=pale blue/red; gb/dr=gray blue/dark red; w/b=white/black. Col Perp=same only perpendicular to fiber.


RI Par=refractive index parallel to fiber; RI Perp=refractive index perpendicular to fiber



Analyst: MICHAEL A. COOK

Printed: 01-Oct-07

Original Print Date: 01-Oct-07



Larry S. Pierce, Approved Accreditation Signatory



Polarized Light Microscope (PLM) Analysis for Asbestos

JobNumber: 200707381

Client:

IHI ENVIRONMENTAL

(PHOENIX OFFICE)

4527 N 16th ST STE 105

PHOENIX, AZ

85016-0000

Office Phone: (602) 776-0300

FAX: (602) 776-0301

Samples: 48 **PLM** **Rec:** 8/27/2007 **Method:** Interim (EPA/600/M4-82-020) **PLM analysis for asbestos in bulk smp**

Client Job: IHS-Mescalero Bldg# 2008

PO Number: 07P-3031

Report Date: 9/19/2007

Date Analyzed: 9/17/2007

Routing Number: -

Method and Analysis Information:

Fiberquant Internal SOP: PLMi

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, NESHAP and OSHA regulations designate a result of $\leq 1\%$ 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 Interim Method (EPA Method 600/M4-82-020). 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 $\leq 1\%$ asbestos are point counted using 400 points, and the results listed on the detail analysis sheet. Such point counting is required by NESHAP (National Emission Standards for Hazardous Air Pollutants, Nov. 1990) in order to rely on analytical results that are $\leq 1\%$. 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 $\leq 1\%$ as "borderline negative", and results where asbestos was $> 1\%$ but $\leq 2\%$ as "borderline positive" to indicate the uncertainty in assigning a "positive" or "negative" label. In the sample summary, a "ND" means that no asbestos was detected during the analysis. A "Tr" or "Trace" of asbestos is defined for our purposes as the detection of several asbestos fibers during the analysis; an amount essentially at the limit of detection for the method. 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 is a degreed geologist or mineralogist, 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 monthly. 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 (#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.

The "Analysis Results" below are the averages for all layers of each sample listed. The "+ Layer" column indicates whether any of the layers in the sample were >1% asbestos. Please refer to each detailed analysis sheet to determine which layer(s) of a sample was(were) positive.

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:

Sample 2C4-19 and 2C5-20 consisted of paint only without wall texture so no analysis was performed. Single layer sample analysis as per client request. Any material or layer other than that indicated on the chain of custody was not analyzed, even if a suspect material.

PLM Analysis Summary:

Job Number: **200707381**

IHS-Mescalero Bldg# 2008

Sample Number			Lab Number	Apparent Sample Type *	Positive Layer Yes or No
Layer	Color	Apparent Layer Type *	Asbestos Results		
Sample #	<u>IHS-M-2008-1A1-1</u>		2007-07381- 1	Flooring	Positive Layer? Yes
Layer # 1	Blue	floor tile	no asbestos detected		
Layer # 2	Black	mastic	2-5% chrysotile asbestos		
Sample #	<u>IHS-M-2008-1A2-2</u>		2007-07381- 2	Flooring	Positive Layer? No
Layer # 1	Blue	floor tile	no asbestos detected		
Layer # 2	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2008-1A3-3</u>		2007-07381- 3	Flooring	Positive Layer? No
Layer # 1	Blue	floor tile	no asbestos detected		
Sample #	<u>IHS-M-2008-1B1-4</u>		2007-07381- 4	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile	no asbestos detected		
Layer # 2	Black	mastic	no asbestos detected		
Sample #	<u>IHS-M-2008-1B2-5</u>		2007-07381- 5	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile	no asbestos detected		
Layer # 2	Black	mastic	no asbestos detected		
Sample #	<u>IHS-M-2008-1B3-6</u>		2007-07381- 6	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile	no asbestos detected		
Layer # 2	Black	mastic	no asbestos detected		
Layer # 3	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2008-1C1-7</u>		2007-07381- 7	Flooring	Positive Layer? No
Layer # 1	Green	floor tile	no asbestos detected		
Sample #	<u>IHS-M-2008-1C2-8</u>		2007-07381- 8	Flooring	Positive Layer? No
Layer # 1	Green	floor tile	no asbestos detected		
Sample #	<u>IHS-M-2008-1C3-9</u>		2007-07381- 9	Flooring	Positive Layer? No
Layer # 1	Green	floor tile	no asbestos detected		
Layer # 2	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2008-2A1-10</u>		2007-07381- 10	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2008-2A2-11</u>		2007-07381- 11	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2008-2A3-12</u>		2007-07381- 12	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2008-2B1-13</u>		2007-07381- 13	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2008-2B2-14</u>		2007-07381- 14	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2008-2B3-15</u>		2007-07381- 15	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2008-2C1-16</u>		2007-07381- 16	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2008-2C2-17</u>		2007-07381- 17	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2008-2C3-18</u>		2007-07381- 18	Not Analyzed	
Sample #	<u>IHS-M-2008-2C4-19</u>		2007-07381- 19	Not Analyzed	
Sample #	<u>IHS-M-2008-2C5-20</u>		2007-07381- 20	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2008-2C6-21</u>		2007-07381- 21	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2008-2C7-22</u>		2007-07381- 22	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2008-2D1-23</u>		2007-07381- 23	Trowelled Material	Positive Layer? No
Layer # 1	Tan	stucco	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2008-2D2-24</u>		2007-07381- 24	Trowelled Material	Positive Layer? No
Layer # 1	Tan	stucco	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2008-2D3-25</u>		2007-07381- 25	Trowelled Material	Positive Layer? No
Layer # 1	Tan	stucco	<=1% chrysotile asbestos		
Layer # 2	Gray	stucco	no asbestos detected		

Sample # <u>IHS-M-2008-2D4-26</u>	2007-07381- 26	Trowelled Material	Positive Layer? No
Layer # 1 Tan stucco		<=1% chrysotile asbestos	
Layer # 2 Gray stucco		no asbestos detected	
Sample # <u>IHS-M-2008-2D5-27</u>	2007-07381- 27	Trowelled Material	Positive Layer? No
Layer # 1 Tan stucco		<=1% chrysotile asbestos	
Sample # <u>IHS-M-2008-7A1-28</u>	2007-07381- 28	Adhesive/caulk	Positive Layer? No
Layer # 1 Yellow mastic		no asbestos detected	
Sample # <u>IHS-M-2008-7A2-29</u>	2007-07381- 29	Adhesive/caulk	Positive Layer? No
Layer # 1 Yellow mastic		no asbestos detected	
Sample # <u>IHS-M-2008-7A3-30</u>	2007-07381- 30	Adhesive/caulk	Positive Layer? No
Layer # 1 Off-white mastic		no asbestos detected	
Sample # <u>IHS-M-2008-7B1-31</u>	2007-07381- 31	Adhesive/caulk	Positive Layer? No
Layer # 1 White caulk		no asbestos detected	
Sample # <u>IHS-M-2008-7B2-32</u>	2007-07381- 32	Adhesive/caulk	Positive Layer? No
Layer # 1 White caulk		no asbestos detected	
Sample # <u>IHS-M-2008-7B3-33</u>	2007-07381- 33	Adhesive/caulk	Positive Layer? No
Layer # 1 White caulk		no asbestos detected	
Sample # <u>IHS-M-2008-7C1-34</u>	2007-07381- 34	Adhesive/caulk	Positive Layer? No
Layer # 1 White caulk		no asbestos detected	
Sample # <u>IHS-M-2008-7C2-35</u>	2007-07381- 35	Adhesive/caulk	Positive Layer? No
Layer # 1 White caulk		no asbestos detected	
Sample # <u>IHS-M-2008-7C3-36</u>	2007-07381- 36	Adhesive/caulk	Positive Layer? No
Layer # 1 White caulk		no asbestos detected	
Sample # <u>IHS-M-2008-7D1-37</u>	2007-07381- 37	Adhesive/caulk	Positive Layer? No
Layer # 1 Brown caulk		no asbestos detected	
Sample # <u>IHS-M-2008-7D2-38</u>	2007-07381- 38	Adhesive/caulk	Positive Layer? No
Layer # 1 Brown caulk		no asbestos detected	
Sample # <u>IHS-M-2008-7D3-39</u>	2007-07381- 39	Adhesive/caulk	Positive Layer? No
Layer # 1 Brown caulk		no asbestos detected	
Sample # <u>IHS-M-2008-8A1-40</u>	2007-07381- 40	Roofing	Positive Layer? No
Layer # 1 Black roofing roll/shingle		no asbestos detected	
Layer # 2 Black roofing roll/shingle		no asbestos detected	
Layer # 3 Black roof ply		no asbestos detected	
Sample # <u>IHS-M-2008-8A2-41</u>	2007-07381- 41	Roofing	Positive Layer? No
Layer # 1 Black roofing roll/shingle		no asbestos detected	
Layer # 2 Black roofing roll/shingle		no asbestos detected	
Layer # 3 Black roof ply		no asbestos detected	
Sample # <u>IHS-M-2008-8A3-42</u>	2007-07381- 42	Roofing	Positive Layer? No
Layer # 1 Black roofing roll/shingle		no asbestos detected	
Layer # 2 Black roofing roll/shingle		no asbestos detected	
Layer # 3 Black roof ply		no asbestos detected	
Sample # <u>IHS-M-2008-8B1-43</u>	2007-07381- 43	Roofing	Positive Layer? No
Layer # 1 Black roofing roll/shingle		no asbestos detected	
Layer # 2 Black roof ply		no asbestos detected	
Sample # <u>IHS-M-2008-8B2-44</u>	2007-07381- 44	Roofing	Positive Layer? No
Layer # 1 Black roofing roll/shingle		no asbestos detected	
Layer # 2 Black roof ply		no asbestos detected	
Sample # <u>IHS-M-2008-8B3-45</u>	2007-07381- 45	Roofing	Positive Layer? No
Layer # 1 Black roofing roll/shingle		no asbestos detected	
Layer # 2 Black roof ply		no asbestos detected	
Sample # <u>IHS-M-2008-8C1-46</u>	2007-07381- 46	Adhesive/caulk	Positive Layer? Yes
Layer # 1 Gray caulk		10-20% chrysotile asbestos	
Sample # <u>IHS-M-2008-8C2-47</u>	2007-07381- 47	Adhesive/caulk	Positive Layer? Yes
Layer # 1 Gray caulk		10-20% chrysotile asbestos	
Sample # <u>IHS-M-2008-8C3-48</u>	2007-07381- 48	Adhesive/caulk	Positive Layer? Yes
Layer # 1 Gray caulk		10-20% chrysotile asbestos	

* 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.

