

EHS ENVIRONMENTAL, INC.

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ASBESTOS ABATEMENT AIRBORNE SAMPLE ANALYSIS REPORT


CLIENT: Centennial School District
433 Centennial Road
Warminster, PA 18974

LOCATION: Log College Middle School
730 North Norristown Road
Warminster, PA 18974

PROJECT NUMBER: 5-18-21198

CONTACT PERSON: Mr. Tom Golden

DATE OF REPORT: June 21, 2018

REPORT REVIEWED BY: 

Jack F. Carney, President

EXECUTIVE SUMMARY

EHS Environmental, Inc. was contracted by Centennial School District to provide sample collection and analytical services for airborne asbestos during and after the removal of specified asbestos containing materials from the Boiler Room at the Log College Middle School located at 730 North Norristown Road in Warminster, Pennsylvania.

This project entailed the removal of approximately:

- 30 square feet of “other” from the Boiler Room;
- 500 square feet of boiler insulation from the Boiler Room;
- 300 linear feet of pipe insulation from the Boiler Room.

Removal operations were performed by Power Component Systems, Inc. of Camp Hill, Pennsylvania. EHS was directed to removal locations by the client.

Results indicate that samples collected following removal activities were below 0.01 Fibers per cubic centimeter of air (F/cc) and below 70 Structures per millimeter squared (S/mm²), the current re-occupancy standards utilizing Transmission Electron Microscopy (TEM) for analysis.

METHODS

Asbestos Sampling

Airborne asbestos samples were collected using calibrated equipment and NIOSH recommended sampling procedures. Asbestos fibers were collected on mixed cellulose membrane filters with 0.80 micron pore size mounted in a 3 stage filter cassette. Sample collection was performed in the open face position by drawing a known volume of air through the filter with a calibrated sampling pump. Final air samples were collected utilizing aggressive air sampling techniques.

Asbestos Analysis

Airborne asbestos samples were analyzed per NIOSH Method 7400 using the ‘A’ counting rules. This method identifies total number of fibers by Phase Contrast Microscopy using 400 x magnifications. This method does not distinguish between asbestos and non-asbestos fibers (i.e., fiberglass, mineral wool, cellulose, etc.). All fibers with a length to diameter ratio of 3 to 1 or greater and a length of greater than 5 microns are considered to be asbestos fibers and are counted as such. The NIOSH Method 7400 requires 5.5 fibers per 100 fields to be counted to be considered “detectable”.

Asbestos Standards

OSHA Standard is 0.10 F/cc: (applies to workers inside the work area and work area samples) 0.10 Fibers per cubic centimeters of air (F/cc) averaged over an 8-hour time period.

Clearance Criteria is 0.01 F/cc: (applies to samples collected inside the change room of the decontamination unit, outdoors, outside the work area, and final air samples collected following removal activities).

AIRBORNE SAMPLING RESULTS

CLIENT: Centennial School District

PROJECT NUMBER: 5-18-21198

LOCATION: Log College Middle School
730 North Norristown Road
Warminster, PA
Boiler Room

ACTIVITY: Removal

COLLECTION DATE: May 8, 2018 – 1st Shift

SAMPLE#	LOCATION/DESCRIPTION	CONCENTRATION (F/cc)
21198-1	Perimeter – at north side double doors of Boiler Room	<0.002
21198-2	Perimeter – at west side door of Boiler Room	<0.002
21198-3	Perimeter – at east side door of Boiler Room	<0.002
21198-4	Perimeter – at south side rear door of Boiler Room	<0.002
21198-5	Perimeter – outside of decon	0.002
21198-6	3 stage decon	0.005
21198-7	Work area – Boiler Room	OVERLOADED
21198-8	Work area – Boiler Room	OVERLOADED
21198-9	Field Blank	0.0 Fibers/100 Fields
21198-10	Field Blank	0.0 Fibers/100 Fields

AIRBORNE SAMPLING RESULTS

CLIENT: Centennial School District

PROJECT NUMBER: 5-18-21198

LOCATION: Log College Middle School
730 North Norristown Road
Warminster, PA
Boiler Room

ACTIVITY: Removal

COLLECTION DATE: May 9, 2018 – 1st Shift

SAMPLE#	LOCATION/DESCRIPTION	CONCENTRATION (F/cc)
21198-11	Perimeter – at north side double doors of Boiler Room	<0.002
21198-12	Perimeter – at west side door of Boiler Room	<0.002
21198-13	Perimeter – at east side door of Boiler Room	<0.002
21198-14	Perimeter – at south side rear door of Boiler Room	<0.002
21198-15	Perimeter – outside of decon	0.002
21198-16	3 stage decon	0.004
21198-17	Work area – Boiler Room	0.032
21198-18	Work area – Boiler Room	0.041
21198-19	Field Blank	0.0 Fibers/100 Fields
21198-20	Field Blank	0.0 Fibers/100 Fields

