

# Roanoke County Schools

## Three Year AHERA Reinspection

Cave Spring Middle School  
Facility 006

Reinspection Date:

February 15, 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 006 Cave Spring Middle School  
Building School


**SCHOOL BUILDINGS**

Building Name	Location	Check here for the presence of:				No ACBM
		ACBM		Suspect ACBM		
		Friable	Non- friable	Friable	Non- friable	
Cave Spring Middle School	488 Brambleton Avenue Roanoke VA 24018					
	001 Main Building	X	X			
	002 Shop	X	X			
	003 North Wing	X	X			
	004 Field House					Note 1

Note 1      The field house was demolished in 1998

Inspector:

Name: Michael Baratta

Signature 

Date

3/1/06

Accreditation Number: 3303 000065 Agency: Virginia DPOR

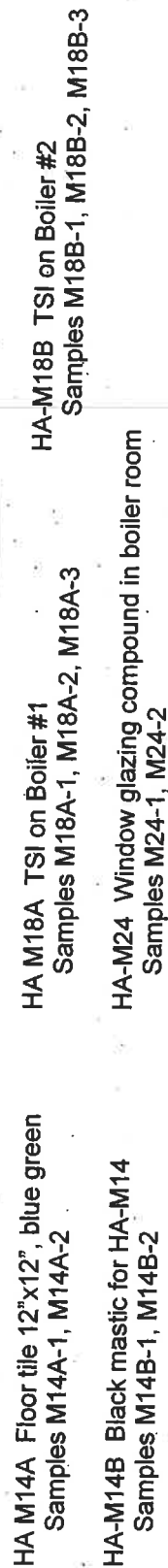
**DETERMINATION OF EACH  
SAMPLE AREA**

H-K reported HA-14 (floor tile 12"x12" blue green) to be negative. We subdivided this into the tile and mastic portions (M14A & M14B respectively) and resampled. We designated the mastic for HA-17 (ACT 12"x 12") HA-17A and sampled it (M17A-1 and M17A-2). It appeared, from the H-K data, that it might be possible to designate the TSI (HA-18) on Boiler #2 as a non-ACM. We obtained three (3) samples of the TSI on Boiler #1 (M18A and Boiler #2 (M18B) to evaluate the insulations. The H-K data was ambiguous regarding the LIC in the office area. We designated these as HA-23 and obtained two samples. Window glazing compounds were not deemed suspect in 1988. We took two samples of this compound from the boiler room (M24-1 & M24-2).

Homogeneous Area	Material	Sample Number	Location
<b>Main Building</b>			
M14A	Floor tile 12"x12", blue green	M14A-1	Room 32, center of S wall
		M14A-2	Room 32, center of E wall
M14B	Black mastic for HA-M14	M14B-1	Room 32, center of S wall
		M14B-2	Room 32, center of E wall
M17A	Brown mastic for ACT 12"x 12" (HA-17)	M17A-1	SE Gymnasium Stairs
		M17A-2	NE Gymnasium Stairs
M18A	TSI on Boiler #1	M18A-1	Boiler #1, NE corner
		M18A-2	Boiler #1, SW corner
		M18A-3	Boiler #1, center E side
M18B	TSI on Boiler #2	M18B-1	Boiler #2, SE corner
		M18B-2	Boiler #2, SW corner
		M18B-3	Boiler #2, NE corner
M23	LIC 2' x 2', random	M23-1	Reception, center of room
		M23-2	Bookkeeper, center of N wall
M24	Window glazing compound in boiler room	M24-1	Boiler room, E side
		M24-2	Boiler room, E side

Name: Michael Baratta Signature:  Date: 3/1/08  
Accreditation Number: 3303 000065 Agency: Virginia DPOR

Main Sample Locations  
L001  
February 15, 2008

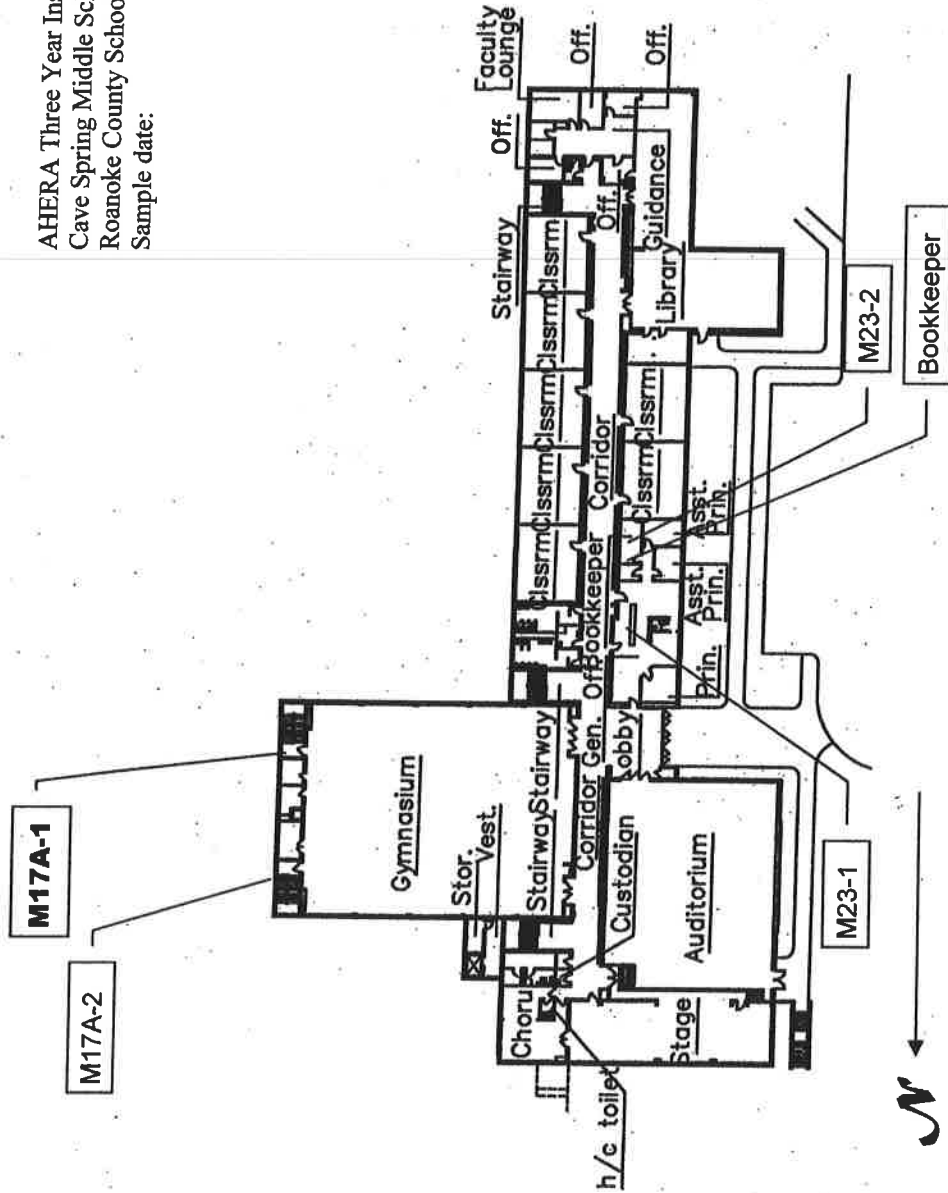


## ● Lower Floor Plan ●

0.816 32

AHERA Three Year Inspection  
 Cave Spring Middle School (006)  
 Roanoke County Schools  
 Sample date:  
 February 15, 2008

