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ASBESTOS-CONTAINING MATERIAL RE-INSPECTION FOR BUILDING 234 VOLUME 14
CNC CHARLESTON SC
2/15/2000
BAT ASSOCIATES, INC.

Volume 14

**Asbestos-Containing Material Re-inspection
For Building 234
Charleston Naval Shipyard
Charleston, South Carolina**

Contract No. N2467-96-D-0998
Delivery Order No. 0013

Prepared for:

Department of the Navy
Southern Division
NAVFACENGCOM
2305 Eagle Drive
North Charleston, SC 29419

Prepared by:

BAT Associates, Inc.
5151 Brook Hollow Parkway
Suite 250
Norcross, Georgia 30071
(770) 242-3908

February 15, 2000

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1.0 EXECUTIVE SUMMARY

BAT Associates, Inc. (BAT) was retained by the U.S. Department of the Navy, Southern Division (SouthDiv), Naval Facilities Engineering Command (NAVFACENGCOM) to perform an asbestos-containing material (ACM) re-inspection of Building 234 located at the Charleston Naval Shipyard (CNS) in Charleston, South Carolina.

A list of ACM identified in Building 234 is summarized in Table 1.0.

Table 1.0
Summary of Identified ACM

HA No.	Material Description	Sample Analysis Results	Approx. Quantity of ACM	NESHAP Category
1	Floor Tile, 12" x 12" white with gold w/ black mastic	Tile = NAD, Mastic = 5-10% chrysotile	1,800 SF	Regulated, friable
3	Floor Tile, 12" x 12" white with gray and brown w/ black mastic	Tile = 2-5% chrysotile, Mastic = 5-7% chrysotile	14,000 SF	Regulated, friable
5	Joint Sealer Compound, on drywall	2% chrysotile in tape and compound (5% chrysotile in joint compound)	12,600 SF	Regulated, friable
10	Floor Tile, 12" x 12" black w/ black mastic	Tile = 3-4% chrysotile, Mastic = 7% chrysotile	100 SF	Regulated, friable
11	Floor Tile, 12" x 12" gray w/ black mastic	Tile = 3-4% chrysotile, Mastic = 4-5% chrysotile	58,075 SF	Category I, non-friable
12	Floor Tile, 12" x 12" white pebbling w/ black mastic	Tile = NAD Mastic = 3% chrysotile	800 SF	Category I, non-friable
14	Floor Tile, 12" x 12" gray with white and brown w/ black mastic	Tile = NAD, Mastic = 2-3% chrysotile	800 SF	Category I, non-friable
15	Mastic on Sink, black	< 1-4% chrysotile	2 EA	Category I, non-friable
19	Boiler Insulation, white	20-25% chrysotile	65 SF	Regulated, friable

- NOTES:** HA = Homogeneous Area SF = Square Feet EA = Each
- One percent or less asbestos content is considered a non-asbestos-containing material by EPA and the State of South Carolina.
 - Federal and state regulations require a minimum of three non-asbestos-containing analysis results per homogeneous area (material) to classify that material as being a non-asbestos-containing material. However, one "positive" asbestos-containing analysis result would classify that material as being an asbestos-containing material.
 - No Quality Control discrepancies were noted.

BAT recommends the following management actions for the identified ACM in Building 234 in Table 2.0.

Table 2.0
Recommended Response Actions

HA No.	Material Description	Recommended Response Action
1	Floor Tile, 12" x 12" white with gold w/ black mastic	Repair and O&M Plan
3	Floor Tile, 12" x 12" white with gray and brown w/ black mastic	Removal
5	Joint Sealer Compound, on drywall	Repair and O&M Plan
10	Floor Tile, 12" x 12" black w/ black mastic	Repair and O&M Plan
11	Floor Tile, 12" x 12" gray w/ black mastic	O&M Plan
12	Floor Tile, 12" x 12" white pebbling w/ black mastic	O&M Plan
14	Floor Tile, 12" x 12" gray with white and brown w/ black mastic	O&M Plan
15	Mastic on Sink, black	O&M Plan
19	Boiler Insulation, white	Repair and O&M Plan

Other suspect ACM not identified could be present in areas of the building inaccessible to the asbestos building inspectors. For example, materials could exist in walls and other locations where access could only be gained by demolition of the building. Also, other materials currently not recognized by the asbestos building inspection industry could exist.

The total estimated cost for the removal of the identified and/or assumed ACM in Building 234 is approximately \$221,200. See Section 10.0 for a break down of the preliminary cost estimate for the removal of the identified or assumed ACM.

2.0 BUILDING INSPECTION INFORMATION FORM

Building Name: Engineering Management Building
Building Number: 234
Facility: Charleston Naval Shipyard
Building Area (square footage): 166,656
Year Built: 1974
Building Type: Offices
No. of Floors in Building: Six
Purpose of ACM Survey: Re-Inspection
Facility Unit Identification Code (UIC): N/A

Building Contact: Mr. William A. Drawdy
Contact's Telephone No.: (843) 743-9985
Building Survey Date(s): November 6, 1999

Asbestos Inspector's Name: Mr. Jason McGlashan
Asbestos Inspector's Accreditation No: GA2594
Inspection Company: BAT Associates, Inc.
Company Telephone No. (770) 242-3908

3.0 INTRODUCTION

BAT Associates, Inc. (BAT) was retained by the U.S. Department of the Navy, Southern Division (SouthDiv), Naval Facilities Engineering Command (NAVFACENGCOM) to perform an asbestos-containing material (ACM) re-inspection of all buildings located at the Charleston Naval Shipyard in Charleston, South Carolina. The purpose of this re-inspection was to:

1. Perform a comprehensive ACM re-inspection of 34 buildings in accordance with Federal and U.S. Navy requirements;
2. Assess the condition of previously identified friable and non-friable ACM; and
3. Provide a preliminary cost estimate for the removal of identified ACM.

The re-inspection was performed in accordance with the Navy's Asbestos Facility Inventory/Assessment Protocol (NEESA 70.2-010) and the U.S. Environmental Protection Agency's (USEPA) Asbestos Hazard Emergency Response Act (AHERA) and the Asbestos School Hazard Abatement Reauthorization Act (ASHARA).

The results of the re-inspection survey are presented in 23 separate volume reports. This report describes the results for Building 234.

This re-inspection survey was performed by Mr. Jason McGlashan, under the direct supervision of Mr. Douglas J. Milton, CIH, on November 6, 1999. Mr. McGlashan is an accredited asbestos building inspector. Mr. Milton, a Certified Industrial Hygienist, is an accredited asbestos inspector, management planner, and project designer.

This report discusses the sampling methodology used during the re-inspection and assessment (Section 4.0); a list of all identified suspect materials (Section 5.0); a summary of the bulk sample analysis results (Section 6.0); results of quality control sampling; (Section 7.0); physical assessments of the identified ACM (Section 8.0); a hazard assessment of the identified ACM (Section 9.0); preliminary cost estimates for removal (Section 10.0); and conclusions (Section 11.0). Appendix A contains drawings identifying the location of collected bulk samples and the locations of identified ACM. Appendix B contains photographic documentation of identified ACM. Appendix C contains personnel and laboratory accreditations. Appendix D contains laboratory analysis results.

The assessment protocol for ACM involved three distinct steps:

1. Performed preliminary walk-through of the building to identify suspect ACM and to determine the amount of suspect ACM, to define the number of samples to be collected, to identify access problems (e.g., collection of samples in a limited access pipe chase below the building), and to determine the degree of personal protection necessary for the bulk sample collection.

2. Visually inspected the building for ACM to identify the location of the suspect ACM and to determine if the material was friable or non-friable. Suspect materials were then categorized according to the EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) for asbestos as: Category I non-friable materials, Category II non-friable materials, and Regulated (friable) Asbestos-Containing Materials (RACM).
3. Collected bulk samples for the analysis for asbestos content (see Section 4.0, *Sampling Methodology*, for details).

4.0 SAMPLE METHODOLOGY

Representative, randomly selected bulk samples were collected in accordance with the Navy's and AHERA sampling protocol, as described in 40 CFR 763.86, and in accordance with BAT's contract requirements. Bulk samples were collected from homogenous areas (materials) in a manner that minimized any release of airborne asbestos fibers. A homogeneous area (material) is defined as a material uniform in size, color and texture.

The minimum number of samples collected from each homogeneous area was as follows:

1. *Friable Spray-Applied or Trowel-Applied Material* (including plaster)
 - a. Less than or equal to 1,000 Square Feet (S.F.) = 3 samples
 - b. Greater than 1,000 S.F and less than or equal to 5,000 S.F. = 5 samples
 - c. Greater than 5,000 = 7 samples
2. *Pipe and Duct Insulation*
 - a. Three samples per homogeneous area of insulation.
3. *Elbows, Valves, Fittings, and Connection Mud*

Three representative samples from each type of insulated elbow, valve, fitting, and connection mud.
4. *Boiler, Tanks, and Furnaces*

A minimum of 3 samples per unit.
5. *Patchwork*

Patchwork is defined as a patch or repair to existing material based on the following quantities:

- a. Surfacing material patches are limited to a maximum of 6 S.F.
- b. Pipe and duct insulation patches are limited to a maximum of 6 Linear Feet (L.F.) or 6 S.F.
- c. Boiler, tank, and furnace patches are limited to 6 S.F.

If the patchwork exceeded the limits prescribed above, it was sampled according to the homogeneous area protocol in items 1 to 4 above. If a material qualifies as patchwork, a single sample was collected per patch.

6. *Ceiling or Acoustical Tile*

3 samples

7. *Miscellaneous Friable Material*

3 samples

8. *Non-Friable Material*

Non-friable materials for purpose of this survey included Transite-type panels, floor tiles, floor tile mastic, and other miscellaneous materials.

Minimum of 3 samples.

The procedures followed for collection of each bulk sample is outlined briefly below:

1. The accredited inspector collecting the sample was equipped with the appropriate personal protective equipment. This included a half-mask air-purifying respirator, protective gloves and protective eyewear.
2. The surface of the material being sampled was wetted with amended water (containing a surfactant to aid penetration) mist to lessen the risk of fiber release during sampling.
3. Each sample was extracted using the appropriate equipment, (e.g., a sample container, knife, core borer). Care was taken to insure that all layers of the suspect materials, down to the substrate, were included in the sample.
4. Each sample was placed in an individual container, which was then sealed and labeled with a unique identification number which was also recorded on the sample data log-in sheet.
5. After each sample was collected, the area immediately surrounding the sampling location was inspected for debris and wet-cleaned as necessary to lessen the risk of an airborne fiber release.

6. All necessary data were recorded on the BAT Suspect Material Inventory Form including sample number, sample location, type of suspect material, name of inspector collecting the sample and other relevant information.
7. Samples were then transported to Cape Environmental Management Inc. (CAPE) Asbestos Laboratories in Atlanta, Georgia, for Polarized Light Microscopy (PLM) analysis. The CAPE Asbestos Laboratory participates in the National Voluntary Laboratory Assurance Program (NVLAP) for the analysis of asbestos content in suspect materials. CAPE's NVLAP Laboratory Code is 102111-0.
8. BAT collected duplicate samples during the collection of primary bulk sampling for quality control (QC) purposes. QC samples were collected at ten percent of the bulk sample locations. They were assigned unrelated sample identification numbers and analyzed by Analytical Environmental Services, Inc. (AES). AES participates in the National Voluntary Laboratory Assurance Program (NVLAP) for the analysis of asbestos content in suspect materials. AES's NVLAP Laboratory Code is 102033-0.
9. Upon receipt by the laboratory, the samples were logged in and assigned a unique laboratory identification number. The laboratory analyzed the samples in accordance with 40 CFR 763.87 subpart F. Copies of the laboratory accreditations for both laboratories may be found in Appendix C.

5.0 ASBESTOS INVENTORY AND ASSESSMENT

Table 3.0 describes the suspect ACM identified in and around Building 234.

**Table 3.0
 Summary of Identified Suspect ACM**

HA No.	Description of Suspect ACM	Location of Suspect ACM	AHERA Category of Material
1	Floor Tile, 12" x 12" white with gold w/ black mastic	First floor, southeast area behind loading dock	Misc.
2	Ceiling Tile, 2' x 4' white with deep fissures	First floor, southeast area behind loading dock	N/A
3	Floor Tile, 12" x 12" white with gray and brown w/ black mastic	First floor, majority (under carpet in north conference room)	Misc.
4	Ceiling Tile, 2' x 4' white with two size perforations	First floor, northeast printing area	N/A
5	Joint Sealer Compound, on drywall	Throughout the building	Misc.
6	Ceiling Tile, 2' x 4' white with pinholes	First floor, room 118	N/A
7	Ceiling Tile, 2' x 4' white textured	First floor, northwest offices	N/A
8	Ceiling Tile, 1' x 2' white with deep fissures	First floor, lobby and main corridors	N/A
9	Floor Tile, 12" x 12" white with gray w/ brown mastic	First floor, northwest office area; second floor, southeast offices; fourth floor, center corridor and south conference room; fifth floor, center corridor; sixth floor, center corridor	N/A
10	Floor Tile, 12" x 12" black w/ black mastic	First floor, center corridor under HA #9	Misc.
11	Floor Tile, 12" x 12" gray w/ black mastic	Second floor, majority (under carpet in northwest storage rooms); third floor, majority (under carpet in 3 southwest rooms); fifth floor, majority of rooms	Misc.
12	Floor Tile, 12" x 12" white pebbling w/ black mastic	Third floor, northeast room	Misc.
13	Floor Tile, 12" x 12" gray with white and brown w/ brown mastic	Fourth floor, south central conference rooms	N/A
14	Floor Tile, 12" x 12" gray with white and brown w/ black mastic	Fourth floor, northeast corner rooms	Misc.
15	Mastic on Sink, black	Fifth floor, north center room; sixth floor, south center break room	Misc.
16	Window Glazing	Exterior of all windows	N/A
17	Ceiling Tile, 2' x 4' white and yellow	Sixth floor, auditorium	N/A
18	Mastic on Sink, white	Sixth floor, northwest break room	N/A
19	Boiler Insulation, white	Sixth floor, mechanical room	TSI
20	Tank Insulation, condensate tank	Sixth floor, mechanical room	N/A

Notes: Misc. = Miscellaneous Material N/A = Not Applicable

6.0 SUMMARY OF SAMPLE ANALYSIS RESULTS

Table 4.0 contains a summary of the bulk sample analysis results for suspect ACM identified in this building.

All thermal system insulation (TSI), if present, was classified as friable material. As long as the outer covering remains intact and is in good condition the TSI can be considered non-friable (29 CFR 763.85). Ceiling tile, if asbestos is present was considered a friable material. However, if non-friable materials are drilled, sawed, ground or otherwise physically or mechanically disturbed, they may release asbestos fibers to the environment and therefore would be considered a friable material.

According to AHERA protocol, all samples within a homogeneous area must have an asbestos content of one percent or less by weight using Polarized Light Microscopy (PLM) analysis before the material can be categorized as non-asbestos-containing. If one sample is determined as asbestos-containing using PLM analysis, the entire homogeneous area must be classified asbestos-containing.

**Table 4.0
 Summary of Sample Analysis Results**

HA No.	Sample ID No.	Suspect Material Description	Asbestos Content	Friability
1	234-1, 234-46, 234-47	Floor Tile, 12" x 12" white with gold w/ black mastic	Tile = NAD, Mastic = 5-10% chrysotile	Friable
2	234-2, 234-48, 234-49	Ceiling Tile, 2' x 4' white with deep fissures	NAD	N/A
3	234-3, 234-50, 234-51	Floor Tile, 12" x 12" white with gray and brown w/ black mastic	Tile = 2-5% chrysotile, Mastic = 5-7% chrysotile	Friable
4	234-4, 234-6, 234-52	Ceiling Tile, 2' x 4' white with two size perforations	NAD	N/A
5	234-5, 234-60, 234-55	Joint Sealer Compound, on drywall	2% chrysotile total (5% chrysotile in joint compound only)	Friable
6	234-12, 234-53, 234-54	Ceiling Tile, 2' x 4' white with pinholes	NAD	N/A
7	234-7, 234-8, 234-58	Ceiling Tile, 2' x 4' white textured	NAD	N/A
8	234-9, 234-10, 234-11	Ceiling Tile, 1' x 2' white with deep fissures	NAD	N/A
9	234-13, 234-56, 234-57	Floor Tile, 12" x 12" white with gray w/ brown mastic	Tile = NAD, Mastic = NAD	N/A
10	234-14, 234-15, 234-16	Floor Tile, 12" x 12" black w/ black mastic	Tile = 3-4% chrysotile, Mastic = 7% chrysotile	Friable

HA No.	Sample ID No.	Suspect Material Description	Asbestos Content	Friability
11	234-17, 234-18, 234-19	Floor Tile, 12" x 12" gray w/ black mastic	Tile = 2-3% chrysotile, Mastic = 4-5% chrysotile	Non
12	234-21, 234-22, 234-20	Floor Tile, 12" x 12" white pebbling w/ black mastic	Tile = NAD, Mastic = 3% chrysotile	Non
13	234-23, 234-24, 234-25	Floor Tile, 12" x 12" gray with white and brown w/ brown mastic	NAD	N/A
14	234-26, 234-27, 234-28	Floor Tile, 12" x 12" gray with white and brown w/ black mastic	Tile = NAD, Mastic = 2-3% chrysotile	Non
15	234-29, 234-30, 234-31	Mastic on Sink, black	< 1-4% chrysotile	Non
16	234-32, 234-33, 234-59	Window Glazing	NAD	N/A
17	234-34, 234-35, 234-36	Ceiling Tile, 2' x 4' white and yellow	NAD	N/A
18	234-37, 234-38, 234-39	Mastic on Sink, white	NAD	N/A
19	234-40, 234-41, 234-42	Boiler Insulation, white	20-25% chrysotile	Friable
20	234-43, 234-44, 234-45	Tank Insulation, condensate tank	NAD	N/A

Notes: NAD = No Asbestos Detected N/A = Not Applicable

7.0 RESULTS OF QUALITY CONTROL SAMPLING

The purpose of quality control (QC) sampling was to ensure reproducibility of the primary laboratory analysis results. Duplicate samples were collected for ten percent of the total building samples for QC purposes.

