

# Roanoke County Schools

## Three Year AHERA Reinspection

Cave Spring High School  
Facility 002

Reinspection Date: February 5, 2008

*Baratta & Associates, Inc*  
PO Box 293  
Vinton, Virginia 24179  
540-890-4875

Michael Baratta, PE  
Virginia Asbestos Inspector License: 3303-000065  
Virginia Asbestos Management Planner License: 3304-000208

**Baratta & Associates, Inc.**

Virginia Department of Education  
Energy and Facilities Service

LEA Roanoke County Schools  
School Cave Spring High School  
Building Main

**SCHOOL BUILDINGS**

Building Name	Location	Check here for the presence of:				No ACBM
		ACBM		Suspect ACBM		
		Friable	Non- friable	Friable	Non- friable	
Cave Spring High School	3712 Chaparral Drive Roanoke, VA 24018	X	X			

Inspector:

Name: Michael Baratta Signature  Date 2-9-08

Accreditation Number: 3303 000065 Agency: Virginia DPOR


Virginia Department of Education  
Energy and Facilities Services

LEA Roanoke County Schools  
School: Cave Spring High School  
Building: \_\_\_\_\_

**DETERMINATION OF EACH  
SAMPLE AREA**

Some ambiguity existed in the HK report regarding the ACTs (03) and LICs (13). We resampled these as well as two (2) new LIC homogeneous areas (15 & 16). The asbestos containing floor tiles may have been replaced since the HK study. We ignored the HK Homogeneous Area floor tile designations (09, 10, 11 & 12) and created new homogenous areas for the tiles and mastics that now exist where old asbestos containing floor tiles were once shown. These new tiles and mastic are designated HA-17 17 thorough HA-22.

Homogeneous Area	Material	Sample Number	Location
03	ACT 12x12	03-1	Facility Workroom SW corner
		03-2	209 SW corner
13	LIC 2' x 2', parallel holes, perforated	13-1	Book storage, NE corner
		13-2	132, NE corner
15	LIC 2' x 2' random	15-1	303 center of room
		15-2	212, SW corner
16	LIC 2' x 2' parallel holes	16-1	Hall at 303
		16-2	Hall at 205
17	Floor tile 12"x12" white with light grey	17-1	113, SE corner
		17-2	120, SE corner
18	Tan mastic for HA-17	18-1	113, SE corner
		18-2	120, SE corner
19	Floor tile 12"x12" light grey with tan & blue	19-1	Bookkeeper W side
		19-2	Bookkeeper W side
20	Tan mastic for HA-19	20-1	Bookkeeper W side
		20-2	Bookkeeper W side
21	Floor tile 12"x12" tan	21-1	Bookkeeper at hall door
		21-2	Bookkeeper at hall door
22	Black mastic for HA-21	22-1	Bookkeeper at hall door
		22-2	Bookkeeper at hall door

Name: Michael Baratta Signature:  Date: 2/9/08  
Accreditation Number: 3303 000065 Agency: Virginia DPOR

