

ASBESTOS MANAGEMENT PLAN

FOR

**WILLIAMSBURG ACADEMY
1000 SANDY BAY ROAD
KINGSTREE SC 29556**

PREPARED FOR

**M. EVAN POWELL M.A.
HEAD OF SCHOOL
WILLIAMSBURG ACADEMY
KINGSTREE, SC 29556**

PREPARED BY

**ENVIRONMENTAL RISK MANAGEMENT LLC
P O BOX 5119
FLORENCE, SC 29502**

**RON MUNNINGS BI-01110 01/05/17
ERM Job #16SC-08 May 2, 2016**

ERM, LLC 
Engineering Services

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 For

 Asbestos

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1.0 EXECUTIVE SUMMARY

Environmental Risk Management, LLC was retained by M. Evan Powell, Head of School, Williamsburg Academy 1000 Sandy Bay Road Kingstree SC 29556 to conduct an Asbestos Inspection and develop an Asbestos Management Plan for all school buildings located at 1000 Sandy Bay Road Kingstree SC 29556 on April 18, 2016. The purpose of this Asbestos Inspection was to Identify and Delineate any Asbestos Containing Building Materials (ACBM) that may impact the environment and human health of students and employees. This inspection includes all construction materials and other debris within the buildings that would present any environmental or human health issues such as air quality during the life time of the facility including materials that may be manufactured of, Asbestos Containing Building Materials (ACBM).

The main school building located at 1000 Sandy Bay Road Kingstree was built in 1978 and consists of approximately 59,000 sq ft. The exterior walls are constructed of sheet metal, cement block and Brick. The roof over the class rooms and hallways has a low pitch and is constructed of metal, the roof over the gymnasium is also constructed of sheet metal with fiberglass insulation below. The interior walls of the class rooms consisted of painted wood paneling and painted cement block. Recently, there were new perforated drop ceiling tiles installed 24 inches by 24 inches with fiberglass insulation above. The floors in the class rooms are 12 inch by 12 inch beige fleck tile which is homogenous throughout all the class rooms. The hallways consist of 12 inch by 12 inch gray fleck tile and grayish black terrazzo tile. These tiles are homogenous throughout the hallways of this school building. The HVAC system consists of individual units in each class room and other rooms throughout the facility. The HVAC systems in the gym and cafeteria are separate units with metal plenum, metal duct work and fiberglass insulation.

There are several out buildings consisting of a canteen, lawn maintenance shop, tack shop, these buildings have metal roofs cement block and/or wood walls and concrete floors.

Buildings K3 and K4 are individual units used as classrooms. The exteriors walls are

constructed of wood paneling, the roofs are metal with plywood under lain and fiberglass insulation below. The windows are wood frame thermal glass no calking. The interior ceiling is constructed of wood paneling with a sprayed on textured finish on the surface. The walls are constructed of painted wood paneling. The floors are 12inch by 12 inch gray fleck tile in high traffic areas by entrance ways and carpet in the remaining areas.

During the asbestos inspection a total of Twenty (20) samples of suspect/unknown building materials were collected and submitted for laboratory analysis by Polarized Light Microscopy (PLM) Method for ACM. However, the laboratory processed 30 samples of SACM, the result of multiple layers in samples.

Laboratory results from this asbestos inspection indicated there was 5% Chrysotile asbestos fibers in the green vinyl floor tile beneath the bleachers in the gymnasium and none in the associated mastic. The green vinyl floor tile beneath the bleachers in the gymnasium is in good condition and non-friable. The remaining materials in the building did **not** contain any ACBM.

Please contact the undersigned at 843-601-0207 with any questions regarding this Asbestos Management Plan.

This report was prepared by:



Cary M. Andrews, PE

And



Ron Munnings, MS, CHMM
Asbestos Inspector No. BI-01110 01/05/17

2.0 SCOPE OF WORK

This asbestos investigation was to identify any aspects of the of the non-friable asbestos located beneath the bleachers in the Gym that may impact the environment and human health during its life time and to determine the presence and condition of any suspect ACM on site that may impact air quality during the life of the material. The laboratory utilized for samples analysis was CEI Labs. Cary NC. This laboratory is accredited by USEPA in accordance with 40 CFR 163 & FR/Vol. 52. No. 210-763.91 and is also, a SCDHEC certified laboratory. The samples were analyzed for ACM using US EPA 600/R-93/116 (PLM).

Visual Inspection

An initial building walk-through was conducted to determine the presence and condition of suspect materials that were accessible and/or exposed. Materials which were visually similar in color, texture, and general appearance and which appeared to have been installed at the same time were grouped into homogeneous sampling areas. Such materials are termed "homogeneous materials" by the EPA. During this walk-through, the approximate locations of the observed homogeneous materials were noted. Following the EPA inspection protocol, each identified suspect homogeneous material may be placed in one of the following EPA classifications:

- *Surfacing Materials (spray or trowel applied to building members)*
- *Thermal system Insulation (materials generally applied to various Mechanical Systems)*
- *Miscellaneous Materials (any materials which do not fit either of the above categories)*

Sampling Procedures

Following the visual survey, the inspector collected representative samples of exposed and/or accessible materials identified as suspect ACM. Sampling was not limited just to those materials that were accessible. In some situations wholesale destruction of walls may be done in order to access those concealed areas that may contain suspect ACM as well as other building elements, physical barriers and structural components being tested.