**Table 5.0
 Validation of Quality Control Sampling**

Sample I.D. No.	Primary Laboratory Analysis Results	QC Laboratory Analysis Results
234-1	Tile = NAD, Mastic = 5% chrysotile	Tile = < 1% chrysotile, Mastic = 10% chrysotile
234-4	NAD	NAD
234-13	NAD	NAD
234-37	NAD	NAD

Notes: QC = Quality Control NAD = No Asbestos Detected

No discrepancies between primary laboratory and quality control laboratory bulk sample analysis were noted.

8.0 PHYSICAL ASSESSMENT OF IDENTIFIED ACM

The following sections contain a summary of the methodology BAT specialists used to conduct the physical assessment for this building. This methodology was developed in accordance with USEPA AHERA re-inspection requirements contained in 40 CFR Part 763.85.

1. Physical Assessment for Friable ACM.

A. **Condition.** Friable ACM were assigned to one of the following categories based on a visual inspection and touch test:

1) **Significantly Damaged Condition.** Material which met one or both of the following characteristics:

- a. Ten percent (10%) or more of the material in the functional space is crumbled, blistered, or is hanging from the surface, deteriorated, showing adhesive failure, water stained, gouged or marred, and the damage is evenly distributed.
- b. Twenty-five percent (25%) or more of the material in the functional space is crumbled, blistered, or is hanging from the surface, deteriorated, showing adhesive failure, water stained, gouged or marred, and the damage is localized.

2) **Damaged Condition.** Material which met one or both of the following characteristics:

- a. The surface is crumbling, blistered, water stained, gouged or marred, or otherwise damaged on less than ten percent (10%) of the material in the functional space (but material is too damaged to be characterized as good condition) and the damage is evenly distributed.
- a. The surface is crumbling, blistered, water stained, gouged or marred, or otherwise damaged on twenty-five percent (25%) or more of the material in the functional space (but material is too damaged to be characterized as good condition) and the damage is localized.

3) **Good Condition.** Material with very limited, or no visible damage or deterioration.

B. **Potential for Disturbance.** Friable ACM were assigned to one of the following categories based on a visual inspection and assessment of surroundings:

- 1) **Potential for Significant Damage.** Material which met one or more of the following conditions:
 - a. High potential for Contact. Service workers are in the vicinity of the material more than once each week or the material is in a public area and is accessible to building occupants.
 - b. High Potential for Vibration. Loud motors or engines present in the vicinity of the material or there are intrusive noises or easily sensed vibrations from surrounding area, such as nearby highways or airports.
 - c. High Potential for Air Erosion. High velocity air moving across or against material.

- 2) **Potential for Damage.** Material which met one or more of the following conditions for potential for significant damage:
 - a. Moderate Potential for Contact. Service workers are in the vicinity of the material at least once each month, but less than once each week or the material is in a room or office and is accessible to the occupants.
 - b. Moderate Potential for Vibration. Motors or engines present but not obtrusive or occasional loud noise in the vicinity of the material.
 - c. Moderate potential for Air Erosion. Noticeable movement of air across or against material, but not high in velocity.

- 3) **Low Potential for Damage.** Material which met one or more of the following conditions and met none of the conditions for potential for significant damage or potential for damage:
 - a. Low Potential for Contact. Service workers are in the vicinity of the material less than once each month or the material is visible but not accessible to the building occupants in the course of normal activity.
 - b. Low Potential for Vibration. None of the conditions for high or moderate potential for vibration are met.
 - c. Low Potential for Air Erosion. None of the conditions for high or moderate potential for air erosion are met.

2. Physical Assessment for Thermal ACM.

A. **Condition.** Thermal ACMs were assigned to one of the following categories based on a visual inspection:

- 1) **Significantly Damaged Condition.** Material which met one or both of the following characteristics:
 - a. Missing jackets, crushed, heavily gouged, or punctured insulation on equal to or greater than ten percent (10%) of the material in the functional space, and the damage is evenly distributed.
 - b. Missing jackets, crushed, heavily gouged, or punctured insulation on equal to or greater than twenty-five percent (25%) of the material in the functional space, and the damage is localized.
- 2) **Damaged Condition.** Material which met one or both of the following characteristics:
 - a. Missing jackets, crushed, heavily gouged, or punctured insulation on less than ten percent (10%) of the material in the functional space, and the damage is evenly distributed.
 - b. Missing jackets, crushed, heavily gouged, or punctured insulation on greater than twenty-five percent (25%) of the material in the functional space, and the damage is localized.
- 3) **Good Condition.** Material with very limited, or no visible damage or deterioration.

B. **Potential for Disturbance.** Thermal ACMs were assigned to one of the following categories based on a visual inspection and assessment of surroundings:

- 1) **Potential for Significant Damage.** Material which met one or more of the following conditions:
 - a. **High Potential for Contact.** Service workers are in the vicinity of the material more than once each week or the material is in a public area and is accessible to building occupants.
 - b. **High Potential for Vibration.** Loud motors or engines present in the vicinity of the material or there are intrusive noises or easily sensed vibrations from surrounding area, such as a nearby highway or airport.

- c. High Potential for Air Erosion. High velocity air moving across or against the material.
- 2) **Potential for Damage.** Material which met one or more of the following conditions and met none of the conditions for potential for significant damage.
- a. Moderate Potential for Contact. Service workers are in the vicinity of the material at least once each month but less than once each week or the material is in a room or office and is accessible to the occupants.
 - b. Moderate Potential for Vibration. Motors or engines present but not obtrusive or occasional loud noise in the vicinity of the material.
 - c. Moderate Potential for Air Erosion. Noticeable movement of air across or against material, but not high in velocity.
- 3) **Low Potential for Damage.** Material which met one or more of the following conditions and met none of the conditions for potential for significant damage or potential for damage:
- a. Low Potential for Contact. Service workers are in the vicinity of the material less than once per month or the material is visible but not accessible to the building occupants in the course of normal activity.
 - b. Low Potential for Vibration. None of the conditions for high or moderate potential for vibration are met.
 - c. Low Potential for Air Erosion. None of the conditions for high or moderate potential for air erosion are met.

PHYSICAL ASSESSMENT DATA FOR IDENTIFIED ACM

BUILDING: Charleston Naval Shipyard, Building Number 234

SAMPLE NUMBER(S): 234-1, 234-46 and 234-47

HOMOGENEOUS AREA No.: 1

TYPE OF MATERIAL: Surfacing TSI Other

Description: Floor Tile, 12" x 12" white with gold w/ black mastic

Approximate Amount of Asbestos-Containing Material (Linear or Square Foot): 1,800 SF

CONDITION:

Percent Damage: 5-7 % Damage Localized Distributed

Type of Damage: Deterioration Water Physical

DESCRIPTION:

Overall Rating: Good Fair Poor

POTENTIAL FOR DISTURBANCE:

Frequency of Potential Contact: High Moderate Low

Description: Material is located in high traffic areas.

Influence of Vibration: High Moderate Low

Description: None identified.

Potential for Air Erosion: High Moderate Low

Description: None identified.

OVERALL RATING: Potential for Significant Damage Potential for Damage Low Potential for Damage

COMMENTS: Material should be included in the facility Operations and Maintenance (O&M) Plan until removal is accomplished.

PHYSICAL ASSESSMENT DATA FOR IDENTIFIED ACM

BUILDING: Charleston Naval Shipyard, Building Number 234

SAMPLE NUMBER(S): 234-5, 234-20 and 234-55

HOMOGENEOUS AREA No.: 5

TYPE OF MATERIAL: Surfacing TSI Other

Description: Joint Sealer Compound, on drywall

Approximate Amount of Asbestos-Containing Material (Linear or Square Foot): 12,600 SF

CONDITION:

Percent Damage: 5-7 % Damage Localized Distributed

Type of Damage: Deterioration Water Physical

DESCRIPTION:

Overall Rating: Good Fair Poor

POTENTIAL FOR DISTURBANCE:

Frequency of Potential Contact: High Moderate Low

Description: Material is located in high traffic areas.

Influence of Vibration: High Moderate Low

Description: None identified.

Potential for Air Erosion: High Moderate Low

Description: None identified.

OVERALL RATING: Potential for Significant Damage Potential for Damage Low Potential for Damage

COMMENTS: Material should be repaired and included in the facility O&M Plan until removal is accomplished.

PHYSICAL ASSESSMENT DATA FOR IDENTIFIED ACM

BUILDING: Charleston Naval Shipyard, Building Number 234

SAMPLE NUMBER(S): 234-14, 234-15 and 234-16

HOMOGENEOUS AREA No.: 10

TYPE OF MATERIAL: Surfacing TSI Other

Description: Floor Tile, 12" x 12" black w/ black mastic

Approximate Amount of Asbestos-Containing Material (Linear or Square Foot): 100 SF

CONDITION:

Percent Damage: 5-7 % Damage Localized Distributed

Type of Damage: Deterioration Water Physical

DESCRIPTION:

Overall Rating: Good Fair Poor

POTENTIAL FOR DISTURBANCE:

Frequency of Potential Contact: High Moderate Low

Description: Material is located in high traffic areas.

Influence of Vibration: High Moderate Low

Description: None identified.

Potential for Air Erosion: High Moderate Low

Description: None identified.

OVERALL RATING: Potential for Significant Damage Potential for Damage Low Potential for Damage

COMMENTS: Material should be repaired and included in the facility O&M Plan until removal is accomplished.

PHYSICAL ASSESSMENT DATA FOR IDENTIFIED ACM

BUILDING: Charleston Naval Shipyard, Building Number 234

SAMPLE NUMBER(S): 234-17, 234-18 and 234-19

HOMOGENEOUS AREA No.: 11

TYPE OF MATERIAL: Surfacing TSI Other

Description: Floor Tile, 12" x 12" gray w/ black mastic

Approximate Amount of Asbestos-Containing Material (Linear or Square Foot): 58,075 SF

CONDITION:

Percent Damage: <1 % Damage Localized Distributed

Type of Damage: Deterioration Water Physical

DESCRIPTION:

Overall Rating: Good Fair Poor

POTENTIAL FOR DISTURBANCE:

Frequency of Potential Contact: High Moderate Low

Description: Material is located below other floor tile.

Influence of Vibration: High Moderate Low

Description: None identified.

Potential for Air Erosion: High Moderate Low

Description: None identified.

OVERALL RATING: Potential for Significant Damage Potential for Damage Low Potential for Damage

COMMENTS: Material should be included in the facility O&M Plan until removal is accomplished.

PHYSICAL ASSESSMENT DATA FOR IDENTIFIED ACM

BUILDING: Charleston Naval Shipyard, Building Number 234

SAMPLE NUMBER(S): 234-21, 234-22 and 234-60

HOMOGENEOUS AREA No.: 12

TYPE OF MATERIAL: Surfacing TSI Other

Description: Floor Tile, 12" x 12" white pebbling w/ black mastic

Approximate Amount of Asbestos-Containing Material (Linear or Square Foot): 800 SF

CONDITION:

Percent Damage: <1 % Damage Localized Distributed

Type of Damage: Deterioration Water Physical

DESCRIPTION:

Overall Rating: Good Fair Poor

POTENTIAL FOR DISTURBANCE:

Frequency of Potential Contact: High Moderate Low

Description: Material is located in high traffic areas.

Influence of Vibration: High Moderate Low

Description: None identified.

Potential for Air Erosion: High Moderate Low

Description: None identified.

OVERALL RATING: Potential for Significant Damage Potential for Damage Low Potential for Damage

COMMENTS: Material should be included in the facility O&M Plan until removal is accomplished.

PHYSICAL ASSESSMENT DATA FOR IDENTIFIED ACM

BUILDING: Charleston Naval Shipyard, Building Number 234

SAMPLE NUMBER(S): 234-26, 234-27 and 234-28

HOMOGENEOUS AREA No.: 14

TYPE OF MATERIAL: Surfacing TSI Other

Description: Floor Tile, 12" x 12" gray with white and brown w/ black mastic

Approximate Amount of Asbestos-Containing Material (Linear or Square Foot): 800 SF

CONDITION:

Percent Damage: <1 % Damage Localized Distributed

Type of Damage: Deterioration Water Physical

DESCRIPTION:

Overall Rating: Good Fair Poor

POTENTIAL FOR DISTURBANCE:

Frequency of Potential Contact: High Moderate Low

Description: Material is located in high traffic areas.

Influence of Vibration: High Moderate Low

Description: None identified.

Potential for Air Erosion: High Moderate Low

Description: None identified.

OVERALL RATING: Potential for Significant Damage Potential for Damage Low Potential for Damage

COMMENTS: Material should be included in the facility O&M Plan until removal is accomplished.

PHYSICAL ASSESSMENT DATA FOR IDENTIFIED ACM

BUILDING: Charleston Naval Shipyard, Building Number 234

SAMPLE NUMBER(S): 234-29, 234-30 and 234-31

HOMOGENEOUS AREA No.: 15

TYPE OF MATERIAL: Surfacing TSI Other

Description: Mastic on Sink, black

Approximate Amount of Asbestos-Containing Material (Linear or Square Foot): 2 EA

CONDITION:

Percent Damage: <1 % Damage Localized Distributed

Type of Damage: Deterioration Water Physical

DESCRIPTION:

Overall Rating: Good Fair Poor

POTENTIAL FOR DISTURBANCE:

Frequency of Potential Contact: High Moderate Low

Description: Material is located under the sink, in a cabinet.

Influence of Vibration: High Moderate Low

Description: None identified.

Potential for Air Erosion: High Moderate Low

Description: None identified.

OVERALL RATING: Potential for Significant Damage Potential for Damage Low Potential for Damage

COMMENTS: Material should be included in the facility O&M Plan until removal is accomplished.

PHYSICAL ASSESSMENT DATA FOR IDENTIFIED ACM

BUILDING: Charleston Naval Shipyard, Building Number 234

SAMPLE NUMBER(S): 234-40, 234-41 and 234-42

HOMOGENEOUS AREA No.: 19

TYPE OF MATERIAL: Surfacing TSI Other

Description: Boiler Insulation, white

Approximate Amount of Asbestos-Containing Material (Linear or Square Foot): 65 SF

CONDITION:

Percent Damage: 10-12 % Damage Localized Distributed

Type of Damage: Deterioration Water Physical

DESCRIPTION:

Overall Rating: Good Fair Poor

POTENTIAL FOR DISTURBANCE:

Frequency of Potential Contact: High Moderate Low

Description: Material is located in the mechanical room.

Influence of Vibration: High Moderate Low

Description: Possible vibration due to equipment operation.

Potential for Air Erosion: High Moderate Low

Description: None identified.

OVERALL RATING: Potential for Significant Damage Potential for Damage Low Potential for Damage

COMMENTS: Material should be repaired and included in the facility O&M Plan until removal is accomplished.

9.0 HAZARD ASSESSMENT OF IDENTIFIED ACM

AHERA describes a hazard assessment as "the means of collecting and considering whatever data were necessary for the management planner to make an informed, responsible recommendation to the LEA [Local Education Agency] consistent with response action requirements". As stated in AHERA, there is no single assessment method that is required in the regulations.

