

# Roanoke County Schools

## Three Year AHERA Reinspection

Cave Spring Elementary School  
Facility 014

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Reinspection Date:  
April 8, 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 014 Cave Spring Elementary School  
Building Main

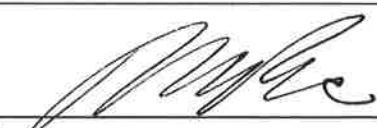
**SCHOOL BUILDINGS**

Building Name	Location	Check here for the presence of:				No ACBM
		ACBM		Suspect ACBM		
		Friable	Non- friable	Friable	Non- friable	
014 Cave Spring Elementary School	5404 Spring Lawn Avenue	X	X			

Inspector:

Name: Michael Baratta

Signature



Date

5/7/08

Accreditation Number: 3303 000065 Agency: Virginia DPOR

Virginia Department of Education  
Energy and Facilities Services

LEA Roanoke County Schools  
School: 014 Cave Spring Elementary School  
Building: Main


**DETERMINATION OF EACH  
SAMPLE AREA**

HA-17 was the soft asbestos containing ceiling plaster. This had been enclosed with a gypsumboard system. We noted that HK also designed the hard plaster in the Little Hall as being the same material. We divided HA-17 into HA-17 (soft plaster) and HA-17-A (hard plaster) and took three (3) samples of HA-17A. Seven hundred (700) square feet of HA17-A was encountered.

Pipe and tank TSI debris was noted in the boiler room. We deemed the debris as coming from HA-22 (pipe TSI) and HA-23 (tank TSI) and took one (1) to two (2) samples of same.

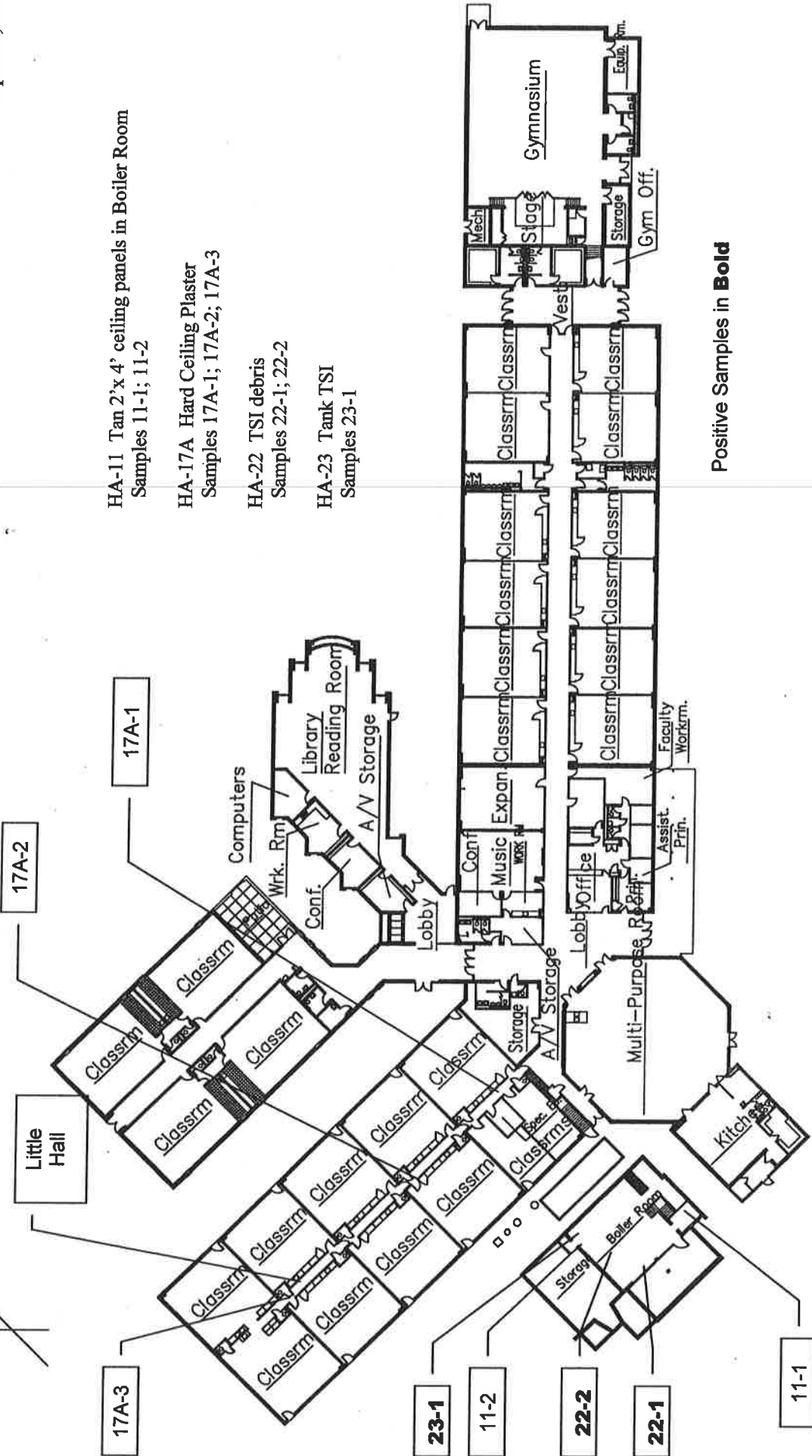
The suspect boiler room ceiling panels in the boiler room were designated HA-11. We took two (2) samples of these panels.