AIRBORNE SAMPLING RESULTS

CLIENT: Centennial School District

PROJECT NUMBER: 5-18-21198

LOCATION: Log College Middle School
730 North Norristown Road
Warminster, PA
Boiler Room

ACTIVITY: Removal

COLLECTION DATE: May 10, 2018 – 1st Shift

SAMPLE#	LOCATION/DESCRIPTION	CONCENTRATION (F/cc)
21198-21	Perimeter – at north side double doors of Boiler Room	<0.002
21198-22	Perimeter – at west side door of Boiler Room	<0.002
21198-23	Perimeter – at east side door of Boiler Room	<0.002
21198-24	Perimeter – at south side rear door of Boiler Room	<0.002
21198-25	Perimeter – outside of decon	0.003
21198-26	3 stage decon	0.003
21198-27	Work area – Boiler Room	0.017
21198-28	Work area – Boiler Room	0.026
21198-29	Field Blank	0.0 Fibers/100 Fields
21198-30	Field Blank	0.0 Fibers/100 Fields

AIRBORNE SAMPLING RESULTS

CLIENT: Centennial School District

PROJECT NUMBER: 5-18-21198

LOCATION: Log College Middle School
730 North Norristown Road
Warminster, PA
Boiler Room

ACTIVITY: Removal

COLLECTION DATE: May 11, 2018 – 1st Shift

SAMPLE#	LOCATION/DESCRIPTION	CONCENTRATION (F/cc)
21198-31	Perimeter – at north side double doors of Boiler Room	<0.003
21198-32	Perimeter – at west side door of Boiler Room	<0.003
21198-33	Perimeter – at east side door of Boiler Room	<0.003
21198-34	Perimeter – at south side rear door of Boiler Room	<0.003
21198-35	Perimeter – outside of decon	<0.003
21198-36	3 stage decon	0.004
21198-37	Work area – Boiler Room	0.019
21198-38	Field Blank	0.0 Fibers/100 Fields
21198-39	Field Blank	0.0 Fibers/100 Fields

AIRBORNE SAMPLING RESULTS

CLIENT: Centennial School District

PROJECT NUMBER: 5-18-21198

LOCATION: Log College Middle School
730 North Norristown Road
Warminster, PA
Boiler Room

ACTIVITY: Removal

COLLECTION DATE: May 14, 2018 – 1st Shift

SAMPLE#	LOCATION/DESCRIPTION	CONCENTRATION (F/cc)
21198-40	Perimeter – at north side double doors of Boiler Room	<0.002
21198-41	Perimeter – at west side door of Boiler Room	<0.002
21198-42	Perimeter – at east side door of Boiler Room	<0.002
21198-43	Perimeter – at south side rear door of Boiler Room	<0.002
21198-44	Perimeter – outside of decon	0.002
21198-45	3 stage decon	0.004
21198-46	Work area – Boiler Room	0.018
21198-47	Work area – Boiler Room	0.030
21198-48	Field Blank	0.0 Fibers/100 Fields
21198-49	Field Blank	0.0 Fibers/100 Fields

AIRBORNE SAMPLING RESULTS

CLIENT: Centennial School District

PROJECT NUMBER: 5-18-21198

LOCATION: Log College Middle School
730 North Norristown Road
Warminster, PA
Boiler Room

ACTIVITY: Removal

COLLECTION DATE: May 15, 2018 – 1st Shift

SAMPLE#	LOCATION/DESCRIPTION	CONCENTRATION (F/cc)
21198-50	Perimeter – at north side double doors of Boiler Room	<0.002
21198-51	Perimeter – at west side door of Boiler Room	<0.002
21198-52	Perimeter – at east side door of Boiler Room	<0.002
21198-53	Perimeter – at south side rear door of Boiler Room	<0.002
21198-54	Perimeter – outside of decon	<0.002
21198-55	3 stage decon	0.003
21198-56	Work area – Boiler Room	0.011
21198-57	Work area – Boiler Room	<0.015
21198-58	Field Blank	0.0 Fibers/100 Fields
21198-59	Field Blank	0.0 Fibers/100 Fields

AIRBORNE SAMPLING RESULTS

CLIENT: Centennial School District

PROJECT NUMBER: 5-18-21198

LOCATION: Log College Middle School
730 North Norristown Road
Warminster, PA
Boiler Room

ACTIVITY: Final Air Tests – TEM

COLLECTION DATE: May 15, 2018 – 1st Shift

SAMPLE#	LOCATION/DESCRIPTION	CONCENTRATION (F/cc)
21198-60	North side	0.21
21198-61	West side	Sample Not Analyzed
21198-62	Center	Sample Not Analyzed
21198-63	East side	Sample Not Analyzed
21198-64	South side	Sample Not Analyzed