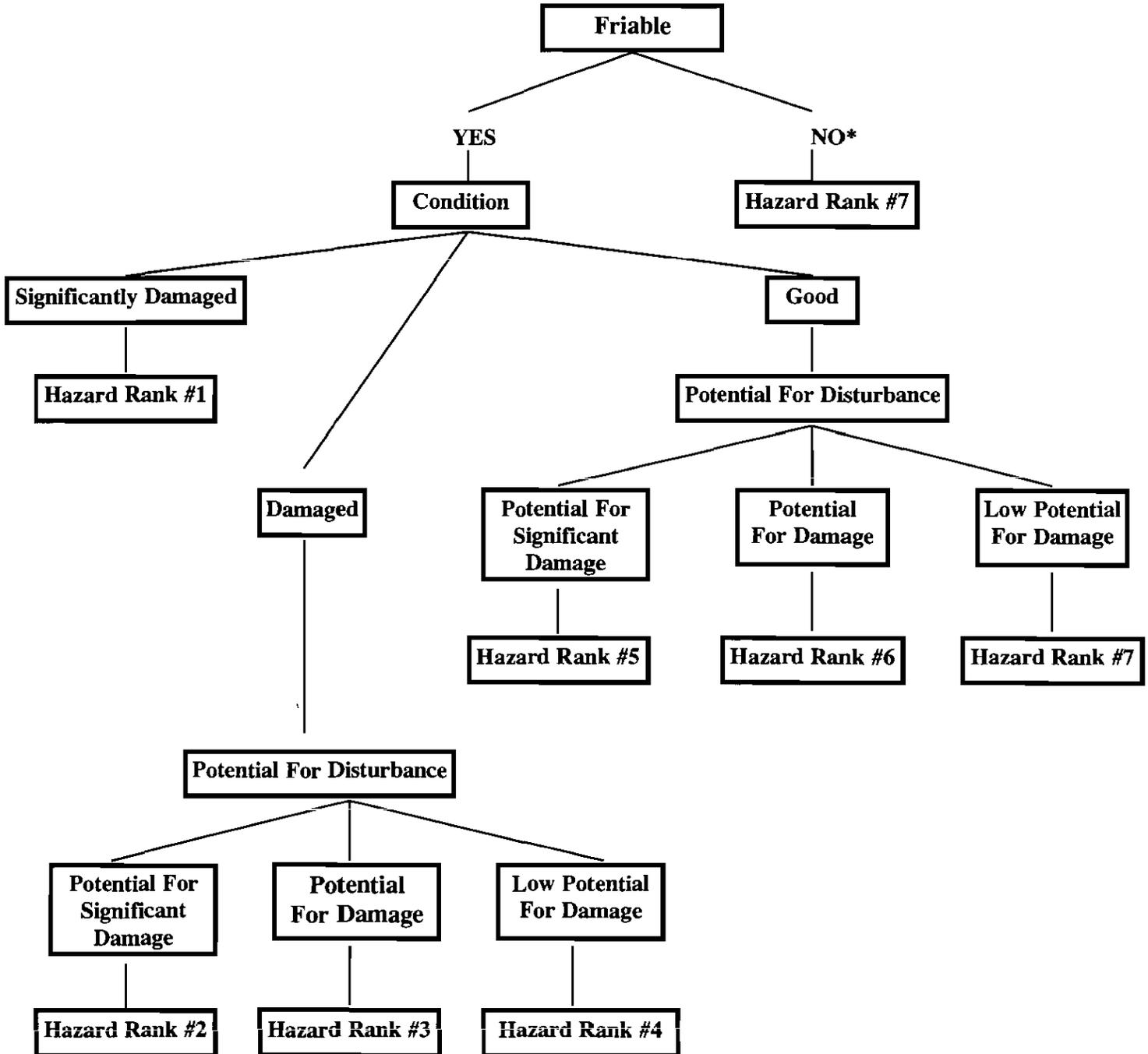
BAT adopted for this re-inspection one of the four general classes of hazard assessment models considered during the AHERA rule-making process. This method for hazard assessment is a modified decision tree as detailed in the USEPA, *Guidance for Assessing and Managing Exposure to Asbestos in Buildings*, or the *Pink Book*. Based on the physical assessment responses documented in the field, the BAT Management Planner proceeded through the decision tree process depicted in Figure 1.0 on the following page.

Only the identified and/or assumed asbestos-containing materials were assessed for hazards.

All of the identified and/or assumed asbestos-containing materials observed in this building were in good condition on the day of the survey.

Figure 1.0 Decision Tree Diagram For Hazard Assessment

Hazard rank #1 are materials of highest concern, and hazard rank #7 are the materials least likely to release asbestos fibers to the work area.



*Miscellaneous materials that are considered non-friable were placed in the Hazard Rank #8 category, which is in good condition with a low potential for damage.

**HAZARD ASSESSMENT AND RESPONSE ACTION DATA
FOR IDENTIFIED ACM**

BUILDING: Charleston Naval Shipyard, Building Number 234

SAMPLE NUMBER(S): 234-3, 234-50 and 234-51

HOMOGENEOUS AREA No.: 3

TYPE OF MATERIAL: Surfacing TSI Other

Description: Floor Tile, 12" x 12" white with gray and brown w/ black mastic

Approximate Amount of Asbestos-Containing Material (Linear or Square Foot): 14,000 SF

Approximate Recommended Response Action Cost:

HAZARD ASSESSMENT

RESPONSE ACTION RECOMMENDATION

- | | |
|--|---|
| <input checked="" type="checkbox"/> (1) Significantly damaged | <input checked="" type="checkbox"/> (1) Removal |
| (2) Damaged plus potential for significant damage | (2) Encapsulation |
| (3) Damaged plus potential for damage | (3) Enclosure |
| (4) Damaged plus low potential for damage | (4) Repair |
| (5) ACM (good condition) with potential for significant damage | (5) Operations and Maintenance Program |
| (6) ACM (good condition) with potential for damage | |
| (7) Any remaining friable ACM or friable suspect ACM | |
| (8) Non-friable ACM | |

COMMENTS: None.

**HAZARD ASSESSMENT AND RESPONSE ACTION DATA
FOR IDENTIFIED ACM**

BUILDING: Charleston Naval Shipyard, Building Number 234

SAMPLE NUMBER(S): 234-5, 234-20 and 234-55

HOMOGENEOUS AREA No.: 5

TYPE OF MATERIAL: Surfacing TSI Other

Description: Joint Sealer Compound, on drywall

Approximate Amount of Asbestos-Containing Material (Linear or Square Foot): 12,600 SF

Approximate Recommended Response Action Cost:

HAZARD ASSESSMENT

RESPONSE ACTION RECOMMENDATION

- | | |
|---|--|
| (1) Significantly damaged | (1) Removal |
| <input checked="" type="checkbox"/> (2) Damaged plus potential for significant damage | (2) Encapsulation |
| (3) Damaged plus potential for damage | (3) Enclosure |
| (4) Damaged plus low potential for damage | <input checked="" type="checkbox"/> (4) Repair |
| (5) ACM (good condition) with potential for significant damage | <input checked="" type="checkbox"/> (5) Operations and Maintenance Program |
| (6) ACM (good condition) with potential for damage | |
| (7) Any remaining friable ACM or friable suspect ACM | |
| (8) Non-friable ACM | |

COMMENTS: None.

**HAZARD ASSESSMENT AND RESPONSE ACTION DATA
FOR IDENTIFIED ACM**

BUILDING: Charleston Naval Shipyard, Building Number 234

SAMPLE NUMBER(S): 234-14, 234-15 and 234-16

HOMOGENEOUS AREA No.: 10

TYPE OF MATERIAL: Surfacing TSI X Other

Description: Floor Tile, 12" x 12" black w/ black mastic

Approximate Amount of Asbestos-Containing Material (Linear or Square Foot): 100 SF

Approximate Recommended Response Action Cost:

HAZARD ASSESSMENT

RESPONSE ACTION RECOMMENDATION

- | | |
|--|---|
| (1) Significantly damaged | (1) Removal |
| <u>X</u> (2) Damaged plus potential for significant damage | (2) Encapsulation |
| (3) Damaged plus potential for damage | (3) Enclosure |
| (4) Damaged plus low potential for damage | <u>X</u> (4) Repair |
| (5) ACM (good condition) with potential for significant damage | <u>X</u> (5) Operations and Maintenance Program |
| (6) ACM (good condition) with potential for damage | |
| (7) Any remaining friable ACM or friable suspect ACM | |
| (8) Non-friable ACM | |

COMMENTS: None.

**HAZARD ASSESSMENT AND RESPONSE ACTION DATA
FOR IDENTIFIED ACM**

BUILDING: Charleston Naval Shipyard, Building Number 234

SAMPLE NUMBER(S): 234-21, 234-22 and 234-60

HOMOGENEOUS AREA No.: 12

TYPE OF MATERIAL: Surfacing TSI Other

Description: Floor Tile, 12" x 12" white pebbling w/ black mastic

Approximate Amount of Asbestos-Containing Material (Linear or Square Foot): 800 SF

Approximate Recommended Response Action Cost:

HAZARD ASSESSMENT

RESPONSE ACTION RECOMMENDATION

- | | |
|--|--|
| (1) Significantly damaged | (1) Removal |
| (2) Damaged plus potential for significant damage | (2) Encapsulation |
| (3) Damaged plus potential for damage | (3) Enclosure |
| (4) Damaged plus low potential for damage | (4) Repair |
| (5) ACM (good condition) with potential for significant damage | <input checked="" type="checkbox"/> (5) Operations and Maintenance Program |
| (6) ACM (good condition) with potential for damage | |
| (7) Any remaining friable ACM or friable suspect ACM | |
| <input checked="" type="checkbox"/> (8) Non-friable ACM | |

COMMENTS: For removal purposes, floor tile is to be considered asbestos-contaminated.

**HAZARD ASSESSMENT AND RESPONSE ACTION DATA
FOR IDENTIFIED ACM**

BUILDING: Charleston Naval Shipyard, Building Number 234

SAMPLE NUMBER(S): 234-29, 234-30 and 234-31

HOMOGENEOUS AREA No.: 15

TYPE OF MATERIAL: Surfacing TSI Other

Description: Mastic on Sink, black

Approximate Amount of Asbestos-Containing Material (Linear or Square Foot): 2 EA

Approximate Recommended Response Action Cost:

HAZARD ASSESSMENT

RESPONSE ACTION RECOMMENDATION

- | | |
|--|--|
| (1) Significantly damaged | (1) Removal |
| (2) Damaged plus potential for significant damage | (2) Encapsulation |
| (3) Damaged plus potential for damage | (3) Enclosure |
| (4) Damaged plus low potential for damage | (4) Repair |
| (5) ACM (good condition) with potential for significant damage | <input checked="" type="checkbox"/> (5) Operations and Maintenance Program |
| (6) ACM (good condition) with potential for damage | |
| (7) Any remaining friable ACM or friable suspect ACM | |
| <input checked="" type="checkbox"/> (8) Non-friable ACM | |

COMMENTS: None.

**HAZARD ASSESSMENT AND RESPONSE ACTION DATA
FOR IDENTIFIED ACM**

BUILDING: Charleston Naval Shipyard, Building Number 234

SAMPLE NUMBER(S): 234-40, 234-41 and 234-42

HOMOGENEOUS AREA No.: 19

TYPE OF MATERIAL: Surfacing TSI Other

Description: Boiler Insulation, white

Approximate Amount of Asbestos-Containing Material (Linear or Square Foot): 65 SF

Approximate Recommended Response Action Cost:

HAZARD ASSESSMENT

RESPONSE ACTION RECOMMENDATION

- | | |
|---|--|
| (1) Significantly damaged | (1) Removal |
| (2) Damaged plus potential for significant damage | (2) Encapsulation |
| <input checked="" type="checkbox"/> (3) Damaged plus potential for damage | (3) Enclosure |
| (4) Damaged plus low potential for damage | <input checked="" type="checkbox"/> (4) Repair |
| (5) ACM (good condition) with potential for significant damage | <input checked="" type="checkbox"/> (5) Operations and Maintenance Program |
| (6) ACM (good condition) with potential for damage | |
| (7) Any remaining friable ACM or friable suspect ACM | |
| (8) Non-friable ACM | |

COMMENTS: None.

10.0 PRELIMINARY COST ESTIMATE FOR REMOVAL OF IDENTIFIED ACM

The following is a preliminary cost estimate for the abatement (removal) of identified ACM in Building 234. This estimate is based on removing all of the materials during the same project. It does not include the cost of replacement materials. The cost estimate includes, project surveillance, air monitoring, and disposal of materials. These costs are estimates only; BAT made no attempt to obtain bids from removal contractors for this work, however, the average unit costs of three asbestos abatement contractors were used to develop the preliminary removal costs. Additionally, quantities noted are based upon engineering measurements. BAT recommends the use of architectural measurements for more accurate quantification.

Material Description	Unit Cost (\$)	Quantity	Total Abatement Cost (\$)
Floor Tile with Mastic	1.78	75,575 SF	134,524
Mastic on Sink	140	2 EA	280
Boiler Insulation	8.21	65 SF	534
Handling Cost	25.00	458 EA	11,450
Mobilization	300.00	2 EA	600
Waste Disposal Cost	<u>50.00</u>	<u>235 CY</u>	<u>11,750</u>
Removal Subtotal			159,138
IH Supervision and Monitoring			<u>19,250</u>
Project Subtotal			178,388
Contingency (24%)			<u>42,813</u>
Project Total			221,201

SF = Square Feet EA = Each CY = Cubic Yard

11.0 CONCLUSIONS

Inspection of Building 234 and confirmatory laboratory bulk sample analysis of selected samples identified the following materials with asbestos concentrations greater than one percent.

<u>Identified ACM</u>	<u>Quantity</u>	<u>NESHAP Category</u>
Floor Tile, 12" x 12" white with gold w/ black mastic	1,800 SF	Regulated, friable
Floor Tile, 12" x 12" white with gray and brown w/ black mastic	14,000 SF	Regulated, friable
Joint Sealer Compound, on drywall	12,600 SF	Regulated, friable
Floor Tile, 12" x 12" black w/ black mastic	100 SF	Regulated, friable
Floor Tile, 12" x 12" gray w/ black mastic	58,075 SF	Category I, non-friable
Floor Tile, 12" x 12" white pebbling w/ black mastic	800 SF	Category I, non-friable
Floor Tile, 12" x 12" gray with white and brown w/ black mastic	800 SF	Category I, non-friable
Mastic on Sink, black	2 EA	Category I, non-friable
Boiler Insulation, white	65 SF	Regulated, friable

The following materials were not sampled in order to avoid disrupting their integrity, and they were assumed to contain asbestos:

<u>Assumed ACM</u>	<u>Quantity</u>	<u>NESHAP Category</u>
None.		

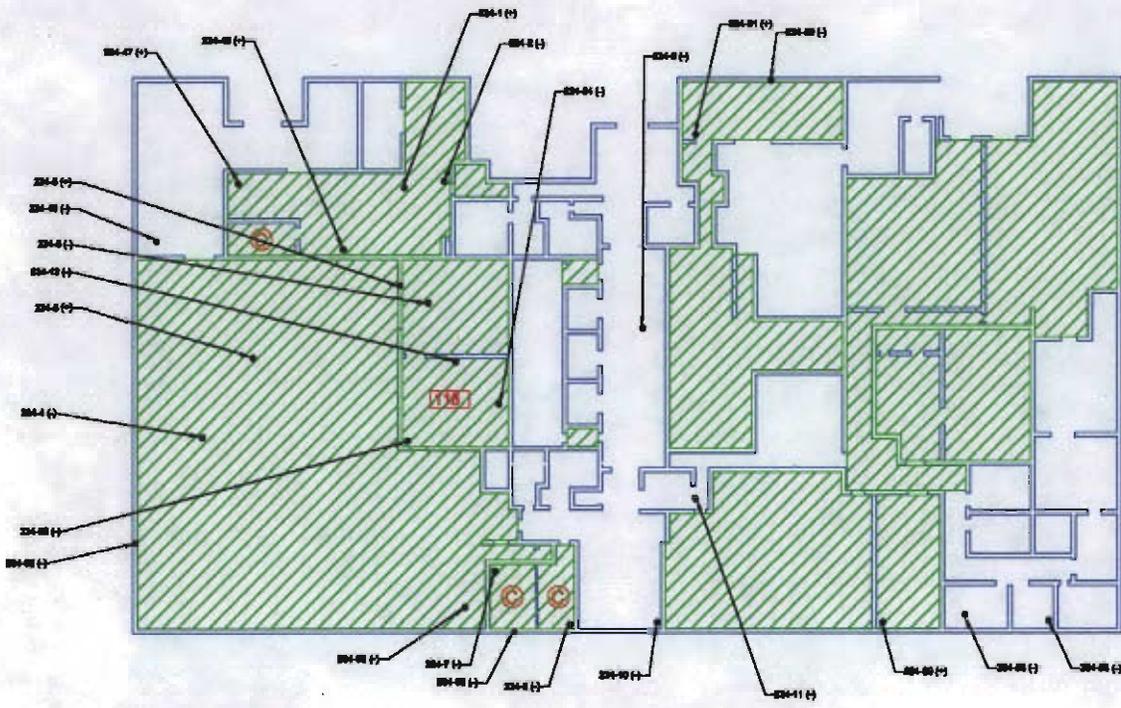
Other suspect ACM not identified could be present in areas of the building inaccessible to the asbestos-building inspectors. For example, material could exist in walls and other locations where access could only be gained by demolition of the building. Also, other materials currently not recognized as ACM by the asbestos building inspection industry could exist.