Homogeneous Area	Material	Sample Number	Location
11	Tan 2' x 4' ceiling panels in Boiler room	11-1	Boiler room SE corner at tunnel
		11-2	Boiler room NW corner
17A	Hard ceiling plaster	17A-1	Little hall E end
		17A-2	Little hall, center
		17A-3	Little hall W end
22	TSI debris	22-1	Boiler room center of S wall, debris on floor at red pump
		22-2	Boiler room between boilers under feed water line
23	Tank TSI	23-1	Boiler room, NW corner, debris on floor under tank

Name: Michael Baratta Signature  Date 5/7/09  
Accreditation Number: 3303 000065 Agency: Virginia DPOR

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

Building 014  
 Sample Locations  
 L001  
 April 8, 2008



HA-11 Tan 2'x 4' ceiling panels in Boiler Room  
 Samples 11-1; 11-2

HA-17A Hard Ceiling Plaster  
 Samples 17A-1; 17A-2; 17A-3

HA-22 TSI debris  
 Samples 22-1; 22-2

HA-23 Tank TSI  
 Samples 23-1

Positive Samples in **Bold**

● Floor Plan

Virginia Department of Education  
Energy and Facilities Services

LEA Roanoke County Schools  
School: 014 Cave Spring Elementary School  
Building: Main  
Sample Date: April 8, 2008  
Analysis Date: April 10, 2008  
Analysis Method: PLM EPA 6000/M4-82-020

**BULK SAMPLE ANALYSIS**

The hard ceiling and Boiler room ceiling panels tested to be non-ACMs

Homogeneous Area	Sample Number	Material	Asbestos Content
11	11-1	Tan 2' x 4' ceiling panels in Boiler room	NAD
	11-2		NAD
17A	17A-1	Hard ceiling plaster	NAD
	17A-2		NAD
	17A-3		NAD
22	22-1	Pipe TSI debris	5 % chrysotile
	22-2		30 % chrysotile 35 % amosite
23	23-1	Tank TSI debris	2 % chrysotile

NAD – no asbestos detected

See attached AmeriSci PLM Bulk Asbestos Report Number 108041270

Name: Michael Baratta Signature  Date 5/7/09  
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 04/10/08

Date Examined 04/11/08

AmeriSci Job No. 108041270

P.O. # L001

Page 1 of 2

RE L001; AHERA; Cave Spring E/S

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
11-1	108041270-01	No	NAD
Location: Ceiling Board			(by CVES) by C. David Mintz on 04/11/08
Analyst Description: White/ Brown, Heterogeneous, Fibrous, Bulk Material			
Asbestos Types:			
Other Material: Cellulose 75 %, Non-fibrous 25 %			
11-2	108041270-02	No	NAD
Location: Ceiling Board			(by CVES) by C. David Mintz on 04/11/08
Analyst Description: White/ Brown, Heterogeneous, Fibrous, Bulk Material			
Asbestos Types:			
Other Material: Cellulose 75 %, Non-fibrous 25 %			
17A-1	108041270-03	No	NAD <sup>1</sup>
Location: Hard Plaster			(by CVES) by C. David Mintz on 04/11/08
Analyst Description: Off White, Homogeneous, Non-Fibrous, Cementitious, Bulk Material			
Asbestos Types:			
Other Material: Cellulose Trace, Non-fibrous 100 %			
17A-2	108041270-04	No	NAD <sup>1</sup>
Location: Hard Plaster			(by CVES) by C. David Mintz on 04/11/08
Analyst Description: Off White, Homogeneous, Non-Fibrous, Cementitious, Bulk Material			
Asbestos Types:			
Other Material: Cellulose Trace, Non-fibrous 100 %			
17A-3	108041270-05	No	NAD <sup>1</sup>
Location: Hard Plaster			(by CVES) by C. David Mintz on 04/11/08
Analyst Description: Off White, Homogeneous, Non-Fibrous, Cementitious, Bulk Material			
Asbestos Types:			
Other Material: Cellulose Trace, Non-fibrous 100 %			

