HAZARDOUS MATERIALS ABATEMENT

PROJECT MANUAL

Project Location:

FORMER CLAY SCHOOL BUILDING

131 15th Street
Wheeling, West Virginia 26003

Prepared for:

Montrose Environmental Group, Inc.
1140 Valley Forge Road, P.O. Box 810
Valley Forge, Pennsylvania 19482

BEC Project #WV24048

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Prepared by:

BOGGS ENVIRONMENTAL CONSULTANTS

Middletown, MD ~ Morgantown, WV
Corporate Office: 200 W Main Street, Middletown, MD 21769#
Tel: (301) 694-5687 ~ Fax: (301) 694-9799

ENVIRONMENTAL SCIENCE, ENGINEERING & INDUSTRIAL HYGIENE SERVICES

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This hazardous material abatement project design document was prepared by:

BOGGS ENVIRONMENTAL CONSULTANTS, INC.

Prepared By:

Ricky Robinson
President

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SECTION 1.0 PROJECT DESCRIPTION

It is the purpose of this Project Manual to communicate the scope of work for asbestos abatement and removal or control of hazardous materials at the subject site, in accordance with Federal & State law, prior to commencement of demolition of the building. This manual has been prepared for "Bidders" to use in the preparation of their Bid to complete the scope of work for asbestos abatement and removal of hazardous materials. This manual delineates performance-based project requirements and is not intended to represent a prescriptive "means and methods" or "specification" dictating to the Bidders exact and precise work processes, practices, and/or procedures to be employed in accomplishment of the work (other than those required by Federal & State law).

The vacant former Clay School Building is located at 131 15th Street, Wheeling, West Virginia 26003 and is referred to hereinafter as the subject site. This former Clay School is located immediately northeast of the intersection of 15th Street and Wood Street and includes a four-story structure that includes three stories that are completely aboveground and a basement level that is belowground on one side of the structure and aboveground on the opposite side of the structure. The former school building has a typical rectangular floor plan of classrooms, administrative offices, gymnasium, mechanical rooms, bathrooms, corridors, and common spaces.

SECTION 2.0 SCHEDULE OF ASBESTOS CONTAINING MATERIALS

The following asbestos-containing building construction materials (ACBMs) have been identified within the subject site that have the potential to be disturbed during planned demolition. Table A lists ACBMs that were identified at the subject site which will undergo gross removal, in their entirety, in accordance with Federal & State law prior to renovations and/or demolition of the structure.

2.1 Asbestos Containing Building Materials

TABLE A: ASBESTOS-CONTAINING BUILDING MATERIALS AT THE FORMER CLAY SCHOOL

Building Construction Material	Material Location(s)	Quantity
9" x 9" Red & Black Floor Tile	Basement, 1st, 2nd, and 3rd Floors	~43,500 SF
Red Vinyl Stair Treads	Center Stairwell, SE Stairwell & NW Stairwell	~1,100 SF
Brown Vinyl Cove Base -6"	Classrooms (Typical Condition is Along One Wall)	~540 LF
12"x 12" White Vinyl Floor Tile (VFT) & Related Black Mastic	Basement	~2,325 SF
12" x 12" White Vinyl Floor Tile w/ Grey Specks & Related Black Mastic	Cafeteria/Auditorium	~6,500 SF
Air-Cell Pipe Insulation & Pipe Packing Material (Fittings)	Within Wall/Ceiling Plenums Throughout Basement, 1st Floor, 2nd Floor, Cafeteria/Auditorium & Gymnasium	~2,400 LF
Fire Doors	Throughout Building	~ 30 each
Mastic on Stone Top of Parapet Wall	Rooflines	~ 315 SF
Scattered Debris with Damaged Asbestos Containing Materials	Throughout Building	~ 77,445 SF

General Note: BEC could not access the sub-basement area as it was filled with water. Any items in this area are not accounted for.

**BEC advises that these quantifications are solely estimations based on the square footage of the materials in question that was visibly observed within the subject site. Therefore, it is incumbent upon the general and/or asbestos abatement contractor to verify these quantities prior to the commencement of any demolition/renovation activities that may impact asbestos-containing materials within the subject site.*

SECTION 2.0 SCHEDULE OF ASBESTOS CONTAINING MATERIALS

2.1 Asbestos Containing Building Materials (continued)

Notes for Table A:

1. BEC advises the quantifications of Asbestos Containing Building Materials (ACBMs) in Table A are solely estimations based on the square or linear footage of the materials in question that were visibly observed within the subject site. Therefore, it is incumbent upon the general and/or asbestos abatement contractor to verify these quantities for accurate bid estimates. Failure to do so will result in the bidder accepting the estimated quantities and no change orders will be authorized in regards to additional quantities.
2. Any discovered materials must be brought to the attention of the **CLIENT**; for confirmation, possible sampling and quantification prior to any submission of change orders.
3. Asbestos containing materials (e.g., mudded pipe fittings, pipe insulation, pipe packing material etc.) will be located within enclosed areas, (e.g., mechanical chases or risers, within plaster and CMU block walls) and will require pre-demolition to gain access to those materials. Asbestos containing flooring (e.g., VFT) may be present under interior demising walls and will require pre-demolition to gain access to those materials.
4. The majority of the asbestos containing flooring and thermal system pipe insulation have undergone substantial damage that has resulted in commingling of damaged non-asbestos containing plaster. Therefore, all debris will require pre-cleaning prior to completing work area setups. All contents and debris shall undergo disposal as asbestos containing materials. The asbestos abatement workplan that is to be submitted should provide detail how this will be accomplished.
5. The contractor will be responsible for verification with the building engineers that all utilities within a selected area are shut off or locked out prior to beginning any demolition activities.

2.2 Trace Asbestos Containing Building Materials At The Former Clay School

BEC concludes, based upon on-site visual inspection and review of analytical data, US OSHA-regulated trace (< 1%) asbestos-containing materials **were identified** at the subject site and are listed in **TABLE B: Trace Asbestos-Containing Materials** and is provided on the following page.

TABLE B: TRACE ASBESTOS–CONTAINING BUILDING MATERIALS AT FORMER CLAY SCHOOL

Building Construction Material	Material Location(s)	EPA Regulated	OSHA Regulated	Quantity*
Black Tar on Parapet Wall Flashing	Rooflines	**NO**	**YES**	~ 3,075 SF
Silver Coated Curb Flashing	Rooflines	**NO**	**YES**	~ 320 SF
White Door Masonry Sealant	Exterior	**NO**	**YES**	~ 125 LF

***BEC advises that that the material identified above (Black Tar on Roofline Parapet Wall Flashing, Silver Coated Curb Flashing on Roofline, and White Door Masonry Sealant on Exterior Doors were found to contain less than 1% Chrysotile Asbestos. Although not considered an asbestos containing materials by the U.S. EPA (since they contain less than 1% asbestos); the U.S. Occupational Safety and Health Administration (OSHA) requires notification of workers and contractors of the presence of materials containing any asbestos and take appropriate safety precautions so that workers are not exposed to asbestos.*

SECTION 3.0 ASBESTOS ABATEMENT – GENERAL REQUIREMENTS

- Asbestos Abatement Contractor shall furnish all labor, materials, services, and equipment necessary for the complete removal of ACBMs, including decontamination of work areas.
- Asbestos Abatement Contractor will strictly adhere to all precautions necessary to ensure the health and safety of their workers in accordance with the provisions in US OSHA, US EPA, WVDEP, WVDHHR, and all local codes. Asbestos Abatement Contractor will also protect the health and safety of building visitors/occupants and/or other contractors working in the structure during the asbestos abatement work.
- The Asbestos Abatement Contractor shall hold the Owner and Client harmless for any Contractor failure to comply with any applicable work, packaging, transporting, disposal, safety, health, or environmental requirement on the part of themselves, their employees, or their subcontractors. The Contractor will incur all costs of BEC, including all sampling/analytical costs to assure compliance with OSHA/EPA/State requirements related to failure to comply with the regulations applicable to the work.
- The selected Asbestos Abatement Contractor will provide proper notice to all government agencies having jurisdiction over asbestos abatement activities. At a minimum, National Emission Standards for Hazardous Air Pollutants (NESHAP) notification will be submitted to the US EPA and the West Virginia Department of Environmental Protection (WVDEP), Division of Air Quality, and the West Virginia Department of Health and Human Resources (WVDHHR) through WVDEP's Electronic Submittal System (ESS). Instructions for the West Virginia Notification is provided on the WVDHHR website. These US EPA and West Virginia notifications are required as set forth in NESHAP, 40 CFR 61 Subpart M and State of West Virginia asbestos regulations. The selected Asbestos Abatement Contractor is responsible for payment of all applicable fees associated with the removal of asbestos within the State of West Virginia.
- The selected Asbestos Abatement Contractor is required to submit the "Notification of Abatement, Demolition or Renovation" to US EPA and the State of West Virginia ten (10) business days prior to beginning work.
- Copies of the notifications identified above and asbestos abatement permits are required to be submitted to the project manager.
- The selected Asbestos Abatement Contractor will furnish proof to the project manager that all employees assigned to this project possess current and valid training and licenses. Asbestos abatement Supervisor and Worker training accreditation, as required under Asbestos Hazard Emergency Response Act (AHERA) and State of West Virginia asbestos abatement Supervisor and Worker licenses are required. Such documentation for all Asbestos Abatement Contractor personnel must be present onsite for the duration of the asbestos abatement project.
- A current AHERA Asbestos Abatement Worker and/or Supervisor accreditation and State of West Virginia licensing as an Asbestos Worker for each employee working on the project must be presented to BEC prior to initiating site abatement activities. No worker will be permitted to perform asbestos abatement without current accreditation and appropriate licensing. The selected contractor must have at least one (1) employee onsite possessing a valid AHERA Asbestos Abatement Supervisor accreditation and a current West Virginia license as an Asbestos Supervisor at all times.
- The selected Asbestos Abatement Contractor must possess a current and valid State of West Virginia issued Asbestos Abatement Contractor license. This license must be kept on file at the site and presented to the **CLIENT**, prior to initiating abatement activities.
- The selected Asbestos Abatement Contractor must provide proof of current and valid medical examinations of all workers, as required by OSHA regulations prescribed in 29 CFR 1926.1101. At a minimum, the medical examination is required to include a chest X-ray, a medical history with specific reference to respiratory disease, and a pulmonary function test. Contractor shall provide such information to the **CLIENT** prior to beginning asbestos removal activities. Copies of these documents must be kept onsite at all times for all employees engaged in abatement activities.

SECTION 3.0 ASBESTOS ABATEMENT – GENERAL REQUIREMENTS (continued)

- The selected Asbestos Abatement Contractor must furnish proof that all personnel have received and passed a respirator fit test within six months of any onsite abatement activities; submit same to the **CLIENT**.
- The Asbestos Abatement Contractor is solely responsible for monitoring their asbestos workers as specified by US OSHA Asbestos in General Industry (29 CFR 1910.1001), Asbestos in Construction (29 CFR -1926.1101), and the US OSHA Respiratory Protection Standard (29 CFR 1910.134). Sampling must be performed using the methodology established in Appendix A of 29 CFR 1926.1101. Appropriate respiratory protection is required for Asbestos Abatement Contractor use, in work areas during abatement activities. The level of respiratory protection will be based on OSHA personal air monitoring results, and the minimum respiratory protection used inside work areas during abatement shall be a negative pressure half-face respirator. Personnel exposure monitoring data will not be accepted from previous projects. It will be the responsibility of the abatement contractor to perform exposure monitoring daily until the completion of the project.
- Personnel exposure monitoring results must be submitted to the environmental consultant weekly and include name of individual performing personal breathing zone sampling, air sample analyst, and Certificates of Analysis. The Asbestos Abatement Contractor is required to submit a fully detailed report of personnel exposure monitoring findings to BEC upon completion of abatement at each building.
- Copies of Safety Data Sheets (SDS) for all chemicals scheduled for use on this project (i.e., encapsulants, surfactants, mastic-removing compounds) will be submitted to BEC for approval prior to the start of abatement activities. Chemicals will not be approved for use during abatement activities unless the SDSs are on file with BEC. In accordance to OSHA regulations, the Asbestos Abatement Contractor shall keep copies of the SDSs at the job site.
- Copies of the Asbestos Abatement Contractor's license, all workers, licenses, asbestos permits, and asbestos activity notifications are required to be displayed in one central area at the project site.
- The Asbestos Abatement Contractor is required to submit their asbestos abatement work plan, to include means and methods (In accordance with West Virginia Code R. §64-63-8) to be employed during the abatement process, to BEC for review and approval, prior to beginning any work.
- The Asbestos Abatement Contractor will provide a site specific "Health and Safety Plan" in accordance with all applicable local, state and federal safety regulations. The plan must also include detailed information on fall protection and the proposed method of accessing work areas elevated higher than six (6) feet.
- The Owner will provide electrical service to the Work Areas. The Asbestos Abatement Contractor is responsible for provision of ground-fault circuit interrupters for electrical equipment (e.g., HEPA filter equipped vacuums/AFDs, portable task lights, airless sprayers, etc.) to be utilized during the work effort.
- The Building Owner will provide access to water for use in the abatement actions. Asbestos Abatement Contractor is responsible for all temporary electrical and water connections necessarily-required to support the work.
- Provide and display asbestos warning signs in all languages required at the job site at every entrance to each Work Area in clearly visible locations indicating that asbestos removal work is being conducted and unauthorized persons should not enter.
- Signage must use the following legend, in accordance with 29 CFR 1926.1101(k)(7):

DANGER
ASBESTOS CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED
IN THIS AREA

SECTION 3.0 ASBESTOS ABATEMENT – GENERAL REQUIREMENTS (continued)

- Disable or isolate the ventilation system or any other system bringing air into or out of the Work Area. Disable system by disconnecting and isolating the HVAC system from the Work Area. Seal all openings in ventilation system or any other system that brings air into or out of the Work Area with two separate layers of 6-mil polyethylene sheeting.
- Seal all openings (critical barriers) to the work area with two separate layers of 6-mil polyethylene sheeting.
- Construct a negatively-pressurized enclosure (NPE) separating the regulated area from adjacent areas of the building that is sufficient to prevent migration of asbestos fibers, dust, debris, odors, fumes, mists, etc. from the Work Area. High Efficiency Particulate Air (HEPA) filtration of the air is required. Work will not commence until BEC has inspected and has approved of the Work Area enclosure. The Asbestos Abatement Contractor will smoke test any negatively pressurized enclosure constructed prior to each work shift, in the presence of BEC.
- All objects remaining in the regulated work area shall be covered with 6-mil polyethylene sheeting that is secured by duct tape.
- Install approved negative air filtration devices (AFDs) with HEPA filters to exhaust air from the Work Area. Negative air filtration units will be of sufficient quantity and capacity to ensure the total air volume is exchanged four (4) times per hour at minimum. Replacement air will enter the work area through the decontamination facility, in order to reduce the possible escape of contaminated air. The exhaust from the negative air filtration units shall be exhausted outside of the building.
- Negative pressure will be established and maintained through the use of HEPA-filter equipped air filtration devices (AFDs). Negative pressure of a minimum of -0.02 column inches of water (wc) pressure differential, relative to outside pressure, will be maintained within each containment. Verified with an electronic manometer, equipped with real-time, direct display and strip chart recording capabilities (direct-read instrument) to continuously collect and record static air pressure differential (SAPD) measurements.
- The Asbestos Abatement Contractor will provide a three-stage decontamination unit consisting of a serial arrangement of rooms or air locks adjoining the Work Area. The decontamination unit must be supported, at a minimum, by 2x4-inch studs, temporary metal frame or PVC pipe. Each area will be clearly identified and separated from others by plastic sheeting arranged to minimize fiber and air transfer as people pass between areas. Air locks shall have three alternating layers of 6- mil polyethylene sheeting and flaps will be weighted to fall back in place after the passage of workers, bags, or equipment. A minimum of two (2) layers of 6-mil polyethylene shall be used for the walls and floors of all decontamination units constructed onsite.
- The Asbestos Abatement Contractor will establish an equipment room or area that is adjacent to the regulated area for the decontamination of employees and their equipment, which shall consist of an area covered by an impermeable drop cloth on the floor or horizontal working surface. Work clothing must be cleaned with a HEPA vacuum before it is removed. All equipment and surfaces of containers filled with ACM must be cleaned prior to removal from the Work Area. The Asbestos Abatement Contractor will provide a shower area in the three-stage decontamination unit located between the equipment and a clean room.
- The wastewater from the shower will be filtered through a 5-micron filter. It is the Asbestos Abatement Contractor's responsibility to obtain authorization from the local municipality sanitary sewer service provider to discharge filtered water into the sanitary sewer.
- The selected contractor must identify the landfill(s) that will receive the asbestos waste and to ensure they are licensed to receive asbestos waste. The Asbestos Abatement Contractor is required to submit copies of all ACM waste disposal manifests to the **CLIENT** within two (2) working days after receiving the disposal manifests from the landfill. All waste from the removal of ACM must be identified as asbestos-containing or contaminated and recognized as such by the landfill(s). Further information regarding the labeling of asbestos waste is provided later in this project manual.