Rooms that were inaccessible to the asbestos-building inspectors have been identified on the drawings of the building in Appendix B, *Sample and ACM Location Drawings*.

EPA rules governing the application, removal and disposal of ACM were promulgated under NESHAP [40 CFR 61 Part M]. NESHAP requires the building owner or asbestos removal contractor to notify EPA when a building containing ACM is to be renovated, ACM is to be removed, or the building is to be demolished. At least 20 days notification is required "...if less than 260 linear feet of asbestos pipe covering or 160 square feet of asbestos material are removed during building renovation". Ten days notification is required when the amount is greater than 260 linear feet or 160 square feet of friable ACM.

APPENDIX A

SAMPLE AND ACM LOCATION DRAWINGS



NOTE 1:
All Interior Drywall Wall and Ceiling Systems Contain Asbestos-Containing Joint Compound.

NOTE 2:
All Piping Systems Are Insulated With Non-Suspect Asbestos-Containing Materials.

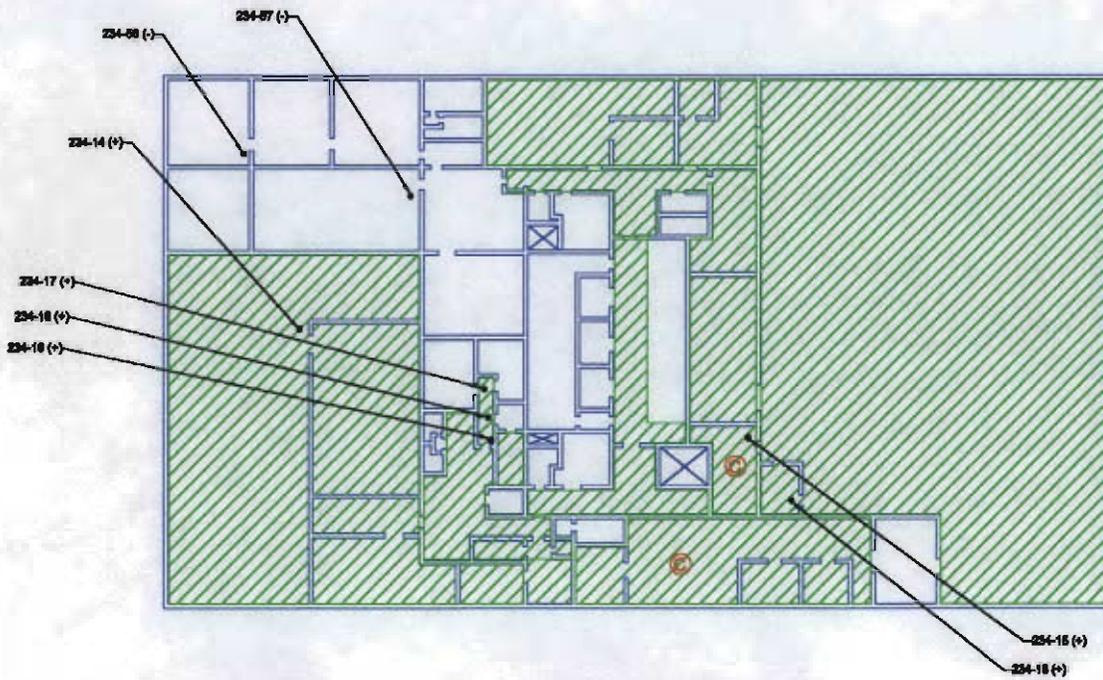
LEGEND

- - Sample Location
- (-) - Non-Asbestos-Containing Sample Location
- (+) - Asbestos-Containing Sample Location
- Asbestos-Containing And/OR Contaminated Floor Tile And Mastic
- Under Carpet

BUILDING 234 FLOOR 1
Sample and Asbestos-Containing Material Locations



BAT Associates, Inc.
ENVIRONMENTAL, HEALTH & SAFETY SERVICES
5151 BROOK HOLLOW PARKWAY, SUITE 220
NORCROSS, GA 30071



NOTE 1:
All Interior Drywall Wall and Ceiling Systems Contain Asbestos-Containing Joint Compound.

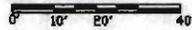
NOTE 2:
Majority Of Floors Have Multiple Layers Of Asbestos-Containing Floor Tile And Mastic

NOTE 3:
All Piping Systems Are Insulated With Non-Suspect Asbestos-Containing Materials.

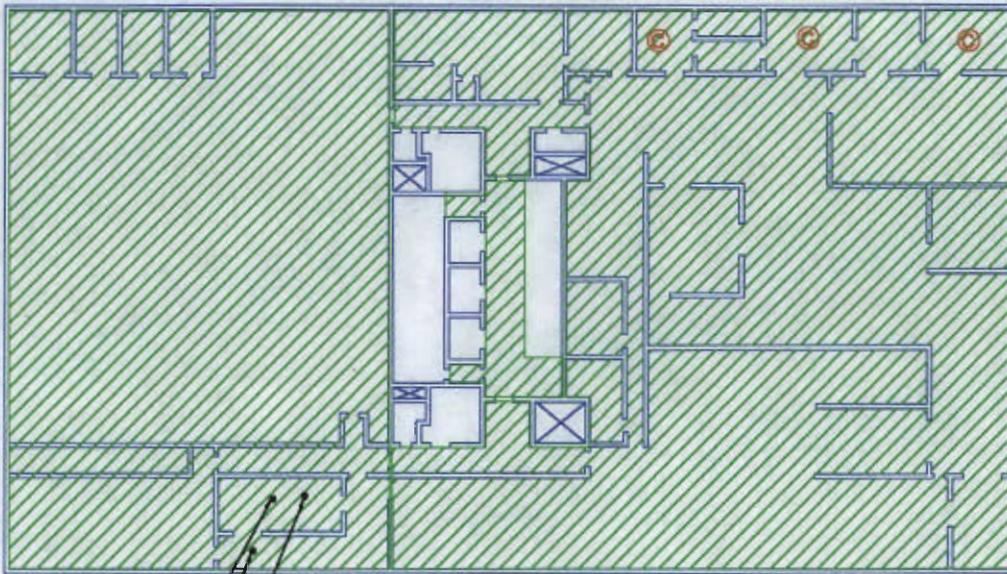
LEGEND

- - Sample Location
- (-) - Non-Asbestos-Containing Sample Location
- (+) - Asbestos-Containing Sample Location
-  - Asbestos-Containing And/OR Contaminated Floor Tile And Mastic
-  - Under Carpet

BUILDING 234 FLOOR 2
Sample and Asbestos-Containing Material Locations



BAT Associates, Inc.
ENVIRONMENTAL, HEALTH & SAFETY SERVICES
5151 BROOK HOLLOW PARKWAY, SUITE 200
NORCROSS, GA 30071



234-21 (+)
234-20 (+)
234-22 (+)

NOTE 1:
All Interior Drywall Wall and Ceiling Systems Contain Asbestos-Containing Joint Compound.

NOTE 2:
All Piping Systems Are Insulated With Non-Suspect Asbestos-Containing Materials.

LEGEND

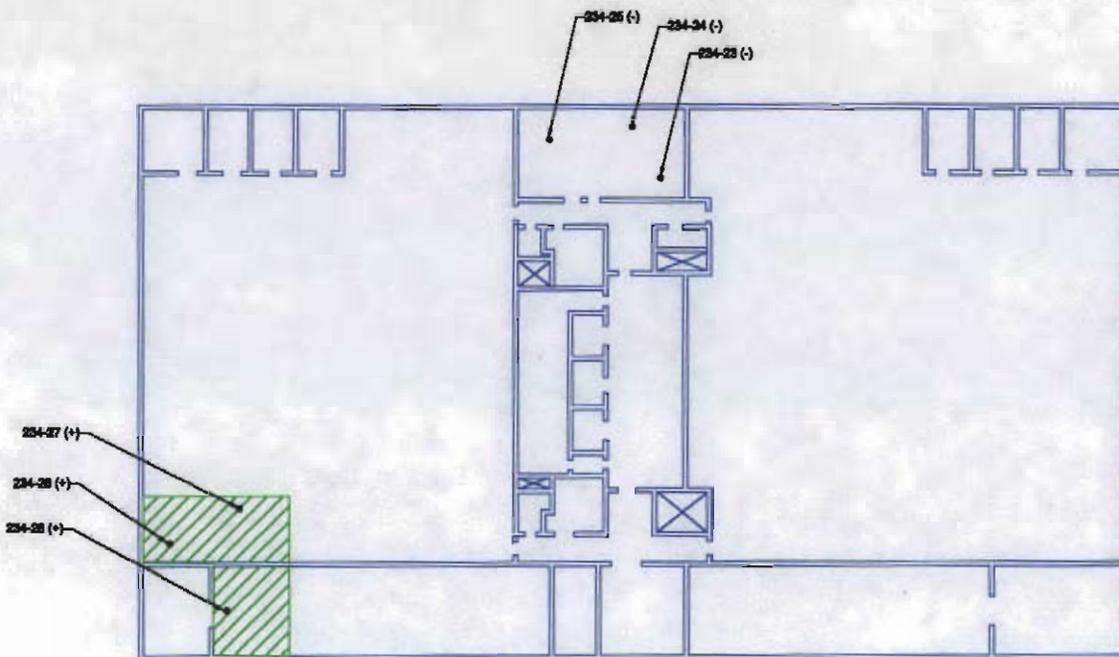
- - Sample Location
- (+) - Asbestos-Containing Sample Location
- ▨ - Asbestos-Containing And/Or Contaminated Floor Tile And Mastic
- (C) - Under Carpet

BUILDING 234 FLOOR 3

Sample and Asbestos-Containing Material Locations



BAT Associates, Inc.
ENVIRONMENTAL, HEALTH & SAFETY SERVICES
5151 BROOK HOLLOW PARKWAY, SUITE 250
NORCROSS, GA 30071



NOTE 1:
All Interior Drywall Wall and Ceiling Systems Contain Asbestos-Containing Joint Compound.

NOTE 2:
All Piping Systems Are Insulated With Non-Suspect Asbestos-Containing Materials.

LEGEND

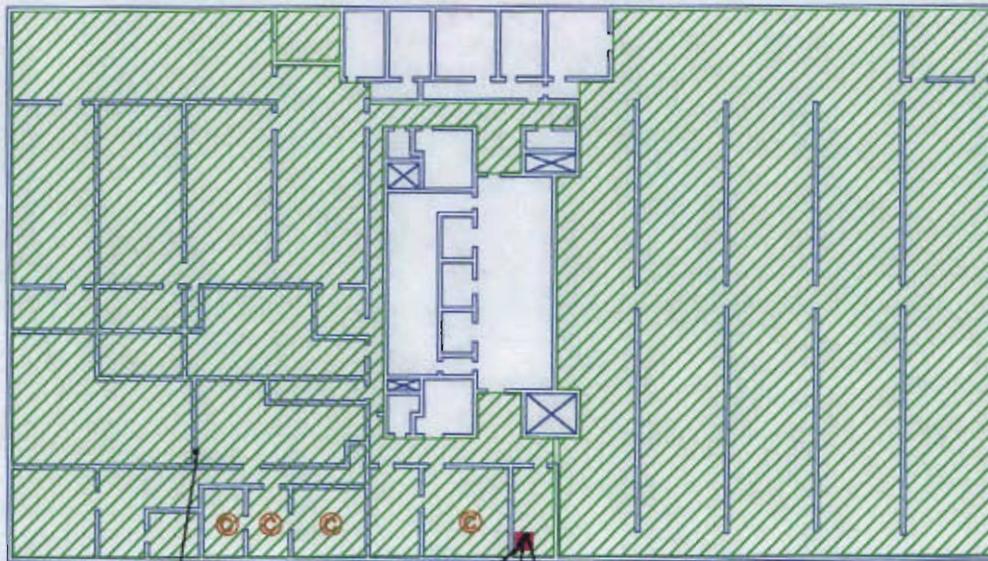
- - Sample Location
- (-) - Non-Asbestos-Containing Sample Location
- (+) - Asbestos-Containing Sample Location
-  - Asbestos-Containing And/OR Contaminated Floor Tile And Mastic

BUILDING 234 FLOOR 4

Sample and Asbestos-Containing Material Locations



BAT Associates, Inc.
ENVIRONMENTAL, HEALTH & SAFETY SERVICES
5151 BROOK HOLLOW PARKWAY, SUITE 250
NORCROSS, GA 30071



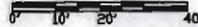
NOTE 1:
All Interior Drywall Wall and Ceiling Systems Contain Asbestos-Containing Joint Compound.

NOTE 2:
All Piping Systems Are Insulated With Non-Suspect Asbestos-Containing Materials.

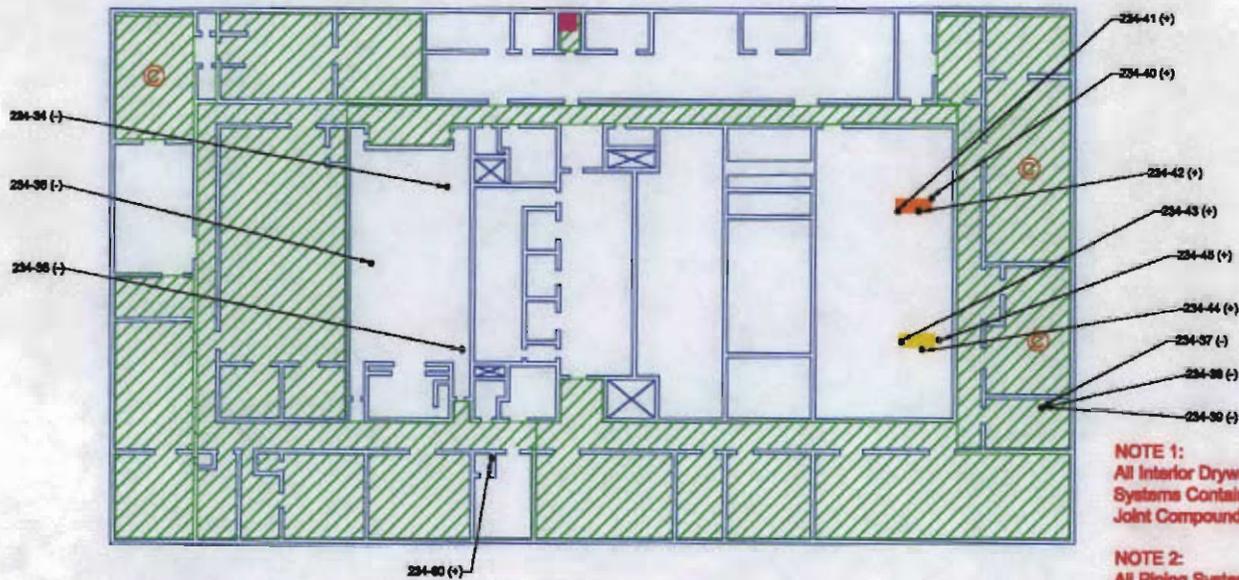
LEGEND

- - Sample Location
- (+) - Asbestos-Containing Sample Location
-  - Asbestos-Containing And/Or Contaminated Floor Tile And Mastic
-  - Under Carpet
-  - Asbestos-Containing Sink Mastic

BUILDING 234 FLOOR 5
Sample and Asbestos-Containing Material Locations



BAT Associates, Inc.
ENVIRONMENTAL, HEALTH & SAFETY SERVICES
5151 BROOK HOLLOW PARKWAY, SUITE 250
NORCROSS, GA 30071



NOTE 1:
All Interior Drywall Wall and Ceiling Systems Contain Asbestos-Containing Joint Compound.

NOTE 2:
All Piping Systems Are Insulated With Non-Suspect Asbestos-Containing Materials.