Client Name: Baratta & Associates, Inc.

## PLM Bulk Asbestos Report

L001; AHERA; Cave Spring E/S

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
22-1	108041270-06	Yes	5 %
Location: TSI Debris			(by CVES) by C. David Mintz on 04/11/08
<b>Analyst Description:</b> Off White, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 5.0 % <b>Other Material:</b> Fibrous glass 20 %, Non-fibrous 75 %			
22-2	108041270-07	Yes	65 %
Location: TSI Debris			(by CVES) by C. David Mintz on 04/11/08
<b>Analyst Description:</b> White, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 30.0 %, Amosite 35.0 % <b>Other Material:</b> Non-fibrous 35 %			
23-1	108041270-08	Yes	2 %
Location: Tank TSI Debris			(by CVES) by C. David Mintz on 04/11/08
<b>Analyst Description:</b> White, Heterogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 2.0 % <b>Other Material:</b> Non-fibrous 98 %			

**Reporting Notes:**

(1) Sample homogenized by grinding to a powder prior to analysis.

Analyzed by: C. David Mintz

Date

*C. David Mintz*      4/10/08

\*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 014 Cave Spring Elementary School  
Building Main

### REASSESSMENT OF MATERIALS

Past or Initial Assessment: Hall-Kimbrell April 1989

Homogeneous Area	Description	Past Assessment Category #	Reassessment Category #
02	Heating water pipe TSI	1	6
03	Heating water fitting TSI	1	6
04	Domestic hot water pipe TSI	1	6
05	Domestic hot water fitting TSI	1	6
06	Domestic cold water pipe TSI	1	6
07	Domestic cold water fitting TSI	1	6
08	Drain pipe TSI	1	6
09	Drain fitting TSI	1	6
10	Lay-in Ceiling Panels	Non-ACM	-
11	Tan 2' x 4' ceiling panels in Boiler Room	Not evaluated	Non-ACM
12	Heating water fitting TSI	Non-ACM	
13	Drain fitting TSI	1	6
14	Lay-in Ceiling Panels	Non-ACM	-
15	Drain pipe TSI	1	6
16	Surface material all floors over LIC	2	2
17	Surface material all floors over gypsumboard system	2	2
17A	Hard Plaster, Little Hall	See 17	Non-ACM
18	Floor tile 12"x12", white (gymnasium office)	5	5
19	Boiler TSI	1	1
20	Breeching TSI	1	1
21	Fitting TSI in boiler room	1	1
22	Pipe TSI in boiler room	1	1
23	Tank TSI in boiler room	1	1
24	Fitting TSI in mechanical room	1	6

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

- 1 Damaged or significantly damaged TSI-ACBM
- 2 Damaged friable surfacing ACBM
- 5 ACBM with potential for damage
- 6 ACBM with potential for significant damage

Inspector:

Name: Michael Baratta Signature

Date

5/7/04

Accreditation Number: 3303 000065 Agency: Virginia DPOR





Virginia Department of Education  
Energy and Facilities Service

LEA Roanoke County Schools  
School 014 Cave Spring Elementary School  
Building: Main

**RESPONSE ACTIONS  
RECOMMENDED**

Total cost to remove \$192,000

Each Location	Recommended Response Actions	Scheduled To Begin	Scheduled To Be Completed	Est. Cost To Remove
Damaged TSI-ACM in Boiler Room	Restrict access to Boiler Room. Repair damaged TSI-ACM and decontaminate area.	June 2008	August 2008	\$20,000
TSI-ACM in Boiler Room	Place in O & M plan until other needs require the TSI-ACM to be removed.	Not scheduled	Not scheduled	\$35,000
Significantly damaged in TSI-ACM in tunnels	Place in O & M plan until other needs require the tunnels to be entered.	Not scheduled	Not scheduled	\$60,000
Surface Ceiling Material under gypsumboard system and LIC panels	Monitor for any future damage. Place in O & M plan until other needs require the ceiling to be removed.	Not scheduled	Not scheduled	\$75,000
Floor tile and mastic in Gymnasium Office	Monitor for any future damage. Place in O & M plan until other needs require the floor to be replaced.	Not scheduled	Not scheduled	\$2,000