HA-03 ACT 12"x12"  
 Sample 03-1, 03-2

HA-15 LIC 2'x2' random  
 Samples 15-1, 15-2

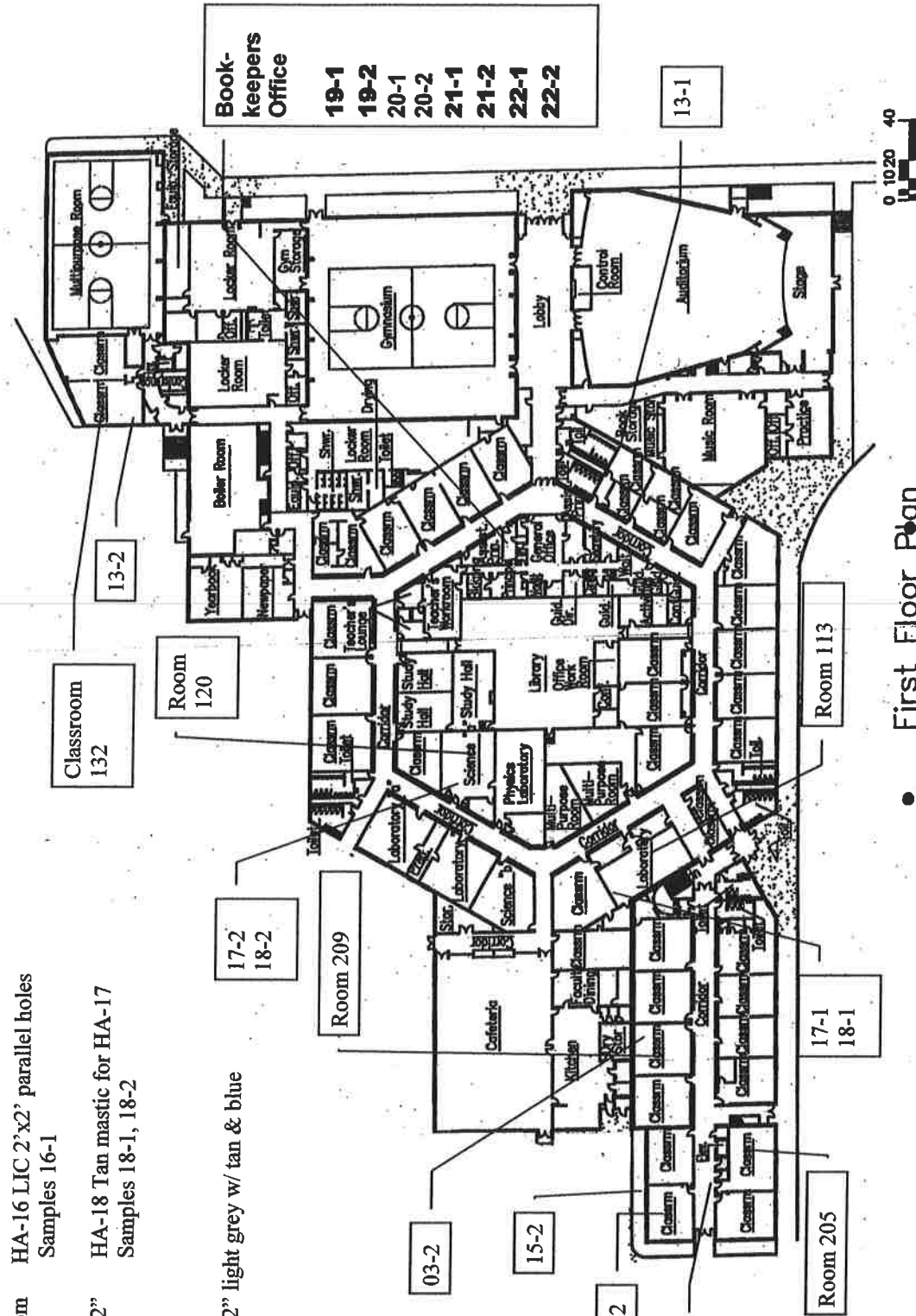
HA-17 Floor tile 12"x12"  
 White with light grey  
 Samples 17-1, 17-2

