



TTI ENVIRONMENTAL, INC
Consulting & Contracting

1253 North Church Street, Moorestown, NJ 08057
www.ttienv.com o 856-840-8800 f 856-840-8815

PROJECT REPORT

on the

INSPECTIONS, ON-SITE SUPERVISION AND AIR MONITORING

for the

NON-FRIABLE ASBESTOS FLOOR TILE AND MASTIC ABATEMENT

conducted on

January 3, 2018

at

PINELANDS REGIONAL HIGH SCHOOL
2nd Floor Hallways
565 Nugentown Road
Little Egg Harbor, New Jersey 08087

for

Pinelands Regional School District
520 Nugentown Road
Little Egg Harbor, New Jersey 08087

TTI Project No. 17-1224

January 12, 2018



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I. INTRODUCTION

Pinelands Regional School District (PRSD) requested the services of TTI Environmental (TTI) to provide oversight for the abatement of asbestos containing floor tile and associated mastic located on the second (2nd) floor of the Pinelands Regional High School.

At the request of the PRSD, TTI was retained as the Environmental Consultant for the above referenced project to conduct the following:

- Provide an Environmental Technician to serve as on-site supervisor to ensure that the contractor adheres to project requirements.
- Conduct periodic asbestos air sampling during removal of floor tile and associated mastic. Analysis conducted per National Institute of Occupational Safety and Health (NIOSH) Method 7400 using Phase Contrast Microscopy (PCM) techniques. PCM results were compared with the New Jersey Department of Community Affairs (NJDEA) limit of 0.010 f/cc.
- Conduct final asbestos air sampling post removal of floor tile and associated mastic. Analysis was conducted per Asbestos Hazard Emergency Response Act (AHERA) method 40 CFR 763 final rule by Transmission Electron Microscopy (TEM). TEM results were compared with AHERA clearance limit of <70 s/mm².

The following documentation is included in the appendices to document adherence to the project requirements during the project:

- Air Sampling Data and Analytical Results
- Daily Inspection Reports
- Notifications and Permits



II. SUMMARY AND CONCLUSIONS

The asbestos abatement project summarized below was conducted in accordance with US Environmental Protection Agency (EPA) asbestos procedures and monitoring by TTI Environmental, Inc. (TTI).

Location: Pinelands Regional High School – Second (2nd) Floor

Abatement Contractor: Synatech, Inc.

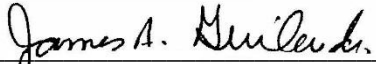
Date(s) of Abatement: January 3, 2018

LOCATION	TYPE OF ACM	ABATEMENT METHOD
Pinelands Regional High School - Designated Areas of 2 nd Floor	Floor Tile	Mini Enclosure Non-Friable Removal Methods
	Mastic associated with Floor Tile	

TTI conducted a final inspection within the work area(s) for visible asbestos material on January 3, 2018. The work area(s) were found to be in compliance with the project scope of work.

All project air sampling results analyzed by Phase Contrast Microscopy (PCM) during abatement procedures were found to be below the New Jersey Department of Community Affairs (NJCA) established limit of 0.010 fibers per cubic centimeter (f/cc) in accordance with the NJAC 5:23-8.21(g).

All project clearance air sampling results analyzed by Transmission Electron Microscopy (TEM) yielded concentrations below the EPA 40 CFR Part 763 Final Rule Asbestos Hazard Emergency Response Act (AHERA) final clearance limit of <70 structures per millimeter squared (s/mm²). All five (5) clearance samples were non-detected for asbestos fibers.



 James A. Guilardi
 Senior Project Manager



APPENDIX A:

Air Sampling Data and Analytical Results



1253 North Church Street, Moorestown, NJ 08057
856-840-8800 Fax 856-840-8815

SAMPLING DATA AND CHAIN OF CUSTODY RECORD
 (Circle One) **PCM** **TEM** **PRES** **DURINGS** **POST**

PROJECT #:		CLIENT:		TTI PROJECT MANAGER:		SAMPLING DATE:					
17-1224		Pinelands Regional BOE		Guilardi		Stocku					
SEAMAN		CLIENT CONTACT:		FACILITY:		SAMPLING DATE:					
A. Culliton		Pinelands Regional High School		1-3-18							
SAMPLE #	PUMP #	SAMPLE LOCATION	TIMES			FLOW RATE		TOTAL VOLUME	FIBER COUNT (fibers/field)	FIBER DENSITY (f/mm ²)	FIBER CONCENTRATION (fibers/cc)
			START	STOP	TOTAL	INITIAL	FINAL				
D-01	009	Hallway at Room 223	0843	1205	202	5	5	1010	9/100	7.01	<0.002
D-02	52	Hallway at Room 219	0846	1207	201	5	5	1005	6.5/100	9.28	0.002
D-03	11	Hallway at Room 215	0850	1209	199	5	5	995	4.5/100	7.01	<0.002
D-04	210	Hallway at Room 251 (Decon)	0900	1214	194	5	5	970	7/100	8.92	0.002
D-05	59	Hallway at Stairwell #5 (Decon)	0906	1214	190	5	5	950	9/100	11.46	0.002
D-06	003	Hallway at Room 246	0909	1218	189	5	5	945	4/100	7.01	<0.002
D-07	009	Hallway at Room 223	1205	1530	205	5	5	1025	5.5/100	7.01	<0.002
D-08	52	Hallway at Room 219	1207	1531	206	5	5	1030	6/100	7.64	0.002
D-09	11	Hallway at Room 215	1209	1531	202	5	5	1010	4/100	7.01	<0.002
D-10	210	Hallway at Room 251 (Decon)	1214	1545	211	5	5	1055	7/100	8.92	0.002
D-11	59	Hallway at Stairwell #5 (Decon)	1216	1545	209	5	5	1045	6/100	7.64	1.002
D-12	003	Hallway at Room 246	1218	1546	208	5	5	1040	9/100	7.01	<0.002
D-13	-	Blank	-	-	-	-	-	-	9/100	-	-
D-14	-	Blank	-	-	-	-	-	-	-	-	-

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
<i>[Signature]</i>					
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Analyst: (Signature)	Date:	Time:	Rotameter #: 3	PO #	Turn Around Time:
<i>[Signature]</i>	1-4-18		Filter Manufacturer: Zefon		
			Lot #: 47741		

Comments: e-mail all results and COC to: ih-lab@ttienv.com

FOR TEM ANALYSIS ONLY: DO NOT ANALYZE BLANKS



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 /

<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order: 041800133

Customer ID: TTIE54

Customer PO: 024231

Project ID:

Attention: Jim Guilardi
TTI Environmental Inc.
1253 North Church Street
Moorestown, NJ 08057

Phone: (856) 840-8800

Fax: (856) 840-8815

Received Date: 01/03/2018 21:10 PM

Analysis Date: 01/03/2018 - 01/04/2018

Collected Date: 01/03/2018

Project: 17-1224 / Pinelands Regional BOE / Pinelands Regional High School

Test Report: Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Appendix A to Subpart E

Sample	Location	Volume (Liters)	Area Analyzed (mm ²)	Non Asb	Asbestos Type(s)	#Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration	
						≥0.5μ < 5μ	≥5μ		(S/mm ²)	(S/cc)
C-01	Inside Containment #1 2nd Floor (Glass Hallway)	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
041800133-0001										
C-02	Inside Containment #1 2nd Floor (Glass Hallway)	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
041800133-0002										
C-03	Inside Containment #1 2nd Floor (Glass Hallway)	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
041800133-0003										
C-04	Inside Containment #1 2nd Floor (Glass Hallway)	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
041800133-0004										
C-05	Inside Containment #1 2nd Floor (Glass Hallway)	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
041800133-0005										
C-06	Inside Containment #2 2nd Floor (Connector)	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
041800133-0006										
C-07	Inside Containment #2 2nd Floor (Connector)	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
041800133-0007										
C-08	Inside Containment #2 2nd Floor (Connector)	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
041800133-0008										
C-09	Inside Containment #2 2nd Floor (Connector)	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
041800133-0009										
C-10	Inside Containment #2 2nd Floor (Connector)	1200.00	0.0650	0	None Detected	0	0	0.0049	<15.00	<0.0049
041800133-0010										

Analyst(s)

Sarah Richey (10)