General EPA guidelines were used to determine the sampling protocol. Sampling locations were chosen to be representative to the homogeneous materials.

Quantification

Quantities of accessible and/or exposed building materials that were identified as suspect asbestos-containing materials were estimated. This estimation was conducted by taking approximate measurements in the field.

Quantities are estimates and should be confirmed by an engineering survey if and when demolition activities are contemplated. The level of detail provided by an engineering survey, which is required for a construction estimate, is beyond the scope of the present survey.

Material Assessment

The condition of the suspect material is an indication of the likelihood that it may release asbestos fibers into the environment. The combination of its current condition coupled with the potential for damage to the material in the future, determines which EPA response priority is appropriate for that material.

The condition of each homogeneous suspect material identified within the facility was assessed using the EPA decision tree approach. The friability of each material was determined and then its condition and potential for future damage was assessed using the following criteria:

Source and type of damage:

- *Physical contact*
- *Water or air erosion*
- *Deterioration or material delamination*

Extent of damage:

- *Good: No damage or little damage*
- *Damaged: Less than 10% damage, evenly distributed over the entire material or less than 25% damage confined to a localized area of the material.*
- *Significantly damaged: 10% or more damage distributed evenly over the entire material or 25% or more damage within a localized area of the material*

Potential for future damage:

- *Frequency of access to material*
- *Height of material*
- *Location of material in a plenum*
- *Exposure of material*
- *Accessibility*
- *Presence in an area of air movement, vibrations, loud noise*

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3.0 SUSPECT MATERIAL DATA TABLES
3.1 Suspect Material Data Table

Project Name: Williamsburg Academy
 Site: 1000 Sandy Bay Road
 Kingstree SC 29556

Inspector Name: Ron Munnings

Inspection Date: April 25, 2016

Page 1 of 2

SAMPLE ID	HA #	MATERIAL DESCRIPTION	CATEGORY SURFACING/ TSI/MISC.	TOTAL SQ.FT OF MATERIAL	NO. OF RANDOM SAMPLES	AHERA ASSESSMENT CATEGORIES (1-7) SCDHEC (8)	PRESENT CONDITION FRIABLE NON-FRIABLE	PHYSICAL ASSESSMENT	POTENTIAL FOR DISTURBANCE	LAB RESULTS P% OR ND
FTCR-1	#1	12 x 12 inch Beige Fleck Floor Tile Main Building Class Rooms	Misc	20,000	Samples Taken FTCR-1 to FTCR-5	8	NF	G = GOOD	LPD	ND
FTHW-1	#2	Gray Fleck 12" X 12" Floor Tile And Mastic Main Building Hallways	Misc	4,320	Samples Taken FTHW-1 to FTHW-5	8	NF	G = GOOD	LPD	ND AND ND
FTBB-1	#3	12" X 12" Green Floor Tile and Mastic Gym Below Bleachers	Misc.	1,816	Samples Taken FTBB-1 To FTBB-5	2	NF	G = GOOD	LPD	5% CH AND ND

PRESENT CONDITION

F = FRIABLE
 NF = NONFRIABLE

PHYSICAL ASSESSMENT

G = GOOD (VERY LOCALIZED LIMITED DAMAGE)
 D = DAMAGED (DAMAGE < 10% DISTRIBUTED OR > 25% LOCALIZE)
 SD = SIGNIFICANTLY DAMAGED (DAMAGED - OR .10% DISTRIBUTED/25% LOCALIZED)

AHERA - ASSESSMENT CATEGORIES

1. DAMAGED OR SIGNIFICANTLY DAMAGED FRIABLE THERMAL SYSTEM INSULATION
2. DAMAGED FRIABLE SURFACING ACM.
3. SIGNIFICANTLY DAMAGED FRIABLE SURFACING ACM.
4. DAMAGED OR SIGNIFICANTLY DAMAGED FRIABLE MISCELLANEOUS ACM.
5. ACMB WITH POTENTIAL FOR DAMAGE.
6. ACMB WITH POTENTIAL FOR SIGNIFICANT DAMAGE
7. ANY REMAINING FRIABLE ACMB OR FRIABLE SUSPECTED ACBM.