LEGEND

- - Sample Location
- (-) - Non-Asbestos-Containing Sample Location
- (+) - Asbestos-Containing Sample Location
- ▨ - Asbestos-Containing And/OR Contaminated Floor Tile And Mastic
- Ⓢ - Under Carpet
- - Asbestos-Containing Sink Mastic
- - Asbestos-Containing Tank Insulation
- - Asbestos-Containing Boiler Insulation

BUILDING 234 FLOOR 6
Sample and Asbestos-Containing Material Locations



BAT Associates, Inc.
ENVIRONMENTAL, HEALTH & SAFETY SERVICES
5151 BROOK HOLLOW PARKWAY, SUITE 250
NORCROSS, GA 30071

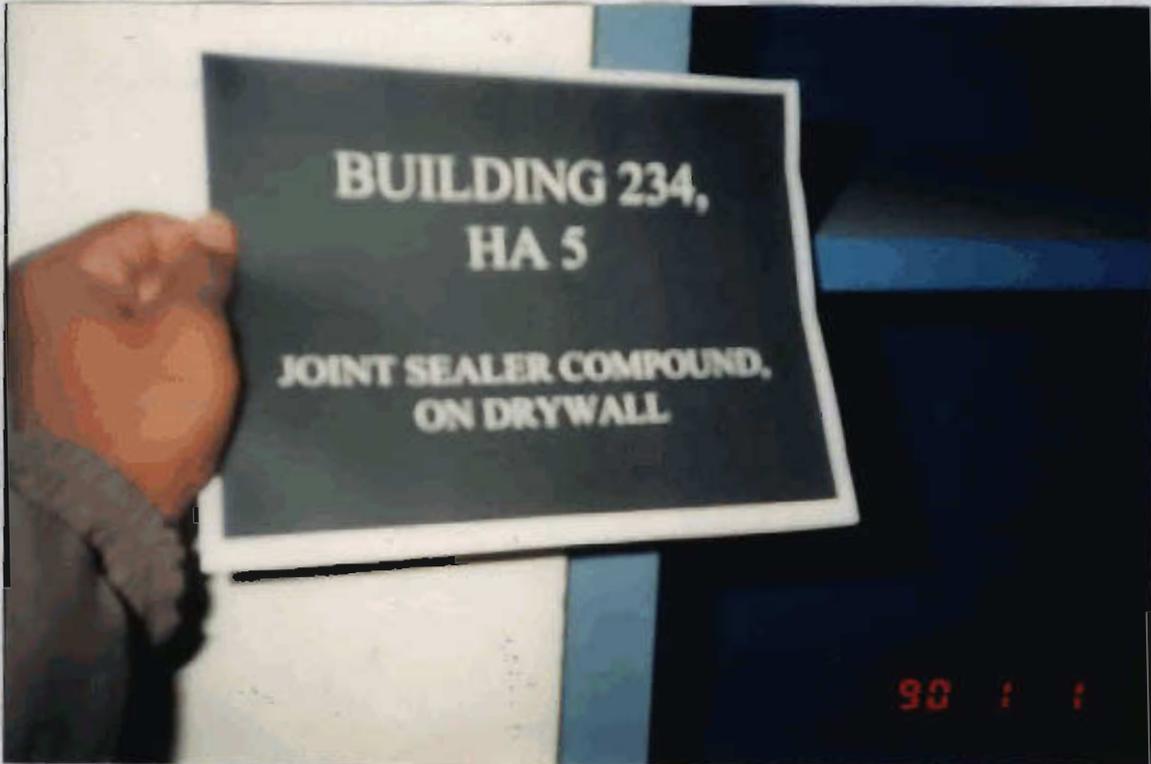
APPENDIX B
PHOTOGRAPHIC DOCUMENTATION
OF IDENTIFIED ACM



Floor Tile, 12" x 12" white with gold w/ black mastic, HA # 1



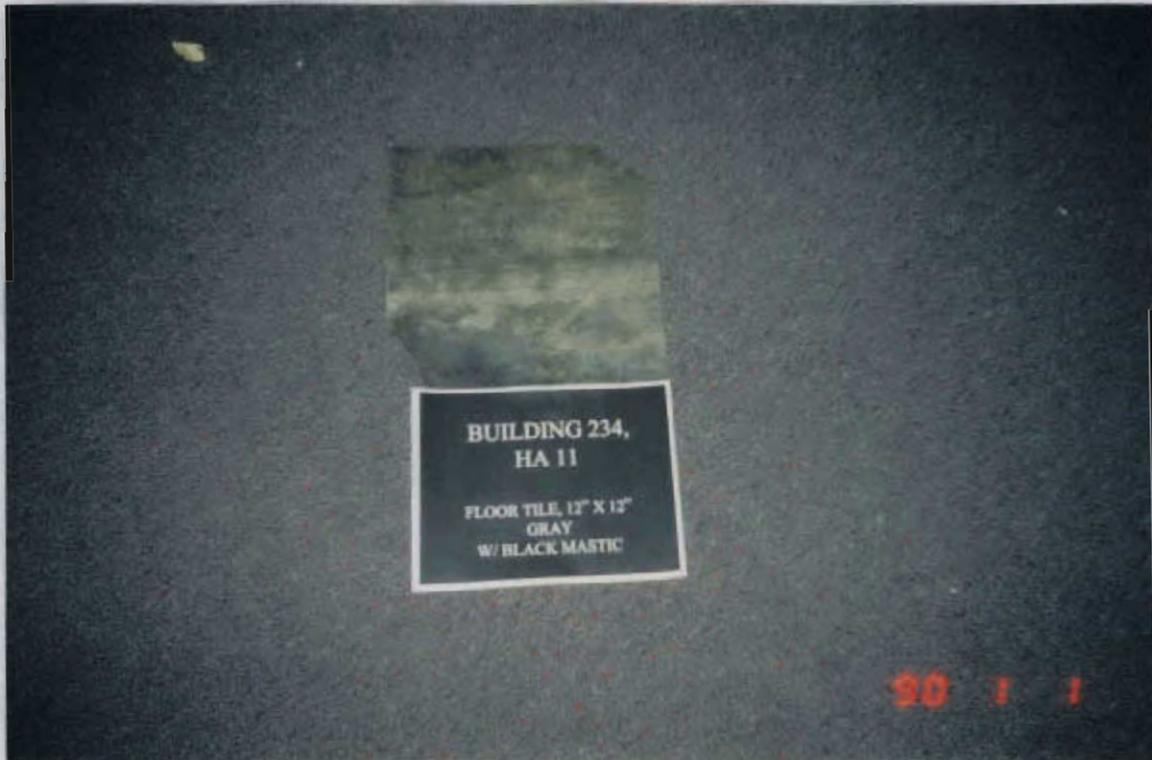
Floor Tile, 12" x 12" white with gray and brown w/ black mastic, HA # 3



Joint Sealer Compound, on drywall, HA # 5



Floor Tile, 12" x 12" black w/ black mastic, HA # 10



Floor Tile, 12" x 12" gray w/ black mastic, HA # 11



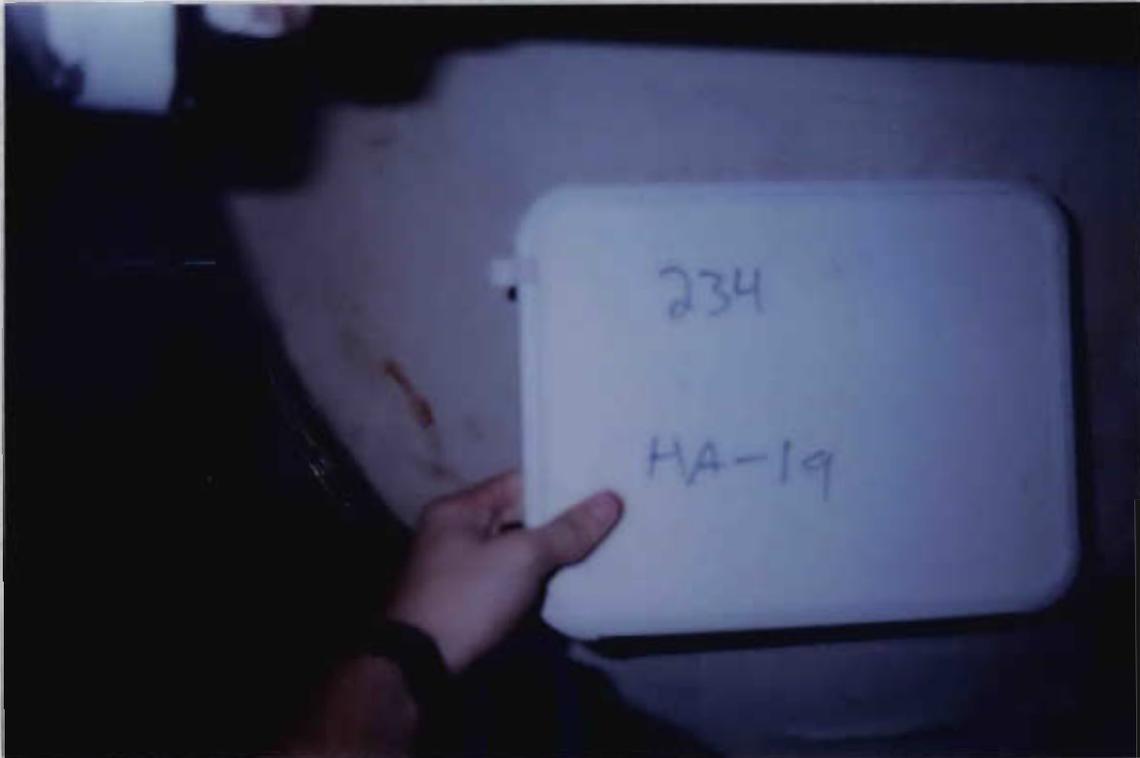
Floor Tile, 12" x 12" white pebbling w/ black mastic, HA # 12



Floor Tile, 12" x 12" gray with white and brown w/ black mastic, HA # 14



Mastic on Sink, black, HA # 15



Boiler Insulation, white, HA # 19

APPENDIX C

PERSONNEL AND LABORATORY ACCREDITATIONS

The Environmental Institute

Jason McGlashan

Social Security Number - 137-62-0377

*Has completed coursework and satisfactorily passed
an examination that meets all criteria required for
EPA/AHERA/ASHARA (TSCA Title II) Approved Accreditation
and NESHAP Regulations Training*

Asbestos in Buildings: Inspection and Assessment

June 21-23, 1999

Course Date

2594

Certificate Number

June 23, 1999

Examination Date

June 22, 2000

Expiration Date

R. A. Short

Ronald A. Short - Course Director

Rachel G. McCain

Rachel G. McCain - Exam Administrator



TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

The Environmental Institute

Douglas J. Milton

Social Security Number - 266-55-7179

*Has completed coursework and satisfactorily passed
an examination that meets all criteria required for
EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation
and NESHAP Regulations Training
Asbestos in Buildings: Inspector & Management
Planner Refresher*

December 15, 1999

Course Date

6398

Certificate Number

December 15, 1999

Examination Date

December 14, 2000

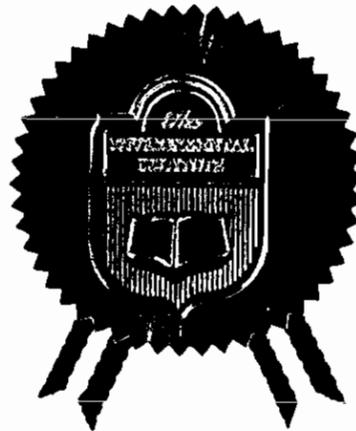
Expiration Date

Tod A. Dawson

Tod A. Dawson - Course Director

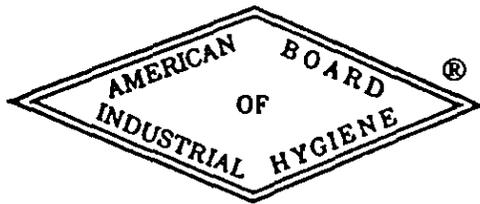
Rachel G. McCain

Rachel G. McCain - Exam Administrator



TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

The
American Board of Industrial Hygiene®
ABIH®



organized to improve the practice of Industrial Hygiene
proclaims that

Douglas J. Milton

having met all requirements through
education, experience and examination,
is hereby certified in the

**COMPREHENSIVE PRACTICE
of
INDUSTRIAL HYGIENE**

and has the right to use the designations

CERTIFIED INDUSTRIAL HYGIENIST

CIH

November 12, 1997

date

A handwritten signature in cursive script, reading "J. Kenneth Cronin".

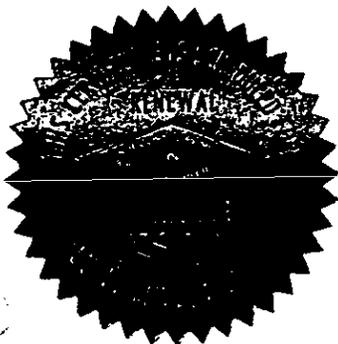
Chair ABIH

CP 7612

certificate
number

A handwritten signature in cursive script, reading "Robert T. Conner".

Secretary ABIH





ASBESTOS ABATEMENT LICENSE

No. 22860

This certifies that

Douglas J Milton

266-AR-7179

doing business as *B A T Associates, Inc*

has satisfactorily completed the training required by South Carolina Regulation No. 61-86.1 and the EPA Model Accreditation Plan, 40 CFR 763 Subpart E Appendix C, for the category of

Consultant/Management Planner

The holder of this license shall comply with all the requirements of said Regulation.

This License, License Number, or any Representation thereof, is not transferable to any other licensee or company. Use of this License is only authorized for the licensee and Company whose name appears hereon and shall expire one year from

09/24/98.

The holder of this license is qualified in accordance with requirements of the Asbestos Hazard Emergency Response Act of 1986 (AHERA) to perform as an abatement Building Inspector.

07/28/99

Richard D. Sharpe

ORIGINAL

07/28/99 14:31



Richard D. Sharpe, Director
Air Compliance Management Division
Bureau of Air Quality
South Carolina Department of Health & Environmental Control
CR-001126



ASBESTOS ABATEMENT LICENSE

No. 22859

This certifies that

Douglas J Milton

266-BJ-7179

doing business as *B A T Associates, Inc*

has satisfactorily completed the training required by South Carolina Regulation No. 61-86.1 and the EPA Model Accreditation Plan, 40 CFR 763 Subpart E Appendix C, for the category of

Consultant/Building Inspector

The holder of this license shall comply with all the requirements of said Regulation.

This License, License Number, or any Representation thereof, is not transferable to any other licensee or company. Use of this License is only authorized for the licensee and Company whose name appears hereon and shall expire one year from

09/23/98.

07/28/99

Richard D. Sharpe

ORIGINAL

07/28/99 14:28



Richard D. Sharpe, Director
Air Compliance Management Division
Bureau of Air Quality
South Carolina Department of Health & Environmental Control
CR-001126

United States Department of Commerce
National Institute of Standards and Technology



ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation



CAPE ENVIRONMENTAL MANAGEMENT, INC.
ATLANTA, GA

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

BULK ASBESTOS FIBER ANALYSIS

June 30, 2000

Effective through

A handwritten signature in black ink, appearing to read "James L. Galt", is written over a horizontal line.

For the National Institute of Standards and Technology

NVLAP Lab Code: 102111-0

United States Department of Commerce
National Institute of Standards and Technology

NVLAP[®]

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation



ANALYTICAL ENVIRONMENTAL SERVICES, INC.
ATLANTA, GA

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

BULK ASBESTOS FIBER ANALYSIS

September 30, 2000

Effective through

A handwritten signature in black ink, appearing to read "James L. Galt".

For the National Institute of Standards and Technology

NVLAP Lab Code: 102033-0

APPENDIX D
LABORATORY ANALYSIS RESULTS

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-1 LAB ID: 920702-1
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 1 NO. OF LAYERS: 2
 APPEARANCE: TAN HARD RESILIENT TO GRANULAR

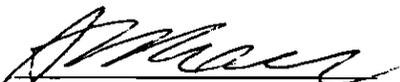
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE		VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	30
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	70

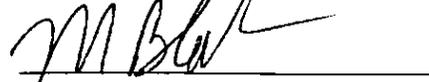
COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. NO OF LAYERS - INDICATES NUMBER OF SUBSAMPLES ANALYZED AND REPORTS ISSUED (UNLESS COMPOSITED).