HA-19 Floor tile 12"x12" light grey w/ tan & blue  
 Samples 19-1, 19-2

HA-20 Tan mastic  
 for HA-19  
 Samples 20-1, 20-1

HA-21 Floor tile  
 12"x12" tan  
 Samples 21-1, 21-2

HA-22 Black mastic for HA-21  
 Samples 22-1, 22-2

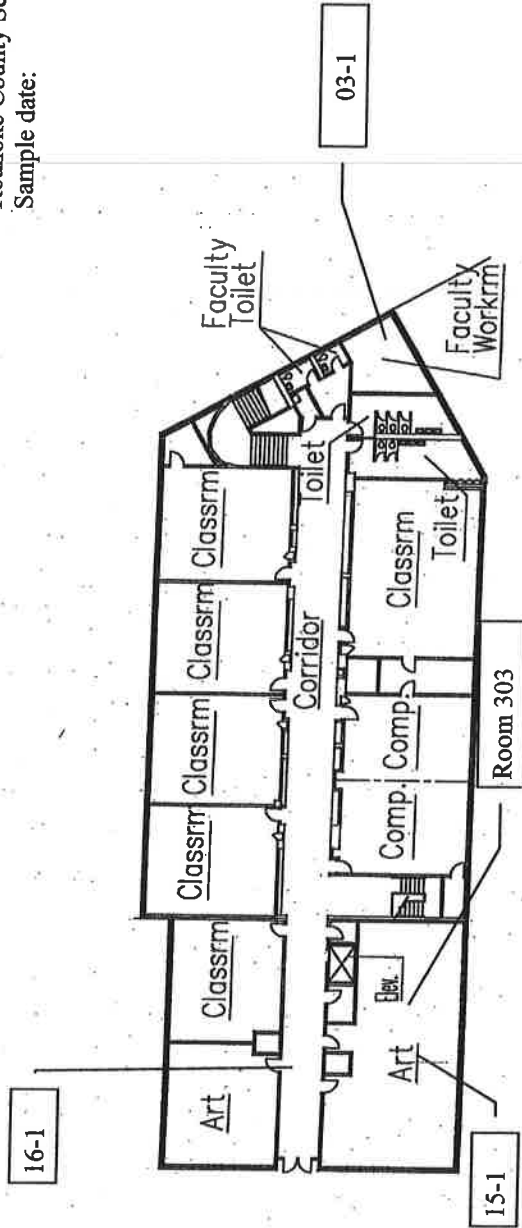


Positive samples in **bold**

● First Floor Plan

Building 002  
 Sample Locations  
 L001  
 February 5, 2008

AHERA Three Year Inspection  
 Cave Spring High School  
 Roanoke County Schools  
 Sample date:



**Second Floor Plan**

HA-03 ACT 12" x12"  
 Samples 03-1, 03-2

HA-15 LIC 2'x2' random  
 Samples 15-1, 15-2

HA-16 LIC 2'x2' parallel holes  
 Samples 16-1, 16-2

Virginia Department of Education  
Energy and Facilities Services

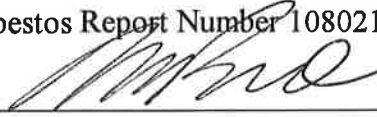
LEA Roanoke County Schools  
School: Cave Spring High School  
Building: \_\_\_\_\_  
Sample Date: February 5, 2008  
Analysis Date: \_\_\_\_\_  
Analysis Method: PLM EPA 6000/M4-82-020

**BULK SAMPLE ANALYSIS**

Homogeneous Area	Material	Sample Number	Asbestos Content
03	ACT 12x12	03-1	NAD
		03-2	NAD
13	LIC 2' x 2', parallel holes, perforated	13-1	NAD
		13-2	NAD
15	LIC 2' x 2' random	15-1	NAD
		15-2	NAD
16	LIC 2' x 2' parallel holes	16-1	NAD
		16-2	NAD
17	Floor tile 12"x12" white with light grey	17-1	NAD
		17-2	NAD
18	Tan mastic for HA-17	18-1	NAD
		18-2	NAD
19	Floor tile 12"x12" light grey with tan & blue	19-1	2 % chrysotile
		19-2	2 % chrysotile
20	Tan mastic for HA-19	20-1	NAD
		20-2	NAD
21	Floor tile 12"x12" tan	21-1	2 % chrysotile
		21-2	2 % chrysotile
22	Black mastic for HA-21	22-1	10 % chrysotile
		22-2	10 % chrysotile

NAD – no asbestos detected

See attached AmeriSci PLM Bulk Asbestos Report Number 108021180

Name: Michael Baratta Signature  Date 2-9-08  
Accreditation Number: 3303 000065 Agency: Virginia DPOR



**AmeriSci Richmond**

13635 GENITO ROAD  
MIDLOTHIAN, VIRGINIA 23112  
TEL: (804) 763-1200 • FAX: (804) 763-1800

**PLM Bulk Asbestos Report**

Baratta & Associates, Inc.  
Attn: Michael Baratta  
1150 Shady Run Road  
  
Vinton, VA 24179

**Date Received** 02/06/08    **AmeriSci Job #** 108021180  
**Date Examined** 02/06/08    **P.O. #**  
**Page** 1 of 4  
**RE: L002; Cove Spring HS; Ahera**