PLM Analysis Details
Job Number:
200707381
IHS-Mescalero Bldg# 2008

Sample IHS-M-2008-1A1-1 **Lab Number** 2007-07381- 1 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** Yes **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder, bitumen

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	Blue	1	n.d.	n.d.	-	-	-	-
2	mastic	1	Black	1	2-5%	2-5%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					chrysotile asbestos	cellulose fiber				

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2008-1A2-2 **Lab Number** 2007-07381- 2 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	Blue	1	n.d.	-	-	-	-	-
2	mastic	1	Yellow	1	5-10%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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. Traces of black mastic were present but there was not enough to analyze.

Sample IHS-M-2008-1A3-3 **Lab Number** 2007-07381- 3 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **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					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	100	Blue	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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.

PLM Analysis Details
Job Number: 200707381

IHS-Mescalero Bldg# 2008

Sample IHS-M-2008-1B1-4 **Lab Number** 2007-07381- 4 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder, bitumen

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	Tan	1	n.d.	-	-	-	-	-
2	mastic	1	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

Sample IHS-M-2008-1B2-5 **Lab Number** 2007-07381- 5 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder, bitumen

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	Tan	1	n.d.	-	-	-	-	-
2	mastic	1	Black	1	5-10%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using solvent.

PLM Analysis Details
Job Number: 200707381
IHS-Mescalero Bldg# 2008

Sample IHS-M-2008-1B3-6 **Lab Number** 2007-07381- 6 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): filler, binder, bitumen

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	Tan	1	n.d.	-	-	-	-	-
2	mastic	0.5	Black	1	5-10%	-	-	-	-	-
3	mastic	0.5	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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

Sample Analytical Note

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

Sample IHS-M-2008-1C1-7 **Lab Number** 2007-07381- 7 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **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					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	100	Green	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

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

Sample IHS-M-2008-1C2-8 **Lab Number** 2007-07381- 8 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **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					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	100	Green	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707381

IHS-Mescalero Bldg# 2008

Sample IHS-M-2008-1C3-9 **Lab Number** 2007-07381- 9 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	99	Green	1	n.d.	-	-	-	-	-
2	mastic	1	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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 IHS-M-2008-2A1-10 **Lab Number** 2007-07381- 10 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose					

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

Sample Analytical Note

Procedure: tweased apart using forceps.

Sample IHS-M-2008-2A2-11 **Lab Number** 2007-07381- 11 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose					

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

Sample Analytical Note

Procedure: tweased apart using forceps.

PLM Analysis Details
Job Number: 200707381
IHS-Mescalero Bldg# 2008

Sample IHS-M-2008-2A3-12 **Lab Number** 2007-07381- 12 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose					

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

Sample Analytical Note

Procedure: tweased apart using forceps.

Sample IHS-M-2008-2B1-13 **Lab Number** 2007-07381- 13 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2008-2B2-14 **Lab Number** 2007-07381- 14 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707381
IHS-Mescalero Bldg# 2008

Sample IHS-M-2008-2B3-15 **Lab Number** 2007-07381- 15 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2008-2C1-16 **Lab Number** 2007-07381- 16 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2008-2C2-17 **Lab Number** 2007-07381- 17 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

PLM Analysis Details

Job Number: 200707381

IHS-Mescalero Bldg# 2008

Sample IHS-M-2008-2C5-20 **Lab Number** 2007-07381- 20 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/17/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2008-2C6-21 **Lab Number** 2007-07381- 21 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2008-2C7-22 **Lab Number** 2007-07381- 22 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	db/ly	sb/o	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707381
IHS-Mescalero Bldg# 2008

Sample IHS-M-2008-2D1-23 **Lab Number** 2007-07381- 23 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Trowelled Material Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Tan	2	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2008-2D2-24 **Lab Number** 2007-07381- 24 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Trowelled Material Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Tan	2	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2008-2D3-25 **Lab Number** 2007-07381- 25 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Trowelled Material Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	50	Tan	2	<=1%	-	-	-	-	-
2	stucco	50	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707381

IHS-Mescalero Bldg# 2008

Sample IHS-M-2008-2D4-26 **Lab Number** 2007-07381- 26 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Trowelled Material Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	75	Tan	2	<=1%	-	-	-	-	-
2	stucco	25	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
	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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2008-2D5-27 **Lab Number** 2007-07381- 27 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Trowelled Material Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Tan	2	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
	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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2008-7A1-28 **Lab Number** 2007-07381- 28 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Yellow	1	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
	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.

PLM Analysis Details
Job Number: 200707381

IHS-Mescalero Bldg# 2008

Sample IHS-M-2008-7A2-29 **Lab Number** 2007-07381- 29 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Yellow	1	2-5%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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 IHS-M-2008-7A3-30 **Lab Number** 2007-07381- 30 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Off-white	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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 IHS-M-2008-7B1-31 **Lab Number** 2007-07381- 31 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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.

PLM Analysis Details
Job Number: 200707381

IHS-Mescalero Bldg# 2008

Sample IHS-M-2008-7B2-32 **Lab Number** 2007-07381- 32 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using solvent.

Sample IHS-M-2008-7B3-33 **Lab Number** 2007-07381- 33 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using solvent.

Sample IHS-M-2008-7C1-34 **Lab Number** 2007-07381- 34 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using solvent.

PLM Analysis Details
Job Number: 200707381
IHS-Mescalero Bldg# 2008

Sample IHS-M-2008-7C2-35 **Lab Number** 2007-07381- 35 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Rubbery**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

Sample IHS-M-2008-7C3-36 **Lab Number** 2007-07381- 36 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Rubbery**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:				none						

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

Sample IHS-M-2008-7D1-37 **Lab Number** 2007-07381- 37 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Rubbery**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Brown	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	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 matrix using solvent.

PLM Analysis Details
Job Number: 200707381
IHS-Mescalero Bldg# 2008

Sample IHS-M-2008-7D2-38 **Lab Number** 2007-07381- 38 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Condition:** Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Brown	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using solvent.

Sample IHS-M-2008-7D3-39 **Lab Number** 2007-07381- 39 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Condition:** Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Brown	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	2	3	4	5	6	7	8	9	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 matrix using solvent.

Sample IHS-M-2008-8A1-40 **Lab Number** 2007-07381- 40 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Roofing **Condition:** Fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	30	Black	1	10-20%	n.d.	-	-	-	-
2	roofing roll/shingle	30	Black	1	10-20%	n.d.	-	-	-	-
3	roof ply	40	Black	1	<=1%	70-80%	-	-	-	-
Total %		100	Average %		5-10%	20-30%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

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

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707381
IHS-Mescalero Bldg# 2008

Sample IHS-M-2008-8A2-41 **Lab Number** 2007-07381- 41 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	50	Black	1	10-20%	n.d.	-	-	-	-
2	roofing roll/shingle	25	Black	1	10-20%	n.d.	-	-	-	-
3	roof ply	25	Black	1	<=1%	70-80%	-	-	-	-
Total %		100	Average %		10-20%	10-20%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2008-8A3-42 **Lab Number** 2007-07381- 42 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	40	Black	1	10-20%	n.d.	-	-	-	-
2	roofing roll/shingle	40	Black	1	10-20%	n.d.	-	-	-	-
3	roof ply	20	Black	1	<=1%	70-80%	-	-	-	-
Total %		100	Average %		10-20%	10-20%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number: 200707381
IHS-Mescalero Bldg# 2008

Sample IHS-M-2008-8B1-43 **Lab Number** 2007-07381- 43 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, powder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	60	Black	1	20-30%	n.d.	-	-	-	-
2	roof ply	40	Black	1	70-80%	>1-2%	-	-	-	-
Total %		100	Average %		40-50%	<=1%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers									Refractive Index Determinations				
		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 IHS-M-2008-8B2-44 **Lab Number** 2007-07381- 44 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, powder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	40	Black	1	30-40%	n.d.	-	-	-	-
2	roof ply	60	Black	1	70-80%	>1-2%	-	-	-	-
Total %		100	Average %		50-60%	>1-2%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers									Refractive Index Determinations				
		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 IHS-M-2008-8B3-45 **Lab Number** 2007-07381- 45 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, powder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	40	Black	1	30-40%	n.d.	-	-	-	-
2	roof ply	60	Black	1	70-80%	>1-2%	-	-	-	-
Total %		100	Average %		50-60%	>1-2%	-	-	-	-
Fiber Identification:					cellulose fiber	glass fiber				

Fibers									Refractive Index Determinations				
		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.