Benjamin Ellis, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. EMSL is not responsible for data reported in structures/cc, which is dependent on volume collected by non-laboratory personnel. Samples received in good condition unless otherwise noted. The test results meet the requirements of NELAC unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036, PA ID# 68-00367

Initial report from: 01/04/2018 00:58 AM

041800133



1253 North Church Street, Moorestown, NJ 08057
856-840-8800 Fax 856-840-8815

SAMPLING DATA AND CHAIN OF CUSTODY RECORD

PCM **TEM** (Circle One) PRES DURINGS **POST**

PROJECT #:		CLIENT:		TTI PROJECT MANAGER:		STOCKU					
SAMPLER(S):		CLIENT CONTACT:		FACILITY:		SAMPLING DATE:					
SAMPLE #	PUMP #	SAMP'LE LOCATION	TIMES			FLOW RATE		TOTAL VOLUME	FIBER COUNT (fibers/field)	FIBER DENSITY (f/mm ²)	FIBER CONCENTRATION (fibers/cc)
			START	STOP	TOTAL	INITIAL	FINAL				
C-01	003	Inside Containment #1 (2nd Floor Class Hallway)	1630	1830	120	10	10	1200			
C-02	12		1630	1830	120	10	10	1200			
C-03	69		1630	1830	120	10	10	1200			
C-04	59		1630	1830	120	10	10	1200			
C-05	72		1630	1830	120	10	10	1200			
C-06	210	Inside Containment #2 (2nd Floor Connector)	1730	1930	120	10	10	1200			
C-07	11		1730	1930	120	10	10	1200			
C-08	74		1730	1930	120	10	10	1200			
C-09	52		1730	1930	120	10	10	1200			
C-10	009		1730	1930	120	10	10	1200			
C-11	—	Blank	—	—	—	—	—	—			
C-12	—	Blank	—	—	—	—	—	—			

RECEIVED
2010 JAN -3 10
CINNAMINSON, NJ
D 9 10

Relinquished by: (Signature) *[Signature]* Date: 1-3-10 Time: 2:05
 Relinquished by: (Signature) *[Signature]* Date: 1-3-10 Time: 9:10
 Analyst: (Signature) _____ Date: _____ Time: _____
 Rotameter #: 3
 Filter Manufacturer: Zefon
 Lot #: 47674
 Turn Around Time: 24 hr
 PO # 024231
 Comments: e-mail all results and COC to: ih-lab@ttienv.com (12)

FOR TEM ANALYSIS ONLY: DO NOT ANALYZE BLANKS

Night Drop Box - (Ac)



APPENDIX B:

Daily Inspection Reports



ASBESTOS SAFETY TECHNICIAN DAILY INSPECTION REPORT

CLIENT: <u>Pinelands Regional BOE</u>		PROJECT: <u>Floor Tile and Mastic of 2nd Floor Hall</u>	
PROJECT NO.: <u>17-1224</u>	DATE: <u>1-3-18</u>	DAY OF JOB: <u>1</u>	
ADDRESS: <u>590 Nugentown Rd., Tuckerton, NJ</u>			
AST: <u>Adam Culliton</u>		SIGNATURE:	
ARRIVED ON SITE: <u>0800</u> <input checked="" type="radio"/> AM <input type="radio"/> PM		LEFT SITE: _____, AM <input type="radio"/> <input checked="" type="radio"/> PM	

LIST PERMITTED WORKERS AND AUTHORIZED VISITORS WITH TIMES

NAME	PERMIT NUMBER	EXP DATE	NAME	PERMIT NUMBER	EXP DATE
<u>Synatech</u>					
<u>Robert Perez</u>	<u>036973</u>	<u>2-18-18</u>			
<u>Maria Llugay</u>	<u>032285</u>	<u>3-21-18</u>			
<u>Jorge Delgado</u>	<u>032044</u>	<u>6-8-18</u>			
<u>Angel Reyes</u>	<u>27849</u>	<u>5-11-18</u>			
<u>Wojciech Bielski</u>	<u>037696</u>	<u>5-12-18</u>			
<u>Enrique Macias</u>	<u>035054</u>	<u>8-12-18</u>			
<u>Javier Andacilla Borja</u>	<u>035695</u>	<u>4-15-18</u>			
<u>Lesly Cantor</u>	<u>037495</u>	<u>8-9-18</u>			
<u>- End -</u>					