SECTION 3.0 ASBESTOS ABATEMENT – GENERAL REQUIREMENTS (continued)

- Upon the completion of work area setups the selected contactor must preclean the debris throughout building as asbestos containing materials since evidence of asbestos containing pipe insulation was observed in the debris. All waste from the removal of debris throughout all four floors (3-floors and basement) of the building shall be removed and disposed as ACM as described in the bulleted items below.
- Asbestos Abatement Contractor shall remove all designated asbestos-containing materials and associated waste in strict accordance with Federal, State of West Virginia, and local regulations. The Asbestos Abatement Contractor will use wet methods and HEPA vacuums when removing and handling ACM. The Asbestos Abatement Contractor shall use vacuum cleaners fitted with HEPA filters to collect asbestos-laden dust and debris. The Asbestos Abatement Contractor shall promptly clean-up and dispose of wastes and debris contaminated with asbestos within the work areas prior to the conclusion of each shift. The Asbestos Abatement Contractor shall "double bag" all waste, twist neck of bags ("goose-neck"), bend over and seal with minimum three wraps of duct tape, and mark with labels prescribed by Section 40 CFR 61.150 of the US EPA regulations, and ship to a US EPA permitted landfill to undergo disposal as asbestos waste within a closed and lined trailer.
- Prohibited Work Practices described in 29 CFR 1926.1101(g)(3)(i) include the following:
  1. High-speed abrasive disk saws not equipped with a HEPA filter.
  2. Compressed air to remove ACM.
  3. Dry sweeping, shoveling, and other dry cleanup of dust and debris.
  4. Employee rotation to reduce employee exposures to asbestos (as a potential means of circumventing development of legally required US OSHA medical surveillance programs when an employee is subject to at or above the permissible exposure limit (PEL) for a combined total of thirty (30) or more days per year).
- Following completion of gross removal activities, all Work Areas will be cleaned using vacuums fitted with HEPA filters and by wet wiping all substrates.
- Upon completion of the cleaning activities, BEC will visually inspect the work area. Upon approval from BEC, the abatement contractor shall spray all horizontal and vertical surfaces with lock down encapsulant, preferably with a contrasting color.
- Disposal of Asbestos, Asbestos Contaminated Waste, and ACM:
- Any container used for temporary storage of asbestos material must be of a closed type, and kept closed and locked to be available only for Waste from the Work Areas.
- All asbestos materials designated for disposal shall be wetted and packaged in permanently sealed leak-tight containers in accordance 40 CFR 61.150 and 49 CFR 171 and 172. All ACM disposal bags shall have the following markings:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID BREATHING DUST
CANCER AND LUNG DISEASE HAZARD
RQ – WASTE ASBESTOS
9 – NA – 2212 – 111

1. Asbestos waste must be properly packaged and disposed at of at an approved landfill that accepts asbestos waste. A waste manifest must be signed by the landfill operator and returned to the **CLIENT** for their records. A copy of the Waste Manifest must also be submitted to BEC.
2. OSHA warning labels will be applied to all disposal bags. Bags shall also be labeled with the name, address, license number of the Contractor, date each bag or container filled, and the location from which the asbestos waste originated.

SECTION 3.0 ASBESTOS ABATEMENT – GENERAL REQUIREMENTS (continued)

3. Before transporting asbestos containing materials, a valid asbestos waste transporter registration/license must be presented to the **CLIENT** by the transportation company. Waste hauling vehicles must be clearly marked with asbestos warning signs during loading, transportation, and unloading. The transport vehicle must remain closed during transport.
4. If rough surfaces or other materials are present in the load that could potentially puncture the asbestos waste containers, the asbestos waste containers will be enclosed in fiber or steel drums during loading, transportation, and unloading operations. In addition, asbestos waste shall not be loaded into or hauled with vehicles using or containing compaction devices.
5. Comply with all Federal, State of West Virginia, and local regulations regarding the disposal of asbestos-containing, asbestos-contaminated, asbestos, or ACM waste.
6. Only licensed asbestos workers shall move and load asbestos waste.
7. Upon completion of the project, provide documentation of the proper removal and disposal of asbestos materials in accordance with all applicable Federal and State of West Virginia regulations to BEC.

- Each Work Area will be visually inspected for complete removal by BEC. The Work Area must be free of all visible ACM specified for removal and dust/debris prior to collection of final clearance air samples. Final clearance criteria for each air sample collected within the work area must be less than 0.01 fibers per cubic centimeter (f/cc) as analyzed by Phase Contrast Microscopy (PCM) utilizing the analytical method prescribed by NIOSH #7400.
- If clearance criteria are not achieved in the Work Area, the Asbestos Abatement Contractor shall return at no additional cost to the **CLIENT**, and conduct necessary re-cleaning/corrective action and submit for a retest (visual inspection/air sampling). The **CLIENT** has the option to upgrade any final clearance samples that failed by PCM to Transmission Electron Microscopy (TEM).

SECTION 4.0 SCHEDULE OF HAZARDOUS MATERIALS OR ENVIRONMENTAL CONCERNS

Based on visual observations, the following Hazardous Materials or Environmental Concerns have been identified that will undergo removal for the planned demolition at the Former Clay School. Table C lists the hazardous materials or elements of environmental concern in the Former Clay School that must be removed, in their entirety, in accordance with Federal & State law prior to demolition activities.

4.1 Hazardous Materials or Environmental Concerns

TABLE C: HAZARDOUS MATERIALS OR ENVIRONMENTAL CONCERNS AT FORMER CLAY SCHOOL

Description	Contaminant of Concern	Quantity
Ballasts in Fluorescent Light Fixtures Throughout	Presumed To Contain PCBs	~517
Very Old Transformer or Electrical Switchgear With Possible Dielectric Mounted on the Wall on 1st Floor	Presumed To Contain PCBs	~1
4' Fluorescent Light Tubes Throughout Building	Mercury	~1,004
Light Bulbs Throughout Building	Potential Mercury Containing	~29
Incandescent Bulbs in Gym	Potential Mercury Containing	~18
Possible Chiller in Basement (portions of the basement were flooded & inaccessible)	Possible Refrigerant & Ozone Depleting Substance	Unknown

SECTION 4.0 SCHEDULE OF HAZARDOUS MATERIALS OR ENVIRONMENTAL CONCERNS

4.1 Hazardous Materials or Environmental Concerns

TABLE C: HAZARDOUS MATERIALS OR ENVIRONMENTAL CONCERNS AT FORMER CLAY SCHOOL
(continued)

Description	Contaminant of Concern	Quantity
Lead Acid Batteries for Exit Signs on 1st & 2nd Floors	Lead & Sulfuric Acid	~40 Each
12 Volt Battery on 1st Floor	Lead & Sulfuric Acid	~1 Each
Clark Automatic Scrubber Detergent in Basement	Potential High or Low pH	~ Three 5-gallon Containers
Shineline Emulsifier in Basement	Caustic (High or low pH)	~Two 5-Gallon Containers
Prestone Antifreeze in Basement	Ethylene Glycol	~1 Gallon
Glycerin in Basement	Sweetener-Preservative-Carbohydrate	Two - 1 qt. Containers
Cathode-Ray Tubes (CRTs) in TV Sets or Monitors in Basement	Lead, Cadmium. Barium or Mercury	3-Monitors & 2 TV Sets
Fire Extinguishers in Basement, Rm 213, & Rm 325	Compressed Gas	Three Cylinders
Various Laboratory Chemicals Including Ferrous Sulfide, Lactose, Dextrose, Benzoic Acid, Oxalic Acid, Lead Acetate, Photographic Chemicals in Library	High & Low pH, Metals & Potential Flammables	~100 Containers (1-quart in size or smaller)
Smoke Detectors in Rooms	Americium-241 Radiation Isotope	~63 Each
Unknown/Unlabeled Liquid Container on 1st Floor	Potential Hazardous Substance – High or Low pH, Flammable, or Containing a Heavy Metal	One Unlabeled 5-Gallon Container

Notes for Table C:

1. The abatement contractor shall inspect for possible hydraulic elevator systems and elevator pits onsite and if present recover any additional hydraulic oil that may be in an adjacent elevator mechanical room or basement. that may be located in the elevator pit. Additionally, the contractor shall account for any oils found in equipment lines that need captured prior to disconnecting.

SECTION 5.0 HAZARDOUS MATERIALS REMOVAL & DISPOSAL- GENERAL REQUIREMENTS

Some of the materials identified above in Table C can be handled as Universal Waste. The contractor shall assist the **CLIENT** and/or owner of the property with the acquisition of an EPA Identification Number for the removal, recycling and/or disposal of hazardous waste and/or universal waste. Upon completion of removal of hazardous materials by the contractor, BEC will conduct a visual inspection confirming all hazardous materials were removed and the contractor shall provide the required waste manifest(s). Further information regarding the handling, recycling and or disposal of the waste identified in Table C is provided in the following Sections.

5.1 Handling of Building Elements Containing Mercury

- Contractor will remove the fluorescent lamps and bulbs in an intact state, from the general Work Area and transfer directly to the shipping corrugated paper (cardboard) boxes as Universal Waste in accordance with 40 CFR part 273.4.

SECTION 5.0 HAZARDOUS MATERIALS REMOVAL & DISPOSAL- GENERAL REQUIREMENTS

5.1 Handling of Building Elements Containing Mercury (continued)

- Lamps should be stored in a way that avoids breakage. Containers must be closed, structurally sound, compatible with the contents of the lamps or bulbs and must lack evidence of leakage, spillage or damage that could cause leakage or releases of mercury or other hazardous constituents. Fluorescent lamps can be stored in the original boxes or in boxes for replacement bulbs. Specially manufactured containers can be purchased for storing used lamps or bulbs until they are ready for recycling or disposal. The recycler may also provide a container that makes storage, shipping or pick-up easier. Handle lamps and bulbs with extreme due care and caution; lamps are fragile.
- Create procedures for managing broken lamps. Protect lamps from breakage. Remove lamps carefully and store used lamps in a location and manner that will prevent breakage. Have a 55-gallon drum on hand to place and control broken light tubes.
- Containers of waste fluorescent light tubes or bulbs must be labeled as "Universal Waste- Lamps."
- Any mercury containing thermometer should be stored and controlled in order that the ampule containing the mercury does not break. It may be best to utilize the thermometer or thermostat housing to protect the mercury then wrap the item in cardboard and place in a sealed leak proof plastic container.
- A universal waste mercury-containing thermostat or container may be labeled or marked clearly with any of the following phrases: "Universal Waste - Mercury Thermostat(s)," "Waste Mercury Thermostat(s)," or "Used Mercury Thermostat(s)."
- The contractor will be responsible for the handling and transportation of the mercury containing elements as a Universal Waste and to make sure they are properly transported and recycled in accordance with West Virginia and Federal Regulations. The contractor is also responsible for maintaining Universal Waste/Recycling manifests for the mercury containing elements and provide such manifests or documentation to BEC.

5.2 Handling of Cathode Ray Tubes

Cathode Ray Tubes (CRTs) and their related glass within television sets are known to contain lead and should be handled and recycled in accordance with West Virginia Regulation 33CSR12. The contractor must manage all CRTs in a manner that prevents breakage and ship them intact to a designated recycling facility. All CRTs, regardless of condition (broken, intact or otherwise separated from the Covered Electronic Device (CED), must be accepted by a Treatment Storage and Disposal (TSD) facility and properly managed for recycling. The CRT container package must be tightly packed or padded to prevent breakage padded and shall clearly label or mark one of the following phrases: "Universal Waste – Covered Electronic Devices" or "Waste Covered Electronic Devices" or "Used Covered Electronic Devices."

- The contractor will be responsible for the handling of the CRTs as a Universal Waste and to make sure they are properly recycled in accordance with Federal regulation 40 CFR Part 261.39 and West Virginia regulation 33-20-13. The contractor is also responsible for maintaining Universal Waste/Recycling manifests for CRTs and/or CEDs and provide such manifests or documentation.

5.3 Handling of Items Containing or Presumed To Contained Polychlorinated Biphenyls

The PCB regulations to follow regarding proper disposal of PCB items Fluorescent Light Ballasts (FLBs) and evaluation of the decontamination and sampling related to leaks or spills include:

- Disposal requirements for PCB small capacitors in FLBs - See 40 CFR § 761.50(b)(2), § 761.60(b)(2)(ii), and § 761.62(a) or (c). Disposal requirements for PCBs in potting material of FLBs - See 40 CFR § 761.50(b)(2)(ii), § 761.60(b)(6)(iii), and § 761.62.

5.3.1 Fluorescent Light Ballasts Containing Polychlorinated Biphenyls (PCBs)

Inspect ballasts within the fluorescent lighting fixtures. Ballasts without a "No PCB" label shall be assumed to contain PCBs and were likely manufactured prior to 1979, and are likely to contain PCBs with a concentration exceeding 50 parts per million (ppm) and shall be considered PCB Waste. If there are less than 1600 "No PCB" labeled lighting ballasts dispose of them as normal demolition debris.

5.3.2 Disposal of Items Containing or Presumed to Contain PCB's

Because the onsite use is not a generator who uses, owns, services or processes PCBs, they are exempt from obtaining an EPA Identification Number for the PCB waste materials and according to 40 CFR 761.205 paragraph (c)(1) can use the generic identification number "40 CFR Part 761" on the waste manifests, records, reports, unless such generator elects to use a unique EPA identification number previously assigned to them under RCRA by EPA or a State. The contractor shall verify with West Virginia Department of Environmental Protection (WVDEP) that an EPA Identification Number is not needed for the removal and disposal of hazardous substances as discussed in the PCB containing light ballast in accordance with paragraph above. If WVDEP Requires an EPA Identification number then assist the property owner in obtaining a temporary EPA Identification number for the items that are presumed to contain PCBs prior to commencement of removal work. Materials with PCBs must be stored and transported in containers approved by DOT for PCBs (49 CFR 178).

Place PCB FLBs carefully into a drum in order not to cause damage due to metal casing that could cause a leak of PCBs. Be careful not to fill the drum to capacity (approximately ½-full) to prevent the weight of the ballast causing physical damage to the drum container.

Any leaking (oil stained) or damaged PCB ballasts should be placed in a separate drum (dedicated to damaged or leaking PCB ballast) with absorbent material placed into the drum. If there is any leakage of oil from any PCB waste container or drum then an over-pack drum is required to place the leaking drum into with absorbent material to control leakage. If any spillage of PCBs occurs then the following decontamination actions must occur.

- Decontamination requirements for PCB contaminated non-porous surfaces – See 40 CFR § 761.79(b)(3).
- Sampling non-porous surfaces for measurement-based use, reuse, and decontamination under 40 CFR § 761.79(b)(3) – See 40 CFR Part 761 Subpart P.
- Option for an approval from EPA to use alternative decontamination and/or sampling procedures (other than those specified in 40 CFR § 761.79 and 40 CFR Part 761 Subpart P) –See 40 CFR § 761.79(h).

Labeling and manifesting is required if the PCB items that are not intact and have evidence of leaking with PCBs at concentrations of greater than or equal to 50 ppm PCBs. See 40 CFR 761.40 and 761.45 for marking requirements and 40 CFR Part 761 Subpart K for manifesting requirements. West Virginia follows Federal US EPA regulations for handling hazardous waste and Toxic Substances Control Act (TSCA) waste (for PCBs and asbestos). It is further recommended that the state be contacted to determine any applicable regulations.

PCB waste documentation to be maintained by the contractor and to be provided to BEC will include the following:

- The identity of the disposal and or recycling facility, by name, address, and EPA identification number.
- The identity of the PCB waste affected by the Certificate of Disposal including reference to the manifest number for the shipment.
- A statement certifying the fact of disposal and or recycling of the identified PCB waste, including the date(s) of disposal, and identifying the disposal process used.
- A certification as defined in 40 CFR 761.

5.4 Handling of Compressed Gas Cylinders

The fire extinguishers and any other compressed gas cylinders identified in Table C, must be handled and controlled by subcontracted recycler or disposer in such a way that contained energy within the compressed gas cylinders is safely handled, recycled, disposed properly. The compressed gases within the fire extinguishers or other gas cylinders must not be released on the subject site. The fire extinguishers can either be reclaimed for reuse as fire extinguishers or recycled for metal content. Manufactures of gas cylinders or fire extinguishers are typically eager to recycle their own cylinders. Contractor is responsible for making these arrangements for recycling or disposal and providing documentation to BEC to the quantity materials recycled or disposed.

5.5 Handling and Reclaiming of Refrigerants

All refrigerants including Freon identified in Table C including within window air conditioning units, refrigerators, ice machines, and chillers are considered ozone depleting substances (ODS) and must be reclaimed properly in accordance with US EPA Regulations in 40 CFR Part 82, Subpart F. The onsite refrigerants must be recovered by an EPA certified Section 608 Technician. Recovered refrigerants must be reclaimed by a facility that is an EPA-certified refrigerant reclaimer in which the used refrigerants are reprocessed to purity levels specified in Appendix A to 40 CFR Part 82 Subpart F. Contractor is responsible for making sure that properly certified technicians are utilized to recover the refrigerants and that they are properly reclaimed.

Contractor must provide documentation including the following: Certification of the EPA Section 608 Technician, documentation on quantity (in pounds) of refrigerants recovered, and documentation on the receipt of the refrigerants by an EPA Certified Reclaimer.

The onsite refrigerants must be recovered by an EPA certified Section 608 Technician. Recovered refrigerants must be reclaimed by a facility that is an EPA-certified refrigerant reclaimer in which the used refrigerants are reprocessed to purity levels specified in Appendix A to 40 CFR Part 82 Subpart F. The certified refrigerant reclaimer shall spray paint a big orange or red X on each device where refrigerant was recovered to avoid duplication of a recovery attempt.

5.6 Handling of Smoke Detectors Containing Americium-241

Smoke alarms with Americium-241 shall be recycled. Options include checking with the manufacture of the smoke detection device to if they accept used smoke detectors with a low-level radiation source or use of a commercial low level radiation recycling business such as Curie Environmental Services. (See the follow website: https://www.curieservices.com/product/smoke-alarm-recycling-self-ship-2/) for recycling. It should be noted that the manufacturer of the smoke alarms was not readily apparent on the outside casing of the smoke detectors. Carefully open the smoke detector casing without damaging inside components and check to see if the smoke detector includes a labeled source of Americium-241 and also identify the manufacture of the device. Remove any batteries within the smoke detection device and handle as a separate waste stream (see Section 5.10). The US EPA indicates that the smoke detectors with Americium-241 can be disposed in household solid waste as long as the local landfill accepts the waste. A local landfill is unlikely to accept hundreds of smoke detectors from a commercial entity. Recycling is the proffered method for properly handling smoke detectors. Obtain a documented certification or manifest as proof that the smoke detectors with Americium-241 were properly recycled.

5.7 Handling of Electronic Waste

Electronic waste (E-Waste) on the subject site shall be property handled and components reclaimed and/or recycled as much as possible. E-Waste includes anything with electronic circuitry such as microwave ovens, appliances, and anything else with circuit boards such as flat screen televisions, flat screen computer monitors, network servers, computers, and printers. Circuit boards can include precious metals such as gold, silver, and platinum. Microwave ovens have a high energy capacitor that store electrical charge even when unplugged. Contractor shall disconnect all electrical devices segregate such waste and arrange for a recycler to reclaim such items. Contractor shall obtain documentation from the recycler that such E-Waste was properly recycled in accordance with EPA and West Virginia regulations.

SECTION 5.0 HAZARDOUS MATERIALS REMOVAL & DISPOSAL- GENERAL REQUIREMENTS (continued)

5.8 Handing of Miscellaneous Chemicals, Paints, & Cleansers

If miscellaneous chemicals, paints, and cleansers are of no use to the owner or others they should be segregated, staged, and recycled or disposed as hazardous waste. Contractor personnel segregating such items shall have current OSHA 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training in accordance with OSHA standard 29 CFR Party 1910.120. When segregating such waste the contractor must keep incompatible waste from being stored near each other such as keeping acidic materials or solutions away from basic materials, and keeping flammables and volatile organic compounds (VOCs) segregated from oxygenated materials.