PLM Analysis Details
Job Number: 200707381
IHS-Mescalero Bldg# 2008

Sample IHS-M-2008-8C1-46 **Lab Number** 2007-07381- 46 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): bitumen, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Gray	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2008-8C2-47 **Lab Number** 2007-07381- 47 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): bitumen, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Gray	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2008-8C3-48 **Lab Number** 2007-07381- 48 **Sampled:** 8/23/2007 **Condition:** acceptable
Analyzed By DMS 9/19/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): bitumen, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Gray	1	10-20%	-	-	-	-	-
Total %		100	Average %		10-20%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

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

Fr=Friability: 1=very non-friable; 2= non-friable; 3=friable; 4=highly friable

Colors: B=black;BL=blue;BR=brown;CL=clear;G=Green;GY=gray;OR=orange;OW=off-white;PN=pink;PU=purple;R=red;TN=tan;W=white;Y=yellow;V=various

Fiber Morphology: A=fine fibers/bundles, white, sinewy, flexible; B=fine fibers/bundles, w-br, straight, broomed ends; C=fine fibers/bundles, blue, straight, broomed ends; D=fine to coarse fibers, CL-B, brittle; E=coarse fibers,CL or dyed, striated; F=coarse fibers or splinters, W-BR, ribbon-like; G=lath-like or shards, low aspect ratio, may taper

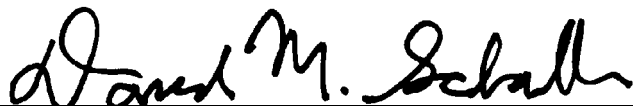
Iso=isotropism - may be yes or no; Pleo=pleochroism - may be yes or no; Bi=birefringence - may be None, Low, Medium or High

Elg=sign of elongation - may be +, - or B (both); Ext=extinction - may be Parallel, Oblique, None or Undulating; Oil=medium used to for dispersion staining

Col Par=dispersion staining colors parallel to the fiber (fiber/halo): b/w=black/white; dg/py=dark gray/pale yellow; vg/y=violet gray/yellow; db/ly=dark blue/lemon yellow;

vb/g= vivid blue/gold; sb/o=sky blue/orange; pb/r=pale blue/red; gb/dr=gray blue/dark red; w/b=white/black. Col Perp=same only perpendicular to fiber.

RI Par=refractive index parallel to fiber; RI Perp=refractive index perpendicular to fiber



Analyst: DAVID M. SCHALLER

Printed: 19-Sep-07

Original Print Date: 19-Sep-07



Larry S. Pierce, Approved Accreditation Signatory



Polarized Light Microscope (PLM) Analysis for Asbestos

JobNumber: 200707382

Client:

IHI ENVIRONMENTAL

(PHOENIX OFFICE)

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PHOENIX, AZ

85016-0000

Office Phone: (602) 776-0300

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Samples: 51 **PLM Rec:** 8/27/2007 **Method:** Interim (EPA/600/M4-82-020) **PLM analysis for asbestos in bulk smp**
Client Job: IHS-Mescalero Bldg# 2009 **PO Number:** 07P-3031 B
Report Date: 9/28/2007 **Date Analyzed:** 9/28/2007 **Routing Number:** -

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

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, NESHAP and OSHA regulations designate a result of $\leq 1\%$ 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 Interim Method (EPA Method 600/M4-82-020). 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 $\leq 1\%$ asbestos are point counted using 400 points, and the results listed on the detail analysis sheet. Such point counting is required by NESHAP (National Emission Standards for Hazardous Air Pollutants, Nov. 1990) in order to rely on analytical results that are $\leq 1\%$. 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 $\leq 1\%$ as "borderline negative", and results where asbestos was $> 1\%$ but $\leq 2\%$ as "borderline positive" to indicate the uncertainty in assigning a "positive" or "negative" label. In the sample summary, a "ND" means that no asbestos was detected during the analysis. A "Tr" or "Trace" of asbestos is defined for our purposes as the detection of several asbestos asbestos fibers during the analysis; an amount essentially at the limit of detection for the method. 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 is a degreed geologist or mineralogist, 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 monthly. 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 (#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.

The "Analysis Results" below are the averages for all layers of each sample listed. The "+ Layer" column indicates whether any of the layers in the sample were >1% asbestos. Please refer to each detailed analysis sheet to determine which layer(s) of a sample was(were) positive.

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:

Single layer sample analysis as per client request. Any material or layer other than that indicated on the chain of custody was not analyzed, even if a suspect material.

PLM Analysis Summary:

Job Number: 200707382

IHS-Mescalero Bldg# 2009

Sample Number			Lab Number	Apparent Sample Type *	Positive Layer Yes or No
Layer	Color	Apparent Layer Type *	Asbestos Results		
Sample #	<u>IHS-M-2009-1A1-1</u>		2007-07382- 1	Cementitious	Positive Layer? No
Layer # 1	Gray	grout	no asbestos detected		
Sample #	<u>IHS-M-2009-1A2-2</u>		2007-07382- 2	Cementitious	Positive Layer? No
Layer # 1	Gray	grout	no asbestos detected		
Sample #	<u>IHS-M-2009-1A3-3</u>		2007-07382- 3	Cementitious	Positive Layer? No
Layer # 1	Gray	grout	no asbestos detected		
Sample #	<u>IHS-M-2009-1B1-4</u>		2007-07382- 4	Adhesive/caulk	Positive Layer? No
Layer # 1	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2009-1B2-5</u>		2007-07382- 5	Adhesive/caulk	Positive Layer? No
Layer # 1	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2009-1B3-6</u>		2007-07382- 6	Adhesive/caulk	Positive Layer? No
Layer # 1	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2009-1C1-7</u>		2007-07382- 7	Flooring	Positive Layer? No
Layer # 1	off-white	floor tile	no asbestos detected		
Layer # 2	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2009-1C2-8</u>		2007-07382- 8	Flooring	Positive Layer? No
Layer # 1	off-white	floor tile	no asbestos detected		
Layer # 2	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2009-1C3-9</u>		2007-07382- 9	Flooring	Positive Layer? No
Layer # 1	White	mastic	no asbestos detected		
Layer # 2	off-white	floor tile	no asbestos detected		
Layer # 3	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2009-1D1-10</u>		2007-07382- 10	Miscellaneous	Positive Layer? No
Layer # 1	Off-white	fiber-board	no asbestos detected		
Sample #	<u>IHS-M-2009-1D2-11</u>		2007-07382- 11	Miscellaneous	Positive Layer? No
Layer # 1	Off-white	fiber-board	no asbestos detected		
Sample #	<u>IHS-M-2009-1D3-12</u>		2007-07382- 12	Miscellaneous	Positive Layer? No
Layer # 1	Off-white	fiber-board	no asbestos detected		
Sample #	<u>IHS-M-2009-1E1-13</u>		2007-07382- 13	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile	no asbestos detected		
Layer # 2	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2009-1E2-14</u>		2007-07382- 14	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile	no asbestos detected		
Layer # 2	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2009-1E3-15</u>		2007-07382- 15	Flooring	Positive Layer? No
Layer # 1	Tan	floor tile	no asbestos detected		
Layer # 2	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2009-1F1-16</u>		2007-07382- 16	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2009-1F2-17</u>		2007-07382- 17	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2009-1F3-18</u>		2007-07382- 18	Flooring	Positive Layer? No
Layer # 1	off-white	sheet flooring	no asbestos detected		
Sample #	<u>IHS-M-2009-2A1-19</u>		2007-07382- 19	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2009-2A2-20</u>		2007-07382- 20	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2009-2A3-21</u>		2007-07382- 21	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2009-2B1-22</u>		2007-07382- 22	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2009-2B2-23</u>		2007-07382- 23	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2009-2B3-24</u>		2007-07382- 24	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2009-2C1-25</u>		2007-07382- 25	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	<=1% chrysotile asbestos		

Sample #	<u>IHS-M-2009-2C2-26</u>	2007-07382- 26	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	no asbestos detected		
Sample #	<u>IHS-M-2009-2C3-27</u>	2007-07382- 27	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	no asbestos detected		
Sample #	<u>IHS-M-2009-2C4-28</u>	2007-07382- 28	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2009-2C5-29</u>	2007-07382- 29	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2009-2C6-30</u>	2007-07382- 30	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2009-2C7-31</u>	2007-07382- 31	Wall System	Positive Layer? No
Layer # 1	white texture/joint compound	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2009-2D1-32</u>	2007-07382- 32	Wall System	Positive Layer? No
Layer # 1	off-white stucco	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2009-2D2-33</u>	2007-07382- 33	Wall System	Positive Layer? No
Layer # 1	Gray stucco	no asbestos detected		
Sample #	<u>IHS-M-2009-2D3-34</u>	2007-07382- 34	Wall System	Positive Layer? No
Layer # 1	off-white stucco	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2009-2D4-35</u>	2007-07382- 35	Wall System	Positive Layer? No
Layer # 1	off-white stucco	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2009-2D5-36</u>	2007-07382- 36	Wall System	Positive Layer? No
Layer # 1	off-white stucco	<=1% chrysotile asbestos		
Sample #	<u>IHS-M-2009-7A1-37</u>	2007-07382- 37	Adhesive/caulk	Positive Layer? No
Layer # 1	tan mastic	no asbestos detected		
Sample #	<u>IHS-M-2009-7A2-38</u>	2007-07382- 38	Adhesive/caulk	Positive Layer? No
Layer # 1	tan mastic	no asbestos detected		
Sample #	<u>IHS-M-2009-7A3-39</u>	2007-07382- 39	Adhesive/caulk	Positive Layer? No
Layer # 1	tan mastic	no asbestos detected		
Sample #	<u>IHS-M-2009-7B1-40</u>	2007-07382- 40	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2009-7B2-41</u>	2007-07382- 41	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2009-7B3-42</u>	2007-07382- 42	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2009-7C1-43</u>	2007-07382- 43	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2009-7C2-44</u>	2007-07382- 44	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2009-7C3-45</u>	2007-07382- 45	Adhesive/caulk	Positive Layer? No
Layer # 1	white caulk	no asbestos detected		
Sample #	<u>IHS-M-2009-8A1-46</u>	2007-07382- 46	Roofing	Positive Layer? No
Layer # 1	black roofing roll/shingle	no asbestos detected		
Layer # 2	Black roof ply	no asbestos detected		
Sample #	<u>IHS-M-2009-8A2-47</u>	2007-07382- 47	Roofing	Positive Layer? No
Layer # 1	black roofing roll/shingle	no asbestos detected		
Layer # 2	Black roof ply	no asbestos detected		
Sample #	<u>IHS-M-2009-8A3-48</u>	2007-07382- 48	Roofing	Positive Layer? No
Layer # 1	black roofing roll/shingle	no asbestos detected		
Layer # 2	Black roof ply	no asbestos detected		
Sample #	<u>IHS-M-2009-8B1-49</u>	2007-07382- 49	Roofing	Positive Layer? No
Layer # 1	black roofing roll/shingle	no asbestos detected		
Layer # 2	Black roof ply	no asbestos detected		
Sample #	<u>IHS-M-2009-8B2-50</u>	2007-07382- 50	Roofing	Positive Layer? No
Layer # 1	black roofing roll/shingle	no asbestos detected		
Layer # 2	Black roof ply	no asbestos detected		
Sample #	<u>IHS-M-2009-8B3-51</u>	2007-07382- 51	Roofing	Positive Layer? No
Layer # 1	black roofing roll/shingle	no asbestos detected		
Layer # 2	Black roof ply	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.