Main Building 001  
 Sample Locations  
 L001

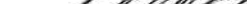


# •Upper Floor Plan•

HA M17A Brown Mastic for ACT 12" x 12" (HA-17)  
 Samples M17A-1, M17A-2

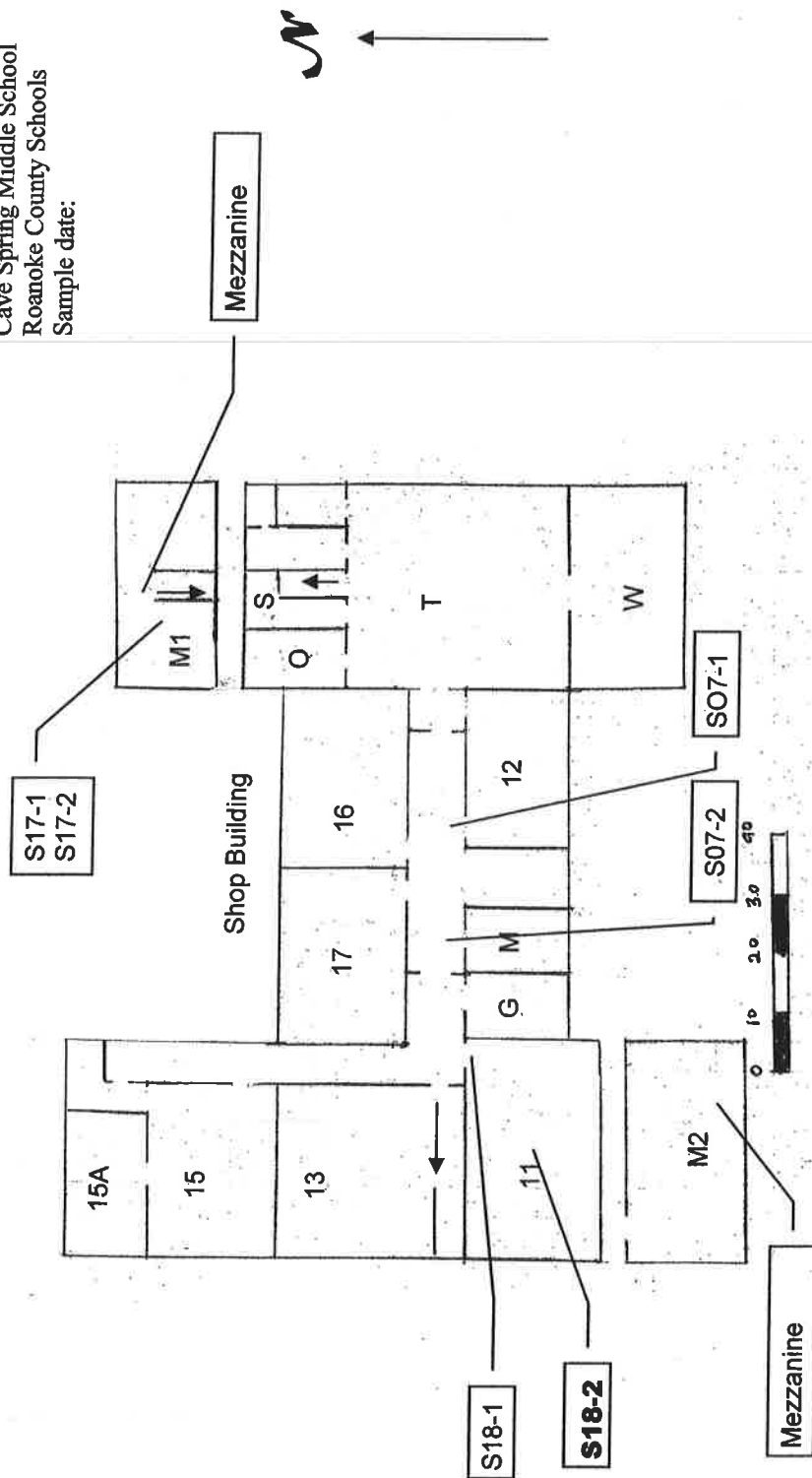
HA M23 LIC 2'x 2' random  
 Samples M23-1, M23-2

Positive Samples in **Bold**

Name: Michael Baratta Signature:  Date: 3-1-08  
Accreditation Number: 3303 000065 Agency: Virginia DPOR

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

Shop Building  
 Sample Location  
 L001  
 February 15, 2008



HA-S18 LIC 2'x2' perforated, parallel holes  
 Samples S18-1, S18-2

HA-S07 LIC 2'x2' parallel holes  
 Samples S07-1, S07-2

HA-S17 Sheet vinyl, beige  
 Samples S17-1, S17-2

Positive Samples in **Bold**

Virginia Department of Education  
Energy and Facilities Services

**BULK SAMPLE ANALYSIS**

Document E.1  
LEA Roanoke County Schools  
School: 006 Cave Spring Middle School  
Building: 001 Main Building  
Sample Date: February 15, 2008  
Analysis Date: February 16, 2008  
Analysis Method: PLM EPA 6000/M4-82-020

The boiler TSI sample test results confirm H-Ks findings that both boilers have TSI-ACM on them.