POTENTIAL FOR FUTURE DISTURBANCES

LPD = LOW POTENTIAL FOR DISTURBANCE (CONTACT/VIBRATION /AIR EROSION ALL OF LOW CONCERN)
 PD = POTENTIAL FOR DAMAGE (CONTACT/VIBRATION/AIR EROSION OF MODERATE CONCERN)
 PSD = POTENTIAL FOR SIGNIFICANT DAMAGE (CONTACT/VIBRATION/AIR EROSION OF HIGH CONCERN)

ASBESTOS FINDING P=POSITIVE (%)

ND=NEGATIVE

TSI = THERMAL SYSTEM INSULATION

SCDHEC-ASSESSMENT
 8. SCDHEC -- Non-FRIABLE ACM

SAMPLE ID REFER TO SAMPLE LOCATION MAP	HA #	MATERIAL DESCRIPTION	CATEGORY SURFACING/ TSI/MISC.	TOTAL SQ.FT OF MATERIAL	NO. OF RANDOM SAMPLES	AHERA ASSESSMENT CATEGORIES (1-7) SCDHEC (8)	PRESENT CONDITION FRIABLE NON- FRIABLE	PHYSICAL ASSESSMENT	PHYSICAL ASSESSMENT	LAB RESULTS P% OR ND
CTT-1	#4	Wood Panel Ceiling With Sprayed Texture Finish	Misc.	1,872	4 CTT-1 TO CTT-5-5	7	NF	G = GOOD	LPD	ND

PRESENT CONDITION F = FRIABLE INSULATION NF = NONFRIABLE	PHYSICAL ASSESSMENT G = GOOD (VERY LOCALIZED LIMITED DAMAGE) D = DAMAGED (DAMAGE < 10% DISTRIBUTED OR > 25% LOCALIZE SD = SIGNIFICANTLY DAMAGED (DAMAGED - OR .10% DISTRIBUTED/25% LOCALIZED)	AHERA - ASSESSMENT CATEGORIES 1. DAMAGED OR SIGNIFICANTLY DAMAGED FRIABLE THERMAL SYSTEM 2. DAMAGED FRIABLE SURFACING ACM. 3. SIGNIFICANTLY DAMAGED FRIABLE SURFACING ACM. 4. DAMAGED OR SIGNIFICANTLY DAMAGED FRIABLE MISCELLANEOUS ACM. 5. ACBM WITH POTENTIAL FOR DAMAGE. 6. ACBM WITH POTENTIAL FOR SIGNIFICANT DAMAGE 7. ANY REMAINING FRIABLE ACBM OR FRIABLE SUSPECTED ACBM.
POTENTIAL FOR FUTURE DISTURBANCES LPD = LOW POTENTIAL FOR DISTURBANCE (CONTACT/VIBRATION/ AIR EROSION ALL OF LOW CONCERN) PD = POTENTIAL FOR DAMAGE (CONTACT/VIBRATION/AIR EROSION OF MODERATE CONCERN) PSD = POTENTIAL FOR SIGNIFICANT DAMAGE (CONTACT/VIBRATION/AIR EROSION OF HIGH CONCERN)	ASBESTOS FINDING P=POSITIVE (%) ND=NEGATIVE TSI = THERMAL SYSTEM INSULATION	SCDHEC-ASSESSMENT 8. SCDHEC - NON-FRIABLE ACM

Inspector Signature _____

Date _____

3.2 Building Materials

Building Name: Williamsburg Academy
 1000 Sandy Bay Road
 Kingstree, SC 29556

Floors: Total Sq. footage of Building Square Feet – 59,206

BUILDING MATERIALS/CONSTRUCTION	SQ FT	*Tested for ACM's
<u>EXTERIOR STRUCTURES;</u>		
EXTERIOR COVERING	21,900	METAL SIDE WALLS
EXTERIOR COATING		
DOORS	360	WOOD, METAL, GLASS
WINDOWS	720	FRAME THERMAL, NO GLAZING COMPOUND
ROOF MATERIALS FLAT		
ROOF INSULATION	59,206	FIBERGLASS ABOVE CEILING
ROOF PITCHED	59,206	METAL ROOFING THROUGHOUT BUILDINGS
ROOF DRAIN	N/A	PVC PIPE NONE
<u>INTERIOR</u>		
*FLOOR COVERING ACBM	1816	12" x 12" GREEN FLECK FLOOR TILE, GYM BELOW BLEACHERS
*WALL COVERING	27,890	PAINTED WOOD PANELING AND CEMENT BLOCK
FLOOR COVER	24,320	12"X12" FLOOR TILE, CLASS ROOMS & HALLWAYS
CEILING MATERIALS OFFICE	59,104	DROP CEILING TILES PERFORATED
FIREPROOFING	N/A	BACKING ¾" THICK
FIRE DOORS	142	GLASS DOORS
<u>MECHANICAL</u>		
*FURNACE/BOILER JACKET	N/A	*WRAPPED ACM NONE
EXHAUST BREECHING	N/A	NONE
*PIPE INSULATION	N/A	*WRAPPED ACM NONE
FITTING INSULATION	N/A	NONE
HEAT SHIELDS	N/A	NONE
EXPANSION TANK INSULATION	N/A	NONE
PIPE INSULATION	N/A	NONE
FITTING INSULATION	N/A	NONE
HVAC DUCTWORK	380	METAL PLENUM AND SHEET METAL DUCTING
FLEX CONNECTORS		NONE
NOTES:		
		<i>MATERIAL SQ. FOOTAGE ESTIMATED</i>