The floor where the hazardous waste is temporally stored must be covered with two layers of 6-mil plastic sheeting to capture minor leaks or spills of chemicals. This temporary area for staged hazardous waste should be located near a loading dock where it be easily loaded onto trucks operated by a licensed hazardous waste transporter.

The contractor shall verify with West Virginia Department of Environmental Protection (WVDEP) that an EPA Identification Number is needed or not needed for the removal, recycling and/or disposal of the miscellaneous chemicals as hazardous waste. If WVDEP requires an EPA Identification number or temporary identification number then assist the property owner in obtaining the necessary EPA Identification number for the recycling and/or disposal of miscellaneous chemicals as hazardous waste.

The contractor must make arrangements and hire a certified hazardous waste service company to properly transport, recycle and/or dispose of the hazardous waste. Contractor shall provide BEC with copies of the hazardous waste leaving the site and signed by the transporter as well as final hazardous waste manifest signed by the ultimate Treatment-Storage-Disposal (TSD) as proof of proper disposal.

5.9 Handling of Petroleum Products

Petroleum products include refrigeration oil, small containers of oil in mechanical rooms, hydraulic fluid in elevator systems, kerosene, engine oil, and diesel fuel. Small containers of oil less than 5-gallons in size can be staged and segregated near the other miscellaneous chemicals identified above. Petroleum products in large containers (such as hydraulic fluids in elevator machine reservoirs) will likely need to be transferred into smaller containers and taken to a chemical segregation area. Contractor personnel handling petroleum products shall have current OSHA 40-hour HAZWOPER training. The contractor must make arrangements and hire a petroleum service company to properly transfer oil to vehicles, transport the petroleum products to recovery or disposal facilities.

Petroleum products shall be recycled and recovered for another use as much as possible. If some of the petroleum products cannot be reclaimed then they can be transported and disposed as non-hazardous waste. The petroleum service company and hazardous waste service provider could potentially be the same company. Contractor will provide all recycling certificates and non-hazardous waste manifests for the removal and disposal of petroleum products from the subject site.

5.10 Handling of Waste Batteries

- Universal waste batteries. A small quantity handler of universal waste (less than 5,000 kilograms) must manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

  1. A small quantity handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):

     a. Sorting batteries by type;

     b. Mixing battery types in one container;

     c. Discharging batteries so as to remove the electric charge;

5.10 Handling of Waste Batteries (continued)

d. Regenerating used batteries;

e. Disassembling batteries or battery packs into individual batteries or cells;

f. Removing batteries from consumer products; or

g. Removing electrolyte from batteries.

2. A small quantity handler of universal waste who removes electrolyte from batteries, or who generates other solid waste (e.g., battery pack materials, discarded consumer products) as a result of the activities listed above, must determine whether the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste identified in 40 CFR part 261, subpart C.

   a. If the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste, it is subject to all applicable requirements of 40 CFR parts 260 through 272. The handler is considered the generator of the hazardous electrolyte and/or other waste and is subject to 40 CFR part 262.

   b. If the electrolyte or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

3. Universal waste batteries (i.e., each battery), or a container in which the batteries are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Battery(ies)," or "Waste Battery(ies)," or "Used Battery(ies);"

- The contractor will be responsible for the handling of the lead containing batteries as a Universal Waste and to make sure they are properly transported and recycled in accordance with Federal regulation 40 CFR Part 273 and West Virginia regulation 33-20-13. The contractor is also responsible for maintaining Universal Waste/Recycling manifests for lead containing batteries and provide such manifests or documentation.

APPENDIX A

ASBESTOS ABATEMENT PROJECT SUBMITTALS

Pre-Construction Submittals:

- Certificate of Insurances; Comprehensive General Liability, Worker's Compensation, Automotive and Pollution Liability with no exclusions for asbestos, lead, mercury, and mold damages.
- Asbestos Abatement Work Plan in accordance with WV Title 64 Series 63, Asbestos Abatement Licensing Rule
- Health and Safety Plan
- US EPA Region III and State of West Virginia Department of the Environmental Protection asbestos project notifications
- West Virginia Contractor's Business License
- West Virginia Asbestos Abatement Contractor's license
- US EPA AHERA Asbestos Abatement Supervisor/Worker training certifications
- State of West Virginia Asbestos Abatement Supervisor/Worker licenses
- Abatement Supervisor/Workers - Physician's Statement of Worker Capability to Wear Respirator
- Abatement Supervisor/Workers - Respirator Fitness Testing, Qualitative/Quantitative
- Asbestos Waste disposal facility; name, address, US EPA/State permits
- Asbestos Waste Bill-of-Lading, sample
- General Construction Debris (C&D) disposal facility; name, address, US EPA/State permits
- Safety Data Sheet (SDS)
    1. Asbestos Surfactant
    2. Asbestos Encapsulant
    3. Mastic Removal Agent

During The Work Submittals:

- Special Reports; Accidents & Incidents
- Personnel exposure monitoring results
- Asbestos waste manifests

Post Construction-Construction Submittals:

- Special Reports; Accidents & Incidents
- Personnel exposure monitoring results
- Asbestos waste manifests

APPENDIX B

HAZARDOUS MATERIALS PROJECT SUBMITTALS

Pre-Construction Submittals:

- Hazardous Materials Work Plan
- Health and Safety Plan
- 40-Hour HAZWOPER Training for Individuals Handling and Packaging Hazardous Materials for Recycling and/or Disposal of Hazardous Waste.
- EPA Certification for Section 608 Technician to Recover Refrigerants.

During The Work Submittals:

- Special Reports; Accidents & Incidents
- Waste Manifests for Hazardous Materials Leaving Facility for Offsite Disposal, Reclamation or Recycling for each building

Post Construction-Construction Submittals:

- Special Reports; Accidents & Incidents
- Uniform Hazardous Waste Manifest/US EPA TSD Facility Receipt of Shipment of Hazardous Waste (PCBs)
- Waste Manifests from TSD Facility for Receipt, Destruction, Reclamation, or Recycling of Universal Waste

APPENDIX C

ASBESTOS INSPECTION REPORT

ASBESTOS-CONTAINING MATERIALS SURVEY

Conducted at:

FORMER CLAY SCHOOL BUILDING
131 15th Street
Wheeling, West Virginia 26003

Prepared for:

2501 Chapline Street, Box 6562
Wheeling, West Virginia 26003

Attention:
Ms. Patricia Hickman, Senior Advisor
phickiman@envstd.com

BEC Project #WV22004

Fieldwork Dates :

February 16, 2022
February 17, 2022
March 3, 2022

Final Technical Report Date:
March 7, 2022

Prepared by:

BOGGS ENVIRONMENTAL CONSULTANTS
Middletown, MD ~ Morgantown, WV
Corporate Office: 200 W Main Street, Middletown, MD 21769
Tel: (301) 694-5687 ~ Fax: (301) 694-9799

BOGGS ENVIRONMENTAL CONSULTANTS

ASBESTOS-CONTAINING MATERIALS SURVEY

Conducted at:

FORMER CLAY SCHOOL BUILDING

131 15th Street
Wheeling, West Virginia 2600

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BOGGS ENVIRONMENTAL CONSULTANTS, INC.

On-site Fieldwork & Final Technical Report By:

Richard Robinson
US EPA AHERA Asbestos Inspector Certificate (#21-194)
State of West Virginia Asbestos Inspector (License No. AI010270)

SECTION 1.0 SUBJECT SITE DESCRIPTION & SCOPE OF WORK

Project Site:	Former Clay School Building 131 15th Street Wheeling, West Virginia 26003
Requester Name:	Ms. Patricia Hickman, Senior Advisor
Requestor Address:	**ENVIRONMENTAL STANDARDS** 2501 Chapline Street Wheeling, West Virginia 26003

Subject Site Description & Scope of Work:

The Former Clay School Building is located at 131 15th Street, in Wheeling, West Virginia (hereinafter referred to as the subject site). The subject site is a three-story structure with a basement and subbasement which was flooded and inaccessible.

BEC received authorization from Environmental Standards, to provide support services to determine the presence of asbestos containing building materials prior to demolition activities. The asbestos inspection was conducted to ensure compliance with United States Environmental Protection Agency's (US EPA) and State of West Virginia regulations, prior to disturbance of building construction materials anticipated (scheduled) to occur during demolition activities.

SECTION 2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

2.1 Background

BOGGS ENVIRONMENTAL CONSULTANTS, INC. (BEC) conducted an asbestos-containing building construction materials (ACBMs) survey at the Former Clay School Building, located at 131 15th Street, in Wheeling, West Virginia on February 16, 2022, February 17, 2022 and March 3, 2022.

BEC staff members, Mr. Richard Robinson and Mr. Andrew Hanson, conducted preliminary field walk inspections for the purpose of developing an inventory of suspect ACBMs. Subsequently, BEC randomly collected multiple bulk samples of suspect ACBMs observed.

2.2 Field Sampling

BEC advises, based upon current US EPA asbestos hazard control regulations, the minimum number of samples necessary to definitively determine the presence (or absence) of ACBMs is dependent on the nature and quantity of the suspect building construction material. Additionally, the US EPA has established a standardized schedule for bulk sample collection of suspect ACBMs based upon homogeneous areas. Homogeneous areas are defined as "…building construction materials that are similar in color, consistency, texture, and appearance of similar application/installation time period".

BEC advises, based upon onsite visual inspection and bulk sampling activities, one hundred-three (103) samples of the suspect ACBMs were collected and submitted to the analytical laboratory which upon laboratory analysis revealed a total of one hundred fifty (158) individual PLM/DS analyses were required due to multiple layered bulk samples.

BEC advises, based upon US EPA asbestos analytical regulations (US EPA Method 600/R-93/116), the laboratory analyst has the sole discretion/responsibility in determining whether the bulk sample is composed of one or multiple layers.

SECTION 2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

2.3 Material Classification

Asbestos-containing materials (ACMs) are any building construction materials containing greater than one percent (>1%) asbestos. Friable ACM is any material which can be broken, crumbled, pulverized, or reduced to powder under hand pressure; conversely, non-friable ACMs are materials incapable of reduction to powder via hand pressure.

In accordance with Federal asbestos hazard control regulations (40 CFR Part 763 - Asbestos, Subpart E), bulk sampling is not required to designate (i.e., presume and treat) a construction material suspected to contain asbestos as Presumed Asbestos-Containing Material (PACM), should a duly trained and accredited asbestos inspector observe/inspect and assign the PACM designation to the suspect ACM.

However, BEC advises, in accordance with Federal regulations, rebuttal of the PACM designation and re-classification of a material to non-ACM, requires collection and analysis of a minimum number of samples of the suspect ACM. As a reminder, a homogeneous material is a unique group of construction materials (eg, surfacing material, thermal system insulation material, or miscellaneous material) that possesses uniform properties such as color, texture, age, and functionality.

For a summary of the minimum number of samples required to undergo collection and analysis to rebut the PACM designation, please refer to **TABLE A: US EPA Minimum Number of Bulk Samples Required to Rebut ACM Designation** on the following page.

TABLE A: US EPA Minimum Number of Bulk Samples Required to Rebut ACM Designation

Thermal System Insulation (TSI): Thermal System Insulation includes materials such as boiler insulation, pipe insulation, and ductwork insulation.		
At least three (3) samples from each homogeneous material of TSI.	At least one (1) sample from patched TSI that is less than six square feet.	For pipe fittings, in a manner sufficient to determine if the material is asbestos-containing.
Surfacing Material: Surfacing material includes materials such as spray-applied fireproofing, troweled-on plasters or ceiling textures.		
At least three samples from homogeneous materials of 1,000 square feet or less.	At least five samples from homogeneous materials of greater than 1,000 square feet but less than 5,000 square feet.	At least seven samples from homogeneous materials of greater than 5000 square feet, with an additional 1 sample per each increment of 1,000 sf, in excess of 5,000 sf.
Miscellaneous Material and Non-friable Suspect ACM: Miscellaneous materials include all materials that are not *TSI* or *Surfacing Materials*, such as vinyl floor tile, acoustical ceiling tile, vinyl sheet goods (linoleum), roofing materials, *et cetera*.		
For each homogeneous material, a sufficient number are required to be collected and analyzed to determine if the material is ACM.	Samples are not required to be collected from homogeneous materials, of which the trained accredited asbestos inspector has determined to be non-asbestos-containing material, such as fiberglass or rubber.	

SECTION 2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

2.4 Laboratory Analysis

Pursuant to the bulk sample collection, BEC submitted the bulk samples to Eurofins CEI (Eurofins) of Cary, North Carolina for asbestos content analysis. Eurofins is fully accredited by the American Industrial Hygiene Association and the National Institute of Standards and Technology's (NIST) National Voluntary Laboratory Accreditation Program (NVLAP) as proficient in the analysis of asbestos in bulk samples.

Eurofins performed PLM/DS analysis of all bulk samples, in accordance with the "*Test Method for the Determination of Asbestos in Bulk Building Materials*" (US EPA 600/R-93/116, July 1993). BEC advises PLM/DS analysis revealed multiple suspect ACM bulk samples submitted to SanAir contained US EPA and US OSHA asbestos concentrations. BEC provides the results of the PLM/DS analyses hereunder in **TABLE B: Asbestos-Containing Material Testing Results**:

TABLE B: ASBESTOS-CONTAINING MATERIAL TESTING RESULTS

HA #	Sample #	Material Class.	Sampling Location	Building Construction Material	Asbestos (%)
1	CS-1	Surfacing	3rd Floor, NE	Wall & Ceiling Grey Base Coat Plaster	None Detected
				White Skim Coat Plaster	None Detected
1	CS-2	Surfacing	3rd Floor Center	Wall & Ceiling Grey Base Coat Plaster	None Detected
				White Skim Coat Plaster	None Detected
1	CS-3	Surfacing	2nd Floor Center	Wall & Ceiling Grey Base Coat Plaster	None Detected
				White Skim Coat Plaster	None Detected
1	CS-4	Surfacing	2nd Floor, NW	Wall & Ceiling Grey Base Coat Plaster	None Detected
				White Skim Coat Plaster	None Detected
1	CS-5	Surfacing	1st Floor, NW	Wall & Ceiling Grey Base Coat Plaster	None Detected
				White Skim Coat Plaster	None Detected
1	CS-6	Surfacing	1st Floor, SE	Wall & Ceiling Grey Base Coat Plaster	None Detected
				White Skim Coat Plaster	None Detected
1	CS-7	Surfacing	Basement	Wall & Ceiling Grey Base Coat Plaster	None Detected
				White Skim Coat Plaster	None Detected
2	CS-8	Misc.	3rd Floor, SW	Black Vinyl Cove Base-6"	None Detected
				Brown Mastic	None Detected
2	CS-9	Misc.	2nd Floor, SW	Black Vinyl Cove Base-6"	None Detected
				Brown Mastic	None Detected
2	CS-10	Misc.	1st Floor SW	Black Vinyl Cove Base-6"	None Detected
				Brown Mastic	None Detected
3	CS-11	Misc.	3rd Floor. SW	Chalk Board Mastic	None Detected
3	CS-12	Misc.	2nd Floor, SW	Chalk Board Mastic	None Detected
3	CS-13	Misc.	1st Floor, SW	Chalk Board Mastic	None Detected
4	CS-14	TSI	2nd Floor, Center	Air-Cell Pipe Insulation	None Detected
4	CS-15	TSI	1st Floor Center	Air-Cell Pipe Insulation	**70% Chrysotile**
4	CS-16	TSI	1st Floor, SW	Air-Cell Pipe Insulation	**60% Chrysotile**
5	CS-17	TSI	2nd Floor, Center	Pipe Packing Material	**50% Chrysotile**
5	CS-18	TSI	2nd Floor, Center	Pipe Packing Material	**50% Chrysotile**
5	CS-19	TSI	2nd Floor, Center	Pipe Packing Material	**50% Chrysotile**
6	CS-20	Misc.	3rd Floor, Center	Grey Patching Material Chalkboards	None Detected
6	CS-21	Misc.	2nd Floor, NE Corner	Grey Patching Material Chalkboards	None Detected
6	CS-22	Misc.	2nd Floor, Center	Grey Patching Material Chalkboards	None Detected

SECTION 2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

2.4 Laboratory Analysis (continued)

TABLE B: ASBESTOS-CONTAINING MATERIAL TESTING RESULTS

HA #	Sample #	Material Class.	Sampling Location	Building Construction Material	Asbestos (%)
6	CS-23	Misc.	1st Floor, SW	Grey Patching Material Behind Chalkboards	None Detected
6	CS-24	Misc.	1st Floor, Center	Grey Patching Material Behind Chalkboards	None Detected
7	CS-25	Misc.	3rd Floor, Center	9" x 9" Red Floor Tile	**3% Chrysotile**
				Mastic for 9" x 9" Red Floor Tile	None Detected
7	CS-26	Misc.	2nd Floor, Center	9" x 9" Red Floor Tile	**3% Chrysotile**
				Mastic for 9" x 9" Red Floor Tile	None Detected
7	CS-27	Misc.	1st Floor, Center	9" x 9" Red Floor Tile	**3% Chrysotile**
				Mastic for 9" x 9" Red Floor Tile	None Detected
8	CS-28	Misc.	3rd Floor Center	9" x 9" Black Floor Tile	**3% Chrysotile**
				Mastic for 9" x 9" Black Floor Tile	None Detected
8	CS-29	Misc.	2nd Floor, Center	9" x 9" Black Floor Tile	**3% Chrysotile**
				Mastic for 9" x 9" Black Floor Tile	None Detected
8	CS-30	Misc.	1st Floor, Center	9" x 9" Black Floor Tile	**3% Chrysotile**
				Mastic for 9" x 9" Black Floor Tile	None Detected
9	CS-31	Misc.	3rd Floor, NE	Brown Blown-In Insulation	None Detected
9	CS-32	Misc.	3rd Floor, Center	Brown Blown-In Insulation	None Detected
9	CS-33	Misc.	3rd Floor, SW	Brown Blown-In Insulation	None Detected
10	CS-34	Misc.	Center Stairwell	Red Vinyl Stair Treads	**3% Chrysotile**
				Black Mastic	None Detected
10	CS-35	Misc.	SE Stairwell	Red Vinyl Stair Treads	**3% Chrysotile**
				Black Mastic	None Detected
10	CS-36	Misc.	NW Stairwell	Red Vinyl Stair Treads	**3% Chrysotile**
				Black Matic	None Detected
11	CS-37	Misc.	Exterior Roof Top	Built Up Roofing-Rubber EPDM	None Detected
				Mastic for Rubber EPDM	None Detected
12	CS-38	Misc.	Exterior Roof Top	Built Up Roofing-Black Tar	None Detected
13	CS-39	Misc.	Exterior Roof Top	Brown Insulation Board Layer for Built Up Roofing	None Detected
11	CS-40	Misc.	Exterior Roof Top	Black Roofing Membrane- EPDM	None Detected
				Black Mastic for Roofing Membrane	None Detected
14	CS-41	Misc.	Exterior Roof Top	Silver Parapet Wall Flashing (multilayer)	None Detected
				Black Membrane on Parapet Wall Flashing	None Detected
				Black Felt on Parapet Wall Flashing	None Detected
14	CS-42	Misc.	Exterior Roof Top	Silver Coated Parapet Wall Flashing (multilayer)	None Detected
				Black Membrane on Parapet Wall Flashing	None Detected
				Black Felt on Parapet Wall Flashing	None Detected
				Black Tar on Parapet Wall Flashing	**<1% Chrysotile**
15	CS-43	Misc.	Exterior Roof Top	End Cap Mastic	**8% Chrysotile**
15	CS-44	Misc.	Exterior Roof Top	End Cap Mastic	**8% Chrysotile**