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
SAMPLE FIELD ID: 234-1 LAB ID: 920702-2
SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 2 NO. OF LAYERS: 2
APPEARANCE: BLACK SOFT BITUMINOUS WITH FIBERS

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYBOTILE	5	CELLULOSE		VERMICULITE/MICA	BITUMEN/TAR	90	
AMOSITE		GLASS FIBERS		PERLITE	SAND/AGGR.		
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS	GLUE/CAULK		
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM	VINYL		
ACTINOLITE		TALC		ALUMINUM/METAL	CORK		
ANTHOPHYLLITE				FOAM RUBBER	LATEX/RUBBER		
					PAINT/OTHER	5	

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 783, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. NO OF LAYERS - INDICATES NUMBER OF SUBSAMPLES ANALYZED AND REPORTS ISSUED (UNLESS COMPOSITED).

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-2 LAB ID: 920703
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY SOFT FIBROUS TO GRANULAR TO POWDERY WITH PAINT

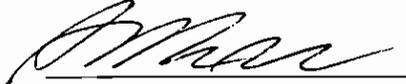
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	30	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS	30	PERLITE	30	SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	10

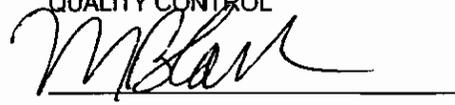
COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME:	BAT ASSOCIATES	LAB JOB NO:	B9286
PROJECT NAME:	CHARLESTON NSY / 971001-13.03	DATE RECEIVED:	10/28/99
PROJECT NO:	L802Z.000.000	REPORT ISSUED:	11/30/99
SAMPLE FIELD ID:	234-3	LAB ID:	920704
SAMPLE INFO:		DATE ANALYZED:	11/17/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY-BROWN HARD RESILIENT TO GRANULAR WITH BLACK MASTIC

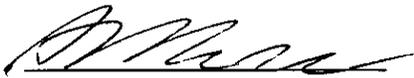
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE	4	CELLULOSE		VERMICULITE/MICA		BITUMEN/TAR	3
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	30
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE	1	SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	62

COMMENTS: **5% CHRYSTOLE IN BLACK MASTIC**

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. 1 (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-4 LAB ID: 920705
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO
 APPEARANCE: GRAY SOFT FIBROUS TO GRANULAR TO POWDERY WITH PAINT

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	40	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS	20	PERLITE	30	SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	10

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEST IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-5 LAB ID: 920706
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 1+2+3 NO. OF LAYERS: 3
 APPEARANCE: 1. WHITE HARD SILTY WITH MICA (J/C); 2. GRAY SOFT FIBROUS; 3. LIGHT GRAY HARD SILTY WITH FIBERS

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLITE		CELLULOSE	50	VERMICULITE/MICA	3	BITUMEN/TAR	
AMOSITE		GLASS FIBERS	2	PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	45

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
SAMPLE FIELD ID: 234-6 LAB ID: 920707
SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY SOFT FIBROUS TO GRANULAR TO POWDERY WITH PAINT

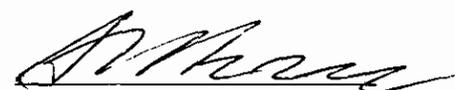
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	30	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS	30	PERLITE	30	SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	10

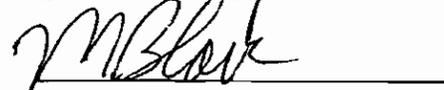
COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
REPORT 1 OF 1

ANALYST


ALEKSEY REZNIK

QUALITY CONTROL


MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: 89286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-7 LAB ID: 920708
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY SOFT FIBROUS TO GRANULAR TO POWDERY WITH PAINT

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYBOTILE		CELLULOSE	30	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS	30	PERLITE	30	SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	10

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. 1 (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-8 LAB ID: 920709
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY SOFT FIBROUS TO GRANULAR TO POWDERY WITH PAINT

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOTILE		CELLULOSE	40	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS	20	PERLITE	30	SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	10

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
 REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME:	BAT ASSOCIATES	LAB JOB NO:	B9286
PROJECT NAME:	CHARLESTON NSY / 971001-13.03	DATE RECEIVED:	10/28/99
PROJECT NO:	L802Z.000.000	REPORT ISSUED:	11/30/99
SAMPLE FIELD ID:	234-9	LAB ID:	920710
SAMPLE INFO:		DATE ANALYZED:	11/17/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY SOFT FIBROUS WITH PAINT

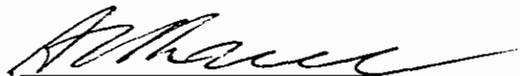
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS	NONASBESTOS FIBERS	NONFIBROUS COMPONENTS	OTHER COMPONENTS
CHRYSTOLE	CELLULOSE 40	VERMICULITE/MICA	BITUMEN/TAR
AMOSITE	GLASS FIBERS 40	PERLITE	SAND/AGGR.
CROCIDOLITE	SYNTHETICS	EXPANDED GLASS	GLUE/CAULK
TREMOLITE	WOLLASTONITE	SYNTHETIC FOAM	VINYL
ACTINOLITE	TALC	ALUMINUM/METAL	CORK
ANTHOPHYLLITE		FOAM RUBBER	LATEX/RUBBER
			PAINT/OTHER 20

COMMENTS:

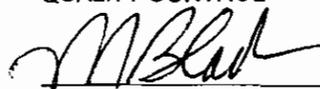
SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
 REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-10 LAB ID: 920711
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY SOFT FIBROUS TO GRANULAR TO POWDERY WITH PAINT

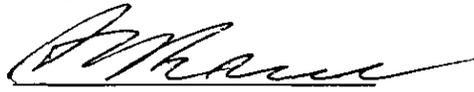
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	40	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS	40	PERLITE	10	SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	10

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. 1 (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
SAMPLE FIELD ID: 234-11 LAB ID: 920712
SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY SOFT FIBROUS WITH PAINT

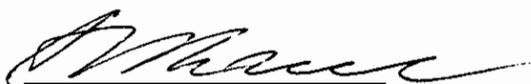
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	40	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS	40	PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	20

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. 1 (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
SAMPLE FIELD ID: 234-12 LAB ID: 920713
SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY SOFT FIBROUS TO GRANULAR TO POWDERY WITH PAINT

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	30	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS	30	PERLITE	30	SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	10

COMMENTS:

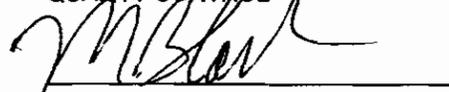
SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-13 LAB ID: 920714
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO
 APPEARANCE: GRAY HARD RESILIENT TO GRANULAR WITH BROWN MASTIC

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE		VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	35
CROCIDOLITE		SYNTHETICS	1	EXPANDED GLASS		GLUE/CAULK	5
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	59

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-14 LAB ID: 920715
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: BLACK HARD RESILIENT TO GRANULAR WITH FIBERS

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE	3	CELLULOSE		VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	30
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	67

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-15 LAB ID: 920716
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: BLACK HARD RESILIENT TO GRANULAR WITH FIBERS

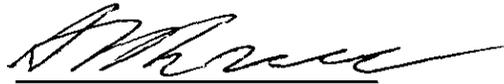
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYBOTILE	4	CELLULOSE		VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	30
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	66

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
 REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-16 LAB ID: 920717
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: BLACK HARD RESILIENT TO GRANULAR WITH FIBERS AND BLACK MASTIC

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSOTILE	3	CELLULOSE		VERMICULITE/MICA		BITUMEN/TAR	2
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	30
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	65

COMMENTS: **7% CHRYSOTILE IN BLACK MASTIC**

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
 REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-17 LAB ID: 920718
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO
 APPEARANCE: GRAY HARD RESILIENT TO GRANULAR WITH BLACK MASTIC

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE	2	CELLULOSE		VERMICULITE/MICA		BITUMEN/TAR	2
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	30
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE	4	SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC	1	ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	61

COMMENTS: **4% CHRYSTOLE IN BLACK MASTIC**

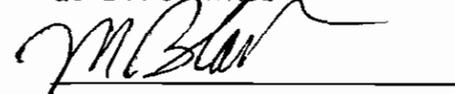
SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. 1 (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-18 LAB ID: 920719
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY HARD RESILIENT TO GRANULAR WITH BLACK MASTIC

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE	3	CELLULOSE		VERMICULITE/MICA		BITUMEN/TAR	2
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	30
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE	3	SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	62

COMMENTS: **5% CHRYSTOLE IN BLACK MASTIC**

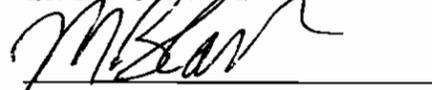
SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. 1 (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
 REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
SAMPLE FIELD ID: 234-19 LAB ID: 920720
SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO
APPEARANCE: GRAY HARD RESILIENT TO GRANULAR WITH BLACK MASTIC

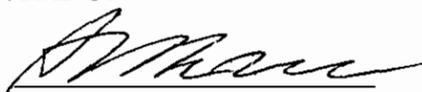
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE	2	CELLULOSE		VERMICULITE/MICA	BITUMEN/TAR	3	
AMOSITE		GLASS FIBERS		PERLITE	SAND/AGGR.	40	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS	GLUE/CAULK		
TREMOLITE		WOLLASTONITE	5	SYNTHETIC FOAM	VINYL		
ACTINOLITE		TALC		ALUMINUM/METAL	CORK		
ANTHOPHYLLITE				FOAM RUBBER	LATEX/RUBBER		
					PAINT/OTHER	50	

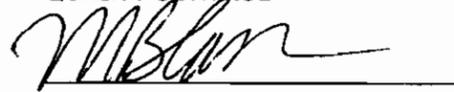
COMMENTS: **4% CHRYSTOLE IN BLACK MASTIC**

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
REPORT 1 OF 1

ANALYST


ALEKSEY REZNIK

QUALITY CONTROL


MICHAEL BLACK

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-20 LAB ID: 920721
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 1+2+3 NO. OF LAYERS: 3
 APPEARANCE: 1. WHITE HARD SILTY WITH MICA (J/C) AND PAINT; 2. GRAY SOFT FIBROUS; 3. LIGHT GRAY HARD SILTY WITH FIBERS

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE	2	CELLULOSE	25	VERMICULITE/MICA	5	BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	68

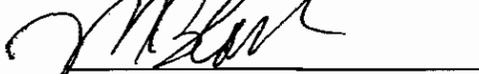
COMMENTS: **5% CHRYSTOLE IN JOINT COMPOUND**

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-21 LAB ID: 920722-1
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 1 NO. OF LAYERS: 2
 APPEARANCE: TAN-GRAY HARD RESILIENT

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYBOTILE		CELLULOSE		VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	90
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	10

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. NO OF LAYERS - INDICATES NUMBER OF SUBSAMPLES ANALYZED AND REPORTS ISSUED (UNLESS COMPOSITED).

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-21 LAB ID: 920722-2
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 2 NO. OF LAYERS: 2
 APPEARANCE: BLACK SOFT BITUMINOUS WITH FIBERS

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS	NONFIBROUS COMPONENTS	OTHER COMPONENTS	
CHRYSTOLE	3	CELLULOSE	VERMICULITE/MICA	BITUMEN/TAR	90
AMOSITE		GLASS FIBERS	PERLITE	SAND/AGGR.	
CROCIDOLITE		SYNTHETICS	EXPANDED GLASS	GLUE/CAULK	
TREMOLITE		WOLLASTONITE	SYNTHETIC FOAM	VINYL	
ACTINOLITE		TALC	ALUMINUM/METAL	CORK	
ANTHOPHYLLITE			FOAM RUBBER	LATEX/RUBBER	
				PAINT/OTHER	7

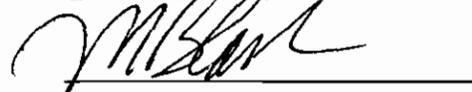
COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99
 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
 NO OF LAYERS - INDICATES NUMBER OF SUBSAMPLES ANALYZED AND REPORTS ISSUED (UNLESS COMPOSITED).

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-22 LAB ID: 920723
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO
 APPEARANCE: GRAY-TAN HARD RESILIENT WITH BLACK MASTIC

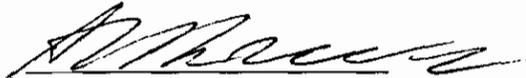
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	1	VERMICULITE/MICA		BITUMEN/TAR	10
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	80
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	9

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
 REPORT 1 OF 1

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-23 LAB ID: 920724
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY HARD RESILIENT TO GRANULAR WITH BROWN MASTIC

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE		VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	30
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	3
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	67

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
SAMPLE FIELD ID: 234-24 LAB ID: 920725
SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY HARD RESILIENT TO GRANULAR WITH BROWN MASTIC

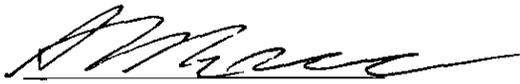
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOTILE		CELLULOSE		VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	35
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	3
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	62

COMMENTS:

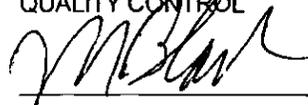
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REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME:	BAT ASSOCIATES	LAB JOB NO:	B9286
PROJECT NAME:	CHARLESTON NSY / 971001-13.03	DATE RECEIVED:	10/28/99
PROJECT NO:	L802Z.000.000	REPORT ISSUED:	11/30/99
SAMPLE FIELD ID:	234-25	LAB ID:	920726
SAMPLE INFO:		DATE ANALYZED:	11/17/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY HARD RESILIENT TO GRANULAR WITH BROWN MASTIC

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	1	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	30
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	5
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	64

COMMENTS:

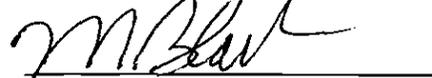
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 REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-26 LAB ID: 920727-1
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 1 NO. OF LAYERS: 2
 APPEARANCE: GRAY HARD RESILIENT TO GRANULAR

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	2	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	30
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	68

COMMENTS:

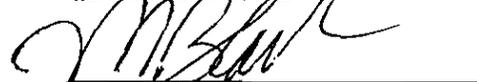
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ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-26 LAB ID: 920727-2
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 2 NO. OF LAYERS: 2
 APPEARANCE: MIX OF BLACK MASTIC AND GLUE

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLITE	3	CELLULOSE	5	VERMICULITE/MICA		BITUMEN/TAR	70
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	15
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	7

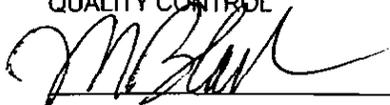
COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. NO OF LAYERS - INDICATES NUMBER OF SUBSAMPLES ANALYZED AND REPORTS ISSUED (UNLESS COMPOSITED).

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

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**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-27 LAB ID: 920728-1
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 1 NO. OF LAYERS: 2
 APPEARANCE: GRAY HARD RESILIENT TO GRANULAR

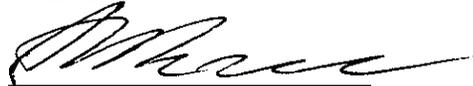
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	1	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	30
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	69

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. 1 (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. NO OF LAYERS - INDICATES NUMBER OF SUBSAMPLES ANALYZED AND REPORTS ISSUED (UNLESS COMPOSITED).

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-27 LAB ID: 920728-2
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 2 NO. OF LAYERS: 2
 APPEARANCE: MIXTURE OF BLACK MASTIC AND GLUE

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE	2	CELLULOSE	3	VERMICULITE/MICA		BITUMEN/TAR	60
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	25
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	10

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. NO OF LAYERS - INDICATES NUMBER OF SUBSAMPLES ANALYZED AND REPORTS ISSUED (UNLESS COMPOSITED).

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-28 LAB ID: 920729-1
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 1 NO. OF LAYERS: 2
 APPEARANCE: GRAY HARD RESILIENT TO GRANULAR

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLITE		CELLULOSE	3	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	30
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	67

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. NO OF LAYERS - INDICATES NUMBER OF SUBSAMPLES ANALYZED AND REPORTS ISSUED (UNLESS COMPOSITED).

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-28 LAB ID: 920729-2
 SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 2 NO. OF LAYERS: 2
 APPEARANCE: MIXTURE OF BLACK MASTIC AND GLUE

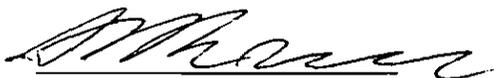
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE	3	CELLULOSE	3	VERMICULITE/MICA		BITUMEN/TAR	60
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	20
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	14

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. 1 (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. NO OF LAYERS - INDICATES NUMBER OF SUBSAMPLES ANALYZED AND REPORTS ISSUED (UNLESS COMPOSITED).