PLM Analysis Details

Job Number: 200707382

IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-1A1-1 Lab Number 2007-07382- 1 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/28/2007 An? OK Apparent Smp Type Cementitious Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
	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 matrix using dilute HCl acid.

Sample IHS-M-2009-1A2-2 Lab Number 2007-07382- 2 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/28/2007 An? OK Apparent Smp Type Cementitious Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
	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 matrix using dilute HCl acid.

Sample IHS-M-2009-1A3-3 Lab Number 2007-07382- 3 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/28/2007 An? OK Apparent Smp Type Cementitious Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
	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 matrix using dilute HCl acid.

PLM Analysis Details

Job Number:

200707382

IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-1B1-4 **Lab Number** 2007-07382- 4 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Yellow	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2009-1B2-5 **Lab Number** 2007-07382- 5 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					synthetic fiber (extr					

Fibers									Refractive Index Determinations				
		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													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2009-1B3-6 **Lab Number** 2007-07382- 6 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Yellow	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number:
200707382
IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-1C1-7 **Lab Number** 2007-07382- 7 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	off-white	1	n.d.	-	-	-	-	-
2	mastic	2	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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

Sample Analytical Note

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

Sample IHS-M-2009-1C2-8 **Lab Number** 2007-07382- 8 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	off-white	1	n.d.	-	-	-	-	-
2	mastic	2	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707382

IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-1C3-9 **Lab Number** 2007-07382- 9 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 3 **Pos Layer?** No **# Sub-Samples** 9
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	1	White	1	n.d.	-	-	-	-	-
2	floor tile	97	off-white	1	n.d.	-	-	-	-	-
3	mastic	2	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 IHS-M-2009-1D1-10 **Lab Number** 2007-07382- 10 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Miscellaneous Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	fiber-board	100	Off-white	3	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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.

Sample IHS-M-2009-1D2-11 **Lab Number** 2007-07382- 11 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Miscellaneous Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	fiber-board	100	Off-white	3	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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.

PLM Analysis Details

Job Number: 200707382

IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-1D3-12 **Lab Number** 2007-07382- 12 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Miscellaneous Fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	fiber-board	100	Off-white	3	5-10%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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.

Sample IHS-M-2009-1E1-13 **Lab Number** 2007-07382- 13 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Tan	1	n.d.	-	-	-	-	-
2	mastic	2	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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 IHS-M-2009-1E2-14 **Lab Number** 2007-07382- 14 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Flooring Non-fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Tan	1	n.d.	-	-	-	-	-
2	mastic	2	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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.

PLM Analysis Details

Job Number:

200707382

IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-1E3-15 **Lab Number** 2007-07382- 15 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Flooring **Non-fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	floor tile	98	Tan	1	n.d.	-	-	-	-	-
2	mastic	2	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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

Sample Analytical Note

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

Sample IHS-M-2009-1F1-16 **Lab Number** 2007-07382- 16 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					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	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

	Oil	Col Par	Col Per	RI Par	RI Per

Sample Analytical Note

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

Sample IHS-M-2009-1F2-17 **Lab Number** 2007-07382- 17 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-
Fiber Identification:					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	cellulose fiber	W	F	N	N	H	+	U					
2	glass fiber	CL	D	Y									
3													
4													
5													
6													

	Oil	Col Par	Col Per	RI Par	RI Per

Sample Analytical Note

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

PLM Analysis Details
Job Number:
200707382
IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-1F3-18 **Lab Number** 2007-07382- 18 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Flooring **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer, powder

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	sheet flooring	100	off-white	2	20-30%	2-5%	-	-	-	-
Total %		100	Average %		20-30%	2-5%	-	-	-	-

Fiber Identification: 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	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 IHS-M-2009-2A1-19 **Lab Number** 2007-07382- 19 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-

Fiber Identification: cellulose fiber

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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.

Sample IHS-M-2009-2A2-20 **Lab Number** 2007-07382- 20 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-

Fiber Identification: cellulose fiber

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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.

PLM Analysis Details

Job Number: 200707382

IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-2A3-21 **Lab Number** 2007-07382- 21 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	>1-2%	-	-	-	-	-
Total %		100	Average %		>1-2%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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.

Sample IHS-M-2009-2B1-22 **Lab Number** 2007-07382- 22 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2009-2B2-23 **Lab Number** 2007-07382- 23 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

PLM Analysis Details

Job Number: 200707382

IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-2B3-24 **Lab Number** 2007-07382- 24 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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													
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2009-2C1-25 **Lab Number** 2007-07382- 25 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2009-2C2-26 **Lab Number** 2007-07382- 26 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

PLM Analysis Details

Job Number:

200707382

IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-2C3-27 **Lab Number** 2007-07382- 27 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid. Note: sample size was too small - analysis may not be representative of whole.

Sample IHS-M-2009-2C4-28 **Lab Number** 2007-07382- 28 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2009-2C5-29 **Lab Number** 2007-07382- 29 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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: teased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

PLM Analysis Details

Job Number: 200707382

IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-2C6-30 **Lab Number** 2007-07382- 30 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2009-2C7-31 **Lab Number** 2007-07382- 31 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2009-2D1-32 **Lab Number** 2007-07382- 32 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	off-white	2	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

PLM Analysis Details

Job Number:

200707382

IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-2D2-33 **Lab Number** 2007-07382- 33 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2009-2D3-34 **Lab Number** 2007-07382- 34 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	off-white	2	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2009-2D4-35 **Lab Number** 2007-07382- 35 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	off-white	2	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

PLM Analysis Details

Job Number: 200707382

IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-2D5-36 **Lab Number** 2007-07382- 36 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Wall System **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	off-white	2	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-

Fiber Identification: chrysotile asbestos

Fibers									Refractive Index Determinations				
	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 matrix using dilute HCl acid.

Sample IHS-M-2009-7A1-37 **Lab Number** 2007-07382- 37 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
	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 matrix using solvent.

Sample IHS-M-2009-7A2-38 **Lab Number** 2007-07382- 38 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
	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 matrix using solvent.

PLM Analysis Details
Job Number: 200707382
IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-7A3-39 **Lab Number** 2007-07382- 39 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, polymer,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	tan	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2009-7B1-40 **Lab Number** 2007-07382- 40 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2009-7B2-41 **Lab Number** 2007-07382- 41 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification: none

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details

Job Number: 200707382

IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-7B3-42 Lab Number 2007-07382- 42 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/28/2007 An? OK Apparent Smp Type Adhesive/caulk Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2009-7C1-43 Lab Number 2007-07382- 43 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/28/2007 An? OK Apparent Smp Type Adhesive/caulk Non-fibrous Solid
Homogeneous Yes # Layers 1 Pos Layer? No # Sub-Samples 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-

Fiber Identification:

talc and transitional non-fibrous tremolit

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	talc and transitional talc fiber	W	B	N	N	H	+	P	1.605	sb/o	w/b	1.607	<1.60
2	non-fibrous tremolite/actinolite	W	G	N	N	M	+	O	1.605	vg/y	sb/o	1.619	1.607
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent. Note: sample contained transitional talc and/or non-fibrous tremolite/actinolite. Transitional talc is an intimate mixture of anthophyllite and talc. Even though it may have been asbestos once, the EPA has ruled not to regulate 'fibers of mixed mineral assemblage'. However, these fibers may be regulated when analyzed by TEM, since some are indistinguishable from anthophyllite asbestos. Likewise, non-fibrous tremolite/actinolite, while not regulated by EPA, may be counted (and thus regulated) when analyzed by TEM.

PLM Analysis Details

Job Number:

200707382

IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-7C2-44 **Lab Number** 2007-07382- 44 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-

Fiber Identification: talc and transitional non-fibrous tremolit

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	talc and transitional talc fiber	W	B	N	N	H	+	P	1.605	sb/o	w/b	1.607	<1.60
2	non-fibrous tremolite/actinolite	W	G	N	N	M	+	O	1.605	vg/y	sb/o	1.619	1.607
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent. Note: sample contained transitional talc and/or non-fibrous tremolite/actinolite. Transitional talc is an intimate mixture of anthophyllite and talc. Even though it may have been asbestos once, the EPA has ruled not to regulate 'fibers of mixed mineral assemblage'. However, these fibers may be regulated when analyzed by TEM, since some are indistinguishable from anthophyllite asbestos. Likewise, non-fibrous tremolite/actinolite, while not regulated by EPA, may be counted (and thus regulated) when analyzed by TEM.