SECTION 2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

2.4 Laboratory Analysis (continued)

TABLE B: ASBESTOS-CONTAINING MATERIAL TESTING RESULTS

HA #	Sample #	Material Class.	Sampling Location	Building Construction Material	Asbestos (%)
16	CS-45	Misc.	Exterior Roof Top	Black Mastic Coating on Metal Exhaust Ducts	None Detected
				Black Felt on Metal Exhaust Ducts	None Detected
16	CS-46	Misc.	Exterior Roof Top	Black Mastic Coating on Metal Exhaust Ducts	None Detected
				Black Felt on Metal Exhaust Ducts	None Detected
17	CS-47	Misc.	Exterior Roof Top	Mastic Pitch Pockets	None Detected
17	CS-48	Misc.	Exterior Roof Top	Mastic Pitch Pockets	None Detected
18	CS-49	Misc.	Exterior Roof Top	Silver Coated Curb Flashing	**<1% Chrysotile**
				Black Tar Paper for Curb Flashing	None Detected
18	CS-50	Misc.	Exterior Roof Top	Silver Coated Curb Flashing	**<1% Chrysotile**
				Black Tar Paper for Curb Flashing	None Detected
19	CS-51	Misc.	Basement	Yellow Carpet Mastic	None Detected
19	CS-52	Misc.	Basement	Yellow Carpet Mastic	None Detected
19	CS-53	Misc.	Basement	Yellow Carpet Mastic	None Detected
20	CS-54	Misc.	2nd Floor Center	Terra Cotta Tile Grey Grout	None Detected
20	CS-55	Misc.	1st Floor Center	Terra Cotta Tile Grey Grout	None Detected
20	CS-56	Misc.	1st Floor West	Terra Cotta Tile Grey Grout	None Detected
21	CS-57	Misc.	1st Floor, SW	Bathroom Ceramic Tile- Beige Thinset	None Detected
				Bathroom Ceramic Tile- Grey Thinset	None Detected
21	CS-58	Misc.	1st Floor, SW	Bathroom Ceramic Tile- Beige Thinset	None Detected
				Bathroom Ceramic Tile- Grey Thinset	None Detected
22	CS-59	Misc.	1st Floor, NW	Gypsum Board Sheeting	None Detected
23	CS-60	Misc.	1st Floor, NW	White Joint Finishing Compound	None Detected
				White Joint Finishing Compound	None Detected
22	CS-61	Misc.	Basement	Gypsum Board Sheeting	None Detected
22	CS-62	Misc.	Basement	Gypsum Board Sheeting	None Detected
23	CS-63	Misc.	Basement	Joint Finishing Compound	None Detected
23	CS-64	Misc.	Basement	Joint Finishing Compound	None Detected
24	CS-65	Misc.	2nd Floor Center	Brown Vinyl Cove Base -6”	**4% Chrysotile**
				Yellow Mastic for Brown Vinyl Cove Base	None Detected
24	CS-66	Misc.	2nd Floor Center	Brown Vinyl Cove Base -6”	**4% Chrysotile**
				Yellow Mastic for Brown Vinyl Cove Base	None Detected
24	CS-67	Misc.	2nd Floor Center	Brown Vinyl Cove Base -6”	**4% Chrysotile**
				Yellow Mastic for Brown Vinyl Cove Base	None Detected
25	CS-68	Misc.	2nd Floor Center	Brown Vinyl Cove Base -4”	None Detected
				Mastic for Brown Vinyl Cove Base	None Detected
25	CS-69	Misc.	2nd Floor Center	Brown Vinyl Cove Base -4”	None Detected
				Mastic for Brown Vinyl Cove Base	None Detected
25	CS-70	Misc.	2nd Floor Center	Brown Vinyl Cove Base -4”	None Detected
				Mastic for Brown Vinyl Cove Base	None Detected

SECTION 2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

2.4 Laboratory Analysis (continued)

TABLE B: ASBESTOS-CONTAINING MATERIAL TESTING RESULTS

HA #	Sample #	Material Class.	Sampling Location	Building Construction Material	Asbestos (%)
26	CS-71	Misc.	1st Floor East	Black Window Sills	None Detected
26	CS-72	Misc.	1st Floor West	Black Window Sills	None Detected
27	CS-73	Misc.	Basement	Black Vinyl Cove Base – 4”	None Detected
				Tan Mastic for Black Vinyl Cove Base – 4”	None Detected
27	CS-74	Misc.	Basement	Black Vinyl Cove Base – 4”	None Detected
				Tan Mastic for Black Vinyl Cove Base – 4”	None Detected
27	CS-75	Misc.	Basement	Black Vinyl Cove Base – 4”	None Detected
				Tan Mastic for Black Vinyl Cove Base – 4”	None Detected
28	CS-76	Misc.	Basement	12” x 12” White Vinyl Floor Tile	**2% Chrysotile**
				Black Mastic for 12” x 12” White VFT	**3% Chrysotile**
28	CS-77	Misc.	Basement	12” x 12” White Vinyl Floor Tile	**2% Chrysotile**
				Black Mastic for 12” x 12” White VFT	**3% Chrysotile**
28	CS-78	Misc.	Basement	12” x 12” White Vinyl Floor Tile	None Detected
				Black Mastic for 12” x 12” White VFT	None Detected
29	CS-79	Misc.	Exterior	White Door Masonry Sealant	**<1% Chrysotile**
29	CS-80	Misc.	Exterior	White Door Masonry Sealant	**<1% Chrysotile**
29	CS-81	Misc.	Exterior	White Door Masonry Sealant	**<1% Chrysotile**
30	CS-82	Misc.	Exterior	Brown Window Masonry Sealant	None Detected
30	CS-83	Misc.	Exterior	Brown Window Masonry Sealant	None Detected
30	CS-84	Misc.	Exterior	Brown Window Masonry Sealant	None Detected
31	CS-85	Misc.	Exterior	White Masonry Grout	None Detected
31	CS-86	Misc.	Exterior	White Masonry Grout	None Detected
31	CS-87	Misc.	Exterior	White Masonry Grout	None Detected
32	CS-88	Misc.	1st Floor, SW	Seam Tape on Fiberglass Pipe Insulation	None Detected
32	CS-89	Misc.	1st Floor, Center	Seam Tape on Fiberglass Pipe Insulation	None Detected
32	CS-90	Misc.	2nd floor, Center	Seam Tape on Fiberglass Pipe Insulation	None Detected
33	CS-91	Misc.	Cafeteria	Brown Glue Dots Under Pegboard Tile	None Detected
				Brown Pegboard Tile	None Detected
33	CS-92	Misc.	Cafeteria	Brown Glue Dots Under Pegboard Tile	None Detected
				Brown Pegboard Ceiling Tile	None Detected
33	CS-93	Misc.	Cafeteria	Brown Glue Dots Under Pegboard Tile	None Detected
				Brown Pegboard Ceiling Tile	None Detected
34	CS-94	Surfacing	Cafeteria	Arch Decorative Plaster	None Detected
34	CS-95	Surfacing	Cafeteria	Arch Decorative Plaster	None Detected
34	CS-96	Surfacing	Cafeteria	Arch Decorative Plaster	None Detected
35	CS-97	Misc.	Cafeteria	12” x 12” White Vinyl Floor Tile w/ Grey Specks	**3% Chrysotile**
				Black Mastic for Floor tile	**2% Chrysotile**
36	CS-98	Misc.	Electrical Panel	Black Fabric Insulated Wiring	None Detected
37	CS-99	Misc.	Electrical Panel	White Fabric Insulated Wiring	None Detected
38	CS-100	Misc.	Electrical Panel	Red Fabric Insulated Wiring	None Detected
39	CS-101	Misc.	Electrical Panel	Red Fabric Insulated Wiring	None Detected

SECTION 2.0 ASBESTOS-CONTAINING MATERIALS SURVEY

2.4 Laboratory Analysis (continued)

TABLE B: ASBESTOS-CONTAINING MATERIAL TESTING RESULTS

HA #	Sample #	Material Class.	Sampling Location	Building Construction Material	Asbestos (%)
11	CS-102	Misc.	Lower Roof	Built Up Silver Coated EPDM Roof	None Detected
				Black Mastic for Built Up EPDM Roof	None Detected
				Black Roofing Felt	None Detected
14	CS-103	Misc.	Lower Roof	Silver Coated Parapet Wall Flashing	None Detected
				Black Mastic for Parapet Wall Flashing	None Detected
				Black Felt for Parapet Wall Flashing	None Detected

2.5 Asbestos Survey Limitations

All accessible areas were inspected in accordance with US EPA regulations and generally accepted engineering work practices associated with the conduct of an asbestos survey. It is relevant to note, BEC conducted limited exploratory demolition, therefore, it is possibility that other suspect ACM may be located in enclosed building conditions at select locations (e.g., wall cavities, pipe chases, HVAC ductwork shafts, etc.). The subbasement was inaccessible due to flooding. Additionally, there were portions of the 3rd floor where the ceilings had collapsed which restricted access.

All accessible areas within the scope of work were inspected, in accordance with US EPA regulations and generally accepted engineering work practices. BEC asbestos survey sampling strategy included multiple samples of the same materials chosen at random. However, BEC advises, due to the inconsistencies of manufacturer processes and contractor installation methods, materials of similar construction may have varied quantities of asbestos.

Furthermore, BEC advises locating all asbestos-containing materials present at a structure can only be definitively achieved by bulk sampling every section of pipe insulation, every fitting or valve covering, every square yard of fireproofing, and every square foot of other surface coating material, for suspect materials both readily-accessible and hidden.

Therefore, BEC makes no warranty, expressed or implied, that all asbestos within the subject site has been found. Accordingly, BEC recommends bulk sampling and analysis of all suspect ACBMs (not otherwise evaluated during this survey) during work, which will, or can be reasonably anticipated to, result in the disturbance or damage of same prior to commencement and/or during demolition/renovation work.

SECTION 3.0 CONCLUSIONS & RECOMMENDATIONS

3.1 Conclusions

1. BEC concludes, based up-on onsite visual inspection and review of analytical data, US EPA-regulated asbestos-containing materials **were identified** at the subject site and are listed hereunder in **TABLE C: Asbestos-Containing Materials**.

TABLE C: ASBESTOS CONTAINING MATERIALS

Building Construction Material	Location	EPA Regulated	OSHA Regulated	Estimated Quantity
9" x 9" Red & Black Floor Tile	Basement, 1st, 2nd and 3rd Floors	**YES**	**YES**	~ 33,500 SF
Red Vinyl Stair Treads	Center Stairwell, SE Stairwell & NW Stairwell	**YES**	**YES**	~ 1,100 SF
Brown Vinyl Cove Base -6"	Classrooms (Typical Condition is Along One Wall)	**YES**	**YES**	~ 540 LF
12"x 12" White Vinyl Floor Tile & Related Black Mastic	Basement	**YES**	**YES**	~ 1,025 SF
12" x 12" White Vinyl Floor Tile w/ Grey Specks & Related Black Mastic	Cafeteria/Auditorium	**YES**	**YES**	~ 6,000 SF
Air-Cell Pipe Insulation & Pipe Packing Material (Fittings)	Within Wall/Ceiling Plenums Throughout Basement, 1st Floor, 2nd Floor, Cafeteria/Auditorium & Gymnasium	**YES**	**YES**	~ 1,200 LF
Mastic on Stone Top of Parapet Wall	Rooflines	**YES**	**YES**	~ 315 SF

**BEC advises that these quantifications are solely estimations based on the square footage of the materials in question that was visibly observed within the subject site. Therefore, it is incumbent upon the general and/or asbestos abatement contractor to verify these quantities prior to the commencement of any demolition/renovation activities that may impact asbestos-containing materials within the subject site.*

2. BEC concludes, based upon review of US EPA and State of West Virginia law, specific regulations governing the disturbance, removal, and disposal of asbestos, **do apply** to any work, of which is planned and/or can be reasonably anticipated to result in the disturbance of the asbestos-containing materials identified in the course of this inspection.
3. BEC concludes, based upon on-site visual inspection and review of analytical data, US OSHA-regulated trace (< 1%) asbestos-containing materials **were identified** at the subject site and are listed hereunder in **TABLE D: Trace Asbestos-Containing Materials**.

TABLE D: TRACE ASBESTOS-CONTAINING MATERIALS

Building Construction Material	Material Location(s)	EPA Regulated	OSHA Regulated	Quantity*
Black Tar on Parapet Wall Flashing	Rooflines	**NO**	**YES**	~ 3,075 SF
Silver Coated Curb Flashing	Rooflines	**NO**	**YES**	~ 320 SF
White Door Masonry Sealant	Exterior	**NO**	**YES**	~ 125 LF

SECTION 3.0 CONCLUSIONS & RECOMMENDATIONS

3.1 Conclusions (Continued)

4. BEC concludes, based upon review of United States Occupational Safety and Health Administration (Construction Industry: 29 CFR 1926.1101 and General Industry: 29 CFR 1910.1001) regulations governing non-occupational and occupational exposure to asbestos, **DO APPLY** to **ANY** renovation/demolition, housekeeping, maintenance, and/or repair activities directly and/or indirectly impacting (disturbance/damage) the asbestos-containing materials identified in the course of this inspection.

5. BEC concludes, based upon Federal and State of West Virginia law, a US EPA accredited and licensed "asbestos abatement project designer" is required to prepare a detailed work plan to govern the disturbance (eg, demolition and/or removal) of the identified asbestos-containing materials and clearance testing for re-occupancy of asbestos abatement work areas.

6. BEC concludes, based upon Federal and State of West Virginia law, a licensed asbestos abatement contractor is required to conduct removal of the identified asbestos containing materials prior to renovation work disturbing/damaging these materials. Removal of these materials is required by law whenever renovation/demolition workplans specify (require) their disturbance and/or their disturbance can be reasonably anticipated to occur during the renovation work activities.

7. BEC concludes, based upon State of West Virginia law, a licensed air clearance monitor is required to perform final visual inspections and post abatement air quality testing. BEC advises, in accordance with recognized risk management industry practices, a licensed air clearance monitor- third party and independent, conduct pre-abatement and daily work area containment construction inspections and continuous air quality surveillance during the abatement project.

3.2 Recommendations

1 Asbestos-Containing Materials Disclosure:

BEC advises, based upon US OSHA's Construction Industry (29 CFR 1926.1101) and General Industry (29 CFR 1910.1001) regulations, the Building Owner is required to disclose the location of any asbestos-containing materials (trace asbestos content and $\geq$ 1% asbestos concentration) to Owner employees, contractors/subcontractors, and tenants whom occupy and/or conduct work activities within building areas, at which asbestos-containing materials are present.

2 BEC recommends, in accordance with prudent risk management practices, an accredited US EPA "Asbestos Management Planner" prepare a specialized "Asbestos Operations & Management" plan to govern the safe management of the asbestos-containing materials present at the subject site should they be left in place following asbestos abatement actions and renovations activities completed within the building.

3 BEC recommends, should any planned renovation activities result in the discovery of additional suspect ACBMs, halting all work activities with subsequent bulk sample collection and analysis of discovered ACBMs, to determine asbestos content.

SECTION 3.0 CONCLUSIONS & RECOMMENDATIONS

3.2 Recommendations (Continued)

PLM/DS Limitations

BEC advises all bulk samples were analyzed by Polarized Light Microscopy with Dispersion Staining (PLM/DS). This is a standard method of analysis in optical mineralogy and a suspect material is immersed in a solution of known refractive index and subjected to illumination by polarized light. The resultant characteristic color display enables mineral identification.

Although PLM/DS analysis is the primary technique used for asbestos determination, it can show significant bias leading to false negatives and false positives for certain types of materials. PLM is limited by the visibility of the asbestos fibers. In some samples the fibers may be reduced to a diameter so small or masked by coatings to such an extent that they cannot be reliably observed or identified using PLM.

As such, BEC recommends further evaluation via gravimetric reduction sample preparation technique and PLM/DS analysis with subsequent TEM analysis (10,000-20,000x magnification), should inconclusive PLM results persist, prior to designation as “non-asbestos-containing”.