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286
PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
SAMPLE FIELD ID: 234-29 LAB ID: 920730
SAMPLE INFO: DATE ANALYZED: 11/17/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: BLACK SOFT BITUMINOUS WITH FIBERS

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE	4	CELLULOSE	2	VERMICULITE/MICA		BITUMEN/TAR	80
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	14

COMMENTS:

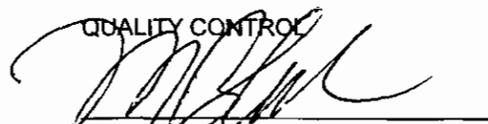
SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME:	BAT ASSOCIATES	LAB JOB NO:	B9286
PROJECT NAME:	CHARLESTON NSY / 971001-13.03	DATE RECEIVED:	10/28/99
PROJECT NO:	L802Z.000.000	REPORT ISSUED:	11/30/99
SAMPLE FIELD ID:	234-30	LAB ID:	920731
SAMPLE INFO:		DATE ANALYZED:	11/17/99

SAMPLE DESCRIPTION

LAYERED: NO
 APPEARANCE: BLACK SOFT BITUMINOUS WITH FIBERS

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS	NONFIBROUS COMPONENTS	OTHER COMPONENTS	
CHRYSTOLE	<1	CELLULOSE 1	VERMICULITE/MICA	BITUMEN/TAR	80
AMOSITE		GLASS FIBERS	PERLITE	SAND/AGGR.	
CROCIDOLITE		SYNTHETICS	EXPANDED GLASS	GLUE/CAULK	
TREMOLITE		WOLLASTONITE	SYNTHETIC FOAM	VINYL	
ACTINOLITE		TALC	ALUMINUM/METAL	CORK	
ANTHOPHYLLITE			FOAM RUBBER	LATEX/RUBBER	
				PAINT/OTHER	19

COMMENTS:

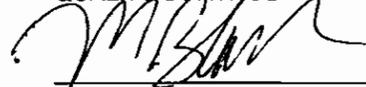
SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/17/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
 REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-31 LAB ID: 920732
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO
 APPEARANCE: BLACK SOFT BITUMINOUS WITH FIBERS

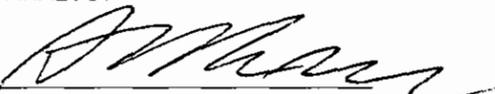
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSOTILE	<1	CELLULOSE	1	VERMICULITE/MICA		BITUMEN/TAR	90
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	5
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	4

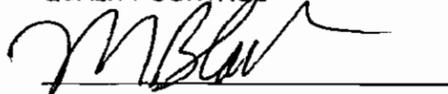
COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
 REPORT 1 OF 1

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-32 LAB ID: 920733
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO
 APPEARANCE: BLACK SOFT GUMMY

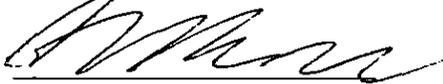
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	1	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	90
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	9

COMMENTS:

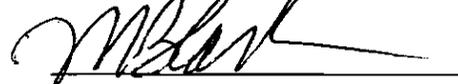
SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
 REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-33 LAB ID: 920734
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO
 APPEARANCE: BLACK SOFT GUMMY

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	1	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	90
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	9

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
SAMPLE FIELD ID: 234-34 LAB ID: 920735
SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 1+2 NO. OF LAYERS: 2
APPEARANCE: 1. GRAY SOFT FIBROUS; 2. LIGHT GRAY HARD SILTY WITH FIBERS

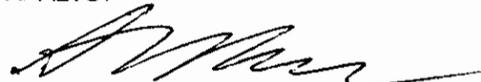
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	30	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	70

COMMENTS:

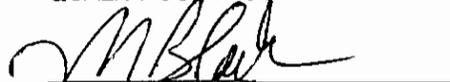
SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-35 LAB ID: 920736
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 1+2 NO. OF LAYERS: 2
 APPEARANCE: 1. GRAY SOFT FIBROUS; 2. LIGHT GRAY HARD SILTY WITH FIBERS

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS	NONASBESTOS FIBERS	NONFIBROUS COMPONENTS	OTHER COMPONENTS
CHRYSTOTILE	CELLULOSE 25	VERMICULITE/MICA	BITUMEN/TAR
AMOSITE	GLASS FIBERS	PERLITE	SAND/AGGR.
CROCIDOLITE	SYNTHETICS	EXPANDED GLASS	GLUE/CAULK
TREMOLITE	WOLLASTONITE	SYNTHETIC FOAM	VINYL
ACTINOLITE	TALC	ALUMINUM/METAL	CORK
ANTHOPHYLLITE		FOAM RUBBER	LATEX/RUBBER
			PAINT/OTHER 75

COMMENTS:

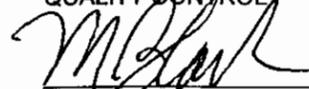
SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-36 LAB ID: 920737
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 1+2 NO. OF LAYERS: 2
 APPEARANCE: 1. GRAY SOFT FIBROUS; 2. LIGHT GRAY HARD SILTY WITH FIBERS

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	20	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	80

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-37 LAB ID: 920738
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO
 APPEARANCE: CREAM POWDERY WITH FIBERS AND MICA

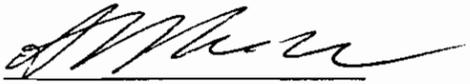
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	15	VERMICULITE/MICA	15	BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	70

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. 1 (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-38 LAB ID: 920739
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO
 APPEARANCE: CREAM POWDERY WITH FIBERS AND MICA

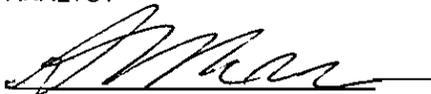
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS	NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	15	VERMICULITE/MICA	10	BITUMEN/TAR
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL
ACTINOLITE		TALC		ALUMINUM/METAL		CORK
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER
						PAINT/OTHER
						75

COMMENTS:

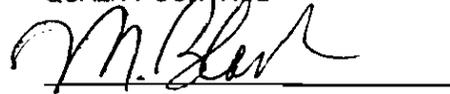
SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
SAMPLE FIELD ID: 234-39 LAB ID: 920740
SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO
APPEARANCE: CREAM POWDERY WITH FIBERS AND MICA

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	20	VERMICULITE/MICA	10	BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	70

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-40 LAB ID: 920741
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY SOFT POWDERY TO FIBROUS WITH CANVAS AND PAINT

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS	OTHER COMPONENTS
CHRYBOTILE	20	CELLULOSE	30	VERMICULITE/MICA	BITUMEN/TAR
AMOSITE		GLASS FIBERS	3	PERLITE	SAND/AGGR.
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS	GLUE/CAULK
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM	VINYL
ACTINOLITE		TALC		ALUMINUM/METAL	CORK
ANTHOPHYLLITE				FOAM RUBBER	LATEX/RUBBER
					PAINT/OTHER 47

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
 REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-41 LAB ID: 920742
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY SOFT POWDERY TO FIBROUS WITH CANVAS AND PAINT

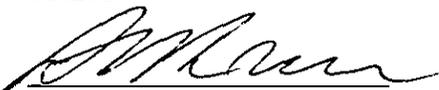
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE	25	CELLULOSE	15	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS	5	PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	55

COMMENTS:

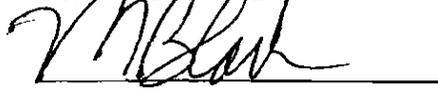
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 REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-42 LAB ID: 920743
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY SOFT POWDERY TO FIBROUS WITH CANVAS AND PAINT

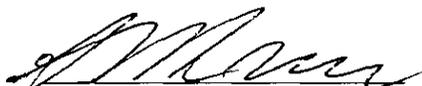
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSO TILE	25	CELLULOSE	30	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS	2	PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	43

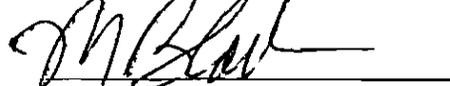
COMMENTS:

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 REPORT 1 OF 1

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-43 LAB ID: 920744-1
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 1 NO. OF LAYERS: 2
 APPEARANCE: CANVAS WITH MUD (WRAP LAYER)

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE	2	CELLULOSE	50	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	48

COMMENTS:

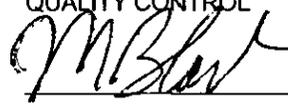
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ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-43 LAB ID: 920744-2
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 2 NO. OF LAYERS: 2
 APPEARANCE: GRAY SOFT POWDERY TO FIBROUS

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS	NONASBESTOS FIBERS	NONFIBROUS COMPONENTS	OTHER COMPONENTS
CHRYSTOLITE	CELLULOSE	VERMICULITE/MICA	BITUMEN/TAR
AMOSITE	GLASS FIBERS 15	PERLITE	SAND/AGGR.
CROCIDOLITE	SYNTHETICS	EXPANDED GLASS	GLUE/CAULK
TREMOLITE	WOLLASTONITE	SYNTHETIC FOAM	VINYL
ACTINOLITE	TALC	ALUMINUM/METAL	CORK
ANTHOPHYLLITE		FOAM RUBBER	LATEX/RUBBER
			PAINT/OTHER 85

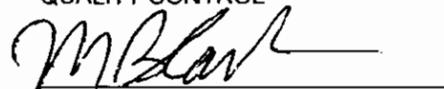
COMMENTS:

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ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99

SAMPLE FIELD ID: 234-44 LAB ID: 920745
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO
 APPEARANCE: GRAY SOFT POWDERY TO FIBROUS

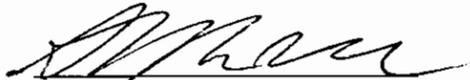
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSOITILE		CELLULOSE	1	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS	20	PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	79

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-45 LAB ID: 920746
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO
 APPEARANCE: GRAY SOFT POWDERY TO FIBROUS

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE		VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS	20	PERLITE		SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	80

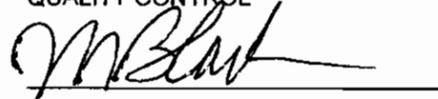
COMMENTS:

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ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME:	BAT ASSOCIATES	LAB JOB NO:	B9286-1
PROJECT NAME:	CHARLESTON NSY / 971001-13.03	DATE RECEIVED:	10/28/99
PROJECT NO:	L802Z.000.000	REPORT ISSUED:	11/30/99
SAMPLE FIELD ID:	234-46	LAB ID:	920747-1
SAMPLE INFO:		DATE ANALYZED:	11/18/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 1 NO. OF LAYERS: 2
APPEARANCE: TAN HARD RESILIENT TO GRANULAR

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS	NONASBESTOS FIBERS	NONFIBROUS COMPONENTS	OTHER COMPONENTS
CHRYSTOLE	CELLULOSE	VERMICULITE/MICA	BITUMEN/TAR
AMOSITE	GLASS FIBERS	PERLITE	SAND/AGGR. 35
CROCIDOLITE	SYNTHETICS	EXPANDED GLASS	GLUE/CAULK
TREMOLITE	WOLLASTONITE	SYNTHETIC FOAM	VINYL
ACTINOLITE	TALC	ALUMINUM/METAL	CORK
ANTHOPHYLLITE		FOAM RUBBER	LATEX/RUBBER
			PAINT/OTHER 65

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. NO OF LAYERS - INDICATES NUMBER OF SUBSAMPLES ANALYZED AND REPORTS ISSUED (UNLESS COMPOSITED).

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME:	BAT ASSOCIATES	LAB JOB NO:	B9286-1
PROJECT NAME:	CHARLESTON NSY / 971001-13.03	DATE RECEIVED:	10/28/99
PROJECT NO:	L802Z.000.000	REPORT ISSUED:	11/30/99
SAMPLE FIELD ID:	234-46	LAB ID:	920747-2
SAMPLE INFO:		DATE ANALYZED:	11/18/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 2 NO. OF LAYERS: 2
APPEARANCE: BLACK SOFT BITUMINOUS WITH FIBERS

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS	NONFIBROUS COMPONENTS	OTHER COMPONENTS	
CHRYSOITILE	6	CELLULOSE	VERMICULITE/MICA	BITUMEN/TAR	90
AMOSITE		GLASS FIBERS	PERLITE	SAND/AGGR.	
CROCIDOLITE		SYNTHETICS	EXPANDED GLASS	GLUE/CAULK	
TREMOLITE		WOLLASTONITE	SYNTHETIC FOAM	VINYL	
ACTINOLITE		TALC	ALUMINUM/METAL	CORK	
ANTHOPHYLLITE			FOAM RUBBER	LATEX/RUBBER	
				PAINT/OTHER	4

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. NO OF LAYERS - INDICATES NUMBER OF SUBSAMPLES ANALYZED AND REPORTS ISSUED (UNLESS COMPOSITED).

ANALYST


ALEKSEY REZNIK

QUALITY CONTROL


MICHAEL BLACK

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-47 LAB ID: 920748-1
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 1 NO. OF LAYERS: 2
 APPEARANCE: TAN HARD RESILIENT TO GRANULAR

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS	NONASBESTOS FIBERS	NONFIBROUS COMPONENTS	OTHER COMPONENTS
CHRYSTOLE	CELLULOSE	VERMICULITE/MICA	BITUMEN/TAR
AMOSITE	GLASS FIBERS	PERLITE	SAND/AGGR. 35
CROCIDOLITE	SYNTHETICS	EXPANDED GLASS	GLUE/CAULK
TREMOLITE	WOLLASTONITE	SYNTHETIC FOAM	VINYL
ACTINOLITE	TALC	ALUMINUM/METAL	CORK
ANTHOPHYLLITE		FOAM RUBBER	LATEX/RUBBER
			PAINT/OTHER 65

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. NO OF LAYERS - INDICATES NUMBER OF SUBSAMPLES ANALYZED AND REPORTS ISSUED (UNLESS COMPOSITED).

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-47 LAB ID: 920748-2
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: YES LAYER NO: 2 NO. OF LAYERS: 2
 APPEARANCE: BLACK SOFT BITUMINOUS WITH FIBERS

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS	NONFIBROUS COMPONENTS	OTHER COMPONENTS
CHRYSTOLE	8	CELLULOSE	VERMICULITE/MICA	BITUMEN/TAR 90
AMOSITE		GLASS FIBERS	PERLITE	SAND/AGGR.
CROCIDOLITE		SYNTHETICS	EXPANDED GLASS	GLUE/CAULK
TREMOLITE		WOLLASTONITE	SYNTHETIC FOAM	VINYL
ACTINOLITE		TALC	ALUMINUM/METAL	CORK
ANTHOPHYLLITE			FOAM RUBBER	LATEX/RUBBER
				PAINT/OTHER 2

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. 1 (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. NO OF LAYERS - INDICATES NUMBER OF SUBSAMPLES ANALYZED AND REPORTS ISSUED (UNLESS COMPOSITED).