4.0 CONCLUSIONS

A visual inspection and sampling survey of the building was conducted in accordance with AHERA and SCDHEC protocol. Good environmental engineering practice and Federal Environmental Protection Agency (EPA) / Asbestos Hazard Emergency Response Act (AHERA) sampling guidelines were followed to determine the presence of exposed and/or accessible suspect asbestos containing building materials (SACBM).

The main school building located at 1000 Sandy Bay Road Kingstree was built in 1978 and consists of approximately 59,000 sq ft. The exterior walls are constructed of sheet metal, cement block and Brick. The roof over the class rooms and hallways has a low pitch and is constructed of metal, also, the roof over the gymnasium is constructed of sheet metal with fiberglass insulation below. The interior walls of the class rooms consisted of painted wood paneling and painted cement block. Recently there were new perforated drop ceiling tiles installed 24 inches by 24 inches with fiberglass insulation above. The floors in the class rooms are 12 inch by 12 inch beige fleck tile which is homogenous throughout all the class rooms. The hallways consist of 12 inch by 12 inch gray fleck tile and grayish black terrazzo tile. These tiles are homogenous throughout the hallways of this school building. The HVAC system consists of individual units in each class room and other rooms throughout the facility. The HVAC systems in the gym and cafeteria are separate units with metal plenum, metal duct work and fiberglass insulation.

There are several out buildings consisting of a canteen, lawn maintenance shop, tack shop, these buildings have metal roofs concrete block and wood walls and concrete floors. Buildings K3 and K4 are individual units used as classrooms. The exteriors walls are constructed of wood paneling, the roofs are metal with plywood under lain and fiberglass insulation below. The windows are wood frame thermal glass no caulking. The interior ceiling is constructed of wood paneling with a sprayed on textured finish on the surface. The walls are constructed of painted wood paneling. The floors are 12inch by 12 inch gray fleck tile in high traffic areas by entrance ways and carpet in the remaining areas.

During the asbestos inspection a total of Twenty (20) samples of suspect/unknown building materials were collected and submitted for laboratory analysis by Polarized Light Microscopy (PLM) Method for ACM. However, the laboratory processed 30 samples of SACM, the result of multiple layers in samples.

Laboratory results from this asbestos inspection indicated there was 5% Chrysotile asbestos fibers in the green vinyl floor tile beneath the bleachers in the gymnasium and none in the associated mastic. The remaining materials in the building did **not** contain any ACBM.

5.0 RECOMMENDATIONS

Whenever renovation is considered for this building, it is recommended that personnel engaged in salvage and/or renovation activities be advised that there was Asbestos Containing Building Materials (ACBM's) in the 12" x 12" green fleck floor tiles, but none in the associated mastic below the bleachers in the gymnasium at the facility. If other suspect materials are identified during renovation activities, stop work and contact the owner and SCDHEC. The green fleck floor tiles are in good condition, considered to be non-friable and in this state do not pose a threat to human health or the environment. However, during removal these materials could become friable. It is recommended when these materials are being removed that tiles and mastic be kept misted with (water or water and citrus based solvent) to prevent asbestos fibers from becoming air borne.

6.0 MANAGEMENT PLAN

6.1 Response Actions

The Management Planer (ERM-LLC) will periodically inspect the condition of the Non-friable green floor tiles in the gymnasium beneath the bleachers. The purpose of this inspection is to ensure that the green floor tiles are being maintained in good condition and steps have been taken to prevent any damage or future damage to these tiles.

6.2 Repair

Whenever any damage is observed to the floor tile in question it will be repaired and brought to an undamaged condition in such a manner so as to prevent any asbestos fibers from being released to the environment while being repaired. This may be accomplished by:
Encapsulation, Enclosure, and/or Removal of damaged area.



ASBESTOS ANALYTICAL REPORT
By: Polarized Light Microscopy

Prepared for

ERM-Environmental Risk Management, LLC

CLIENT PROJECT: WA (Williams Academy); 16SC-07

CEI LAB CODE: A16-3540

TEST METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORT DATE: 05/02/16

TOTAL SAMPLES ANALYZED: 20

SAMPLES >1% ASBESTOS: 5

TEL: 866-481-1412

www.ceilabs.com



ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: ERM-Environmental Risk Management, LLC
 P.O. Box 5119
 Florence, SC 29502

CEI Lab Code: A16-3540
Date Received: 04-25-16
Date Analyzed: 05-02-16
Date Reported: 05-02-16