Sample IHS-M-2009-7C3-45 **Lab Number** 2007-07382- 45 **Sampled:** 8/20/2007 **Condition:** acceptable
Analyzed By GV 9/28/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, binder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	white	1	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-

Fiber Identification: talc and transitional non-fibrous tremolit

Fibers									Refractive Index Determinations				
		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Oil	Col Par	Col Per	RI Par	RI Per
1	talc and transitional talc fiber	W	B	N	N	H	+	P	1.605	sb/o	w/b	1.607	<1.60
2	non-fibrous tremolite/actinolite	W	G	N	N	M	+	O	1.605	vg/y	sb/o	1.619	1.607
3													
4													
5													
6													

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using solvent. Note: sample contained transitional talc and/or non-fibrous tremolite/actinolite. Transitional talc is an intimate mixture of anthophyllite and talc. Even though it may have been asbestos once, the EPA has ruled not to regulate 'fibers of mixed mineral assemblage'. However, these fibers may be regulated when analyzed by TEM, since some are indistinguishable from anthophyllite asbestos. Likewise, non-fibrous tremolite/actinolite, while not regulated by EPA, may be counted (and thus regulated) when analyzed by TEM.

PLM Analysis Details

Job Number: 200707382

IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-8A1-46 Lab Number 2007-07382- 46 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/28/2007 An? OK Apparent Smp Type Roofing Sticky
Homogeneous No # Layers 2 Pos Layer? No # Sub-Samples 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	40	black	1	5-10%	n.d.	-	-	-	-
2	roof ply	60	Black	1	n.d.	60-70%	-	-	-	-
Total %		100	Average %		2-5%	30-40%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2009-8A2-47 Lab Number 2007-07382- 47 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/28/2007 An? OK Apparent Smp Type Roofing Sticky
Homogeneous No # Layers 2 Pos Layer? No # Sub-Samples 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	40	black	1	5-10%	n.d.	-	-	-	-
2	roof ply	60	Black	1	n.d.	60-70%	-	-	-	-
Total %		100	Average %		2-5%	30-40%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2009-8A3-48 Lab Number 2007-07382- 48 Sampled: 8/20/2007 Condition: acceptable
Analyzed By GV 9/28/2007 An? OK Apparent Smp Type Roofing Sticky
Homogeneous No # Layers 2 Pos Layer? No # Sub-Samples 6
Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	55	black	1	5-10%	n.d.	-	-	-	-
2	roof ply	45	Black	1	n.d.	60-70%	-	-	-	-
Total %		100	Average %		5-10%	20-30%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details

Job Number: 200707382

IHS-Mescalero Bldg# 2009

Sample IHS-M-2009-8B1-49 Lab Number 2007-07382- 49 Sampled: 8/20/2007 Condition: acceptable
 Analyzed By GV 9/28/2007 An? OK Apparent Smp Type Roofing Sticky
 Homogeneous No # Layers 2 Pos Layer? No # Sub-Samples 6
 Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	roofing roll/shingle	35	black	1	5-10%	n.d.	-	-	-	-						
2	roof ply	65	Black	1	n.d.	60-70%	-	-	-	-						
Total %		100	Average %		2-5%	40-50%	-	-	-	-						
Fiber Identification:					glass fiber	cellulose fiber										
Fibers					Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	glass fiber				CL	D	Y					Oil	Col Par	Col Per	RI Par	RI Per
2	cellulose fiber				W	F	N	N	H	+	U					
3																
4																
5																
6																

Sample Analytical Note

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

Sample IHS-M-2009-8B2-50 Lab Number 2007-07382- 50 Sampled: 8/20/2007 Condition: acceptable
 Analyzed By GV 9/28/2007 An? OK Apparent Smp Type Roofing Sticky
 Homogeneous No # Layers 2 Pos Layer? No # Sub-Samples 6
 Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	roofing roll/shingle	45	black	1	5-10%	n.d.	-	-	-	-						
2	roof ply	55	Black	1	n.d.	60-70%	-	-	-	-						
Total %		100	Average %		2-5%	30-40%	-	-	-	-						
Fiber Identification:					glass fiber	cellulose fiber										
Fibers					Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	glass fiber				CL	D	Y					Oil	Col Par	Col Per	RI Par	RI Per
2	cellulose fiber				W	F	N	N	H	+	U					
3																
4																
5																
6																

Sample Analytical Note

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

Sample IHS-M-2009-8B3-51 Lab Number 2007-07382- 51 Sampled: 8/20/2007 Condition: acceptable
 Analyzed By GV 9/28/2007 An? OK Apparent Smp Type Roofing Sticky
 Homogeneous No # Layers 2 Pos Layer? No # Sub-Samples 6
 Non-Fibrous Components (in approx. decreasing order): filler, bitumen, rock

Layers					Percents of Each Fiber											
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6						
1	roofing roll/shingle	40	black	1	5-10%	n.d.	-	-	-	-						
2	roof ply	60	Black	1	n.d.	60-70%	-	-	-	-						
Total %		100	Average %		2-5%	30-40%	-	-	-	-						
Fiber Identification:					glass fiber	cellulose fiber										
Fibers					Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
1	glass fiber				CL	D	Y					Oil	Col Par	Col Per	RI Par	RI Per
2	cellulose fiber				W	F	N	N	H	+	U					
3																
4																
5																
6																

Sample Analytical Note

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

Fr=Friability: 1=very non-friable; 2= non-friable; 3=friable; 4=highly friable

Colors: B=black;BL=blue;BR=brown;CL=clear;G=Green;GY=gray;OR=orange;OW=off-white;PN=pink;PU=purple;R=red;TN=tan;W=white;Y=yellow;V=various

Fiber Morphology: A=fine fibers/bundles, white, sinewy, flexible; B=fine fibers/bundles, w-br, straight, broomed ends; C=fine fibers/bundles, blue, straight, broomed ends; D=fine to coarse fibers, CL-B, brittle; E=coarse fibers,CL or dyed, striated; F=coarse fibers or splinters, W-BR, ribbon-like; G=lath-like or shards, low aspect ratio, may taper

Iso=isotropism - may be yes or no; Pleo=pleochroism - may be yes or no; BI=birefringence - may be None, Low, Medium or High

Elg=sign of elongation - may be +, - or B (both); Ext=extinction - may be Parallel, Oblique, None or Undulating; Oil=medium used to for dispersion staining

Col Par=dispersion staining colors parallel to the fiber (fiber/halo): b/w=black/white; dg/py=dark gray/pale yellow; vg/y=violet gray/yellow; db/ly=dark blue/lemon yellow; vb/g= vivid blue/gold; sb/o=sky blue/orange; pb/r=pale blue/red; gb/dr=gray blue/dark red; w/b=white/black. Col Perp=same only perpendicular to fiber.

RI Par=refractive index parallel to fiber; RI Perp=refractive index perpendicular to fiber

Galina B. Volkova

Analyst: GALINA B. VOLKOVA

Printed: 28-Sep-07

Original Print Date: 28-Sep-07

Larry S. Pierce

Larry S. Pierce, Approved Accreditation Signatory



Polarized Light Microscope (PLM) Analysis for Asbestos

JobNumber: 200707383

Client:

IHI ENVIRONMENTAL

(PHOENIX OFFICE)

4527 N 16th ST STE 105

PHOENIX, AZ

85016-0000

Office Phone: (602) 776-0300

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Samples: 39 **PLM** **Rec:** 8/27/2007 **Method:** Interim (EPA/600/M4-82-020) **PLM analysis for asbestos in bulk smp**

Client Job: IHS-Mescalero Bldg# 2010

PO Number: 07P-3031

Report Date: 9/26/2007

Date Analyzed: 9/26/2007

Routing Number: -

Method and Analysis Information:

Fiberquant Internal SOP: PLMi

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, NESHAP and OSHA regulations designate a result of $\leq 1\%$ 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 Interim Method (EPA Method 600/M4-82-020). 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 $\leq 1\%$ asbestos are point counted using 400 points, and the results listed on the detail analysis sheet. Such point counting is required by NESHAP (National Emission Standards for Hazardous Air Pollutants, Nov. 1990) in order to rely on analytical results that are $\leq 1\%$. 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 $\leq 1\%$ as "borderline negative", and results where asbestos was $> 1\%$ but $\leq 2\%$ as "borderline positive" to indicate the uncertainty in assigning a "positive" or "negative" label. In the sample summary, a "ND" means that no asbestos was detected during the analysis. A "Tr" or "Trace" of asbestos is defined for our purposes as the detection of several asbestos fibers during the analysis; an amount essentially at the limit of detection for the method. 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 is a degreed geologist or mineralogist, 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 monthly. 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 (#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.

The "Analysis Results" below are the averages for all layers of each sample listed. The "+ Layer" column indicates whether any of the layers in the sample were >1% asbestos. Please refer to each detailed analysis sheet to determine which layer(s) of a sample was(were) positive.

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:

Single layer sample analysis as per client request. Any material or layer other than that indicated on the chain of custody was not analyzed, even if a suspect material.