Management Planner:

Name: Michael Baratta

Signature



Date

5/27/08

Accreditation Number: 3304 000208

Agency: Virginia DPOR

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

014 Cave Spring Elementary School  
April 26, 2008

This Asbestos Management Operations and Maintenance Plan is based on the AHERA Three Year Reinspection performed by Baratta & Associates, Inc on April 8, 2008. It covers procedures to be followed in dealing with the Asbestos-Containing Materials (ACMs) found in the Cave Spring Elementary School.

### **SUMMARY**

The thermal system insulation (TSI) in the boiler room and tunnels is in poor condition. Access to these spaces should be limited until the ACMs are stabilized.

Asbestos containing TSI is also found inside the academic spaces as well. These TSIs are in good condition and do not pose an asbestos related health risk to those occupying these areas.

The floor tiles in the gymnasium office are considered to be Asbestos Containing Materials. The floor coverings are in good condition. The tiles do not currently present an asbestos related health risk to building occupants in their current condition.

The ceiling plaster used in the halls and in the spaces adjacent to the Music Room is an ACM. This material is covered with either a gypsumboard system or lay-in ceiling tiles.

### **STAFF NOTIFICATION**

The School should send all staff members a brief notice stating that Asbestos-Containing Materials exist in the Cave Spring Elementary School.

## ACM IDENTIFICATION

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

HA Number	Material
02	Heating water pipe TSI
03	Heating water fitting TSI
04	Domestic hot water pipe TSI
05	Domestic hot water fitting TSI
06	Domestic cold water pipe TSI
07	Domestic cold water fitting TSI
08	Drain pipe TSI
09	Drain fitting TSI
13	Drain fitting TSI
15	Drain pipe TSI
16	Surface material all floors over LIC
17	Surface material all floors over gypsumboard system
18	Floor tile 12 "x12 ", white
19	Boiler TSI
20	Breeching TSI
21	Fitting TSI in boiler room
22	Pipe TSI in boiler room
23	Tank TSI in boiler room
24	Fitting TSI in mechanical room

## CARE OF THE THERMAL SYSTEM INSULATION (TSI) IN BOILER ROOM

The TSI in the Boiler Room is damaged. The area needs to be cleaned up and the damaged TSI repaired or removed. Boiler Room access should be limited until this matter is addressed.

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.

## **CARE OF THE THERMAL SYSTEM INSULATION (TSI) IN TUNNELS**

Significantly damaged TSI was found in the tunnels. The tunnels are under the floor. The ACMs in the tunnels do not present an asbestos related health hazard to those occupying the main floor.

The tunnels should be sealed off to prevent entry by unauthorized personnel. An asbestos warning label should be applied to the tunnel entrances. Tunnel access should not be permitted until the asbestos containing materials is stabilized and the tunnels decontaminated.

## **CARE OF OTHER THERMAL SYSTEM INSULATION**

As noted above, most of the asbestos containing thermal system insulation (TSI) in the Cave Spring Elementary School Building is located in the Boiler Room and Tunnels. Some is also found in the ceiling spaces within the academic and administration areas.

The TSI inside the gymnasium mechanical room, academic and administration areas is in good condition and does not present an asbestos related health hazard to those occupying those spaces.

If you notice any of the pipe insulation in the school is damaged, please inform the principal so appropriate actions can be taken.

## **CARE OF THE FLOOR TILES IN THE GYMNASIUM OFFICE (HA-18)**

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.

## **CARE OF THE ASBESTOS CONTAINING CEILING PLASTER (HA-16 & 17)**

This material is found in some of the halls and in the area around the Music Room. It is not found in the "Little Hall" nor in the general classrooms.

The asbestos containing ceiling plaster is enclosed behind a gypsumboard enclosure or lay-in ceiling panels. This protects the ceiling plasters from physical damage. In its current condition, this plaster does not present an asbestos related health hazard to the building occupants.

Do not drill or hang any objects from the ceiling.

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

### **PERMIT REQUIREMENTS**

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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.