Project: WA (Williams Academy); 16SC-07

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
FTCR-1 A2136819	Floor Tile	Heterogeneous Beige Non-fibrous Bound	85% 15%	Vinyl Silicates	None Detected
FTCR-2 A2136820	Floor Tile	Heterogeneous Beige Non-fibrous Bound	85% 15%	Vinyl Silicates	None Detected
FTCR-3 A2136821	Floor Tile	Heterogeneous Beige Non-fibrous Bound	85% 15%	Vinyl Silicates	None Detected
FTCR-4 A2136822	Floor Tile	Heterogeneous Beige Non-fibrous Bound	85% 15%	Vinyl Silicates	None Detected
FTCR-5 A2136823	Floor Tile	Heterogeneous Beige Non-fibrous Bound	85% 15%	Vinyl Silicates	None Detected
FTHW-1 A2136824A	Floor Tile	Heterogeneous Gray Non-fibrous Bound	85% 15%	Vinyl Silicates	None Detected
A2136824B	Mastic	Heterogeneous Yellow Non-fibrous Bound	95% 5%	Mastic Silicates	None Detected



ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

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Project: WA (Williams Academy); 16SC-07

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
FTHW-2 A2136825A	Floor Tile	Heterogeneous	85%	Vinyl	None Detected
		Gray Non-fibrous Bound	15%	Silicates	
A2136825B	Mastic	Heterogeneous	95%	Mastic	None Detected
		Yellow Non-fibrous Bound	5%	Silicates	
FTHW-3 A2136826A	Floor Tile	Heterogeneous	85%	Vinyl	None Detected
		Gray Non-fibrous Bound	15%	Silicates	
A2136826B	Mastic	Heterogeneous	95%	Mastic	None Detected
		Yellow Non-fibrous Bound	5%	Silicates	
FTHW-4 A2136827A	Floor Tile	Heterogeneous	85%	Vinyl	None Detected
		Gray Non-fibrous Bound	15%	Silicates	
A2136827B	Mastic	Heterogeneous	95%	Mastic	None Detected
		Yellow Non-fibrous Bound	5%	Silicates	
FTHW-5 A2136828A	Floor Tile	Heterogeneous	85%	Vinyl	None Detected
		Gray Non-fibrous Bound	15%	Silicates	



ASBESTOS BULK ANALYSIS

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ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
A2136828B	Mastic	Heterogeneous Yellow Non-fibrous Bound	95% 5%	Mastic Silicates	None Detected
FTBB-1 A2136829A	Floor Tile	Heterogeneous Green Non-fibrous Bound	80% 15%	Vinyl Silicates	5% Chrysotile
A2136829B	Mastic	Heterogeneous Yellow Non-fibrous Bound	95% 5%	Mastic Silicates	None Detected
FTBB-2 A2136830A	Floor Tile	Heterogeneous Green Non-fibrous Bound	80% 15%	Vinyl Silicates	5% Chrysotile
A2136830B	Mastic	Heterogeneous Yellow Non-fibrous Bound	95% 5%	Mastic Silicates	None Detected
FTBB-3 A2136831A	Floor Tile	Heterogeneous Green Non-fibrous Bound	80% 15%	Vinyl Silicates	5% Chrysotile
A2136831B	Mastic	Heterogeneous Yellow Non-fibrous Bound	95% 5%	Mastic Silicates	None Detected



ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: ERM-Environmental Risk Management, LLC
 P.O. Box 5119
 Florence, SC 29502

CEI Lab Code: A16-3540
Date Received: 04-25-16
Date Analyzed: 05-02-16
Date Reported: 05-02-16

Project: WA (Williams Academy); 16SC-07

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
FTBB-4 A2136832A	Floor Tile	Heterogeneous Green Non-fibrous Bound	80% 15%	Vinyl Silicates	5% Chrysotile
A2136832B	Mastic	Heterogeneous Yellow Non-fibrous Bound	95% 5%	Mastic Silicates	None Detected
FTBB-5 A2136833A	Floor Tile	Heterogeneous Green Non-fibrous Bound	80% 15%	Vinyl Silicates	5% Chrysotile
A2136833B	Mastic	Heterogeneous Yellow Non-fibrous Bound	95% 5%	Mastic Silicates	None Detected
CTT-1 A2136834	Ceiling Tile Textured	Heterogeneous White Non-fibrous Bound	5% 80% 15%	Paint Binder Foam	None Detected
CTT-2 A2136835	Ceiling Tile Textured	Heterogeneous White Non-fibrous Bound	5% 80% 15%	Paint Binder Foam	None Detected
CTT-3 A2136836	Ceiling Tile Textured	Heterogeneous White Non-fibrous Bound	5% 80% 15%	Paint Binder Foam	None Detected



107 New Edition Court, Cary, NC 27511
 Tel: 866-481-1412; Fax: 919-481-1442

ASBESTOS CHAIN OF CUSTODY

(20) A16-5540
 A2156819-
 A2156838

LAB USE ONLY:
CEI Lab Code:
CEI Lab I.D. Range:

COMPANY INFORMATION	PROJECT INFORMATION
CEI CLIENT #: 27156	Job Contact: Ron Mullins
Company: ERM-Environmental Risk Management, LLC P.O. Box 5119	Email / Tel: 843-601-0207
Florence, SC 29502	Project Name: WA (Williams Academy)
Email: rmunings@erm-llc.com; candrews@erm-llc.com	Project ID# 16SC-07
Tel: 843-601-0207 Fax: 843-669-7491	PO #:
STATE SAMPLES COLLECTED IN:	

GENERAL INSTRUCTIONS		
POSITIVE STOP ANALYSIS	<input checked="" type="checkbox"/>	PLM DUE DATE: / /
ANALYZE NOB'S BY TEM	<input type="checkbox"/>	TEM DUE DATE: / /

IF TAT IS NOT MARKED STANDARD 3 DAY TAT APPLIES.

ASBESTOS	METHOD	TURN AROUND TIME					
		4 HR	8 HR	24 HR	2 DAY	3 DAY	5 DAY
PLM BULK	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PLM POINT COUNT (400)	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM POINT COUNT (1000)	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM GRAV w POINT COUNT	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PCM AIR	NIOSH 7400	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR AHERA	EPA AHERA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR NIOSH	NIOSH 7402	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM BULK	CHATFIELD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM DUST WIPE	ASTM D6480-05	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM DUST MICROVAC	ASTM D5755-09	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM SOIL	ASTM D7521-13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM VERMICULITE	CINCINNATI METHOD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OTHER:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REMARKS:		<input checked="" type="checkbox"/> Accept Samples
		<input type="checkbox"/> Reject Samples
Relinquished By:	Date/Time	Received By: Date/Time
ER Munnings	April 23, 2016	AL 4/25/16
ER Munnings	April 23, 2016	9:20

Samples will be disposed of 30 days after analysis



May 2, 2016

ERM-Environmental Risk Management, LLC
P.O. Box 5119
Florence, SC 29502

CLIENT PROJECT: WA (Williams Academy); 16SC-07
CEI LAB CODE: A16-3540

Dear Customer:

Enclosed are asbestos analysis results for PLM Bulk samples received at our laboratory on April 25, 2016. The samples were analyzed for asbestos using polarizing light microscopy (PLM) per the EPA 600 Method.

Sample results containing >1% asbestos are considered asbestos-containing materials (ACMs) per EPA regulatory requirements. The detection limit for the EPA 600 Method is <1% asbestos by weight as determined by visual estimation.

Thank you for your business and we look forward to continuing good relations. If you have any questions, please feel free to call our office at 919-481-1413.

Kind Regards,

A handwritten signature in black ink, appearing to read "Tianbao Bai".

Tianbao Bai, Ph.D., CIH
Laboratory Director





Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: WA (Williams Academy); 16SC-07