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME:	BAT ASSOCIATES	LAB JOB NO:	B9286-1
PROJECT NAME:	CHARLESTON NSY / 971001-13.03	DATE RECEIVED:	10/28/99
PROJECT NO:	L802Z.000.000	REPORT ISSUED:	11/30/99
SAMPLE FIELD ID:	234-48	LAB ID:	920749
SAMPLE INFO:		DATE ANALYZED:	11/18/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY SOFT FIBROUS TO GRANULAR TO POWDERY WITH PAINT

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSOTILE		CELLULOSE	30	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS	30	PERLITE	30	SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	10

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
 REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-49 LAB ID: 920750
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO
 APPEARANCE: GRAY SOFT FIBROUS TO GRANULAR TO POWDERY WITH PAINT

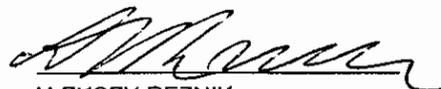
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS	NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS
CHRYSTOLE	CELLULOSE	30	VERMICULITE/MICA	30	BITUMEN/TAR
AMOSITE	GLASS FIBERS	30	PERLITE		SAND/AGGR.
CROCIDOLITE	SYNTHETICS		EXPANDED GLASS		GLUE/CAULK
TREMOLITE	WOLLASTONITE		SYNTHETIC FOAM		VINYL
ACTINOLITE	TALC		ALUMINUM/METAL		CORK
ANTHOPHYLLITE			FOAM RUBBER		LATEX/RUBBER
				PAINT/OTHER	10

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. 1 (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

**POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
SAMPLE FIELD ID: 234-50 LAB ID: 920751
SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: BROWN HARD RESILIENT TO GRANULAR WITH FIBERS AND BLACK MASTIC

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE	5	CELLULOSE		VERMICULITE/MICA		BITUMEN/TAR	3
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	35
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE	1	SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	56

COMMENTS: 7% CHRYSTOLE IN BLACK MASTIC

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch 1 (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
SAMPLE FIELD ID: 234-51 LAB ID: 920752
SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: BROWN-GRAY HARD RESILIENT TO GRANULAR WITH FIBERS AND BLACK MASTIC

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE	2	CELLULOSE		VERMICULITE/MICA		BITUMEN/TAR	3
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	35
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE	2	SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC	1	ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	57

COMMENTS: **5% CHRYSTOLE IN BLACK MASTIC**

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. 1 (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-52 LAB ID: 920753
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY SOFT FIBROUS TO GRANULAR TO POWDERY WITH PAINT

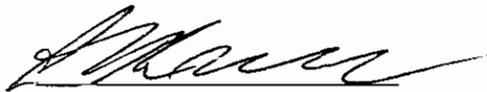
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSOITILE		CELLULOSE	25	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS	25	PERLITE	40	SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	10

COMMENTS:

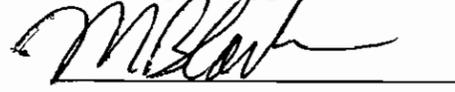
SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
 REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-53 LAB ID: 920754
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY SOFT FIBROUS TO GRANULAR TO POWDERY WITH PAINT

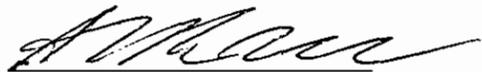
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYBOTILE		CELLULOSE	40	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS	30	PERLITE	20	SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	10

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. 1 (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-54 LAB ID: 920755
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY SOFT FIBROUS TO GRANULAR TO POWDERY WITH PAINT

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOTILE		CELLULOSE	40	VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS	30	PERLITE	20	SAND/AGGR.	
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	10

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY. REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-55 LAB ID: 920756
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: WHITE HARD SILTY WITH MICA (J/C)

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS	NONASBESTOS FIBERS	NONFIBROUS COMPONENTS	OTHER COMPONENTS
CHRYBOTILE	CELLULOSE 3	VERMICULITE/MICA 7	BITUMEN/TAR
AMOSITE	GLASS FIBERS	PERLITE	SAND/AGGR.
CROCIDOLITE	SYNTHETICS	EXPANDED GLASS	GLUE/CAULK
TREMOLITE	WOLLASTONITE	SYNTHETIC FOAM	VINYL
ACTINOLITE	TALC	ALUMINUM/METAL	CORK
ANTHOPHYLLITE		FOAM RUBBER	LATEX/RUBBER
			PAINT/OTHER 90

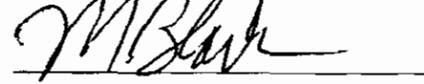
COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
 REPORT 1 OF 1

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME:	BAT ASSOCIATES	LAB JOB NO:	B9286-1
PROJECT NAME:	CHARLESTON NSY / 971001-13.03	DATE RECEIVED:	10/28/99
PROJECT NO:	L802Z.000.000	REPORT ISSUED:	11/30/99
SAMPLE FIELD ID:	234-56	LAB ID:	920757
SAMPLE INFO:		DATE ANALYZED:	11/18/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY HARD RESILIENT TO GRANULAR WITH GLUE

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS		NONFIBROUS COMPONENTS		OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE		VERMICULITE/MICA		BITUMEN/TAR	
AMOSITE		GLASS FIBERS		PERLITE		SAND/AGGR.	30
CROCIDOLITE		SYNTHETICS		EXPANDED GLASS		GLUE/CAULK	5
TREMOLITE		WOLLASTONITE		SYNTHETIC FOAM		VINYL	
ACTINOLITE		TALC		ALUMINUM/METAL		CORK	
ANTHOPHYLLITE				FOAM RUBBER		LATEX/RUBBER	
						PAINT/OTHER	65

COMMENTS:

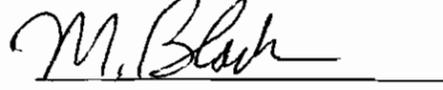
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ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-57 LAB ID: 920758
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY HARD RESILIENT TO GRANULAR WITH GLUE

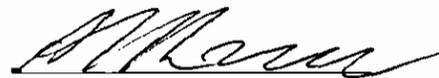
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS	NONFIBROUS COMPONENTS	OTHER COMPONENTS
CHRYSTOTILE		CELLULOSE	VERMICULITE/MICA	BITUMEN/TAR
AMOSITE		GLASS FIBERS	PERLITE	SAND/AGGR. 30
CROCIDOLITE		SYNTHETICS	EXPANDED GLASS	GLUE/CAULK 5
TREMOLITE		WOLLASTONITE	SYNTHETIC FOAM	VINYL
ACTINOLITE		TALC	ALUMINUM/METAL	CORK
ANTHOPHYLLITE			FOAM RUBBER	LATEX/RUBBER
				PAINT/OTHER 65

COMMENTS:

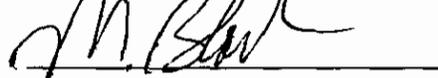
SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 783, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
 REPORT 1 OF 1

ANALYST



ALEKSEY REZNIK

QUALITY CONTROL



MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE ANALYSIS REPORT

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-58 LAB ID: 920759
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO

APPEARANCE: GRAY SOFT FIBROUS TO GRANULAR TO POWDERY WITH PAINT

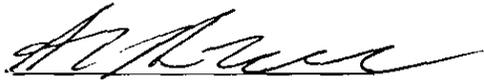
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS	NONASBESTOS FIBERS	NONFIBROUS COMPONENTS	OTHER COMPONENTS
CHRYSTOTILE	CELLULOSE 40	VERMICULITE/MICA	BITUMEN/TAR
AMOSITE	GLASS FIBERS 30	PERLITE 20	SAND/AGGR.
CROCIDOLITE	SYNTHETICS	EXPANDED GLASS	GLUE/CAULK
TREMOLITE	WOLLASTONITE	SYNTHETIC FOAM	VINYL
ACTINOLITE	TALC	ALUMINUM/METAL	CORK
ANTHOPHYLLITE		FOAM RUBBER	LATEX/RUBBER
			PAINT/OTHER 10

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
 REPORT 1 OF 1

ANALYST


 ALEKSEY REZNIK

QUALITY CONTROL


 MICHAEL BLACK

PLM IS NOT CONSISTENTLY RELIABLE IN DETECTING SMALL CONCENTRATION OF ASBESTOS IN FLOOR TILES AND SIMILAR NONFRIABLE MATERIALS. QUANTITATIVE TEM IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO GET THE CONCLUSIVE ASBESTOS CONTENT. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL AND NOT WITHOUT WRITTEN APPROVAL OF THE LABORATORY. THIS REPORT SHALL NOT BE USED TO CLAIM ENDORSEMENT BY NVLAP OR ANY AGENCY OF U.S. GOVERNMENT.

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 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z.000.000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-59 LAB ID: 920760
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO
 APPEARANCE: BLACK SOFT GUMMY WITH FIBERS

RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS	NONASBESTOS FIBERS	NONFIBROUS COMPONENTS	OTHER COMPONENTS
CHRYSTOLE	CELLULOSE 1	VERMICULITE/MICA	BITUMEN/TAR
AMOSITE	GLASS FIBERS	PERLITE	SAND/AGGR.
CROCIDOLITE	SYNTHETICS	EXPANDED GLASS	GLUE/CAULK 90
TREMOLITE	WOLLASTONITE	SYNTHETIC FOAM	VINYL
ACTINOLITE	TALC	ALUMINUM/METAL	CORK
ANTHOPHYLLITE		FOAM RUBBER	LATEX/RUBBER
			PAINT/OTHER 9

COMMENTS:

SAMPLE WAS ANALYZED BY PLM USING DISPERSION STAINING TECHNIQUES IN ACCORDANCE WITH U.S. EPA METHOD 40CFR Ch. I (7-1-92) PT. 763, SUBPT. F, APP. A. LAST CALIBRATION OF EQUIPMENT WAS PERFORMED ON: 11/18/99 FOR ALL HETEROGENEOUS AND LAYERED SAMPLES EASILY SEPARATED INTO SUBLAYERS, EACH LAYER IS ANALYZED SEPARATELY.
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**POLARIZED LIGHT MICROSCOPY (PLM)
 BULK SAMPLE ANALYSIS REPORT**

CLIENT NAME: BAT ASSOCIATES LAB JOB NO: B9286-1
 PROJECT NAME: CHARLESTON NSY / 971001-13.03 DATE RECEIVED: 10/28/99
 PROJECT NO: L802Z,000,000 REPORT ISSUED: 11/30/99
 SAMPLE FIELD ID: 234-60 LAB ID: 920761
 SAMPLE INFO: DATE ANALYZED: 11/18/99

SAMPLE DESCRIPTION

LAYERED: NO
 APPEARANCE: CREAM HARD RESILIENT WITH BLACK MASTIC

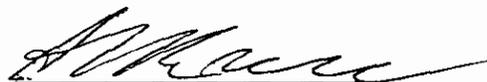
RESULT OF ANALYSIS IN VOLUME PERCENTAGE (BY VISUAL ESTIMATE)

ASBESTOS FIBERS		NONASBESTOS FIBERS	NONFIBROUS COMPONENTS	OTHER COMPONENTS	
CHRYSTOLE		CELLULOSE	VERMICULITE/MICA	BITUMEN/TAR	
AMOSITE		GLASS FIBERS	PERLITE	SAND/AGGR.	
CROCIDOLITE		SYNTHETICS	EXPANDED GLASS	GLUE/CAULK	5
TREMOLITE		WOLLASTONITE	SYNTHETIC FOAM	VINYL	90
ACTINOLITE		TALC	ALUMINUM/METAL	CORK	
ANTHOPHYLLITE			FOAM RUBBER	LATEX/RUBBER	
				PAINT/OTHER	5

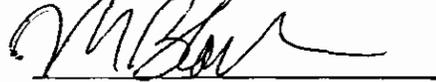
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CHAIN OF CUSTODY FORM

2 of 2

BAT PROJECT CONTACT DOUGLAS J. MILTON	
BAT JOB NAME Charleston Naval Shipyard	BAT JOB NO. 971001 TASK NO. 13.03
ANALYSIS REQUESTED <input checked="" type="checkbox"/> PLM <input type="checkbox"/> PCM <input type="checkbox"/> AAS For Lead Content <input type="checkbox"/> OTHER _____	
CHECK ONE: <input type="checkbox"/> ROUTINE <input checked="" type="checkbox"/> ROUTINE - FAX (HANDWRITTEN) AS SOON AS POSSIBLE <input type="checkbox"/> RUSH - FAX (HANDWRITTEN) AS SOON AS POSSIBLE	
SAMPLE ID	SAMPLE ID
1. 234-1 <i>FB</i>	16. 234-60 <i>FB</i>
2. 234-46 <i>FB</i>	17. 234-21 <i>FB</i>
3. 234-47 <i>FB</i>	18. 234-22 <i>FB</i>
4. 234-3 <i>FB</i>	19. 234-23 <i>FB</i>
5. 234-50 <i>FB</i>	20. 234-24 <i>FB</i>
6. 234-51 <i>FB</i>	21. 234-25 <i>FB</i>
7. 234-13 <i>FB</i>	22. 234-26 <i>FB</i>
8. 234-56 <i>FB</i>	23. 234-27 <i>FB</i>
9. 234-57 <i>FB</i>	24. 234-28 <i>FB</i>
10. 234-15 <i>FB</i>	25. 234-32 <i>FB</i>
11. 234-16 <i>FB</i>	26. 234-33 <i>FB</i>
12. 234-14 <i>FB</i>	27. 234-59 <i>FB</i>
13. 234-17 <i>FB</i>	28. 234-29 <i>FB</i>
14. 234-18 <i>FB</i>	29. 234-30 <i>FB</i>
15. 234-19 <i>FB</i>	30. 234-31 <i>FB</i>
SPECIAL INSTRUCTIONS: Navy Project Rates	
Relinquished by: <i>Joshie Bell</i>	Received by: <i>Mrs. Ori Williams</i>
Date: <i>10/27/99</i> Time: <i>0500</i>	Date: _____ Time: _____

23 1356 (FB) AR 10/28/99 1400

BAT

BAT Associates, Inc.
ENGINEERS • SCIENTISTS • PLANNERS

5151 Brook Hollow Pkwy., Suite 250
Norcross, GA 30071
Phone: (770) 242-3908
Fax: (770) 242-3912

CHAIN OF CUSTODY FORM

1 of 2

BAT PROJECT CONTACT DOUGLAS J. MILTON	
BAT JOB NAME Charleston Naval Shipyard	BAT JOB NO. 971001 TASK NO. 13.03
ANALYSIS REQUESTED <input checked="" type="checkbox"/> PLM <input type="checkbox"/> PCM <input type="checkbox"/> AAS For Lead Content <input type="checkbox"/> OTHER _____	
CHECK ONE: <input type="checkbox"/> ROUTINE <input checked="" type="checkbox"/> ROUTINE - FAX (HANDWRITTEN) AS SOON AS POSSIBLE <input type="checkbox"/> RUSH - FAX (HANDWRITTEN) AS SOON AS POSSIBLE	
SAMPLE ID	SAMPLE ID
1. 234-37 <i>FB</i>	16. 234-9 <i>FB</i>
2. 234-38 <i>FB</i>	17. 234-10 <i>FB</i>
3. 234-39 <i>FB</i>	18. 234-11 <i>FB</i>
4. 234-2 <i>FB</i>	19. 234-34 <i>FB</i>
5. 234-48 <i>FB</i>	20. 234-35 <i>FB</i>
6. 234-49 <i>FB</i>	21. 234-36 <i>FB</i>
7. 234-5 <i>FB</i>	22. 234-40 <i>FB</i>
8. 234-20 <i>FB</i>	23. 234-41 <i>FB</i>
9. 234-55 <i>FB</i>	24. 234-42 <i>FB</i>
10. 234-12 <i>FB</i>	25. 234-43 <i>FB</i>
11. 234-53 <i>FB</i>	26. 234-44 <i>FB</i>
12. 234-54 <i>FB</i>	27. 234-45 <i>FB</i>
13. 234-7 <i>FB</i>	28. 234-4 <i>FB</i>
14. 234-8 <i>FB</i>	29. 234-6 <i>FB</i>
15. 234-58 <i>FB</i>	30. 234-52 <i>FB</i>
SPECIAL INSTRUCTIONS: Navy Project Rates	
Relinquished by: <i>Joshe Bell</i>	Received by: <i>Oré Williams</i>
Date: <i>10/26/99</i> Time: <i>0500</i>	Date: _____ Time: _____

LS

1350

(FB)

10/28/99 14:00

**POLARIZED LIGHT MICROSCOPY (PLM)
BULK SAMPLE SUMMARY**

EPA Method 600/R-93/116. "Method for Determination of Asbestos in Bulk Building Material."

CLIENT NAME: BAT Associates, Inc. AES JOB #: B9372.2
PROJECT NAME: Charleston Naval Shipyard / 971001 Task # 13.03 DATE RECEIVED: 10/28/99
MICROANALYST: Arkadiy Gendlin DATE ANALYZED: 11/01/99

CLIENT I.D.	AES LAB NUMBER	SAMPLE LOCATION	% OF ASBESTOS	TYPE OF ASBESTOS	COMMENTS
234-QC1	140281	n/a	<1%	Chrysotile	1
234-QC2	140282	n/a	ND		
234-QC3	140283	n/a	ND		
234-QC4	140284	n/a	ND		
234-QC5	140285	n/a	ND		

ND - None Detected

1 - Bitumen Contains 10% Chrysotile. Floor Tile Does Not Contain Asbestos.

Approved By: *J. Subitosa*

Date: 11-2-99

PLM is not consistently reliable to detecting small concentrations of asbestos in floor tiles and similar nonfriable materials. Quantitative TEM is currently the only method that can be used to get the conclusive asbestos count. This report relates only to the items tested. This report shall not be reproduced except in full. This report shall not be used to claim endorsement by NVLAP or any agency of the U.S. government.

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CHAIN OF CUSTODY FORM

BAT PROJECT CONTACT		DOUGLAS J. MILTON	
BAT JOB NAME Charleston Naval Shipyard		BAT JOB NO. 971001 TASK NO. 13.03	
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CHECK ONE: <input type="checkbox"/> ROUTINE			
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<input type="checkbox"/> RUSH - FAX (HANDWRITTEN)		AS SOON AS POSSIBLE	
SAMPLE ID		SAMPLE ID	
1.	234-QC1	FB	16.
2.	234-QC#2	FB	17.
3.	234-QC3	FB	18.
4.	234-QC4	FB	19.
5.	234-QC5	FB	20.
6.			21.
7.			22.
8.			23.
9.			24.
10.			25.
11.			26.
12.			27.
13.			28.
14.			29.
15.			30.
SPECIAL INSTRUCTIONS: Navy Project Rates			
Relinquished by: <i>Lodie Bell</i>		Received by: <i>M. Karanic</i>	
Date: <i>10/23/99</i>	Time: <i>0500</i>	Date: <i>10/23/99</i>	Time: <i>14305</i>

(FB)

1405 (FB)