Homogeneous Area	Sample Number	Material	Asbestos Content
<b>Main Building</b>			
M14A	M14A-1	Floor tile 12"x12", blue green	NAD
	M14A-2		NAD
M14B	M14B-1	Black mastic for HA-M14	NAD
	M14B-2		NAD
M17A	M17A-1	Brown for 12" x 12" ACT HA-17	4 % chrysotile
	M17A-2		NAD
M18A	M18A-1	TSI on Boiler #1	NAD
	M18A-2		10 % chrysotile 20 % amosite
	M18A-3		NAD
M18B	M18B-1	TSI on Boiler #2	NAD
	M18B-2		NAD
	M18B-3		10 % chrysotile 20 % amosite
M23	M23-1	LIC 2' x 2', random	NAD
	M23-2		NAD
M24	M24-1	Window glazing compound in boiler room	NAD
	M24-2		NAD

NAD – no asbestos detected

See attached AmeriSci PLM Bulk Asbestos Report Number 108021451

Name: Michael Baratta Signature:  Date: 3-1-08  
Accreditation Number: 3303 000065 Agency: Virginia DPOR



**AMERISCI****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**Date Received** 02/16/08**Date Examined** 02/16/08**AmeriSci Job #** 108021451**P.O. #****Page** 1 **of** 5**RE:** C001; Cave Spring Middle School; AHERA

Vinton, VA 24179

<b>Cilent No. / HGA</b>	<b>Lab No.</b>	<b>Asbestos Present</b>	<b>Total % Asbestos</b>
M14 A-1 <b>Location:</b> Tile	108021451-01	<b>No</b>	<b>NAD</b> (by CVES) by J. Samuel Baird on 02/16/08  <b>Analyst Description:</b> Black/Gray, Heterogeneous, Non-Fibrous, Tile <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %
M14 A-2 <b>Location:</b> Tile	108021451-02	<b>No</b>	<b>NAD</b> (by CVES) by J. Samuel Baird on 02/16/08  <b>Analyst Description:</b> Gray/Blue, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %
M14 B-1 <b>Location:</b> Mastic	108021451-03	<b>No</b>	<b>NAD</b> (by CVES) by J. Samuel Baird on 02/16/08  <b>Analyst Description:</b> Black, Heterogeneous, Non-Fibrous, Mastic <b>Asbestos Types:</b> <b>Other Material:</b> Cellulose 2 %, Non-fibrous 98 %
M14 B-2 <b>Location:</b> Mastic	108021451-04	<b>No</b>	<b>NAD</b> (by CVES) by J. Samuel Baird on 02/16/08  <b>Analyst Description:</b> Black, Heterogeneous, Non-Fibrous, Mastic <b>Asbestos Types:</b> <b>Other Material:</b> Cellulose 2 %, Non-fibrous 98 %
M17 A-1 <b>Location:</b> Acoustic Ceiling Tile Mastic	108021451-05	<b>Yes</b>	<b>4 %</b> (by CVES) by J. Samuel Baird on 02/16/08  <b>Analyst Description:</b> Brown, Heterogeneous, Non-Fibrous, Mastic <b>Asbestos Types:</b> Chrysotile 4.0 % <b>Other Material:</b> Non-fibrous 96 %

See Reporting notes on last page

**PLM Bulk Asbestos Report**

C001; Cave Spring Middle School; AHERA

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
M17 A-2	108021451-06	No	NAD
Location: Acoustic Ceiling Tile Mastic			(by CVES) by J. Samuel Baird on 02/16/08
Analyst Description: Brown, Heterogeneous, Non-Fibrous, Mastic			
Asbestos Types:			
Other Material: Fibrous Talc 10 %, Non-fibrous 90 %			
M18 A-1	108021451-07	No	NAD
Location: Boiler #1 TSI			(by CVES) by J. Samuel Baird on 02/16/08
Analyst Description: White, Heterogeneous, Fibrous, TSI			
Asbestos Types:			
Other Material: Cellulose 30 %, Non-fibrous 70 %			
M18 A-2	108021451-08	Yes	30 %
Location: Boiler #1 TSI			(by CVES) by J. Samuel Baird on 02/16/08
Analyst Description: Gray, Heterogeneous, Fibrous, TSI			
Asbestos Types: Chrysotile 10.0 %, Amosite 20.0 %			
Other Material: Non-fibrous 70 %			
M18 A-3	108021451-09	No	NAD
Location: Boiler #1 TSI			(by CVES) by J. Samuel Baird on 02/16/08
Analyst Description: White, Heterogeneous, Fibrous, TSI			
Asbestos Types:			
Other Material: Cellulose 30 %, Non-fibrous 70 %			
M18 B-1	108021451-10	No	NAD
Location: Boiler #2 TSI			(by CVES) by J. Samuel Baird on 02/16/08
Analyst Description: White, Heterogeneous, Fibrous, TSI			
Asbestos Types:			
Other Material: Cellulose 30 %, Non-fibrous 70 %			
M18 B-2	108021451-11	No	NAD
Location: Boiler #2 TSI			(by CVES) by J. Samuel Baird on 02/16/08
Analyst Description: White, Heterogeneous, Fibrous, Bulk Material			
Asbestos Types:			
Other Material: Cellulose 30 %, Non-fibrous 70 %			

**PLM Bulk Asbestos Report**

C001; Cave Spring Middle School; AHERA

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
M18 B-3 Location: Boiler #2 TSI  Analyst Description: White, Heterogeneous, Fibrous, TSI Asbestos Types: Chrysotile 10.0 %, Amosite 20.0 % Other Material: Non-fibrous 70 %	108021451-12	Yes	30 % (by CVES) by J. Samuel Baird on 02/16/08
M23-1 Location: Lay-In Ceiling  Analyst Description: White/Lt. Gray, Heterogeneous, Fibrous, Ceiling Tile Asbestos Types: Other Material: Cellulose 55 %, Fibrous glass 25 %, Non-fibrous 20 %	108021451-13	No	NAD (by CVES) by J. Samuel Baird on 02/16/08
M23-2 Location: Lay-In Ceiling  Analyst Description: White/Lt. Gray, Heterogeneous, Fibrous, Ceiling Tile Asbestos Types: Other Material: Cellulose 55 %, Fibrous glass 25 %, Non-fibrous 20 %	108021451-14	No	NAD (by CVES) by J. Samuel Baird on 02/16/08
M24-1 Location: Window Glazing Compound  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Window Glazing Asbestos Types: Other Material: Non-fibrous 100 %	108021451-15	No	NAD (by CVES) by J. Samuel Baird on 02/16/08
M24-2 Location: Window Glazing Compound  Analyst Description: Gray, Heterogeneous, Non-Fibrous, Window Glazing Asbestos Types: Other Material: Non-fibrous 100 %	108021451-16	No	NAD (by CVES) by J. Samuel Baird on 02/16/08
S07-1 Location: Lay-In Ceiling  Analyst Description: White/Lt. Gray, Heterogeneous, Fibrous, Ceiling Tile Asbestos Types: Other Material: Cellulose 55 %, Fibrous glass 25 %, Non-fibrous 20 %	108021451-17	No	NAD (by CVES) by J. Samuel Baird on 02/16/08

LEA: Roanoke County Schools  
 School: 006 Cave Spring Middle School  
 Building: 002 Shop  
 Sample Date: February 15, 2008  
 Analysis Date: February 16, 2008  
 Analysis Method: PLM EPA 6000/M4-82-020

The test results confirm H-K designating LIC HA-07 as a non-ACM.

[illegible]

See attached AmeriSci PLM Bulk Asbestos Report Number 108021451

Name: Michael Baratta Signature:  Date: 3-1-09  
Accreditation Number: 3303 000065 Agency: Virginia DPOR

Client Name: Baratta &amp; Associates, Inc.