CEI LAB CODE: A16-3540

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

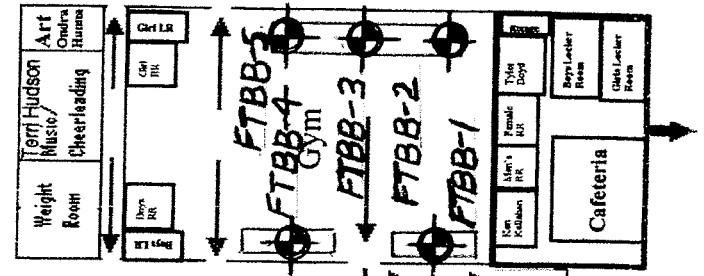
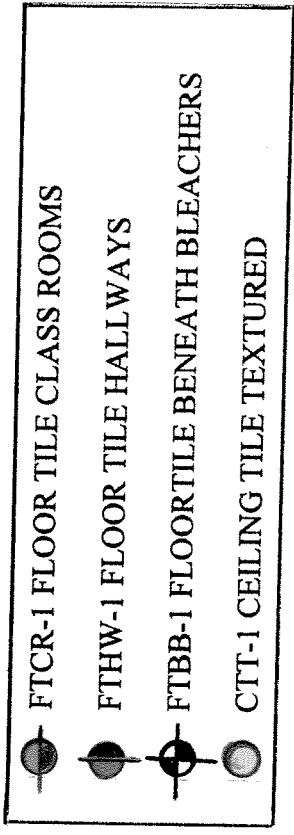
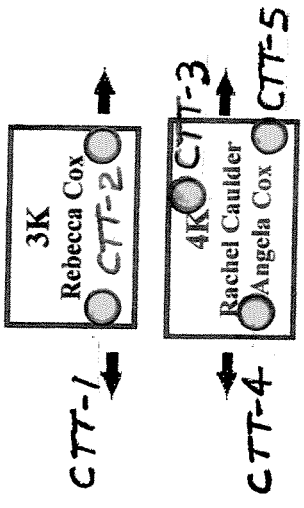
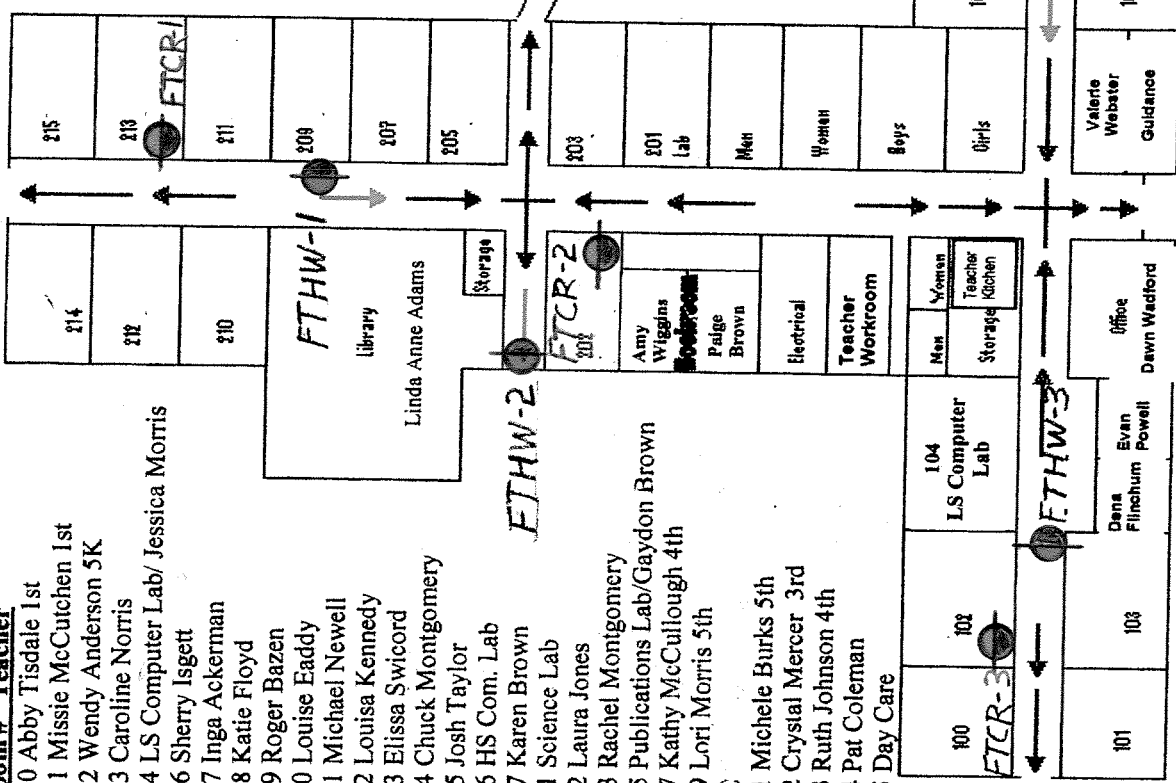
Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
FTCR-1		A2136819	Beige	Floor Tile	None Detected
FTCR-2		A2136820	Beige	Floor Tile	None Detected
FTCR-3		A2136821	Beige	Floor Tile	None Detected
FTCR-4		A2136822	Beige	Floor Tile	None Detected
FTCR-5		A2136823	Beige	Floor Tile	None Detected
FTHW-1		A2136824A	Gray	Floor Tile	None Detected
		A2136824B	Yellow	Mastic	None Detected
FTHW-2		A2136825A	Gray	Floor Tile	None Detected
		A2136825B	Yellow	Mastic	None Detected
FTHW-3		A2136826A	Gray	Floor Tile	None Detected
		A2136826B	Yellow	Mastic	None Detected
FTHW-4		A2136827A	Gray	Floor Tile	None Detected
		A2136827B	Yellow	Mastic	None Detected
FTHW-5		A2136828A	Gray	Floor Tile	None Detected
		A2136828B	Yellow	Mastic	None Detected
FTBB-1		A2136829A	Green	Floor Tile	Chrysotile 5%
		A2136829B	Yellow	Mastic	None Detected
FTBB-2		A2136830A	Green	Floor Tile	Chrysotile 5%
		A2136830B	Yellow	Mastic	None Detected
FTBB-3		A2136831A	Green	Floor Tile	Chrysotile 5%
		A2136831B	Yellow	Mastic	None Detected
FTBB-4		A2136832A	Green	Floor Tile	Chrysotile 5%
		A2136832B	Yellow	Mastic	None Detected
FTBB-5		A2136833A	Green	Floor Tile	Chrysotile 5%
		A2136833B	Yellow	Mastic	None Detected
CTT-1		A2136834	White	Ceiling Tile Textured	None Detected
CTT-2		A2136835	White	Ceiling Tile Textured	None Detected
CTT-3		A2136836	White	Ceiling Tile Textured	None Detected
CTT-4		A2136837	White	Ceiling Tile Textured	None Detected
CTT-5		A2136838	White	Ceiling Tile Textured	None Detected

SUMMARY OF ACBM IN BUILDING Located at 1000 Sandy Bay Road

Asbestos Containing Materials were discovered in the 12" by 12" Green fleck floor tiles .
in the gymnasium below the bleachers.