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
03-1 Location: Acoustic Ceiling Tile	108021180-01	No	NAD (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> White/Gray, Homogeneous, Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Cellulose 25 %, Fibrous glass 55 %, Non-fibrous 20 %			
03-2 Location: Acoustic Ceiling Tile	108021180-02	No	NAD (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> White/Gray, Heterogeneous, Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Cellulose 25 %, Fibrous glass 55 %, Non-fibrous 20 %			
13-1 Location: Lay In Ceiling Parallel Perforated	108021180-03	No	NAD (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> White/Beige, Heterogeneous, Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Cellulose 45 %, Fibrous glass 25 %, Non-fibrous 30 %			
13-2 Location: Lay In Ceiling Parallel Perforated	108021180-04	No	NAD (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> White/Gray, Heterogeneous, Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Cellulose 30 %, Fibrous glass 45 %, Non-fibrous 25 %			
15-1 Location: Lay In Ceiling Random	108021180-05	No	NAD (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> White/Beige, Heterogeneous, Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Cellulose 30 %, Fibrous glass 45 %, Non-fibrous 25 %			

See Reporting notes on last page

Client Name: Baratta &amp; Associates, Inc.

**PLM Bulk Asbestos Report**

L002; Cove Spring HS; Ahera

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
15-2 Location: Lay In Ceiling Random	108021180-06	No	NAD (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> White/Beige, Heterogeneous, Fibrous, Bulk Material			
<b>Asbestos Types:</b>			
<b>Other Material:</b> Cellulose 45 %, Fibrous glass 30 %, Non-fibrous 25 %			
16-1 Location: Lay In Ceiling Parallel	108021180-07	No	NAD (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> White/Beige, Heterogeneous, Fibrous, Bulk Material			
<b>Asbestos Types:</b>			
<b>Other Material:</b> Cellulose 45 %, Fibrous glass 30 %, Non-fibrous 25 %			
16-2 Location: Lay In Ceiling Parallel	108021180-08	No	NAD (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> White/Beige, Heterogeneous, Fibrous, Bulk Material			
<b>Asbestos Types:</b>			
<b>Other Material:</b> Cellulose 50 %, Fibrous glass 25 %, Non-fibrous 25 %			
17-1 Location: Floor Tile White	108021180-09	No	NAD (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> White, Homogeneous, Non-Fibrous, Cementitious, Bulk Material			
<b>Asbestos Types:</b>			
<b>Other Material:</b> Non-fibrous 100 %			
17-2 Location: Floor Tile White	108021180-10	No	NAD (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> White, Homogeneous, Non-Fibrous, Cementitious, Bulk Material			
<b>Asbestos Types:</b>			
<b>Other Material:</b> Non-fibrous 100 %			
18-1 Location: Mastic For 17	108021180-11	No	NAD (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> Amber, Homogeneous, Non-Fibrous, Bulk Material			
<b>Asbestos Types:</b>			
<b>Other Material:</b> Non-fibrous 100 %			

See Reporting notes on last page



Client Name: Baratta &amp; Associates, Inc.

**PLM Bulk Asbestos Report**

L002; Cove Spring HS; Ahera

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
18-2 Location: Mastic For 17	108021180-12	No	NAD (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> Amber, Homogeneous, Non-Fibrous, Bulk Material			
<b>Asbestos Types:</b>			
<b>Other Material:</b> Non-fibrous 100 %			
19-1 Location: Floor Tile Light Grey	108021180-13	Yes	2 % (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> Ivory/Gray, Homogeneous, Non-Fibrous, Cementitious, Bulk Material			
<b>Asbestos Types:</b> Chrysotile 2.0 %			
<b>Other Material:</b> Non-fibrous 98 %			
19-2 Location: Floor Tile Light Grey	108021180-14	Yes	2 % (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> Ivory/Gray, Homogeneous, Non-Fibrous, Cementitious, Bulk Material			
<b>Asbestos Types:</b> Chrysotile 2.0 %			
<b>Other Material:</b> Non-fibrous 98 %			
20-1 Location: Mastic For 19	108021180-15	No	NAD (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> Tan, Homogeneous, Non-Fibrous, Bulk Material			
<b>Asbestos Types:</b>			
<b>Other Material:</b> Non-fibrous 100 %			
20-2 Location: Mastic For 19	108021180-16	No	NAD (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> Tan, Homogeneous, Non-Fibrous, Bulk Material			
<b>Asbestos Types:</b>			
<b>Other Material:</b> Cellulose 2 %, Non-fibrous 98 %			
21-1 Location: Floor Tile Tan	108021180-17	Yes	2 % (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> Lt.Beige, Homogeneous, Non-Fibrous, Cementitious, Bulk Material			
<b>Asbestos Types:</b> Chrysotile 2.0 %			
<b>Other Material:</b> Non-fibrous 98 %			

See Reporting notes on last page

Client Name: Baratta & Associates, Inc.