TESTS FAILED

CERTIFICATE OF ANALYSIS

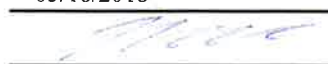
Client: EHS Environmental, Inc. 411 Southgate Court, Suite E Mickleton NJ 08056	Report Date: 5/16/2018 Report No.: 563846 - TEM AHERA Rev #2, 5/21/2018 Project: Log College Middle School Project No.: 21198
Client: EHS762	


TEM AIR SAMPLE ANALYSIS SUMMARY

Lab No.: 6512074 Client No.: 60	Volume: 1800.0 L Location: Boiler Rm North Side Of Containment Date Sampled: 5/15/18	Density (s/mm³): 1000 Concentration (s/cc): 0.21 Asbestos Type(s): Chrysotile
Lab No.: 6512075 Client No.: 61	Volume: 1800.0 Location: Boiler Rm West Side Of Containment Date Sampled: 5/15/18	Density (s/mm³): Sample Not Analyzed Concentration (s/cc): Sample Not Analyzed Asbestos Type(s):
Lab No.: 6512076 Client No.: 62	Volume: 1800.0 Location: Boiler Rm Center Of Containment Date Sampled: 5/15/18	Density (s/mm³): Sample Not Analyzed Concentration (s/cc): Sample Not Analyzed Asbestos Type(s):
Lab No.: 6512077 Client No.: 63	Volume: 1800.0 Location: Boiler Rm East Side Of Containment Date Sampled: 5/15/18	Density (s/mm³): Sample Not Analyzed Concentration (s/cc): Sample Not Analyzed Asbestos Type(s):
Lab No.: 6512078 Client No.: 64	Volume: 1800.0 Location: Boiler Rm South Side Of Containment Date Sampled: 5/15/18	Density (s/mm³): Sample Not Analyzed Concentration (s/cc): Sample Not Analyzed Asbestos Type(s):

Note: Sample analysis terminated. Clearance criteria exceeded (average >70.0 s/mm³). Set fails by AHERA 40 CFR 763.

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 5/15/2018
Date Analyzed: 05/16/2018
Signature: 
Analyst: Rebecca Smith

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

AIRBORNE SAMPLING RESULTS

CLIENT: Centennial School District

PROJECT NUMBER: 5-18-21198

LOCATION: Log College Middle School
730 North Norristown Road
Warminster, PA
Boiler Room

ACTIVITY: Final Air Tests – TEM

COLLECTION DATE: May 17, 2018 – 2nd Shift

SAMPLE#	LOCATION/DESCRIPTION	CONCENTRATION (F/cc) / (S/mm²)
21198-65	Center	<0.0033 / <15.4
21198-66	North side	<0.0033 / <15.4
21198-67	East side	<0.0033 / <15.4
21198-68	South side	<0.0033 / <15.4
21198-69	West side	<0.0033 / <15.4

CERTIFICATE OF ANALYSIS

Client: EHS Environmental, Inc.
411 Southgate Court, Suite E
Mickleton NJ 08056

Report Date: 5/17/2018
Report No.: 563983 - TEM AHERA
Project:
Project No.: 21198

Client: EHS762

TEM AIR SAMPLE ANALYSIS SUMMARY

Lab No.: 6513279 Volume: 1800.0 L Density (s/mm²): <15.4
Client No.: 65 Location: Center Of Boiler Room Concentration (s/cc): <0.0033
Date Sampled: 5/17/18 Asbestos Type(s): None Detected

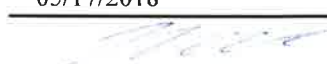
Lab No.: 6513280 Volume: 1810.0 L Density (s/mm²): <15.4
Client No.: 66 Location: North Side Concentration (s/cc): <0.0033
Date Sampled: 5/17/18 Asbestos Type(s): None Detected

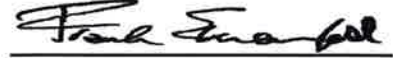
Lab No.: 6513281 Volume: 1820.0 L Density (s/mm²): <15.4
Client No.: 67 Location: East Side Concentration (s/cc): <0.0033
Date Sampled: 5/17/18 Asbestos Type(s): None Detected

Lab No.: 6513282 Volume: 1800.0 L Density (s/mm²): <15.4
Client No.: 68 Location: South Side Concentration (s/cc): <0.0033
Date Sampled: 5/17/18 Asbestos Type(s): None Detected

Lab No.: 6513283 Volume: 1820.0 L Density (s/mm²): <15.4
Client No.: 69 Location: West Side Concentration (s/cc): <0.0033
Date Sampled: 5/17/18 Asbestos Type(s): None Detected

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 5/17/2018
Date Analyzed: 05/17/2018
Signature: 
Analyst: Rebecca Smith

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director