PLM Analysis Summary:

Job Number: 200707383

IHS-Mescalero Bldg# 2010

Sample Number			Lab Number	Apparent Sample Type *	Positive Layer Yes or No
Layer	Color	Apparent Layer Type *	Asbestos Results		
Sample #	<u>IHS-M-2010-1A1-1</u>		2007-07383- 1	Adhesive/caulk	Positive Layer? No
Layer # 1	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2010-1A2-2</u>		2007-07383- 2	Adhesive/caulk	Positive Layer? No
Layer # 1	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2010-1A3-3</u>		2007-07383- 3	Adhesive/caulk	Positive Layer? No
Layer # 1	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2010-1B1-4</u>		2007-07383- 4	Cementitious	Positive Layer? No
Layer # 1	Gray	grout	no asbestos detected		
Sample #	<u>IHS-M-2010-1B2-5</u>		2007-07383- 5	Cementitious	Positive Layer? No
Layer # 1	Gray	grout	no asbestos detected		
Sample #	<u>IHS-M-2010-1B3-6</u>		2007-07383- 6	Cementitious	Positive Layer? No
Layer # 1	Gray	grout	no asbestos detected		
Sample #	<u>IHS-M-2010-2A1-7</u>		2007-07383- 7	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2010-2A2-8</u>		2007-07383- 8	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2010-2A3-9</u>		2007-07383- 9	Wall System	Positive Layer? No
Layer # 1	white	drywall core	no asbestos detected		
Sample #	<u>IHS-M-2010-2B1-10</u>		2007-07383- 10	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	no asbestos detected		
Sample #	<u>IHS-M-2010-2B2-11</u>		2007-07383- 11	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	no asbestos detected		
Sample #	<u>IHS-M-2010-2B3-12</u>		2007-07383- 12	Wall System	Positive Layer? No
Layer # 1	white	texture/joint compound	no asbestos detected		
Sample #	<u>IHS-M-2010-3A1-13</u>		2007-07383- 13	Ceiling Tile	Positive Layer? No
Layer # 1	off-white	ceiling tile	no asbestos detected		
Sample #	<u>IHS-M-2010-3A2-14</u>		2007-07383- 14	Ceiling Tile	Positive Layer? No
Layer # 1	off-white	ceiling tile	no asbestos detected		
Sample #	<u>IHS-M-2010-3A3-15</u>		2007-07383- 15	Ceiling Tile	Positive Layer? No
Layer # 1	off-white	ceiling tile	no asbestos detected		
Sample #	<u>IHS-M-2010-7A1-16</u>		2007-07383- 16	Adhesive/caulk	Positive Layer? No
Layer # 1	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2010-7A2-17</u>		2007-07383- 17	Adhesive/caulk	Positive Layer? No
Layer # 1	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2010-7A3-18</u>		2007-07383- 18	Adhesive/caulk	Positive Layer? No
Layer # 1	Yellow	mastic	no asbestos detected		
Sample #	<u>IHS-M-2010-7B1-19</u>		2007-07383- 19	Cementitious	Positive Layer? No
Layer # 1	White	grout	no asbestos detected		
Sample #	<u>IHS-M-2010-7B2-20</u>		2007-07383- 20	Cementitious	Positive Layer? No
Layer # 1	White	grout	no asbestos detected		
Sample #	<u>IHS-M-2010-7B3-21</u>		2007-07383- 21	Cementitious	Positive Layer? No
Layer # 1	White	grout	no asbestos detected		
Sample #	<u>IHS-M-2010-7C1-22</u>		2007-07383- 22	Adhesive/caulk	Positive Layer? No
Layer # 1	White	coating	no asbestos detected		
Sample #	<u>IHS-M-2010-7C2-23</u>		2007-07383- 23	Adhesive/caulk	Positive Layer? No
Layer # 1	White	coating	no asbestos detected		
Sample #	<u>IHS-M-2010-7C3-24</u>		2007-07383- 24	Adhesive/caulk	Positive Layer? No
Layer # 1	White	coating	no asbestos detected		
Sample #	<u>IHS-M-2010-7D1-25</u>		2007-07383- 25	Adhesive/caulk	Positive Layer? No
Layer # 1	White	caulk	no asbestos detected		
Sample #	<u>IHS-M-2010-7D2-26</u>		2007-07383- 26	Adhesive/caulk	Positive Layer? No
Layer # 1	White	caulk	no asbestos detected		
Sample #	<u>IHS-M-2010-7D3-27</u>		2007-07383- 27	Adhesive/caulk	Positive Layer? No
Layer # 1	White	caulk	no asbestos detected		
Sample #	<u>IHS-M-2010-7E1-28</u>		2007-07383- 28	Adhesive/caulk	Positive Layer? No
Layer # 1	Gray	caulk	no asbestos detected		
Sample #	<u>IHS-M-2010-7E2-29</u>		2007-07383- 29	Adhesive/caulk	Positive Layer? No
Layer # 1	Gray	caulk	no asbestos detected		

Sample #	<u>IHS-M-2010-7E3-30</u>	2007-07383- 30	Adhesive/caulk	Positive Layer?	No
Layer # 1	Gray		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2010-7F1-31</u>	2007-07383- 31	Adhesive/caulk	Positive Layer?	No
Layer # 1	Black		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2010-7F2-32</u>	2007-07383- 32	Adhesive/caulk	Positive Layer?	No
Layer # 1	Black		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2010-7F3-33</u>	2007-07383- 33	Adhesive/caulk	Positive Layer?	No
Layer # 1	Black		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2010-8A1-34</u>	2007-07383- 34	Roofing	Positive Layer?	No
Layer # 1	Black		<i>no asbestos detected</i>		
	Black		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2010-8A2-35</u>	2007-07383- 35	Roofing	Positive Layer?	No
Layer # 1	Black		<i>no asbestos detected</i>		
Layer # 2	Black		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2010-8A3-36</u>	2007-07383- 36	Roofing	Positive Layer?	No
Layer # 1	Black		<i>no asbestos detected</i>		
Layer # 2	Black		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2010-8B1-37</u>	2007-07383- 37	Adhesive/caulk	Positive Layer?	Yes
Layer # 1	Black		<i>10-20% chrysotile asbestos</i>		
Sample #	<u>IHS-M-2010-8B2-38</u>	2007-07383- 38	Adhesive/caulk	Positive Layer?	No
Layer # 1	Black		<i>no asbestos detected</i>		
Sample #	<u>IHS-M-2010-8B3-39</u>	2007-07383- 39	Adhesive/caulk	Positive Layer?	No
Layer # 1	Black		<i>no asbestos detected</i>		

* 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.

PLM Analysis Details

Job Number: 200707383

IHS-Mescalero Bldg# 2010

Sample IHS-M-2010-1A1-1 **Lab Number** 2007-07383- 1 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					synthetic fiber (extr					

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

Sample Analytical Note

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

Sample IHS-M-2010-1A2-2 **Lab Number** 2007-07383- 2 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					synthetic fiber (extr					

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

Sample Analytical Note

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

Sample IHS-M-2010-1A3-3 **Lab Number** 2007-07383- 3 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					synthetic fiber (extr					

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

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707383
IHS-Mescalero Bldg# 2010

Sample IHS-M-2010-1B1-4 **Lab Number** 2007-07383- 4 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2010-1B2-5 **Lab Number** 2007-07383- 5 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using dilute HCl acid.

Sample IHS-M-2010-1B3-6 **Lab Number** 2007-07383- 6 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707383
IHS-Mescalero Bldg# 2010

Sample IHS-M-2010-2A1-7 **Lab Number** 2007-07383- 7 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					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	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.

Sample IHS-M-2010-2A2-8 **Lab Number** 2007-07383- 8 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

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

Refractive Index Determinations				
Oil	Col Par	Col Per	RI Par	RI Per

Sample Analytical Note

Procedure: tweased apart using forceps.

Sample IHS-M-2010-2A3-9 **Lab Number** 2007-07383- 9 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Wall System **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	drywall core	100	white	3	<=1%	<=1%	-	-	-	-
Total %		100	Average %		<=1%	<=1%	-	-	-	-
Fiber Identification:					glass fiber	cellulose fiber				

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

Refractive Index Determinations				
Oil	Col Par	Col Per	RI Par	RI Per

Sample Analytical Note

Procedure: tweased apart using forceps.

PLM Analysis Details
Job Number: 200707383
IHS-Mescalero Bldg# 2010

Sample IHS-M-2010-2B1-10 **Lab Number** 2007-07383- 10 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

Sample IHS-M-2010-2B2-11 **Lab Number** 2007-07383- 11 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

Sample IHS-M-2010-2B3-12 **Lab Number** 2007-07383- 12 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Wall System Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	texture/joint compound	100	white	3	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext
1	none							
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 dilute HCl acid.

PLM Analysis Details
Job Number: 200707383
IHS-Mescalero Bldg# 2010

Sample IHS-M-2010-3A1-13 **Lab Number** 2007-07383- 13 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Ceiling Tile **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	ceiling tile	100	off-white	3	20-30%	-	-	-	-	-
Total %		100	Average %		20-30%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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 acid.

Sample IHS-M-2010-3A2-14 **Lab Number** 2007-07383- 14 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Ceiling Tile **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	ceiling tile	100	off-white	3	20-30%	-	-	-	-	-
Total %		100	Average %		20-30%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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 acid.

Sample IHS-M-2010-3A3-15 **Lab Number** 2007-07383- 15 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Ceiling Tile **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	ceiling tile	100	off-white	3	20-30%	-	-	-	-	-
Total %		100	Average %		20-30%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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 acid.

PLM Analysis Details
Job Number: 200707383
IHS-Mescalero Bldg# 2010

Sample IHS-M-2010-7A1-16 **Lab Number** 2007-07383- 16 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations					
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 IHS-M-2010-7A2-17 **Lab Number** 2007-07383- 17 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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 IHS-M-2010-7A3-18 **Lab Number** 2007-07383- 18 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Yellow	1	<=1%	-	-	-	-	-
Total %		100	Average %		<=1%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

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.