Phase of Abatement (Prep, Removal, Etc.): _____ Work Area(s): 2nd Floor Hallway Areas

Scope of Work: Removal of Floor Tile and Mastic

Visitors: Christopher Trevors Representing: NJDLWD Time of Visit: 1320

Comments: Site Inspection

Dumpster On Site Yes No

Pump Calibration Before Sample After

Emergency Phone # On Site & Posted

Plans & Specs On Site

Amended Water Being Used

No. of Waste Bags Removed _____

No. of AFDs 4

Caution Signs Posted

	Smoke Test	"H ₂ O" Reading	Time
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____

Smoke Tests and Manometer Readings

Decon Chambers/Shower

Electric Shut Down/GFCI Protected Yes No

HVAC Shut Down Yes No

Ventilation provided for Active Equipment



DAILY INSPECTION REPORT

Client: Pinelands Regional BOE	Project: Pinelands Regional HS	Project No.: 17-1224
Date: 1-3-18	Shift:	Page: 1 of 2
Area: 2 nd Floor	Activity: Removal of Floor Tile and Mastic	

- 0800** - Adam Culliton from TTI arrives on site. I meet with supervisor for Synatech and go over work activities for today. They are going to finish prep work of the two areas for floor tile and mastic removal. Full containment with decon and shower in use. Removal will be via non-fricible and non-mechanical methods. (Heat machines). Workers will wear full PPE while working. TTI begins mobilizing equipment. (Ac)
- 0915** - TTI finishes setting up morning removal of air samples. Synatech begins removal of Floor Tile in one ^{#1} containment, prep work still being done on second ^{#2} containment. (Ac)
- 1030** - Synatech is bagging out floor tile using 6mil poly bags - properly sealed and labeled. They are triple bagging materials. Prep work on other containment area still progressing. ^{#2} (Ac)
- 1105** - Floor Tile removal is completed in containment hall with glass over-look and removal is proceeding in "catwalk" hall/connecting entrance ways. Containment ^{#1} will proceed with mastic removal using "no odor" solvent. No visible emissions noticed outside either containment. (Ac)
- 1225** - Several crew members from Synatech break for lunch, other crew members remain on site to continue work. (Ac)
- 1240** - Remaining crew members decide to break for lunch as well. (Ac)
- 1330** - Synatech returns from lunch. Christopher Trevars of NJDLWD on-site. TTI and Synatech walk thru work area to show Mr. Trevars work progress. Mr. Trevars states he is satisfied with set up and work performed he makes (1) one suggestion about entry flaps (need to cover more area). Synatech will adjust these accordingly. (Ac)
- 1410** - Synatech begins bagging out floor tile from containment ^{#2} - triple bagged (Ac)

SIGNATURE: _____

1-3-18



DAILY INSPECTION REPORT

Client: <u>Pinelands Regional BOE</u>	Project: <u>Pinelands Regional HS</u>	Project No.: <u>17-1224</u>
Date: <u>1-3-18</u>	Shift:	Page: <u>2</u> of <u>2</u>
Area: <u>2nd Floor</u>	Activity: <u>Removal of Floor Tile and Mastic</u>	

- (1410) - and sealed/labeled properly before being transported to poly-lined trailer. (Ae)
- (1430) - Removal of mastic begins in containment #2, final clean up of mastic being performed in containment #1. (Ae)
- (1550) - Synatech requests visual inspection of containment #1. TTI inspects and recommends small spot cleaning. Synatech cleans areas in question and TTI gives visual approval. (Ae)
- (1645) - Synatech requests visual inspection of containment #2. TTI inspects and gives visual approval. TTI will remain to run TEM Air clearance samples of containment areas. (Ae)
- (1720) - Synatech finishes their cleanup and pack out of equipment and departs site. TTI on-site to run final clearance samples. (Ae)
- (2000) - TTI packs up equipment and departs site. (Ae)
- (*) See workers Permit Log in Sheet for Permits (*) (Ae)
- (*) See Chain of Custody for Daily Air Sampling (*) (Ae)