**PLM Bulk Asbestos Report**

C001; Cave Spring Middle School; AHERA

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
S07-2	108021451-18	No	NAD
Location: Lay-In Ceiling			(by CVES) by J. Samuel Baird on 02/16/08
Analyst Description: White/Lt. Gray, Heterogeneous, Fibrous, Ceiling Tile			
Asbestos Types:			
Other Material: Cellulose 55 %, Fibrous glass 25 %, Non-fibrous 20 %			
S17-1	108021451-19	No	NAD
Location: Sheet Vinyl			(by CVES) by J. Samuel Baird on 02/16/08
Analyst Description: Yellow/Black, Heterogeneous, Fibrous, Vinyl Sheet Flooring			
Asbestos Types:			
Other Material: Cellulose 65 %, Non-fibrous 35 %			
S17-2	108021451-20	No	NAD
Location: Sheet Vinyl			(by CVES) by J. Samuel Baird on 02/16/08
Analyst Description: Yellow/Black, Heterogeneous, Fibrous, Vinyl Sheet Flooring			
Asbestos Types:			
Other Material: Cellulose 65 %, Non-fibrous 35 %			
S18-1	108021451-21	No	NAD
Location: Lay-In Ceiling Room 11			(by CVES) by J. Samuel Baird on 02/16/08
Analyst Description: White/Lt. Gray, Heterogeneous, Fibrous, Ceiling Tile			
Asbestos Types:			
Other Material: Cellulose 55 %, Fibrous glass 25 %, Non-fibrous 20 %			
S18-2	108021451-22	Yes	5 %
Location: Lay-In Ceiling Room 11			(by CVES) by J. Samuel Baird on 02/16/08
Analyst Description: White, Heterogeneous, Fibrous, Bulk Material			
Asbestos Types: Amosite 5.0 %			
Other Material: Fibrous glass 80 %, Non-fibrous 15 %			

Client Name: Baratta & Associates, Inc.

## PLM Bulk Asbestos Report

C001; Cave Spring Middle School; AHERA

---

### Reporting Notes:

Analyzed by: J. Samuel Baird

Date

2/16/18

\*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)(NYS DOH 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 006 Cave Spring Middle School  
 Building 001 Main Building

**REASSESSMENT OF MATERIALS**Past or Initial Assessment: Hall-Kimbrell April 1989

The asbestos containing tank, breeching and piping TSI was removed from the boiler room in the summer of 1997. Certain floor tiles and associated mastics were also removed in that project.


Homogeneous Area	Description	Past Assessment Category #	Reassessment Category #
02	Low pressure steam pipe run TSI	1	1
03	Low pressure steam fitting TSI	1	1
04	Domestic cold water pipe run TSI	1	1
05	Domestic cold water fitting TSI	1	1
06	Domestic hot water pipe run TSI	1	1
07	Domestic hot water fitting TSI	1	1
08	Roof drain pipe run TSI	1	1
09	Roof drain fitting TSI	1	1
10	Floor tiles 9" x 9", grey	5	5
11	Floor tiles 9" x 9", brown	5	5
12	Floor tiles 9" x 9", grey	5	5
13	Floor tile, brown	5	5
14	Floor tile Floor tile 12"x12", blue green	Non-ACM	Non-ACM
14A	Black mastic for HA-14	Not evaluated	Non-ACM
15	Floor tiles 9" x 9", green	5	5
16	Floor tiles 9" x 9", green	5	5
17	ACT 12"x 12"	Non-ACM	Non-ACM
17A	Brown mastic for HA-17	Not evaluated	5
18	Boiler TSI	1	1
19	Breeching TSI	1	removed
20	Boiler room pipe run TSI	1	removed
21	Boiler room fitting TSI	1	removed
22	Tank TSI	1	removed
23	LIC 2' x 2', random	Not evaluated	Non-ACM
24	Window glazing compound in boiler room	Not evaluated	Non-ACM

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

1 Damaged or significantly damaged TSI-ACBM

5 ACBM with potential for damage

Inspector:

Name: Michael BarattaSignature 

Date

3-1-09

Accreditation Number: 3303 000065 Agency: Virginia DPOR

Baratta &amp; Associates, Inc.

P.O. Box 293

Vinton, Virginia

LEA Roanoke County SchoolsSchool 006 Cave Spring Middle SchoolBuilding 002 Shop**REASSESSMENT OF MATERIALS**Past or Initial Assessment: Hall-Kimbrell April 1989

Homogeneous Area	Description	Past Assessment Category #	Reassessment Category #
01	Roof drain pipe run TSI	1	1
02	Roof drain fitting TSI	1	1
03	Domestic hot water pipe run TSI	1	1
04	Domestic hot water fitting TSI	1	1
05	Domestic cold water pipe run TSI	1	1
06	Domestic cold water fitting TSI	1	1
07	LIC 2' x 2'	Non-ACM	Non-ACM
08	Low pressure steam pipe run TSI (note 1)	1	1
09	Low pressure steam pipe fitting TSI	1	1
10	Low pressure steam air cell pipe run TSI	1	1
11	Low pressure steam pipe fitting TSI on HA-10	1	1
12	Floor tiles 9" x 9", brown	5	5
13	Floor tiles 9" x 9", brown	5	5
14	Floor tiles 9" x 9", green	5	5
15	Floor tiles 9" x 9", brown	5	5
16	Floor tiles 9" x 9", brown	5	5
17	Sheet vinyl, beige	Not evaluated	Non-ACM
18	LIC 2' x 2', perforated, parallel holes	Not evaluated	4

Note 1 HA-08, A hazardous condition was noted in the Tech Storage Room where a file cabinet has damaged the TSI on a riser.

**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 BarattaSignature 

Date

3-1-09Accreditation Number: 3303 000065 Agency: Virginia DPOR



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

LEA Roanoke County Schools  
School 006 Cave Spring Middle School  
Building 003 North Wing

### REASSESSMENT OF MATERIALS

Past or Initial Assessment: Hall-Kimbrell April 1989

No samples were obtained from the North Wing

Homogeneous Area	Description	Past Assessment Category #	Reassessment Category #
02	Low pressure steam pipe run TSI	1	1
03	Low pressure steam pipe fitting TSI	1	1
04	Floor tiles 9" x 9", green	5	5
05	Acoustical plaster (note 1)	2	6
06	Floor tiles 9" x 9", brown	5	5
07	Breeching TSI	1	1
08	Fireproofing on boiler room ceiling	1	2
09	Fitting muds in boiler room	1	1
10	Pipe run TSI in boiler room	1	1

Note 1      HA-05      The asbestos containing surface ceiling plaster is enclosed with a gypsumboard covering.