APPENDIX A

HOMOGENOUS MATERIAL PHOTO SHEET

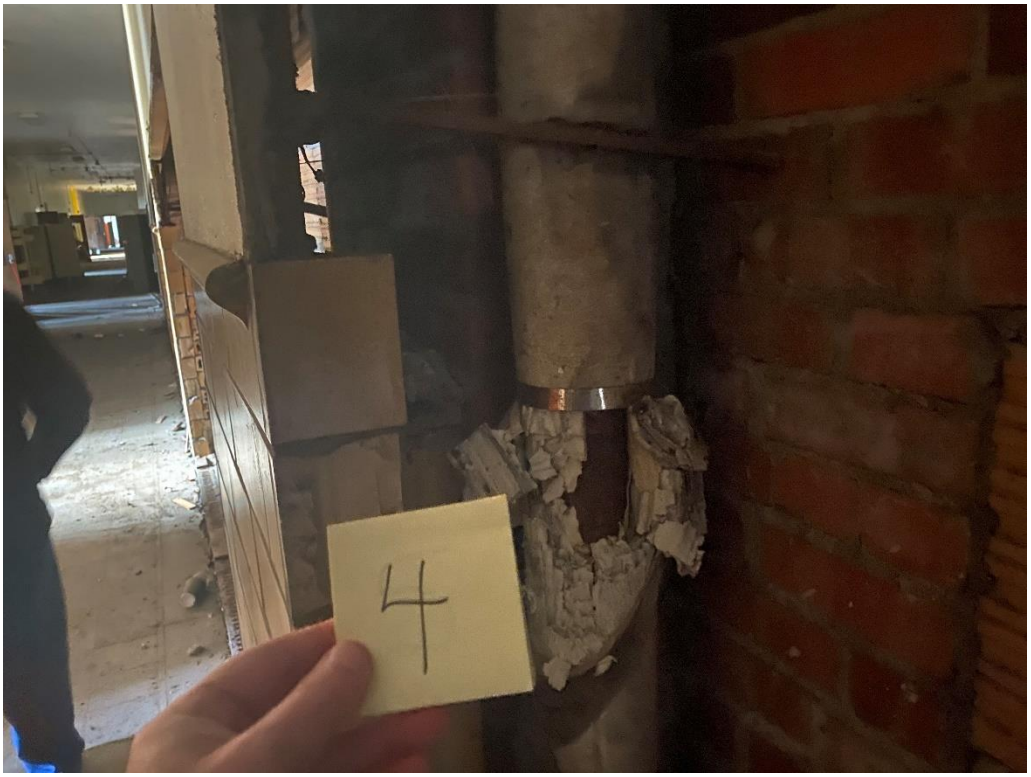
Former Clay School

131 15th Street, Wheeling, West Virginia 26003

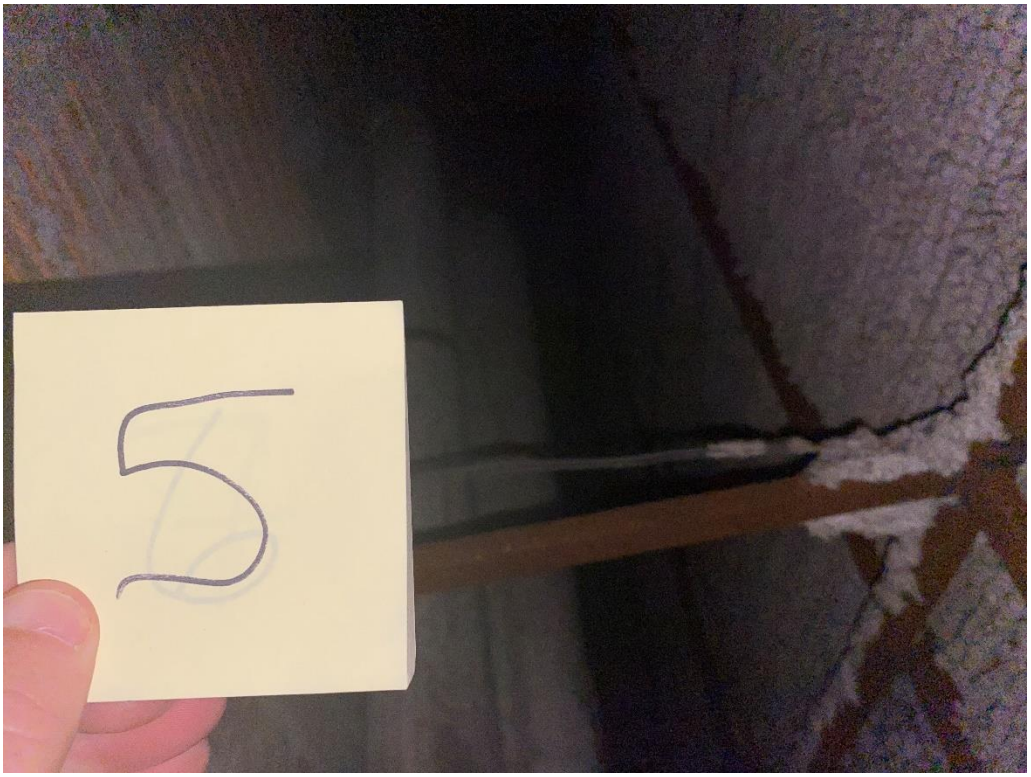
HA #1 – Wall/Ceiling Plaster

HA #2 – Black Vinyl Cove Base 6”

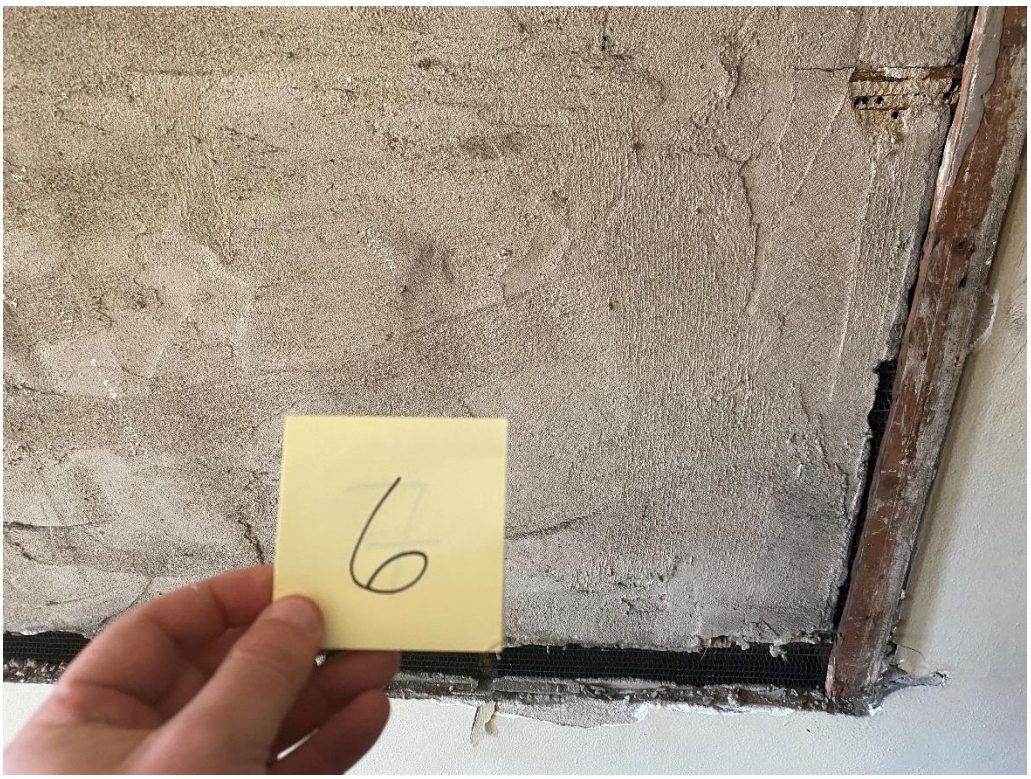
HA #3 – Chalk Board Mastic



HA #4 – Air-O-Cell Pipe Insulation



HA #5 – Pipe Packing Material & Insulation



HA #6 – Gray Pathing Material Behind Chalkboards

HA #7 & #8 – Black & Red 9” x 9” Vinyl Floor Tile

HA #9 – Blown in Insulation

HA #10 – Red Vinyl Stair Treds

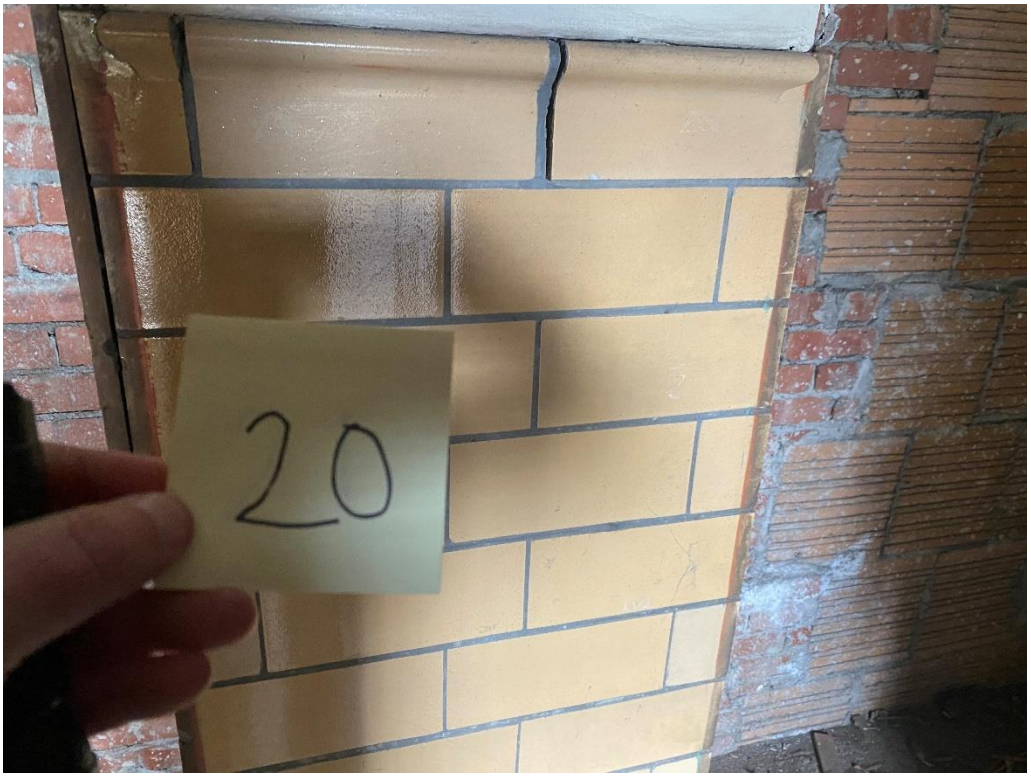
HA #11 – Rubber EPDM w/ Mastic, HA #12 – Built Up Roofing, HA #13 – Insulation Board

HA #14 – Parapet Wall Flashing

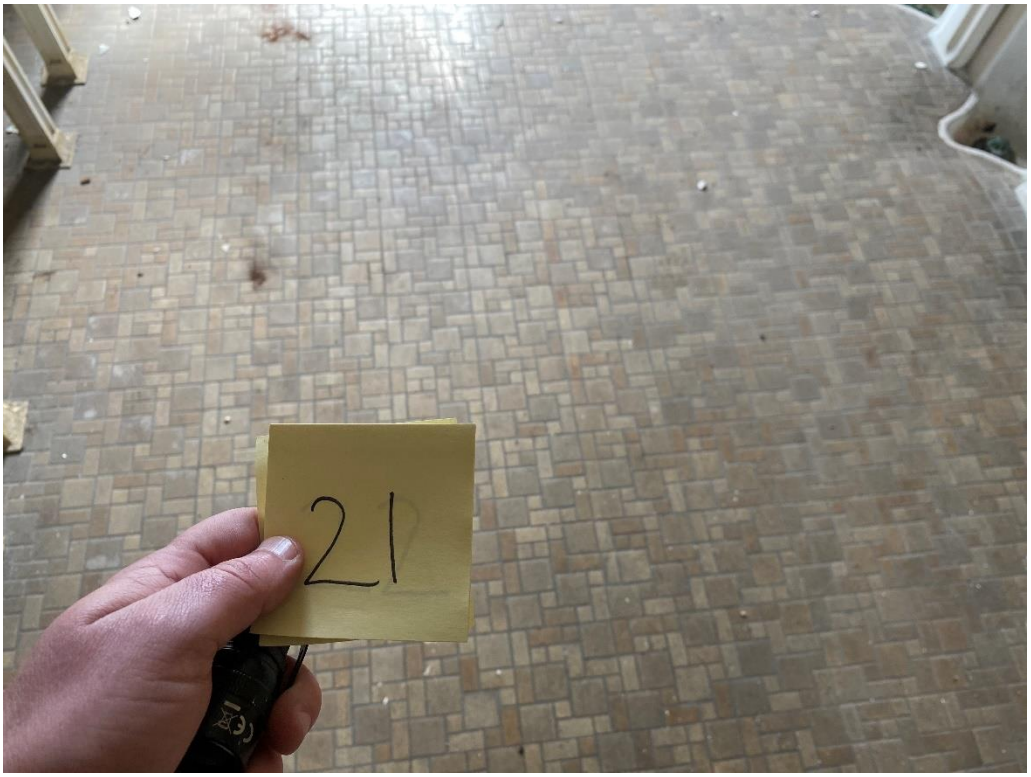
HA #15 – “End Cap Mastic” Mastic on top of Parapet Stone

HA #16 – Mastic on Metal Duct, HA #17 – Pitch Pocket Mastic, HA #18 – Curb Flashing

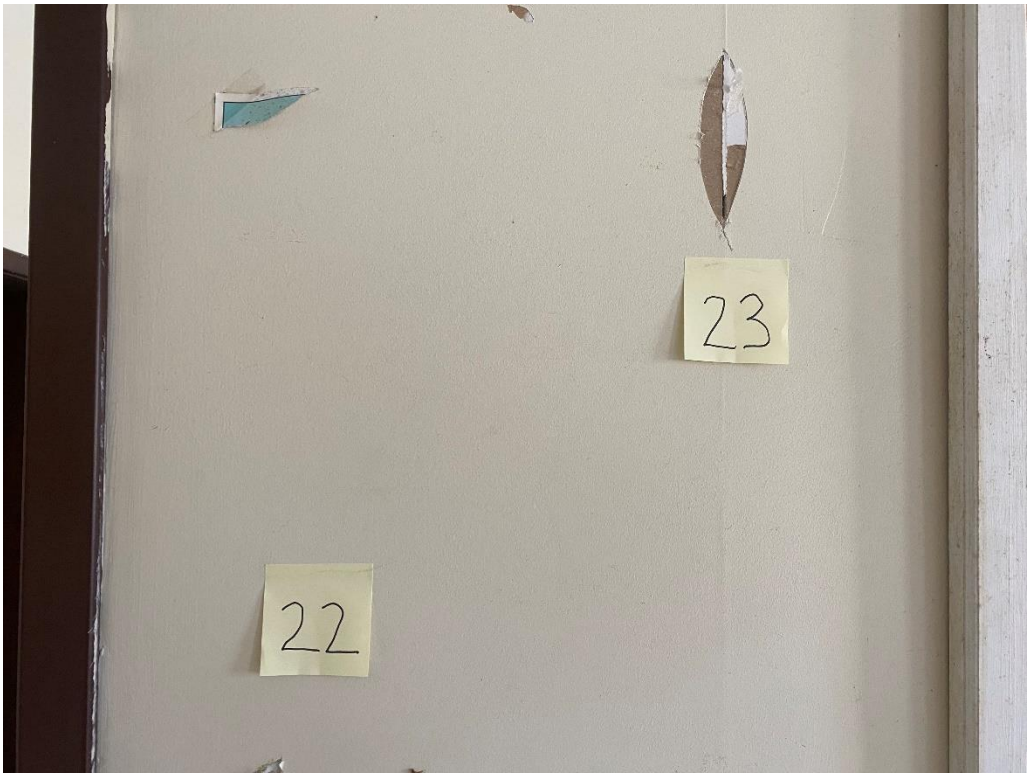
HA #19 – Yellow Carpet Mastic



HA #20 – Terra Cotta Tile Grout/Thinset



HA #21 – Ceramic Tile Grout/Thinset

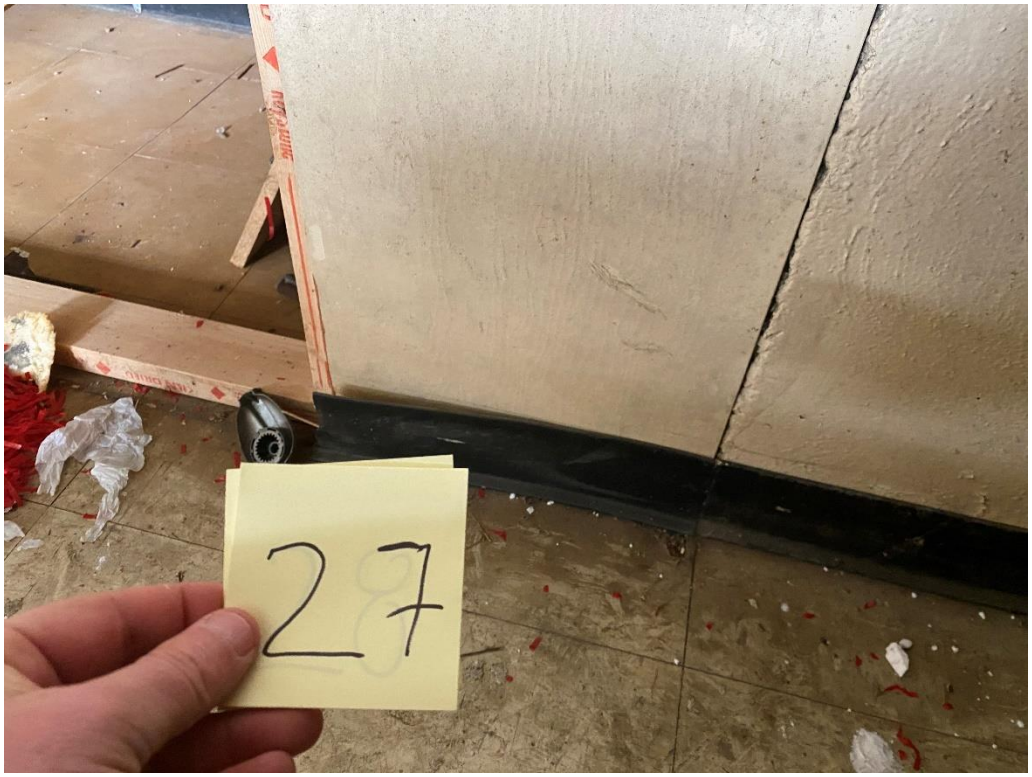


HA #22 – Gypsum Board Sheeting & HA #23 – Joint Finishing Compound

HA #24 – Brown Vinyl Cove Base – 6”

HA #25 – Brown Vinyl Cove Base – 4”