SIGNATURE:  1-3-18




APPENDIX C:

Notifications and Permits

**State of New Jersey
NOTIFICATION OF ASBESTOS ABATEMENT
(Pursuant to NJAC 8:60 and 12:120)**

Check # 12508

Date of Notification (1) December 21, 2017		Name of Building Owner / Operator (2) Pinelands Regional Board of Education							
Agencies Notified <input checked="" type="checkbox"/> EPA <input type="checkbox"/> DEP <input checked="" type="checkbox"/> DOL <input checked="" type="checkbox"/> DOH <input type="checkbox"/> DCA	Type Notification <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Amended Amendment # _____ <input type="checkbox"/> Cancellation	Street Address 520 Nugentown Road							
		City, State & Zip Code Little Egg Harbor, NJ 08087							
		Name of Contact Stephen Brennan, Business Administrator			Telephone Number 609-296-3106				
FACILITY INFORMATION									
Name of Facility Where Abatement is Taking Place (3) Pinelands Regional High School			Type of Facility (4) <input checked="" type="checkbox"/> School (K-12) <input type="checkbox"/> Subchapter 8 (Other than K-12) <input type="checkbox"/> Other (i.e., private & commercial buildings, home, etc.)						
Street Address 565 Nugentown Road			Square Feet 22,000	# of Floors 3	Bldg. Age 48				
City (5) Little Egg Harbor			Current Use (Prior if being demolished) Public Building						
County (6) Ocean		County Code (7) USE ONLY							
Name of Monitoring Firm Hired by Building Owner (8) TTI Environmental, Inc.		ASCM No. 0003	Name of Abatement Contractor (9) Synatech, Inc.						
Street Address 1253 North Church Street		Street Address 829 Radio Road							
City, State & Zip Code Moorestown, NJ 08057		City, State & Zip Code Little Egg Harbor, NJ 08087							
Project Manager for Monitoring Firm Jim Guillard		Telephone Number 856-840-8800	Telephone Number 609-296-6916	License Number 00817					
Scheduled Start Date (10) January 2, 2018		Scheduled Completion Date (11) January 8, 2018	Name of OSHA Monitor Synatech, Inc.						
Occupancy Status During Abatement (Check only one) <input checked="" type="checkbox"/> Facility Closed/Vacated During Entire Period of Abatement <input type="checkbox"/> Abatement Performed Outside of Normal Hours <input type="checkbox"/> Other - Describe: <input type="checkbox"/> Facility Occupied During Abatement			Street Address 829 Radio Road						
			City, State & Zip Code Little Egg Harbor, NJ 08087						
Scope of Work (Check all that apply)									
<input type="checkbox"/> ≥ 3 sf or ≥ 3 lf		<input type="checkbox"/> Renovation		<input type="checkbox"/> Full Containment with Negative Pressure					
<input checked="" type="checkbox"/> ≥ 160 sf or ≥ 260 lf		<input type="checkbox"/> Demolition		<input checked="" type="checkbox"/> Mini-Enclosure					
<input type="checkbox"/> Glovebag Procedure									
<input checked="" type="checkbox"/> Non-Exempted(*) and Non-Friable Procedure									
Location of Asbestos-Containing Material (ACM) TO BE ABATED IN Facility (13)	Is Location Normally Used Solely by Maintenance or Custodial Staff? (12)			Description of Asbestos-Containing Material (ACM) (i.e., thermal systems insulation, surfacing, VAT or other miscellaneous)	Amount (Specify SF or LF)	Abatement Type			
	Yes	No	N/A			Removal	Repair	Encapsulate	Enclosure
2 nd Floor Hallways – 2 Areas			X	Floor Tile and Mastic	1,240 SF	X			
Name of Registered Waste Hauler Synatech, Inc.		NJDEP Waste Hauler ID No. 27429	Cubic Yards of Waste 5	Name of Registered Landfill Grows Landfill					
City, State Little Egg Harbor, NJ 08087		Disposal Date January 9, 2017		City, State Morrisville, PA					
Completed By Diane Aloia		Title Exec. Administrator	Signature 		Date December 21, 2017				

*Do not use this form for asbestos licensure exempted activities.