#### 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 3-1-09

Accreditation Number: 3303 000065      Agency: Virginia DPOR

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

LEA Roanoke County Schools  
School 006 Cave Spring Middle School  
Building 004 Field House

### REASSESSMENT OF MATERIALS

Past or Initial Assessment: Hall-Kimbrell April 1989

The TSI was removed from the Field House in March 1998. It was demolished shortly thereafter.

Homogeneous Area	Description	Past Assessment Category #	Reassessment Category #
01	Boiler TSI	1	Removed
02	Fitting muds	1	Removed
	The Field House was demolished		

#### 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 3-1-08

Accreditation Number: 3303 000065 Agency: Virginia DPOR

Virginia Department of Education  
Energy and Facilities Service

LEA Roanoke County Schools  
School 006 Cave Spring Middle School  
Building: 001 Main Building

**RESPONSE ACTIONS  
RECOMMENDED**

Total cost to remove \$116,000

Each Location	Recommended Response Actions	Scheduled To Begin	Scheduled To Be Completed	Est. Cost To Remove
TSI in Kitchen Storage Room	Removed damaged TSI	April 2008	May 2008	\$2,000
TSI in Boiler Room and through out building	Repair damaged TSI. Place in O & M plan until other needs require the TSI be removed	none	none	60,000
Boiler TSI	Place in O & M plan until other needs require the TSI be removed	none	none	20,000
Acoustical Ceiling Tile Mastic in Stairwells	Place in O & M Plan until removed	none	none	4,000
Floor tile in various Rooms <sup>1</sup>	Maintain floor coverings until other needs require these floor coverings to be removed	none	none	\$30,000

Note 1

The mastics for most of the floor tiles were not tested. The mastics should be deemed presumed asbestos containing materials until future testing proves otherwise.

Management Planner:

Name: Michael Baratta

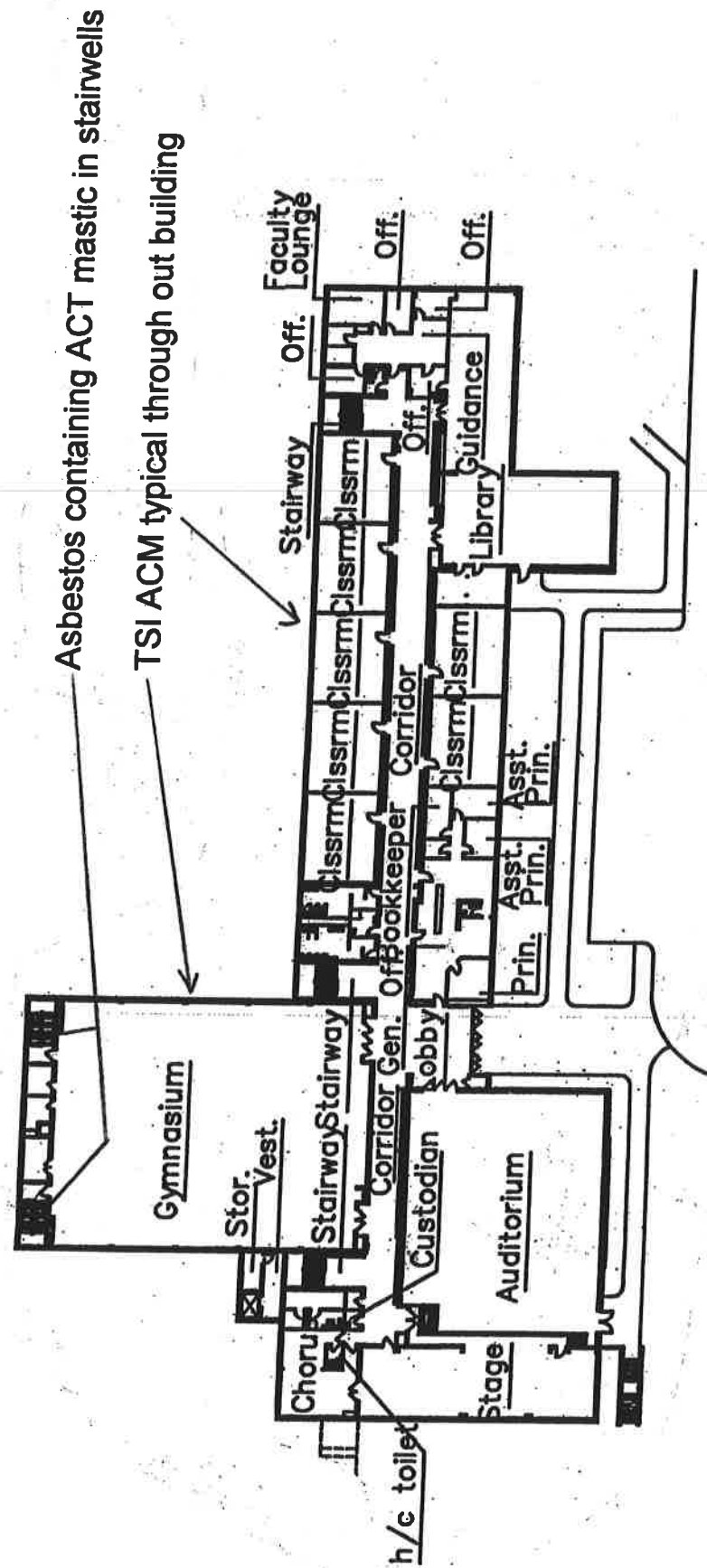
Signature 

Date 3-1-08

Accreditation Number: 3304 000208

Agency: Virginia DPOR

Reinspection Date: Feb. 15, 08 Scale: see drawing



## Upper Floor

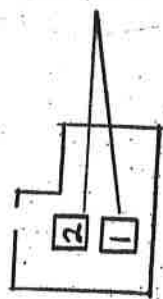
# LOCATION OF ACBMs Cave Spring Middle School