HA #26 – Black Window Sills

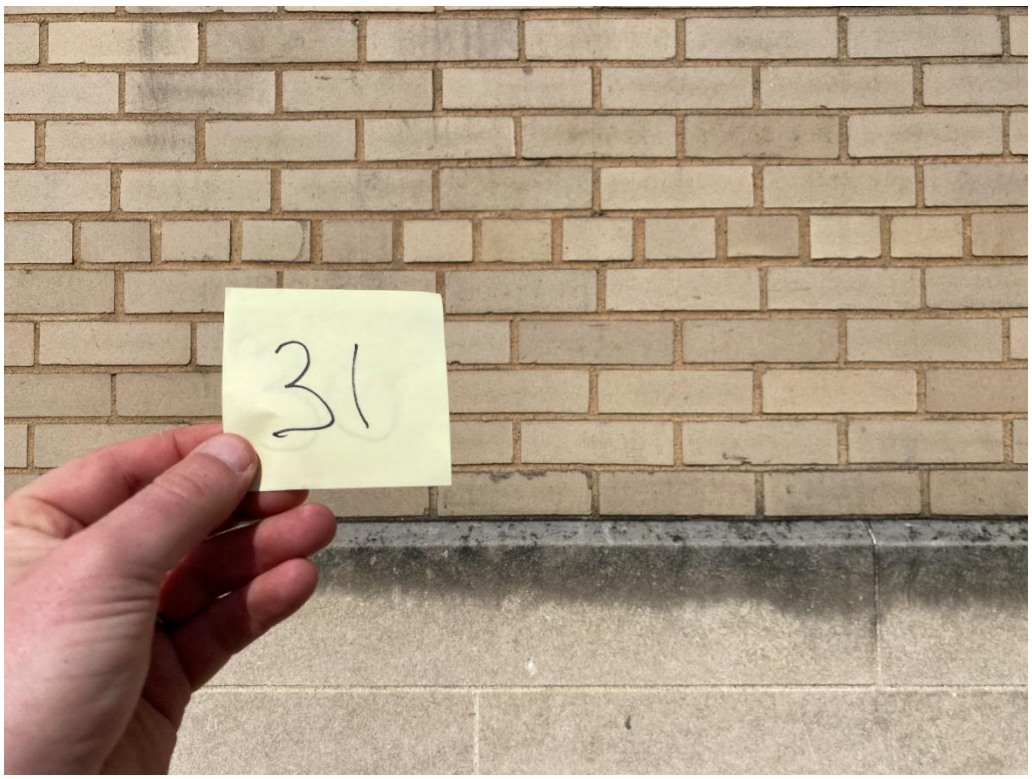


HA #27 – Black Vinyl Cove Base – 4”

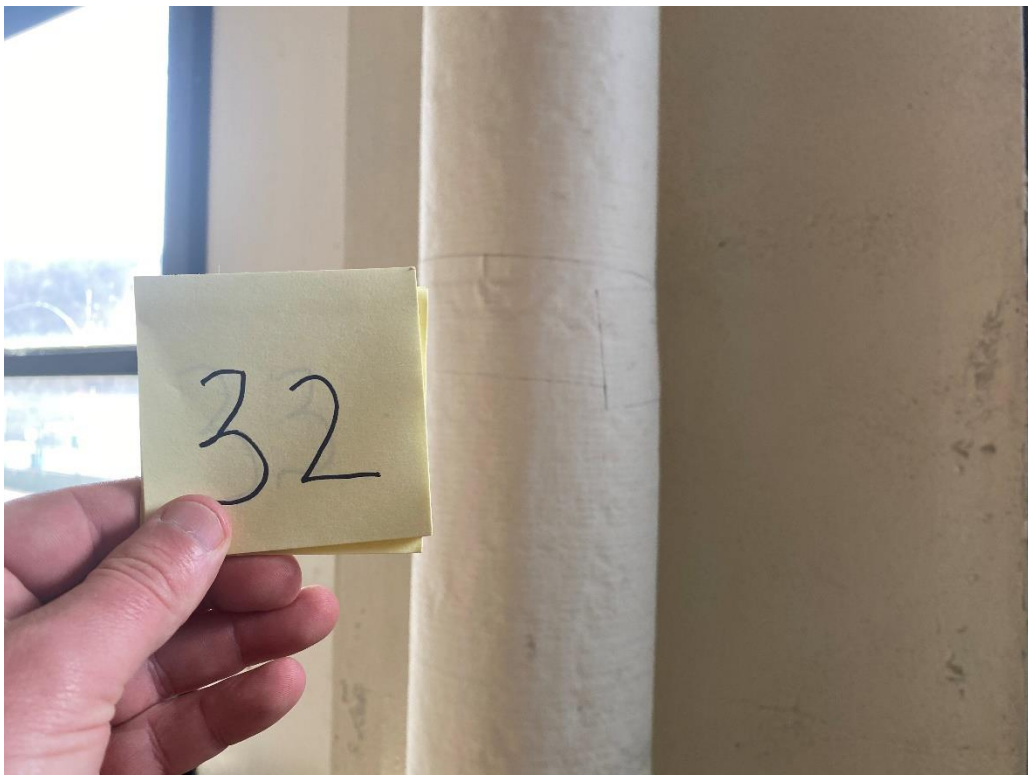
HA #28 – 12” x 12” White VFT with Gray Specks

HA #29 – White Masonry Door Sealant

HA #30 – Window Masonry Sealant



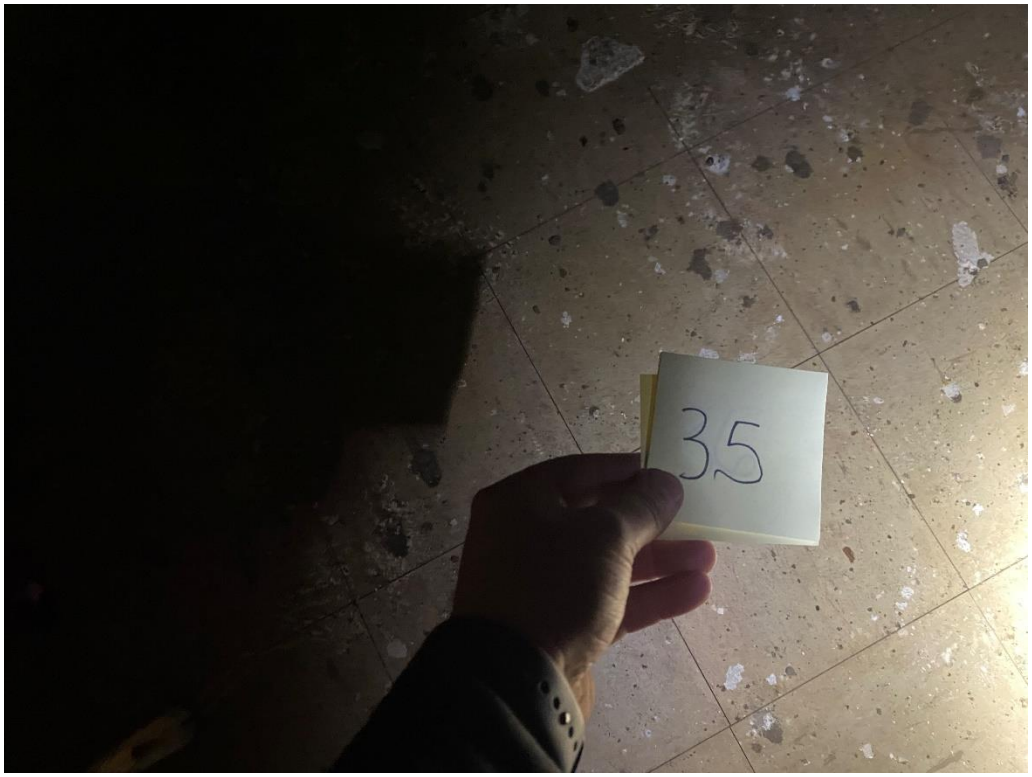
HA #31 – Masonry Grout



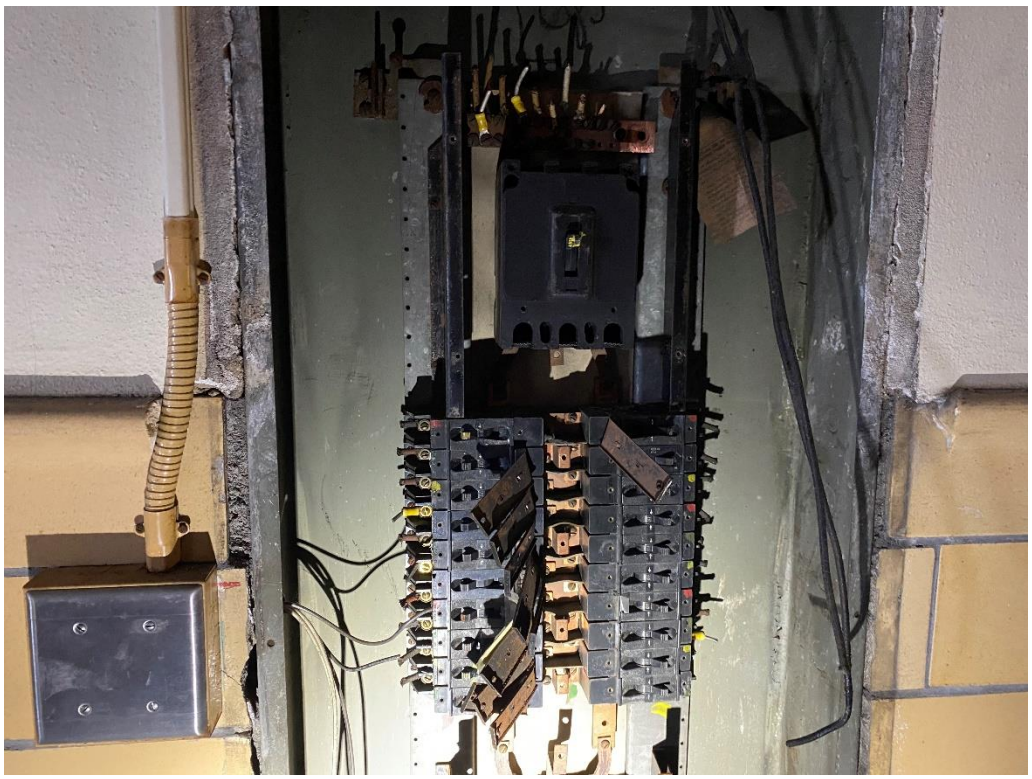
HA #32 – Seam Tape on Fiberglass Pipe Insulation

HA #33 – 12” x 12” Peg board Tile and Mastic

HA #34 – Decorative Plaster



HA #35 – 12” x 12” White VFT with Specks



HA #36 – Black Fabric Wiring, HA #37 – White Fabric Wiring, HA #38 – Red Fabric Wiring, HA #39 Blue Fabric Wiring

APPENDIX B

BEC FIELD DOCUMENTATION

BOGGS ENVIRONMENTAL CONSULTANTS

ASBESTOS INSPECTION PROJECT INFORMATION SHEET

Date: 2/16/2022 / 2·17·2022 / 3·3·2022

Staff: Andy Hanson, Ricky Robinson, Garrett Kehler

Project #: WV22004

Project Location: Clay School
131 15th Street, Wheeling, WV

Project Manager: Ricky Robinson

On-Site Time	Temperature	Weather Conditions	Precipitation
Arrival: 740	30°	Partly Cloudy	0
Departure: 1600	41	Partly Cloudy	0

SCOPE OF WORK TO BE PERFORMED/ SUMMARY OF WORK COMPLETED

Perform asbestos inspection within all readily accessible areas

POINT OF CONTACT:

Name(s): Patricia Hickman

Contact Information: phickman@envstd.com

ANALYSIS TYPE:

- ☑ PLM EPA 600/R-93/116
- ☐ PLM EPA 400 Point Count
- ☐ PLM EPA 1000 Point Count
- ☐ PLM EPA NOB
- ☐ TEM Chatfield
- ☐ TEM EPA NOB

INSPECTION TYPE:

- ☐ AHERA
- ☐ NESHAP
- ☑ Pre-Demo
- ☑ Limited (Note Limitations)
- ☐ Other _____

PPE USE:

- ☐ Half – Face APR (Type A)
- ☐ Full Body Coveralls ☑ Boots
- ☐ Head/Foot Covers ☐ Gloves
- ☑ Hard Hat ☑ Eye Protection
- ☐ Safety Harness ☐ N/A

TURN AROUND TIME:

- ☐ 6 Hour
- ☐ 24 Hour
- ☐ 3 Day
- ☑ 5 Day
- ☐ Other _____

ADDITIONAL REQUIREMENTS:

- ☐ Patch / Repair
- ☑ Roof Sampling

QUANTITY OF SAMPLES:

Bulk # 103

HA's # 39

DATE SAMPLES SHIPPED:

—

TRACKING NUMBER:

—

LIMITATIONS / INACCESSIBLE AREAS

The building envelope particularly from the roof down has caused plaster to delaminate and fall onto vertical surfaces along with brown blown insulation. Given the condition of building only readily accessible areas will be evaluated.

Lower basement where boiler room is located not accessible

BOGGS
ENVIRONMENTAL CONSULTANTS

ASBESTOS INSPECTION BULK SAMPLING LOGSHEET

Date: 2/16/2022

Staff: Andy Hanson, Ricky Robinson, Garrett Kehler

Project #: WV22004

Project Location: Clay School
131 15th Street, Wheeling, WV

Sample #	Ha #	Location	Material Identification: Color/Description	Quantity (sf, lf, yd³)	Friable/Nonfriable: CHECK F	Friable/Nonfriable: CHECK NF
CS-1	1	3RD Floor - NE	Finished Wall/Ceiling Plaster		x	
2	1	3RD Floor - Center	↓		x	
3	1	2ND Floor Center	↓		x	
4	1	2ND Floor - NW	↓		x	
5	1	1ST Floor - NW	↓		x	
6	1	1st Floor - SE	↓		x	
7	1	Basement	↓		x	
8	2	3RD Floor - SW	Black Vinyl Cove Base + Mastic - 6"			x
9	2	2ND Floor - SW	↓			x
10	2	1ST Floor - SW	↓			x
11	3	3RD Floor - SW	Chalk Board Mastic			x
12	3	2ND Floor - SW	↓			x
13	3	1st Floor - SW	↓			x
14	4	2ND Floor Center	Air Cell Pipe Insulation		x	
15	4	1st Floor Center	↓		x	
16	4	1st Floor SW	↓		x	
17	5	2ND Floor Center	Pipe Packing Material		x	
18	5	↓	↓		x	
19	5	↓	↓		x	
20	6	3RD Floor Center	Gray Patching Material Behind Chalkboards			x

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ASBESTOS INSPECTION BULK SAMPLING LOGSHEET

Date: 2/16/2022

Staff: Andy Hanson, Ricky Robinson, Garrett Kehler

Project #: WV22004

Project Location: Clay School
131 15th Street, Wheeling, WV

Page: 2 of 6

Sample #	Ha #	Location	Material Identification: Color/Description	Quantity (sf, lf, yd³)	Friable/ Nonfriable: CHECK F	Friable/ Nonfriable: CHECK NF
5-21	6	2nd Floor NE Corner	Grey Patching Material Behind Chalkboards			✓
22	6	2nd Floor Center	"			✓
23	6	1st Floor - SW	"			✓
24	6	1st Floor Center	"			✓
25	7	3rd Floor Center	9"x9" Red Vinyl Floor Tile + Mastic			✓
26	7	2nd Floor Center	"			✓
27	7	1st Floor Center	"			✓
28	8	3rd Floor Center	9"x9" Black Vinyl Floor Tile + Mastic			✓
29	8	2nd Floor Center	"			✓
30	8	1st Floor Center	"			✓
31	9	3rd Floor - NE	Brown Blown In Insulation		✓	
32	9	3rd Floor - Center	"		✓	
33	9	3rd Floor SW	"		✓	
34	10	Center Stairwell	Red Vinyl Stair Treds			✓
35	10	SE Stairwell	"			✓
36	10	NW Stairwell	"			✓
37	11	Exter. Roof - Top	Built Up Roofing - Rubber EPDM w/ Mastic			✓
38	12	"	Built Up Roofing - Black Tar + Ballasts - 2nd Layer			✓
39	13	"	Built Up Roofing - Brown Insulation Board - 3rd Layer/4th Layer			✓
40	11	"	Built Up Roofing - Rubber EPDM w/ Mastic			✓

BOGGS
ENVIRONMENTAL CONSULTANTS

ASBESTOS INSPECTION BULK SAMPLING LOGSHEET

Date: 2/16/2022

Staff: Andy Hanson, Ricky Robinson, Garrett Kehler

Project #: WV22004

Project Location: Clay School
131 15th Street, Wheeling, WV

			Material Identification		Friable/ Nonfriable	
Sample #	Ha #	Location	Color/Description	Quantity (sf, lf, yd³)	CHECK F	CHECK NF
CS-41	14	Extension-Top Roof	Parapet Wall Flashing (Multilayer)			X
42	14		"			X
43	15		End Cap Mastic			X
44	15		"			X
45	16		Mastic Coating on Metal Exhaust Ductwork			X
46	16		"			X
47	17		Mastic Pitch Pockets			X
48	17		"			X
49	18		Curb Flashing			X
50	18	"	"			X
51	19	Basement	Yellow Carpet Mastic			X
52	19	"	"			X
53	19	"	"			X
54	20	2nd Floor Center	Terra Cotta Tile Grout			X
55	20	1st Floor Center	"			X
56	20	1st Floor West	"			X
57	21	1st Floor SW	Bathroom Ceramic Tile Grout/Thinset			X
58	21	1st Floor SW	"			X
59	22	1st Floor NW	Gypsum Board Sheeting			X
60	23	1st Floor NW	Joint Finishing Compound			X

BOGGS
ENVIRONMENTAL CONSULTANTS

ASBESTOS INSPECTION BULK SAMPLING LOGSHEET

Date: 2/16/2022
Project Location: Clay School
Staff: Andy Hanson, Ricky Robinson, Garrett Kehler
131 15th Street, Wheeling, WV
Project #: WV22004
Page: 4 of 6

Sample #	Ha #	Location	Material Identification: Color/Description	Quantity (sf, lf, yd³)	Friable/ Nonfriable: CHECK F	Friable/ Nonfriable: CHECK NF
CS-61	22	Basement	Gypsum Board Sheeting			✓
62	22	↓	↓			✓
63	23	↓	Joint Finishing Compound			✓
64	23	↓	↓			✓
65	24	2nd Floor Center	Brown Vinyl Cove Base + Mastic - 6"			✓
66	24	↓	↓			✓
67	24	↓	↓			✓
68	25	2nd Floor Center	Brown Vinyl Cove Base + Mastic - 4"			✓
69	25	↓	↓			✓
70	25	↓	↓			✓
71	26	1st Floor - East	Black Slate Window Sills			✓
72	26	1st Floor West	↓			✓
73	27	Basement	Black Vinyl Cove Base + Mastic - 4"			✓
74	27	↓	↓			✓
75	27	↓	↓			✓
76	28	Basement	12" x 12" White VFT w/ Gray Specks + Mastic			✓
77	28	↓	↓			✓
78	28	↓	↓			✓
79	29	Exterior	White Door Masonry Sealant			✓
80	29		↓			✓