PLM Analysis Details

Job Number: 200707383

IHS-Mescalero Bldg# 2010

Sample IHS-M-2010-7B1-19 **Lab Number** 2007-07383- 19 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2010-7B2-20 **Lab Number** 2007-07383- 20 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2010-7B3-21 **Lab Number** 2007-07383- 21 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	grout	100	White	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-

Fiber Identification:

none

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

PLM Analysis Details

Job Number: 200707383

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Sample IHS-M-2010-7C1-22 **Lab Number** 2007-07383- 22 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	20-30%	-	-	-	-	-
Total %		100	Average %		20-30%	-	-	-	-	-

Fiber Identification:

cellulose fiber

Fibers									Refractive Index Determinations				
		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 IHS-M-2010-7C2-23 **Lab Number** 2007-07383- 23 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	20-30%	-	-	-	-	-
Total %		100	Average %		20-30%	-	-	-	-	-

Fiber Identification:

cellulose fiber

Fibers									Refractive Index Determinations				
		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 IHS-M-2010-7C3-24 **Lab Number** 2007-07383- 24 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	coating	100	White	1	20-30%	-	-	-	-	-
Total %		100	Average %		20-30%	-	-	-	-	-

Fiber Identification:

cellulose fiber

Fibers									Refractive Index Determinations				
		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.

PLM Analysis Details
Job Number: 200707383
IHS-Mescalero Bldg# 2010

Sample IHS-M-2010-7D1-25 **Lab Number** 2007-07383- 25 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): polymer, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

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

Sample IHS-M-2010-7D2-26 **Lab Number** 2007-07383- 26 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): polymer, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

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

Sample IHS-M-2010-7D3-27 **Lab Number** 2007-07383- 27 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): polymer, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	White	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707383
IHS-Mescalero Bldg# 2010

Sample IHS-M-2010-7E1-28 **Lab Number** 2007-07383- 28 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Gray	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
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 matrix using solvent.

Sample IHS-M-2010-7E2-29 **Lab Number** 2007-07383- 29 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Gray	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2010-7E3-30 **Lab Number** 2007-07383- 30 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Gray	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707383
IHS-Mescalero Bldg# 2010

Sample IHS-M-2010-7F1-31 **Lab Number** 2007-07383- 31 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using solvent.

Sample IHS-M-2010-7F2-32 **Lab Number** 2007-07383- 32 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using solvent.

Sample IHS-M-2010-7F3-33 **Lab Number** 2007-07383- 33 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Rubbery
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): binder, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using solvent.

PLM Analysis Details

Job Number: 200707383

IHS-Mescalero Bldg# 2010

Sample IHS-M-2010-8A1-34 **Lab Number** 2007-07383- 34 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	50	Black	1	10-20%	-	-	-	-	-
2	roof ply	50	Black	1	<=1%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					glass fiber					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2010-8A2-35 **Lab Number** 2007-07383- 35 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	30	Black	1	10-20%	-	-	-	-	-
2	roof ply	70	Black	1	<=1%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					glass fiber					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2010-8A3-36 **Lab Number** 2007-07383- 36 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	50	Black	1	10-20%	-	-	-	-	-
2	roof ply	50	Black	1	<=1%	-	-	-	-	-
Total %		100	Average %		5-10%	-	-	-	-	-
Fiber Identification:					glass fiber					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

PLM Analysis Details
Job Number: 200707383
IHS-Mescalero Bldg# 2010

Sample IHS-M-2010-8B1-37 **Lab Number** 2007-07383- 37 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): bitumen, ,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	10-20%	2-5%	-	-	-	-
Total %		100	Average %		10-20%	2-5%	-	-	-	-
Fiber Identification:					chrysotile asbestos	cellulose fiber				

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2	cellulose fiber	W	F	N	N	H	+	U					
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2010-8B2-38 **Lab Number** 2007-07383- 38 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Sample IHS-M-2010-8B3-39 **Lab Number** 2007-07383- 39 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk Sticky
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): filler, bitumen,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mastic	100	Black	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using solvent.

Fr=Friability: 1=very non-friable; 2= non-friable; 3=friable; 4=highly friable

Colors: B=black;BL=blue;BR=brown;CL=clear;G=Green;GY=gray;OR=orange;OW=off-white;PN=pink;PU=purple;R=red;TN=tan;W=white;Y=yellow;V=various

Fiber Morphology: A=fine fibers/bundles, white, sinewy, flexible; B=fine fibers/bundles, w-br, straight, broomed ends; C=fine fibers/bundles, blue, straight, broomed ends; D=fine to coarse fibers, CL-B, brittle; E=coarse fibers,CL or dyed, striated; F=coarse fibers or splinters, W-BR, ribbon-like; G=lath-like or shards, low aspect ratio, may taper

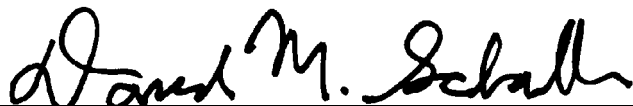
Iso=isotropism - may be yes or no; Pleo=pleochroism - may be yes or no; Bi=birefringence - may be None, Low, Medium or High

Elg=sign of elongation - may be +, - or B (both); Ext=extinction - may be Parallel, Oblique, None or Undulating; Oil=medium used to for dispersion staining

Col Par=dispersion staining colors parallel to the fiber (fiber/halo): b/w=black/white; dg/py=dark gray/pale yellow; vg/y=violet gray/yellow; db/ly=dark blue/lemon yellow;

vb/g= vivid blue/gold; sb/o=sky blue/orange; pb/r=pale blue/red; gb/dr=gray blue/dark red; w/b=white/black. Col Perp=same only perpendicular to fiber.

RI Par=refractive index parallel to fiber; RI Perp=refractive index perpendicular to fiber



Analyst: DAVID M. SCHALLER

Printed: 26-Sep-07

Original Print Date: 26-Sep-07



Larry S. Pierce, Approved Accreditation Signatory



Polarized Light Microscope (PLM) Analysis for Asbestos

JobNumber: 200707384

Client:

IHI ENVIRONMENTAL

(PHOENIX OFFICE)

4527 N 16th ST STE 105

PHOENIX, AZ

85016-0000

Office Phone: (602) 776-0300

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Samples: 17 **PLM** **Rec:** 8/27/2007 **Method:** Interim (EPA/600/M4-82-020) **PLM analysis for asbestos in bulk smp**

Client Job: IHS-Mescalero Bldg# 2011

PO Number: 07P-3031 B

Report Date: 9/26/2007

Date Analyzed: 9/26/2007

Routing Number: -

Method and Analysis Information:

Fiberquant Internal SOP: PLMi

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, NESHAP and OSHA regulations designate a result of $\leq 1\%$ 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 Interim Method (EPA Method 600/M4-82-020). 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 $\leq 1\%$ asbestos are point counted using 400 points, and the results listed on the detail analysis sheet. Such point counting is required by NESHAP (National Emission Standards for Hazardous Air Pollutants, Nov. 1990) in order to rely on analytical results that are $\leq 1\%$. 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 $\leq 1\%$ as "borderline negative", and results where asbestos was $> 1\%$ but $\leq 2\%$ as "borderline positive" to indicate the uncertainty in assigning a "positive" or "negative" label. In the sample summary, a "ND" means that no asbestos was detected during the analysis. A "Tr" or "Trace" of asbestos is defined for our purposes as the detection of several asbestos fibers during the analysis; an amount essentially at the limit of detection for the method. 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 is a degreed geologist or mineralogist, 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 monthly. 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 (#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.

The "Analysis Results" below are the averages for all layers of each sample listed. The "+ Layer" column indicates whether any of the layers in the sample were >1% asbestos. Please refer to each detailed analysis sheet to determine which layer(s) of a sample was(were) positive.

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:

Single layer sample analysis as per client request. Any material or layer other than that indicated on the chain of custody was not analyzed, even if a suspect material.

PLM Analysis Summary:

Job Number: 200707384

IHS-Mescalero Bldg# 2011

Sample Number			Lab Number	Apparent Sample Type *	Positive Layer Yes or No
Layer	Color	Apparent Layer Type *	Asbestos Results		
Sample #	<u>IHS-M-2011-2A1-1</u>		2007-07384- 1	Cementitious	Positive Layer? No
Layer # 1	Gray	block	no asbestos detected		
Sample #	<u>IHS-M-2011-2A2-2</u>		2007-07384- 2	Cementitious	Positive Layer? No
Layer # 1	Gray	block	no asbestos detected		
Sample #	<u>IHS-M-2011-2A3-3</u>		2007-07384- 3	Cementitious	Positive Layer? No
Layer # 1	Gray	block	no asbestos detected		
Sample #	<u>IHS-M-2011-2B1-4</u>		2007-07384- 4	Cementitious	Positive Layer? No
Layer # 1	Gray	mortar	no asbestos detected		
Sample #	<u>IHS-M-2011-2B2-5</u>		2007-07384- 5	Cementitious	Positive Layer? No
Layer # 1	Gray	mortar	no asbestos detected		
Sample #	<u>IHS-M-2011-2B3-6</u>		2007-07384- 6	Cementitious	Positive Layer? No
Layer # 1	Gray	mortar	no asbestos detected		
Sample #	<u>IHS-M-2011-2C1-7</u>		2007-07384- 7	Trowelled Material	Positive Layer? No
Layer # 1	Gray	stucco	no asbestos detected		
Sample #	<u>IHS-M-2011-2C2-8</u>		2007-07384- 8	Trowelled Material	Positive Layer? No
Layer # 1	Gray	stucco	no asbestos detected		
Sample #	<u>IHS-M-2011-2C3-9</u>		2007-07384- 9	Trowelled Material	Positive Layer? No
Layer # 1	Gray	stucco	no asbestos detected		
Sample #	<u>IHS-M-2011-2C4-10</u>		2007-07384- 10	Trowelled Material	Positive Layer? No
Layer # 1	Gray	stucco	no asbestos detected		
Sample #	<u>IHS-M-2011-2C5-11</u>		2007-07384- 11	Trowelled Material	Positive Layer? No
Layer # 1	Gray	stucco	no asbestos detected		
Sample #	<u>IHS-M-2011-8A1-12</u>		2007-07384- 12	Roofing	Positive Layer? No
Layer # 1	Black	roofing roll/shingle	no asbestos detected		
Layer # 2	Black	roof ply	no asbestos detected		
Sample #	<u>IHS-M-2011-8A2-13</u>		2007-07384- 13	Roofing	Positive Layer? No
Layer # 1	Black	roofing roll/shingle	no asbestos detected		
Layer # 2	Black	roof ply	no asbestos detected		
Sample #	<u>IHS-M-2011-8A3-14</u>		2007-07384- 14	Roofing	Positive Layer? No
Layer # 1	Black	roofing roll/shingle	no asbestos detected		
Layer # 2	Black	roof ply	no asbestos detected		
Sample #	<u>IHS-M-2011-8B1-15</u>		2007-07384- 15	Adhesive/caulk	Positive Layer? Yes
Layer # 1	Black	caulk	2-5% chrysotile asbestos		
Sample #	<u>IHS-M-2011-8B2-16</u>		2007-07384- 16	Adhesive/caulk	Positive Layer? Yes
Layer # 1	Black	caulk	2-5% chrysotile asbestos		
Sample #	<u>IHS-M-2011-8B3-17</u>		2007-07384- 17	Adhesive/caulk	Positive Layer? Yes
Layer # 1	Black	caulk	2-5% chrysotile asbestos		