Main Building

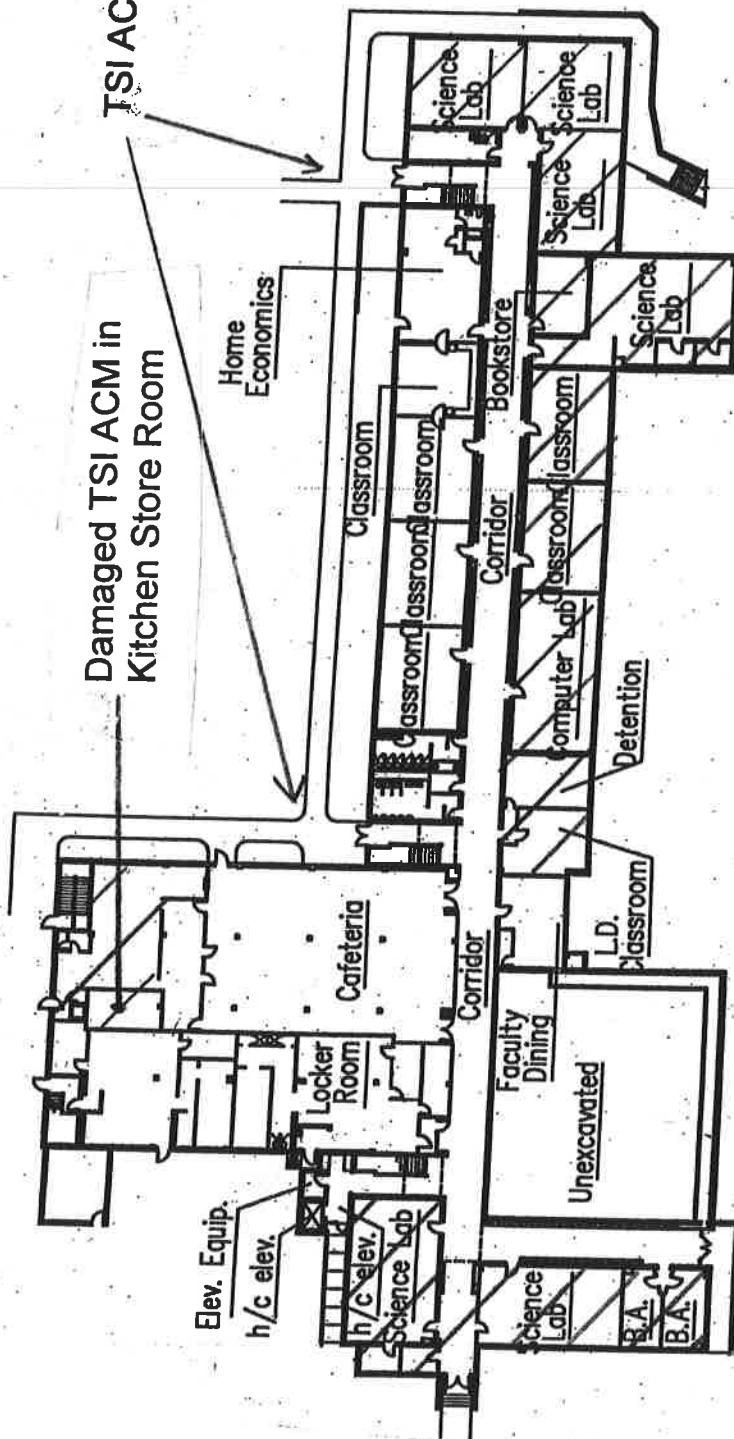
Lower Floor

Reinspection Date: Feb. 15, 08 Scale: see drawing

Boiler TSI in Boiler Room  
(other TSI-ACM had been removed from boiler room)



Boiler Room



Damaged TSI ACM in Kitchen Store Room

TSI ACM typical through out building



Lower Floor



Virginia Department of Education  
Energy and Facilities Service

LEA Roanoke County Schools  
School 006 Cave Spring Middle School  
Building: 002 Shop

**RESPONSE ACTIONS  
RECOMMENDED**

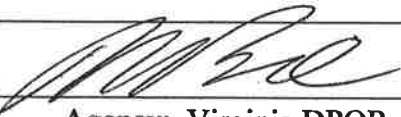
Total cost to remove \$38,000.00

Each Location	Recommended Response Actions	Scheduled To Begin	Scheduled To Be Completed	Est. Cost To Remove
TSI in Room S (HA-08)	Removed damaged TSI on pipe riser	March 2008	April 2008	\$2,000
TSI in Mezzanine M2 above Room 11 (HA-01 & 02)	Removed roof drain TSI	Summer 2008	Summer 2008	\$5,000
TSI through out building	Repair damaged TSI. Place in O & M plan until other needs require the TSI be removed	none	none	15,000
LIC in Room 11 (HA-18)	Removed lay-in ceiling tiles	Summer 2008	Summer 2008	\$3,000
Floor tile in various Rooms <sup>1</sup>	Maintain floor coverings until other needs require these floor coverings to be removed	none	none	\$13,000

Note 1      The mastics for most of the floor tiles were not tested. The mastics should be deemed presumed asbestos containing materials until future testing proves otherwise.

Management Planner:

Name: Michael Baratta

Signature 

Date

3-1-08

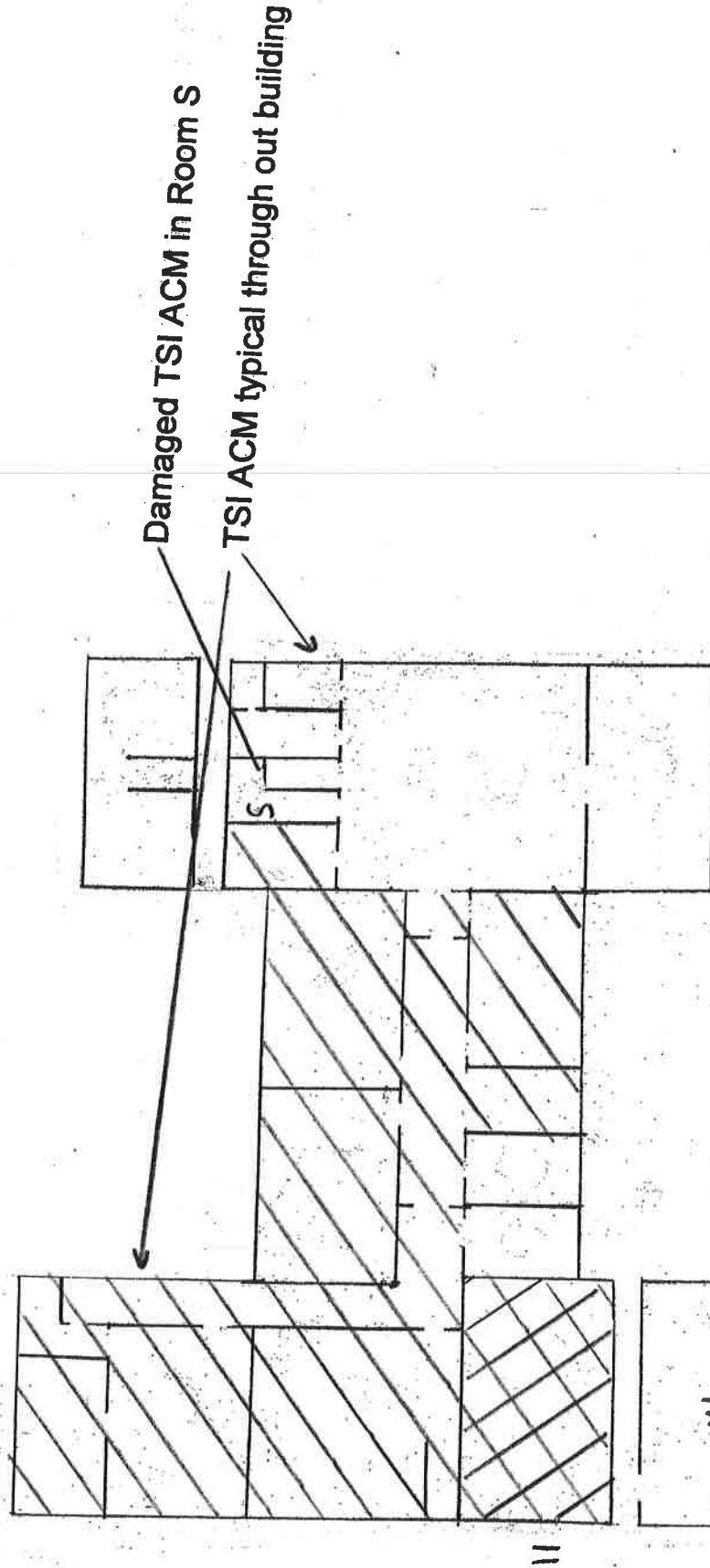
Accreditation Number: 3304 000208

Agency: Virginia DPOR

# LOCATION OF ACBMs Cave Spring Middle School

Shop Building

Reinspection Date: Feb. 15, 08 Scale: see drawing



	Asbestos containing floor tiles
	Asbestos containing lay in ceiling panels



Virginia Department of Education  
Energy and Facilities Service

LEA Roanoke County Schools  
School 006 Cave Spring Middle School  
Building: 003 North Wing


**RESPONSE ACTIONS  
RECOMMENDED**

Total cost to remove \$65,000.00

Each Location	Recommended Response Actions	Scheduled To Begin	Scheduled To Be Completed	Est. Cost To Remove
Fireproofing on Boiler room ceiling (HA-08)	Limit Access to Boiler Room. Place in O & M plan until removed	Summer 2009	Summer 2009	\$8,000
TSI in Boiler Room	Limit Access to Boiler Room. Place in O & M plan until removed	Summer 2009	Summer 2009	\$2,000
Acoustical ceiling plaster behind gypsumboard enclosure	Place in O & M plan until other plans call for removal of the ceiling	none	none	40,000
Floor tile in various Rooms <sup>1</sup>	Maintain floor coverings until other needs require these floor coverings to be removed	none	none	\$15,000

Note 1      The mastics for most of the floor tiles were not tested. The mastics should be deemed presumed asbestos containing materials until future testing proves otherwise.

Management Planner:

Name: Michael Baratta      Signature 

Date 3-1-08

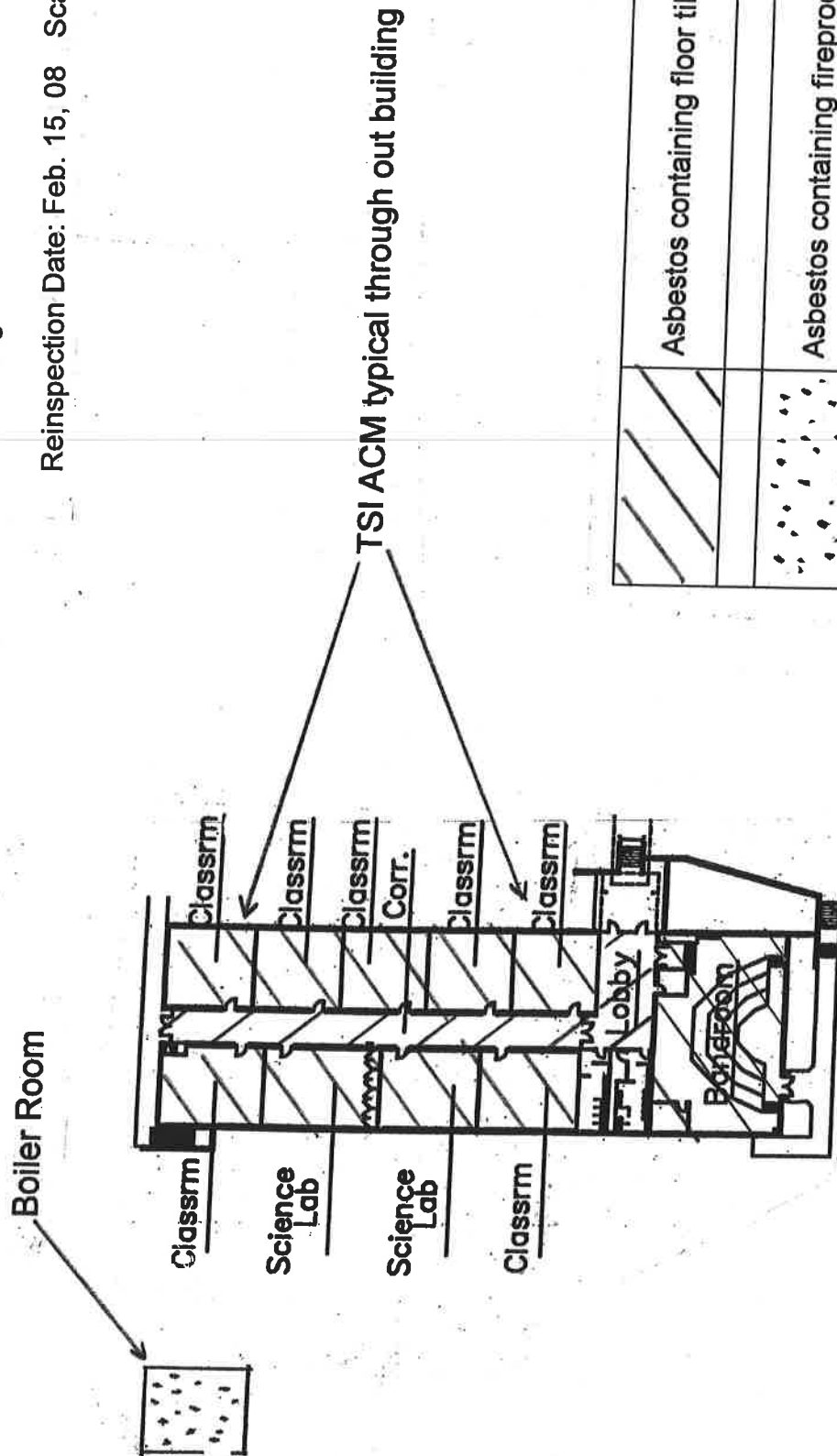
Accreditation Number: 3304 000208      Agency: Virginia DPOR



# LOCATION OF ACBMs Cave Spring Middle School

North Wing

Reinspection Date: Feb. 15, 08 Scale: see drawing



# **ASBESTOS MANAGEMENT, OPERATIONS AND MAINTENANCE PLAN**

Cave Spring Middle School

February 22, 2008

This Asbestos Management Operations and Maintenance Plan is based on the three year AHERA Reinspection performed by Baratta & Associates, Inc on February 15, 2008. It covers procedures to be followed in dealing with the Asbestos-Containing Materials (ACMs) found in the Cave Spring Middle School.