## PLM Bulk Asbestos Report

L002; Cove Spring HS; Ahera

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
21-2 Location: Floor Tile Tan	108021180-18	Yes	2 % (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> Lt.Beige, Homogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> Chrysotile 2.0 % <b>Other Material:</b> Non-fibrous 98 %			
22-1 Location: Mastic For 21	108021180-19	Yes	10 % (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 10.0 % <b>Other Material:</b> Non-fibrous 90 %			
22-2 Location: Mastic For 21	108021180-20	Yes	10 % (by CVES) by Donna M. Blackwell on 02/06/08
<b>Analyst Description:</b> Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 10.0 % <b>Other Material:</b> Non-fibrous 90 %			

**Reporting Notes:**

Analyzed by: Donna M. Blackwell *Donna M. Blackwell* Date 2/6/08  
 \*NAD = no asbestos detected, Detection Limit <1%, Reporting Limits: CVES = 1%, 400 Pt Ct = 0.25%, 1000 Pt Ct = 0.1%; "Present" or NVA = "No Visible Asbestos" are observations made during a qualitative analysis; NA = not analyzed; NA/PS = not analyzed / positive stop; PLM Bulk Asbestos Analysis by EPA 600/M4-82-020 per 40 CFR 763 (NVLAP Lab Code 101904-0) and ELAP PLM Analysis Protocol 198.1 for New York friable samples (198.6 for NOB samples)(NYSDOH ELAP Lab # 10984); CA ELAP Lab # 2508; Note: PLM is not consistently reliable in detecting asbestos in floor coverings and similar NOB materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing in New York State (also see EPA Advisory for floor tile, FR 59, 146, 38970, 8/1/94). NIST Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested.  
 Reviewed By: \_\_\_\_\_

**Baratta & Associates, Inc.**  
 P.O. Box 293  
 Vinton, Virginia

LEA Roanoke County Schools  
 School Cave Spring High School  
 Building \_\_\_\_\_

**REASSESSMENT OF MATERIALS**

Past or Initial Assessment: Hall-Kimbrell April 1989 Floor tiles 19 & 20 may be, in fact, the old HK floor tiles 09, 10 & 12. These were only found in the Bookkeeper Office. The majority of the older asbestos containing floor tile have been removed.

Homogeneous Area	Description	Past Assessment Category #	Reassessment Category #
02	Domestic HW fitting muds	Non-ACM	See 07
03	ACT 12"x 12	Non-ACM	Non-ACM
04	Chilled Water fitting muds	1	1
05	Heating Water fitting muds	Non-ACM	N/A
06	Domestic CW fitting muds	1	1
07	Domestic HW fitting muds	1	1
08	Drain fitting muds	1	1
09	Floor tiles, 12"x12"	5	removed
10	Floor tiles, 12"x12"	5	removed
11	Floor tiles, 9"x9"	Non-ACM	removed
12	Floor tiles, 12"x12"	5	removed
13	LIC	Non-ACM	Non-ACM
14	Other Fitting muds in boiler room	1	1
15	LIC 2' x 2' random	Not evaluated	Non-ACM
16	LIC 2' x 2' parallel holes	Not evaluated	Non-ACM
17	Floor tile 12"x12" white with light grey	Not evaluated	Non-ACM
18	Tan mastic for HA-17	Not evaluated	Non-ACM
19	Floor tile 12"x12" light grey with tan & blue	May be 09	5
20	Tan mastic for HA-19	Not evaluated	Non-ACM
21	Floor tile 12"x12" tan	May be 10	5
22	Black mastic for HA-21	Not evaluated	5

**AHERA - Physical Assessment Categories - 763.88(a)(2)(b)**

- 1 Damaged or significantly damaged TSI-ACBM
- 2 Damaged friable surfacing ACBM
- 3 Significantly damaged friable surfacing ACBM
- 4 Damaged or significantly damaged friable miscellaneous ACBM
- 5 ACBM with potential for damage
- 6 ACBM with potential for significant damage
- 7 Any remaining friable ACBM or friable suspect ACBM