BOGGS
ENVIRONMENTAL CONSULTANTS

ASBESTOS INSPECTION BULK SAMPLING LOGSHEET

Date: 2/16/2022

Staff: Andy Hanson, Ricky Robinson, Garrett Kehler

Project #: WV22004

Project Location: Clay School
131 15th Street, Wheeling, WV

Page: 5 of 6

Sample #	Ha #	Location	Material Identification: Color/Description	Quantity (sf, lf, yd³)	Friable/ Nonfriable: CHECK F	Friable/ Nonfriable: CHECK NF
CS-81	29	Exterior	White Door Masonry Sealant			✓
82	30	Exterior	Brown Window Masonry Sealant			✓
83	30	↓	↓			✓
84	30	↓	↓			✓
85	31	Exterior	White Masonry Grout			✓
86	31	↓	↓			✓
87	31	↓	↓			✓
88	32	1st fl SW	Seam tape on fiberglass pipe insulation			✓
89	32	1st fl Center	↓			✓
90	32	2nd fl Center	↓			✓
91	33	Cafeteria	Mastic Glue Daubs under Pegboard ACT			✓
92	33	↓	↓			✓
93	33	↓	↓			✓
94	34	↓	Arch decorative Plaster			✓
95	34	↓	↓			✓
96	34	↓	↓			✓
97	35	↓	12"x12" White VFT w/ Gray Specks			✓
98	36	Electrical Panel	Fabric Insulated Wiring Black			✓
99	37	↓	White			✓
100	38	↓	Red			✓

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ENVIRONMENTAL CONSULTANTS

ASBESTOS INSPECTION BULK SAMPLING LOGSHEET

Date: 2-16-22

Staff: Andy Hanson, Rick Robinson, Garrett Kehler

Project #: WV22004

Project Location: Clay School
131 15th St Wheeling, WV

Page: 6 of 6

Sample #	Ha #	Location	Material Identification: Color/Description	Quantity (sf, lf, yd³)	Friable/ Nonfriable: CHECK F	Friable/ Nonfriable: CHECK NF
CS- 101	39	Electrical Panel	Fabric Insulated Wiring Blue			✓
102	11	Lower Roof	Built up roofing EPDM w/ Mastic			✓
103	14	2	Parapet wall flashing multi layer			✓

BOGGS
ENVIRONMENTAL CONSULTANTS

SUBJECT SITE / WORK AREA SKETCH

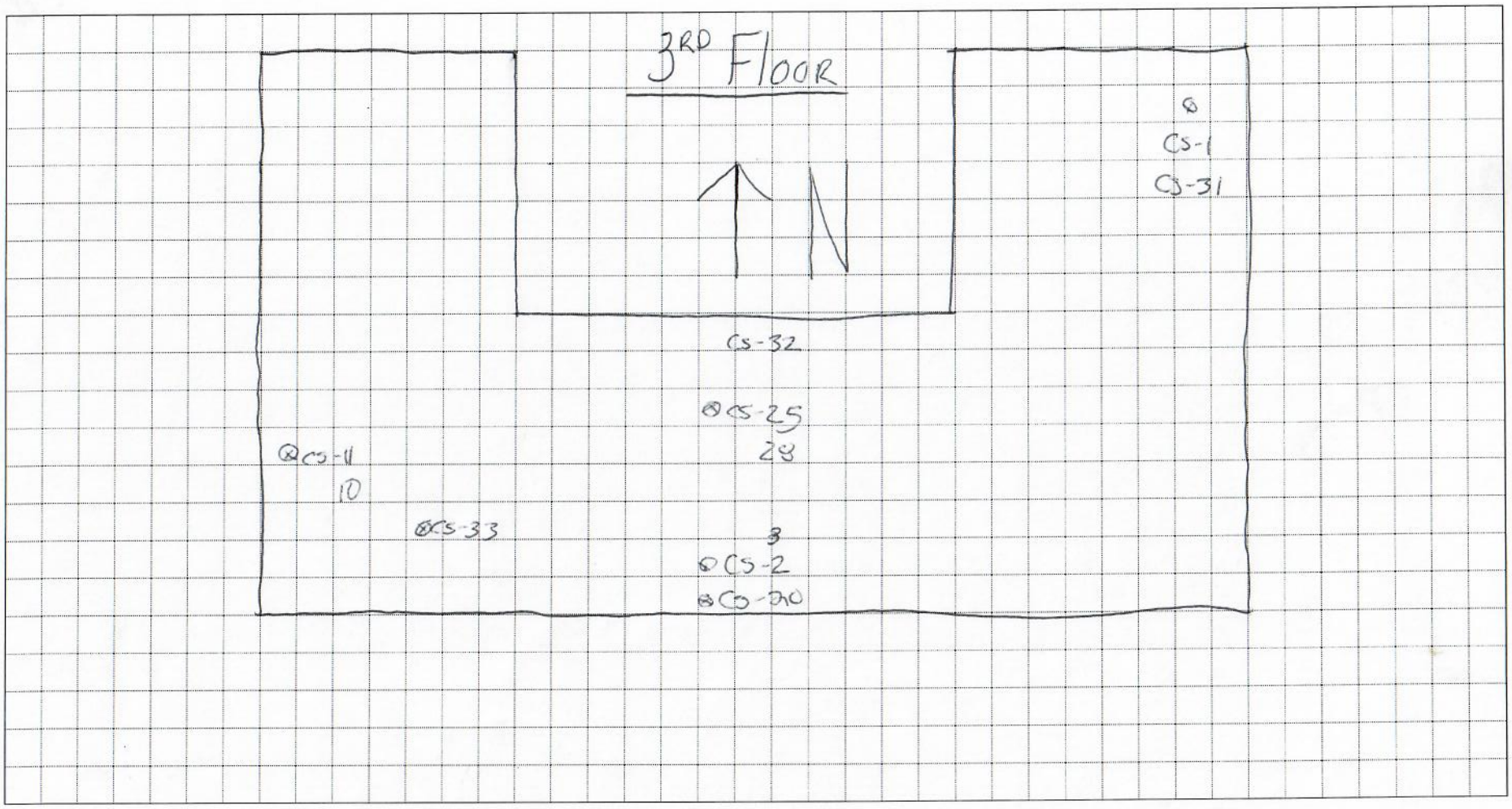
Date: 2/16/2022

BEC Staff: Andy Hanson, Ricky Robinson, (

Project #: WV22004

Project Location: Clay School
131 15th Street, Wheeling, WV

Project Manager: Ricky Robinson



BOGGS
ENVIRONMENTAL CONSULTANTS

SUBJECT SITE / WORK AREA SKETCH

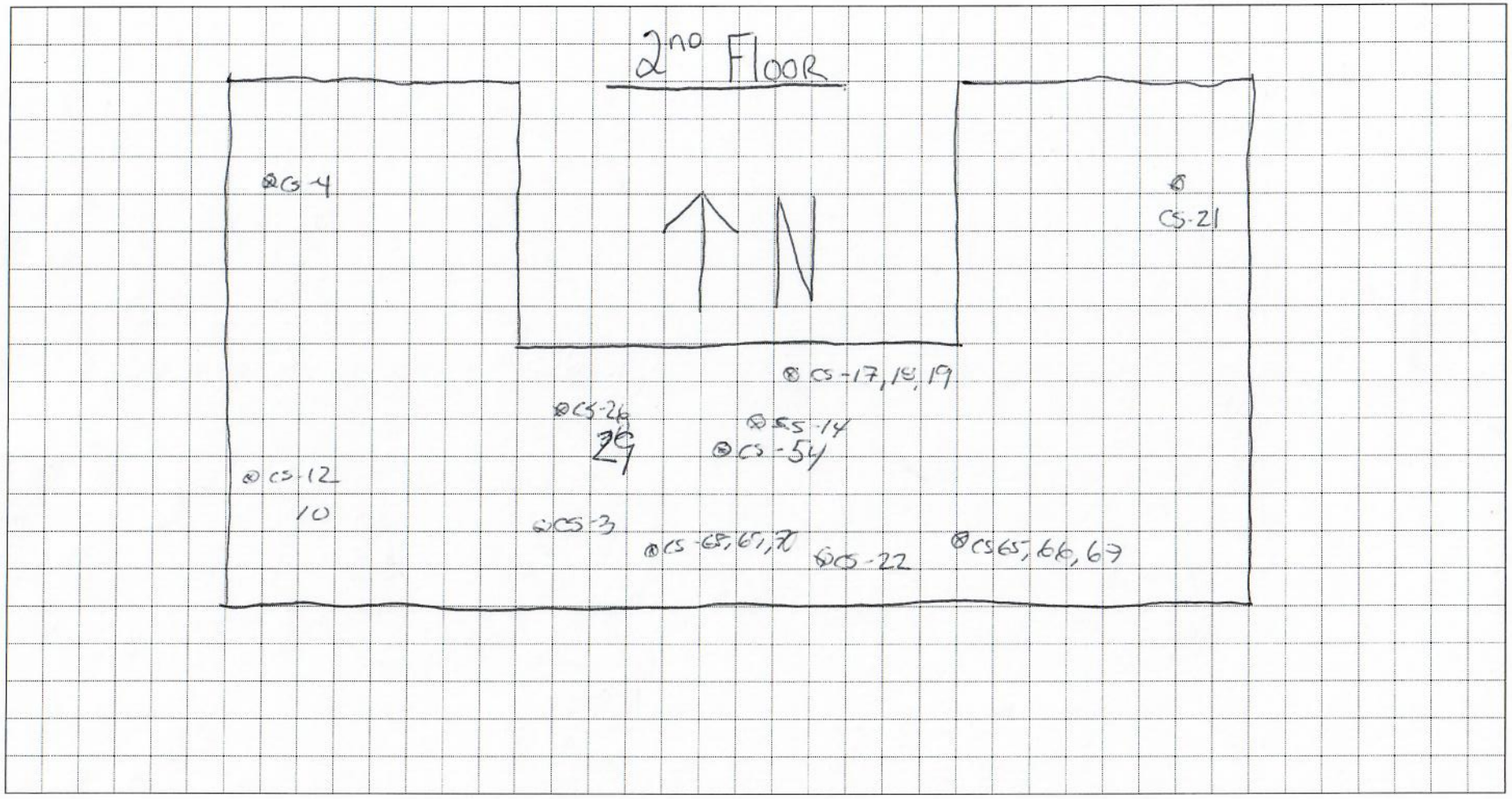
Date: 2/16/2022

BEC Staff: Andy Hanson, Ricky Robinson, (

Project #: WV22004

Project Location: Clay School
131 15th Street, Wheeling, WV

Project Manager: Ricky Robinson



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SUBJECT SITE / WORK AREA SKETCH

Date: 2/16/2022

BEC Staff: Andy Hanson, Ricky Robinson, (

Project #: WV22004

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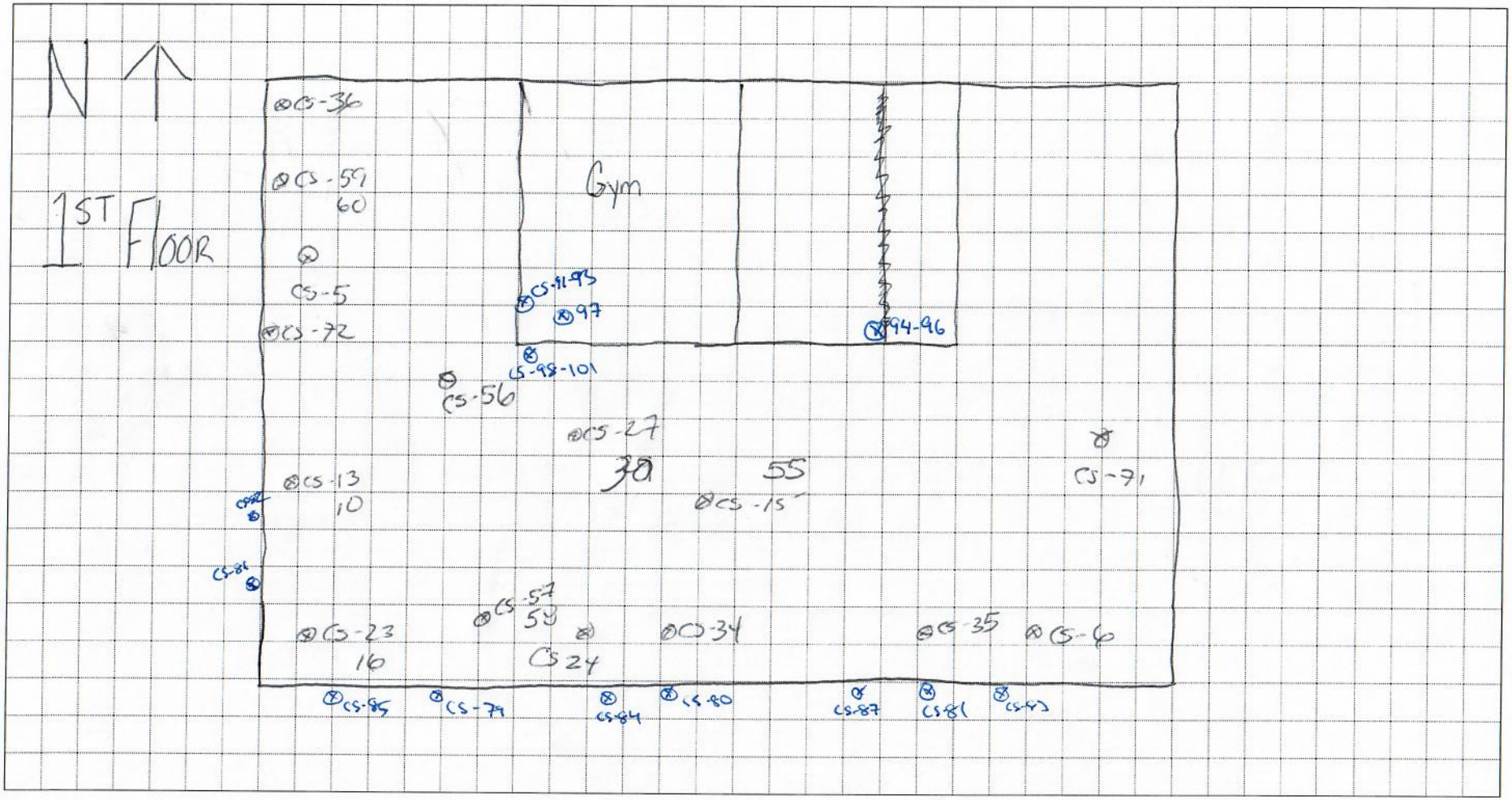

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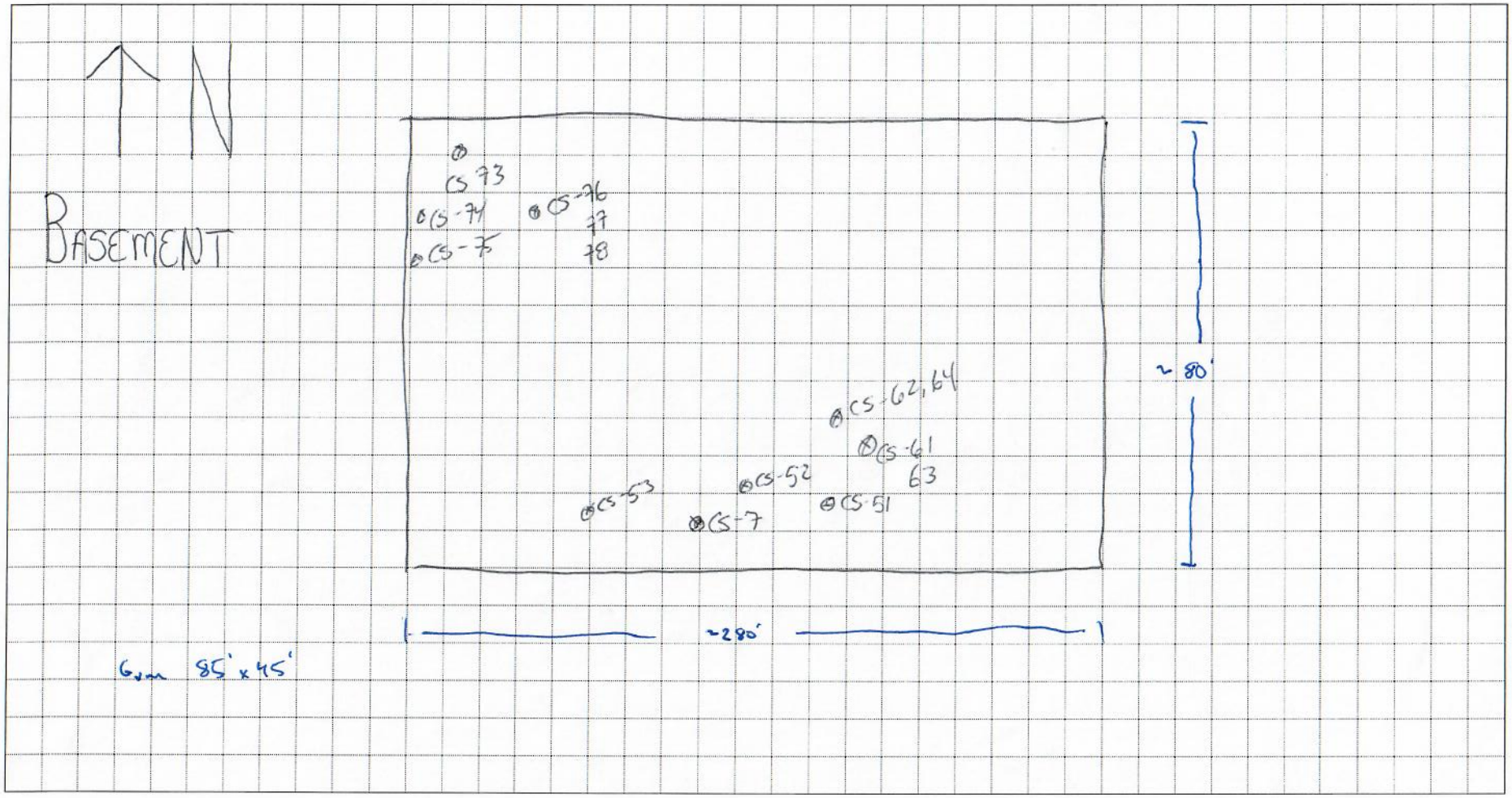