## **SUMMARY**

Asbestos Containing thermal system insulation (TSI) is found through the campus. Some of these materials will require immediate attention.

Most of the floor tiles tested to be ACMs. The mastic used to attach the acoustical ceiling tiles (ACTs) to the ceiling of the gymnasium stairwells also tested to be an asbestos containing material. These products are tough and non-friable. Therefore they are not of immediate concern.

The lay-in ceiling (LIC) in Shop Room 11 was found to be an ACM.

The hall ceilings in the North Wing have asbestos containing ceiling plaster concealed behind a gypsumboard enclosure.

The Boiler Room under the North has asbestos containing fireproofing on its ceiling.

## **STAFF NOTIFICATION**

The School should send all staff members a brief notice stating that Asbestos-Containing Materials exist in the following buildings:

Main Building  
Shop  
North Wing

## **ACM IDENTIFICATION**

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

<b>HA Number</b>	<b>Material</b>
<b>Main Building</b>	
02	Low pressure steam pipe run TSI
03	Low pressure steam fitting TSI
04	Domestic cold water pipe run TSI

05	Domestic cold water fitting TSI
06	Domestic hot water pipe run TSI
07	Domestic hot water fitting TSI
08	Roof drain pipe run TSI
09	Roof drain fitting TSI
10	Floor tiles 9" x 9", grey
11	Floor tiles 9" x 9", brown
12	Floor tiles 9" x 9", grey
13	Floor tile, brown
15	Floor tiles 9" x 9", green
16	Floor tiles 9" x 9", green
17A	Brown mastic for 12"x 12" ACT (HA-17)
18	Boiler TSI
<b>Shop Building</b>	
01	Roof drain pipe run TSI
02	Roof drain fitting TSI
03	Domestic hot water pipe run TSI
04	Domestic hot water fitting TSI
05	Domestic cold water pipe run TSI
06	Domestic cold water fitting TSI
08	Low pressure steam pipe run TSI (note 1)
09	Low pressure steam pipe fitting TSI
10	Low pressure steam air cell pipe run TSI
11	Low pressure steam pipe fitting TSI on HA-10
12	Floor tiles 9" x 9", brown
13	Floor tiles 9" x 9", brown
14	Floor tiles 9" x 9", green
15	Floor tiles 9" x 9", brown
16	Floor tiles 9" x 9", brown
18	LIC 2' x 2', perforated, parallel holes (Room 11)
<b>North Wing</b>	
02	Low pressure steam pipe run TSI
03	Low pressure steam pipe fitting TSI
04	Floor tiles 9" x 9", green
05	Acoustical plaster behind gypsumboard enclosure
06	Floor tiles 9" x 9", brown
07	Breeching TSI
08	Fireproofing on boiler room ceiling
09	Fitting muds in boiler room
10	Pipe run TSI in boiler room

## **CARE OF ASBESTOS CONTAINING MATERIALS**

### ***Care of the Asbestos Containing Ceiling Plaster in the North Wing***

This material is found in the hall of the North Wing. It has been enclosed behind a gypsumboard enclosure thus protecting it from physical damage. In its current condition it does not present and asbestos related health hazard to the building occupants.

Do not drill or hang any objects from the ceiling.

If you notice the gypsumboard covering is water stained or shows other signs of damage please report it to the principal so appropriate actions can be taken.

### ***Fireproofing in the North Wing Boiler Room***

Asbestos containing fireproofing had been installed on the boiler room ceiling to delay the spread of a possible fire to the rest of the building. After all these years, the fireproofing is still well adhered to the ceiling structure.

Custodial and maintenance personnel should be careful not to damage or disturb fireproofing. Any damaged areas should be reported to the Principal so repairs can be made.

Any fireproofing removal should be carried out by a licensed asbestos abatement contractor.

### ***Thermal System Insulation (TSI) in the North Wing Boiler Room***

The damaged TSI in the North Wing Boiler Room should be repaired. Once the damaged areas are repaired, an asbestos warning sign should be applied to all doors leading to the Boiler Room.

Custodial and maintenance personnel should take care not to damage or disturb the TSI while performing their duties. Any damaged areas should be reported to the Principal so repairs can be made.

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

### ***Thermal System Insulation (TSI) in Tech Storage Room S***

A file cabinet drawer has damaged the TSI in the corner of this room. This material should be removed as soon as possible.

### ***General Thermal System Insulation (TSI) in all Buildings***

These insulated pipes are found in the wall and ceiling spaces in these buildings. Sometimes they also exist on vertical pipe risers along the walls. Any damaged TSI should be repaired. The staff should be informed to be careful when working around these pipes. Report any further damage to the Principal so an evaluation can be made.

The children should be discouraged from damaging or poking the insulation. This is especially true in the Shop Art Room Mezzanine above Room 11. The roof drain lines are fairly close to their work area in this space.

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

### ***Boiler Thermal System Insulation (TSI) in the Boiler Room under the Kitchen in the Main Building***

The old asbestos containing TSI in the room was removed and replaced with fiberglass in 1997. Only the asbestos TSI on the boilers proper remains. This is covered with a metal skin that protects it from damage. An asbestos warning label should be applied to the boilers so no one inadvertently damages the ACM.

Again, custodial and maintenance personnel should take care not to damage or disturb the boiler jacket.

Any TSI removal should be performed by a licensed asbestos abatement contractor.

### ***Care of the Floor Tiles (All Buildings)***

Asbestos floor tiles were found in all buildings on the three (3) campus buildings. The floor tiles are tough and non-friable. It is doubtful anything other than forceful vandalism will deteriorate these materials to a point where significant fiber release will occur.

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.

Please report any damaged floor tiles to the Principal so appropriate action can be taken.

### ***Care of the Asbestos Containing Lay-in Ceiling (LIC) Panels in Shop Room 11***

These are 2' x 2', panels used to finish the ceiling in Room 11 of the Shop Building. The surface gives the general impression that the long "holes" are parallel. The more random patterned LICs in the halls are non-ACMs.

Do not hang any items from the ceiling. In addition, discourage the children from poking or throwing objects at the LICs.

The LICs are quite susceptible to damage caused by water leaking on it from above. Please report any water stains to the asbestos coordinator so the matter can be investigated.

Any damaged ceiling tiles should be replaced by qualified personnel.

---

### ***Care of the Acoustical Ceiling Tile (ACT) Mastic in the Gymnasium Stairwells***

The mastic used to attach the 12"x12" acoustical ceiling tiles to the concrete tested to be an ACM. Some of the ACTs are missing, thus exposing the mastic. The ACT mastic is hard and non friable. Although the exposed mastic might present an aesthetic issue, it does not present an asbestos related health hazard.

Please report any fallen mastic or ACTs to the asbestos coordinator so appropriate action can be taken.

### **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.