* 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.

PLM Analysis Details
Job Number: 200707384
IHS-Mescalero Bldg# 2011

Sample IHS-M-2011-2A1-1 **Lab Number** 2007-07384- 1 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, powder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	block	100	Gray	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2011-2A2-2 **Lab Number** 2007-07384- 2 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, powder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	block	100	Gray	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2011-2A3-3 **Lab Number** 2007-07384- 3 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, powder,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	block	100	Gray	1	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
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 matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707384
IHS-Mescalero Bldg# 2011

Sample IHS-M-2011-2B1-4 **Lab Number** 2007-07384- 4 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using dilute HCl acid.

Sample IHS-M-2011-2B2-5 **Lab Number** 2007-07384- 5 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using dilute HCl acid.

Sample IHS-M-2011-2B3-6 **Lab Number** 2007-07384- 6 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Cementitious **Non-fibrous Solid**
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	mortar	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers									Refractive Index Determinations				
	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 matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707384
IHS-Mescalero Bldg# 2011

Sample IHS-M-2011-2C1-7 **Lab Number** 2007-07384- 7 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Trowelled Material Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

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

Sample Analytical Note

Procedure: tweased apart using forceps. Procedure: dissolution of matrix using dilute HCl acid.

Sample IHS-M-2011-2C2-8 **Lab Number** 2007-07384- 8 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Trowelled Material Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
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 matrix using dilute HCl acid.

Sample IHS-M-2011-2C3-9 **Lab Number** 2007-07384- 9 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Trowelled Material Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
									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 matrix using dilute HCl acid.

PLM Analysis Details
Job Number: 200707384
IHS-Mescalero Bldg# 2011

Sample IHS-M-2011-2C4-10 **Lab Number** 2007-07384- 10 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Trowelled Material Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers										Refractive Index Determinations				
		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 matrix using dilute HCl acid.

Sample IHS-M-2011-2C5-11 **Lab Number** 2007-07384- 11 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Trowelled Material Non-fibrous Solid
Homogeneous Yes **# Layers** 1 **Pos Layer?** No **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): powder, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	stucco	100	Gray	2	n.d.	-	-	-	-	-
Total %		100	Average %		n.d.	-	-	-	-	-
Fiber Identification:					none					

Fibers		Color	Mrph	Iso	Pleo	Bi	Elg	Ext	Refractive Index Determinations				
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 matrix using dilute HCl acid.

Sample IHS-M-2011-8A1-12 **Lab Number** 2007-07384- 12 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Roofing Fibrous Solid
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	50	Black	1	30-40%	-	-	-	-	-
2	roof ply	50	Black	1	70-80%	-	-	-	-	-
Total %		100	Average %		50-60%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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.

PLM Analysis Details

Job Number: 200707384

IHS-Mescalero Bldg# 2011

Sample IHS-M-2011-8A2-13 **Lab Number** 2007-07384- 13 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	50	Black	1	30-40%	-	-	-	-	-
2	roof ply	50	Black	1	70-80%	-	-	-	-	-
Total %		100	Average %		50-60%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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 IHS-M-2011-8A3-14 **Lab Number** 2007-07384- 14 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Roofing **Fibrous Solid**
Homogeneous No **# Layers** 2 **Pos Layer?** No **# Sub-Samples** 6
Non-Fibrous Components (in approx. decreasing order): bitumen, rock,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	roofing roll/shingle	50	Black	1	30-40%	-	-	-	-	-
2	roof ply	50	Black	1	70-80%	-	-	-	-	-
Total %		100	Average %		50-60%	-	-	-	-	-
Fiber Identification:					cellulose fiber					

Fibers									Refractive Index Determinations				
		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 IHS-M-2011-8B1-15 **Lab Number** 2007-07384- 15 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Sticky**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): bitumen, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	2-5%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

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

PLM Analysis Details
Job Number: 200707384
IHS-Mescalero Bldg# 2011

Sample IHS-M-2011-8B2-16 **Lab Number** 2007-07384- 16 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Sticky**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): bitumen, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	2-5%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

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

Sample IHS-M-2011-8B3-17 **Lab Number** 2007-07384- 17 **Sampled:** 8/16/2007 **Condition:** acceptable
Analyzed By DMS 9/26/2007 **An?** OK **Apparent Smp Type** Adhesive/caulk **Sticky**
Homogeneous Yes **# Layers** 1 **Pos Layer?** Yes **# Sub-Samples** 3
Non-Fibrous Components (in approx. decreasing order): bitumen, filler,

Layers					Percents of Each Fiber					
#	Layer Type	%	Color	Friability	Fib 1	Fib 2	Fib 3	Fib 4	Fib 5	Fib 6
1	caulk	100	Black	1	2-5%	-	-	-	-	-
Total %		100	Average %		2-5%	-	-	-	-	-
Fiber Identification:					chrysotile asbestos					

Fibers									Refractive Index Determinations				
		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	pb/r	1.556	1.549
2													
3													
4													
5													
6													

Sample Analytical Note

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

Fr=Friability: 1=very non-friable; 2= non-friable; 3=friable; 4=highly friable

Colors: B=black;BL=blue;BR=brown;CL=clear;G=Green;GY=gray;OR=orange;OW=off-white;PN=pink;PU=purple;R=red;TN=tan;W=white;Y=yellow;V=various

Fiber Morphology: A=fine fibers/bundles, white, sinewy, flexible; B=fine fibers/bundles, w-br, straight, broomed ends; C=fine fibers/bundles, blue, straight, broomed ends;

D=fine to coarse fibers, CL-B, brittle; E=coarse fibers,CL or dyed, striated; F=coarse fibers or splinters, W-BR, ribbon-like; G=lath-like or shards, low aspect ratio, may taper

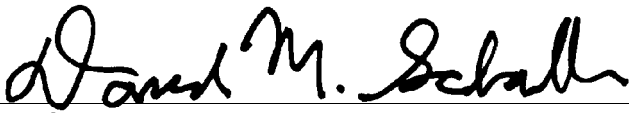
Iso=isotropism - may be yes or no; Pleo=pleochroism - may be yes or no; Bi=birefringence - may be None, Low, Medium or High

Elg=sign of elongation - may be +, - or B (both); Ext=extinction - may be Parallel, Oblique, None or Undulating; Oil=medium used to for dispersion staining

Col Par=dispersion staining colors parallel to the fiber (fiber/halo): b/w=black/white; dg/py=dark gray/pale yellow; vg/y=violet gray/yellow; db/ly=dark blue/lemon yellow;

vb/g= vivid blue/gold; sb/o=sky blue/orange; pb/r=pale blue/red; gb/dr=gray blue/dark red; w/b=white/black. Col Perp=same only perpendicular to fiber.

RI Par=refractive index parallel to fiber; RI Perp=refractive index perpendicular to fiber



Analyst: DAVID M. SCHALLER

Printed: 26-Sep-07

Original Print Date: 26-Sep-07



Larry S. Pierce, Approved Accreditation Signatory

APPENDIX 4
Certifications
Landon Johnson
Suzette Numkena

THE ASBESTOS INSTITUTE

Certifies that

Landon Johnson

has attended the EPA approved course


**AHERA Refresher
Building Inspector**

February 2, 2007

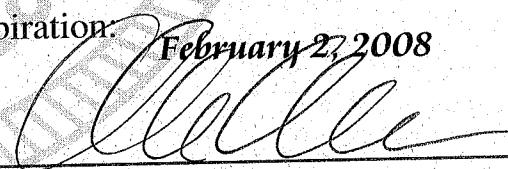
and successfully passed the competency exam.

Date of Examination: **February 2, 2007**

Date of Expiration: **February 27, 2008**



Director



Approved Instructor

THE ASBESTOS INSTITUTE

8102 North 23rd Avenue

Suite A

Phoenix, AZ 85021-4962

602-864-6564

THE ASBESTOS INSTITUTE

Certifies that

Suzette Numkena

has attended the EPA approved course

**AHERA Refresher
Building Inspector
*June 29, 2007***

and successfully passed the competency exam.

Date of Examination: ***June 29, 2007***

Date of Expiration: ***June 29, 2008***



Director



Approved Instructor

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