Inspector:

Name: Michael Baratta Signature  Date 2-9-06

Accreditation Number: 3303 000065 Agency: Virginia DPOR

LOCATION OF ACBMs Cave Spring High School

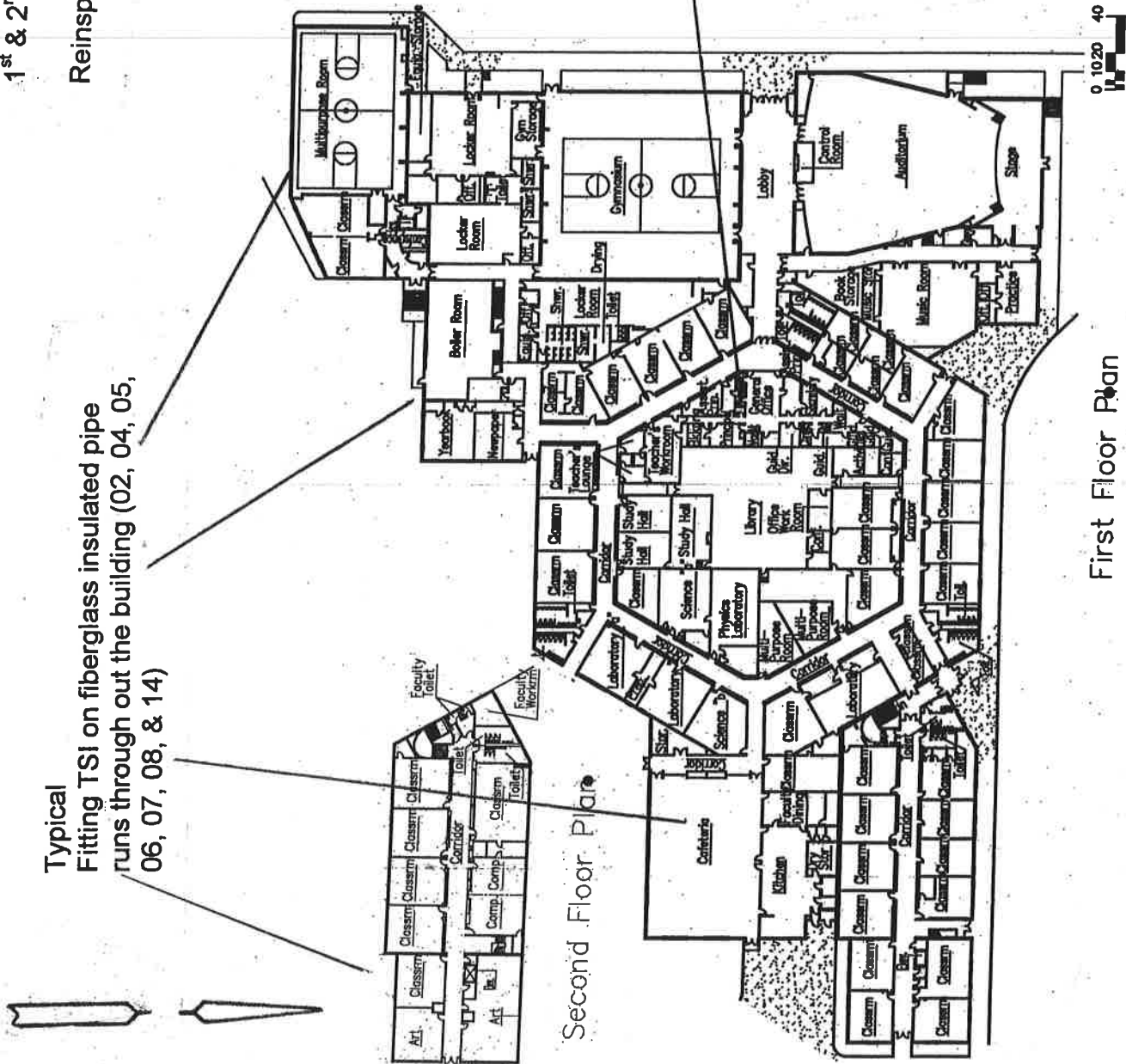
1<sup>st</sup> & 2<sup>nd</sup> Floors

Scale: see drawing

Reinspection Date: February 5, 2008

Typical Fitting TSI on fiberglass insulated pipe runs through out the building (02, 04, 05, 06, 07, 08, & 14)