WA Building Directory/ Fire Escape Plan

- Room # Teacher
- 100 Abby Tisdale 1st
- 101 Missie McCutchen 1st
- 102 Wendy Anderson 5K
- 103 Caroline Norris
- 104 LS Computer Lab/ Jessica Morris
- 106 Sherry Isgett
- 107 Inga Ackerman
- 108 Katie Floyd
- 109 Roger Bazen
- 110 Louise Eaddy
- 111 Michael Newell
- 112 Louisa Kennedy
- 113 Elissa Swicord
- 114 Chuck Montgomery
- 115 Josh Taylor
- 116 HS Com. Lab
- 117 Karen Brown
- 201 Science Lab
- 202 Laura Jones
- 203 Rachel Montgomery
- 205 Publications Lab/Gaydon Brown
- 207 Kathy McCullough 4th
- 209 Lori Morris 5th
- 210
- 211 Michele Burks 5th
- 212 Crystal Mercer 3rd
- 213 Ruth Johnson 4th
- 214 Pat Coleman
- 215 Day Care



ASBESTOS INSPECTION SAMPLING LOCATIONS



ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: ERM-Environmental Risk Management, LLC
P.O. Box 5119
Florence, SC 29502

CEI Lab Code: A16-3540
Date Received: 04-25-16
Date Analyzed: 05-02-16
Date Reported: 05-02-16

Project: WA (Williams Academy); 16SC-07

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS		ASBESTOS %
			Fibrous	Non-Fibrous	
CTT-4 A2136837	Ceiling Tile Textured	Heterogeneous	5%	Paint	None Detected
		White	80%	Binder	
		Non-fibrous	15%	Foam	
		Bound			
CTT-5 A2136838	Ceiling Tile Textured	Heterogeneous	5%	Paint	None Detected
		White	80%	Binder	
		Non-fibrous	15%	Foam	
		Bound			



LEGEND: Non-Anth = Non-Asbestiform Anthophyllite
Non-Trem = Non-Asbestiform Tremolite
Calc Carb = Calcium Carbonate

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

LIMIT OF DETECTION: <1% by visual estimation

REGULATORY LIMIT: >1% by weight

Due to the limitations of the EPA 600 method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles can be difficult to analyze via polarized light microscopy (PLM). EPA recommends that all NOBs analyzed by PLM, and found not to contain asbestos, be further analyzed by Transmission Electron Microscopy (TEM). Please note that PLM analysis of dust and soil samples for asbestos is not covered under NVLAP accreditation.

This report relates only to the samples tested or analyzed and may not be reproduced, except in full, without written approval by CEI Labs, Inc. CEI Labs makes no warranty representation regarding the accuracy of client submitted information in preparing and presenting analytical results. Interpretation of the analytical results is the sole responsibility of the client. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government.

ANALYST: Candace Burrus
Candace Burrus

APPROVED BY: Tianbao Bai
Tianbao Bai, Ph.D., CIH
Laboratory Director



ASBESTOS SAMPLING FORM



COMPANY CONTACT INFORMATION	
Company: <i>ERM-LLC</i>	Job Contact: <i>Ron Munnings</i>
Project Name: <i>WA (Williams Academy)</i>	
Project ID #: <i>16SC-07</i>	Tel: <i>843-601-0207</i>

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
			PLM <input type="checkbox"/>	TEM <input type="checkbox"/>
<i>FTCR-1</i>	<i>Floor Tile Class Rooms</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>FTCR-2</i>	<i>" " " "</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>FTCR-3</i>	<i>" " " "</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>FTCR-4</i>	<i>" " " "</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>FTCR-5</i>	<i>" " " "</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>FTHW-1</i>	<i>FLOOR TILE HALLWAYS</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>FTHW-2</i>	<i>" " " "</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>FTHW-3</i>	<i>" " " "</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>FTHW-4</i>	<i>" " " "</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>FTHW-5</i>	<i>" " " "</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>FTBB-1</i>	<i>FLOOR Tile Below Bleachers</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>FTBB-2</i>	<i>" " " "</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>FTBB-3</i>	<i>" " " "</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>FTBB-4</i>	<i>" " " "</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>FTBB-5</i>	<i>" " " "</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>CTT-1</i>	<i>Ceiling Tile Textured-3K</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>CTT-2</i>	<i>" " " "</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>CTT-3</i>	<i>" " " "</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>CTT-4</i>	<i>" " " "</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>CTT-5</i>	<i>" " " "</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
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