ACM Floor Tile 12" x 12" light grey with tan & blue (19)  
ACM Floor Tile, 12"x12", tan (21)  
Black Mastic for HA-21 (22)  
In Bookkeepers Office



First Floor Plan

Second Floor Plan

Virginia Department of Education  
Energy and Facilities Service

LEA Roanoke County Schools  
School Cave Spring High School  
Building: \_\_\_\_\_

**RESPONSE ACTIONS  
RECOMMENDED**

Total cost to remove \$102,000

Each Location	Recommended Response Actions	Scheduled To Begin	Scheduled To Be Completed	Est. Cost To Remove
Floor tile in Bookkeeper Office (19, 20, 21 & 22) <sup>1</sup>	Seal small damaged areas at the door openings in the Bookkeepers Office. Maintain floor coverings until other needs require these floor coverings to be removed	none	none	2,000.00
Various fitting muds thought out the building <sup>2</sup>	Patch or repair damaged fitting muds with bridging encapsulant	none	none	\$100,000

- 1 Carpet was noted in the adjacent Assistant Principal's Office. We do not know if the carpet had been placed atop of the asbestos containing floor coverings
2. Some asbestos abatement appears to have taken place in the boiler room. Still, it is safer to assume all non-fiberglass fitting muds are ACMs. Many of the fittings are located in the overhead areas of the janitor closets where the likelihood of physical damage is minimal.

Management Planner:  
Name: Michael Baratta Signature  Date 2-9-08  
Accreditation Number: 3304 000208 Agency: Virginia DPOR

# ASBESTOS MANAGEMENT, OPERATIONS AND MAINTENANCE PLAN

Cave Spring High School  
February 7, 2008

This Asbestos Management Operations and Maintenance Plan is based on the three year AHERA Reinspection performed by Baratta & Associates, Inc on February 5, 2008. It covers procedures to be followed in dealing with the Asbestos-Containing Materials (ACMs) found in the Cave Spring High School.

## SUMMARY

None of the old asbestos ceiling treatments remain in the building.

A remnant of the old asbestos containing floor tile remains in the Bookkeepers Office. These floor coverings are non-friable. They do not currently present an asbestos related health risk to building occupants in their current condition.

Some of the pipe fittings are insulated with asbestos containing thermal system insulation. (TSI). A few are damaged, but most are in good condition. The products are mainly limited to the boiler room and to some of the unfinished janitor closets. Since these space are not regularly occupied by school personnel, these fittings do not present a significant health risk

## STAFF NOTIFICATION

The School should send all staff members a brief notice stating that Asbestos-Containing Materials exist in Bookkeepers office and in the mechanical and service areas of the facility.

## ACM IDENTIFICATION

The following products were found to be Asbestos-Containing Materials (ACMs):

HA Number	Material
04	Chilled Water fitting muds
06	Domestic CW fitting muds
07	Domestic HW fitting muds
08	Drain fitting muds
14	Other Fitting muds in boiler room
19	Floor tile 12"x12" light grey with tan & blue
21	Floor tile 12"x12" tan
22	Black mastic for HA-21

### **CARE OF THE FITTING MUDDS**

Repair the damaged fittings. Inform staff to be careful when working around the fittings. Report any further damage to the Principal.

Any patching, repair work or removal should be carried out by a licensed asbestos abatement contractor.

### **CARE OF THE FLOOR TILES**

Apply a patching or caulking compound to the damaged edges of the floor tiles in the door openings adjacent to the Bookkeepers Office.

No drilling, sanding, or other abrasive or penetrating activities shall be used on the asbestos containing floor tiles. To do so may release asbestos fibers into the environment.

The flooring is tough and non-friable. It is doubtful anything other than forceful vandalism will deteriorate this material to a point where significant fiber release will occur.

### **PERMIT REQUIREMENTS**

Before any work that may require the disturbance of the noted Asbestos Containing Materials is performed, maintenance personnel or contractors shall obtain an Asbestos Work Area Permit from the School System's Asbestos Program Manager.