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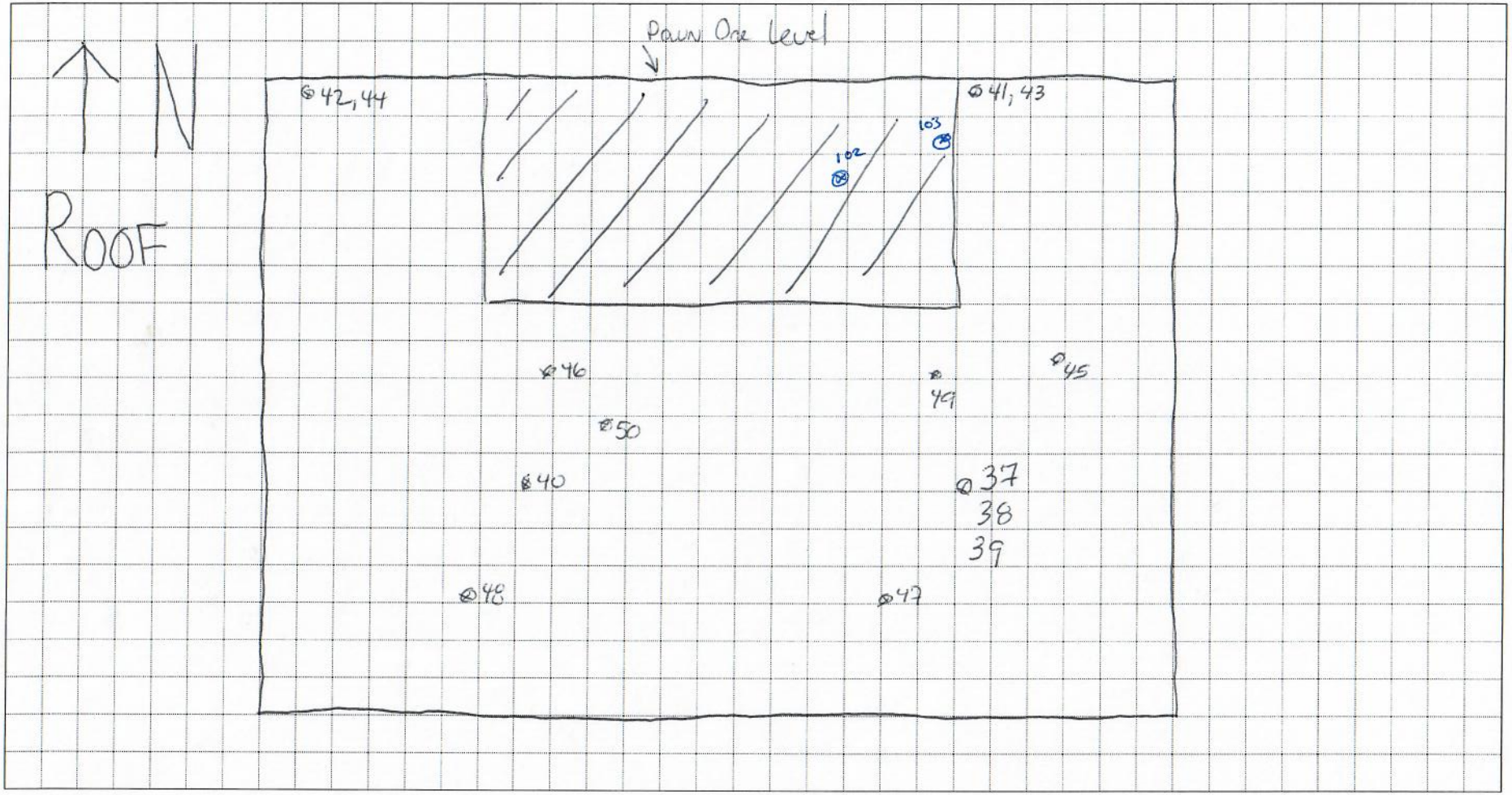

ENVIRONMENTAL SCIENCE, ENGINEERING & INDUSTRIAL HYGIENE SERVICES

APPENDIX C

SANAIR LABORATORY ANALYTICAL RESULTS

&

CHAIN OF CUSTODY

SanAir Technologies Laboratory

The Identification Specialists

Analysis Report
prepared for
Boggs Environmental Consultants, Inc

Report Date: 3/1/2022

Project Name: Clay School

Project #: WV22004

SanAir ID#: 22008394

NVLAP TESTING

NVLAP LAB CODE 200870-0

10501 Trade Court | North Chesterfield, Virginia 23236
888.895.1177 | 804.897.1177 | fax: 804.897.0070 | IAQ@SanAir.com | SanAir.com

SanAir ID Number
22008394
FINAL REPORT
3/1/2022 3:22:57 PM

Name: Boggs Environmental Consultants, Inc
Address: 200 West Main Street
Middletown, MD 21769
Phone: 301-694-5687

Project Number: WV22004
P.O. Number:
Project Name: Clay School
Collected Date: 2/16/2022
Received Date: 2/21/2022 10:05:00 AM

Dear Andrew Hanson,

We at SanAir would like to thank you for the work you recently submitted. The 103 sample(s) were received on Monday, February 21, 2022 via UPS. The final report(s) is enclosed for the following sample(s): CS-1, CS-2, CS-3, CS-4, CS-5, CS-6, CS-7, CS-8, CS-9, CS-10, CS-11, CS-12, CS-13, CS-14, CS-15, CS-16, CS-17, CS-18, CS-19, CS-20, CS-21, CS-22, CS-23, CS-24, CS-25, CS-26, CS-27, CS-28, CS-29, CS-30, CS-31, CS-32, CS-33, CS-34, CS-35, CS-36, CS-37, CS-38, CS-39, CS-40, CS-41, CS-42, CS-43, CS-44, CS-45, CS-46, CS-47, CS-48, CS-49, CS-50, CS-51, CS-52, CS-53, CS-54, CS-55, CS-56, CS-57, CS-58, CS-59, CS-60, CS-61, CS-62, CS-63, CS-64, CS-65, CS-66, CS-67, CS-68, CS-69, CS-70, CS-71, CS-72, CS-73, CS-74, CS-75, CS-76, CS-77, CS-78, CS-79, CS-80, CS-81, CS-82, CS-83, CS-84, CS-85, CS-86, CS-87, CS-88, CS-89, CS-90, CS-91, CS-92, CS-93, CS-94, CS-95, CS-96, CS-97, CS-98, CS-99, CS-100, CS-101, CS-102, CS-103.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

Sandra Sobrino
Asbestos & Materials Laboratory Manager
SanAir Technologies Laboratory

Final Report Includes:
- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

Sample conditions:
- 103 samples in Good condition.

SanAir Technologies Laboratory

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22008394
FINAL REPORT
3/1/2022 3:22:57 PM

Name: Boggs Environmental Consultants, Inc
Address: 200 West Main Street
Middletown, MD 21769
Phone: 301-694-5687

Project Number: WV22004
P.O. Number:
Project Name: Clay School
Collected Date: 2/16/2022
Received Date: 2/21/2022 10:05:00 AM

Analyst: Roseblock, Mary | Li, Elizabeth | Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
CS-1 / 22008394-001 3rd Floor NE Finished Wall/Ceiling Plaster, Plaster	Grey Non-Fibrous Homogeneous		100% Other	None Detected
CS-1 / 22008394-001 3rd Floor NE Finished Wall/Ceiling Plaster, Skim Coat	White Non-Fibrous Homogeneous		100% Other	None Detected
CS-2 / 22008394-002 3rd Floor - Center Finished Wall/Ceiling Plaster, Plaster	Grey Non-Fibrous Homogeneous		100% Other	None Detected
CS-2 / 22008394-002 3rd Floor - Center Finished Wall/Ceiling Plaster, Skim Coat	White Non-Fibrous Homogeneous		100% Other	None Detected
CS-3 / 22008394-003 2nd Floor - Center Finished Wall/Ceiling Plaster, Plaster	Grey Non-Fibrous Homogeneous		100% Other	None Detected
CS-3 / 22008394-003 2nd Floor - Center Finished Wall/Ceiling Plaster, Skim Coat	White Non-Fibrous Homogeneous		100% Other	None Detected
CS-4 / 22008394-004 2nd Floor - NW Finished Wall/Ceiling Plaster, Plaster	Grey Non-Fibrous Homogeneous		100% Other	None Detected
CS-4 / 22008394-004 2nd Floor - NW Finished Wall/Ceiling Plaster, Skim Coat	White Non-Fibrous Homogeneous		100% Other	None Detected
CS-5 / 22008394-005 1st Floor - NW Finished Wall/Ceiling Plaster, Plaster	Grey Non-Fibrous Homogeneous		100% Other	None Detected
CS-5 / 22008394-005 1st Floor - NW Finished Wall/Ceiling Plaster, Skim Coat	White Non-Fibrous Homogeneous		100% Other	None Detected

Analyst: Mary E Roseblock
Analysis Date: 3/1/2022

Approved Signatory: Johnathan Wilson
Date: 3/1/2022

SanAir Technologies Laboratory

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Analyst: Roseblock, Mary | Li, Elizabeth | Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
CS-6 / 22008394-006 1st Floor - SE Finished Wall/Ceiling Plaster, Plaster	Grey Non-Fibrous Homogeneous		100% Other	None Detected
CS-6 / 22008394-006 1st Floor - SE Finished Wall/Ceiling Plaster, Skim Coat	White Non-Fibrous Homogeneous		100% Other	None Detected
CS-7 / 22008394-007 Basement Finished Wall/Ceiling Plaster, Plaster	Grey Non-Fibrous Homogeneous		100% Other	None Detected
CS-7 / 22008394-007 Basement Finished Wall/Ceiling Plaster, Skim Coat	White Non-Fibrous Homogeneous		100% Other	None Detected
CS-8 / 22008394-008 3rd Floor - SW Vinyl Cove Base + Mastic 6", Cove Base	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-8 / 22008394-008 3rd Floor - SW Vinyl Cove Base + Mastic 6", Mastic	Brown Non-Fibrous Homogeneous		100% Other	None Detected
CS-9 / 22008394-009 2nd Floor - SW Vinyl Cove Base + Mastic 6", Cove Base	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-9 / 22008394-009 2nd Floor - SW Vinyl Cove Base + Mastic 6", Mastic	Brown Non-Fibrous Homogeneous		100% Other	None Detected
CS-10 / 22008394-010 1st Floor - SW Vinyl Cove Base + Mastic 6", Cove Base	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-10 / 22008394-010 1st Floor - SW Vinyl Cove Base + Mastic 6", Mastic	Brown Non-Fibrous Homogeneous		100% Other	None Detected

Analyst: Mary E Roseblock
Analysis Date: 3/1/2022

Approved Signatory: Johnathan Wilson
Date: 3/1/2022

SanAir Technologies Laboratory

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Analyst: Roseblock, Mary | Li, Elizabeth | Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
CS-11 / 22008394-011 3rd Floor - SW Chalk Board Mastic	Gray Non-Fibrous Homogeneous		100% Other	None Detected
CS-12 / 22008394-012 2nd Floor - SW Chalk Board Mastic	Gray Non-Fibrous Homogeneous		100% Other	None Detected
CS-13 / 22008394-013 1st Floor - SW Chalk Board Mastic	Gray Non-Fibrous Homogeneous		100% Other	None Detected
CS-14 / 22008394-014 2nd Floor Center Air O Cell Pipe Insulation	Cream Fibrous Homogeneous	98% Cellulose	2% Other	None Detected
CS-15 / 22008394-015 1st Floor Center Air O Cell Pipe Insulation	White Fibrous Homogeneous		30% Other	70% Chrysotile
CS-16 / 22008394-016 1st Floor SW Air O Cell Pipe Insulation	White Fibrous Homogeneous	20% Cellulose	20% Other	60% Chrysotile
CS-17 / 22008394-017 2nd Floor Center Pipe Packing Material	White Fibrous Homogeneous		50% Other	50% Chrysotile
CS-18 / 22008394-018 2nd Floor Center Pipe Packing Material	White Fibrous Homogeneous		50% Other	50% Chrysotile
CS-19 / 22008394-019 2nd Floor Center Pipe Packing Material	White Fibrous Homogeneous		50% Other	50% Chrysotile
CS-20 / 22008394-020 3rd Floor Center Patching Material Behind Chalk Boards	Gray Non-Fibrous Homogeneous		100% Other	None Detected

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SanAir Technologies Laboratory

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Analyst: Roseblock, Mary | Li, Elizabeth | Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
CS-21 / 22008394-021 2nd Floor NE Corner Patching Material Behind Chalk Boards	Gray Non-Fibrous Homogeneous		100% Other	None Detected
CS-22 / 22008394-022 2nd Floor Center Patching Material Behind Chalk Boards	Gray Non-Fibrous Homogeneous		100% Other	None Detected
CS-23 / 22008394-023 1st Floor - SW Patching Material Behind Chalk Boards	Gray Non-Fibrous Homogeneous		100% Other	None Detected
CS-24 / 22008394-024 1st Floor Center Patching Material Behind Chalk Boards	Gray Non-Fibrous Homogeneous		100% Other	None Detected
CS-25 / 22008394-025 3rd Floor Center 9x9 Vinyl Floor Tile + Mastic, Floor Tile	Red Non-Fibrous Homogeneous		97% Other	3% Chrysotile
CS-25 / 22008394-025 3rd Floor Center 9x9 Vinyl Floor Tile + Mastic, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-26 / 22008394-026 2nd Floor Center 9x9 Vinyl Floor Tile + Mastic, Floor Tile	Red Non-Fibrous Homogeneous		97% Other	3% Chrysotile
CS-26 / 22008394-026 2nd Floor Center 9x9 Vinyl Floor Tile + Mastic, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-27 / 22008394-027 1st Floor Center 9x9 Vinyl Floor Tile + Mastic, Floor Tile	Red Non-Fibrous Homogeneous		97% Other	3% Chrysotile
CS-27 / 22008394-027 1st Floor Center 9x9 Vinyl Floor Tile + Mastic, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected

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Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
CS-28 / 22008394-028 3rd Floor Center 9x9 Vinyl Floor Tile + Mastic, Floor Tile	Black Non-Fibrous Homogeneous		97% Other	3% Chrysotile
CS-28 / 22008394-028 3rd Floor Center 9x9 Vinyl Floor Tile + Mastic, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-29 / 22008394-029 2nd Floor Center 9x9 Vinyl Floor Tile + Mastic, Floor Tile	Black Non-Fibrous Homogeneous		97% Other	3% Chrysotile
CS-29 / 22008394-029 2nd Floor Center 9x9 Vinyl Floor Tile + Mastic, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-30 / 22008394-030 1st Floor Center 9x9 Vinyl Floor Tile + Mastic, Floor Tile	Black Non-Fibrous Homogeneous		97% Other	3% Chrysotile
CS-30 / 22008394-030 1st Floor Center 9x9 Vinyl Floor Tile + Mastic, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-31 / 22008394-031 3rd Floor NE Blown In Insulation	Brown Fibrous Homogeneous	98% Cellulose	2% Other	None Detected
CS-32 / 22008394-032 3rd Floor Center Blown In Insulation	Brown Fibrous Homogeneous	98% Cellulose	2% Other	None Detected
CS-33 / 22008394-033 3rd Floor SW Blown In Insualtion	Brown Fibrous Homogeneous	98% Cellulose	2% Other	None Detected
CS-34 / 22008394-034 Center Stairwell Vinyl Stair Treads, Stair Tread	Red Non-Fibrous Homogeneous		97% Other	3% Chrysotile

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Analyst: Roseblock, Mary | Li, Elizabeth | Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
CS-34 / 22008394-034 Center Stairwell Vinyl Stair Treads, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-35 / 22008394-035 SE Stairwell Vinyl Stair Treads, Stair Tread	Red Non-Fibrous Homogeneous		97% Other	3% Chrysotile
CS-35 / 22008394-035 SE Stairwell Vinyl Stair Treads, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-36 / 22008394-036 NW Stairwell Vinyl Stair Treads, Stair Tread	Red Non-Fibrous Homogeneous		97% Other	3% Chrysotile
CS-36 / 22008394-036 NW Stairwell Vinyl Stair Treads, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-37 / 22008394-037 Exter Roof - Top Built Up Roofing - Rubber EPDM W/ Mastic, Membrane	Black Non-Fibrous Heterogeneous	10% Glass	90% Other	None Detected
CS-37 / 22008394-037 Exter Roof - Top Built Up Roofing - Rubber EPDM W/ Mastic, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-38 / 22008394-038 Exter Roof - Top Built Up Roofing - Tar + Ballasts - 2nd Lay	Black Non-Fibrous Heterogeneous	20% Cellulose	80% Other	None Detected
CS-39 / 22008394-039 Exter Roof - Top Built Up Roofing - Insulation Board - 3rd L	Brown Fibrous Homogeneous	98% Cellulose	2% Other	None Detected
CS-40 / 22008394-040 Exter Roof - Top Built Up Roofing - Rubber EPDM W/ Mastic, Membrane	Black Non-Fibrous Heterogeneous	10% Glass	90% Other	None Detected

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Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
CS-40 / 22008394-040 Exter Roof - Top Built Up Roofing - Rubber EPDM W/ Mastic, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-41 / 22008394-041 Exterior - Top Roof Parapet Wall Flashing (Multi Layer), Flashing	Silver Non-Fibrous Heterogeneous		100% Other	None Detected
CS-41 / 22008394-041 Exterior - Top Roof Parapet Wall Flashing (Multi Layer), Membrane	Black Non-Fibrous Heterogeneous		100% Other	None Detected
CS-41 / 22008394-041 Exterior - Top Roof Parapet Wall Flashing (Multi Layer), Felt	Black Fibrous Heterogeneous	85% Glass	15% Other	None Detected
CS-42 / 22008394-042 Exterior - Top Roof Parapet Wall Flashing (Multi Layer), Flashing	Silver Non-Fibrous Heterogeneous		100% Other	None Detected
CS-42 / 22008394-042 Exterior - Top Roof Parapet Wall Flashing (Multi Layer), Membrane	Black Non-Fibrous Heterogeneous		100% Other	None Detected
CS-42 / 22008394-042 Exterior - Top Roof Parapet Wall Flashing (Multi Layer), Felt	Black Fibrous Heterogeneous	85% Glass	15% Other	None Detected
CS-42 / 22008394-042 Exterior - Top Roof Parapet Wall Flashing (Multi Layer), Tar	Various Non-Fibrous Heterogeneous		100% Other	< 1% Chrysotile
CS-43 / 22008394-043 Exterior - Top Roof End Cap Mastic	Black Non-Fibrous Heterogeneous		92% Other	8% Chrysotile
CS-44 / 22008394-044 Exterior - Top Roof End Cap Mastic	Black Non-Fibrous Heterogeneous		92% Other	8% Chrysotile

Analyst: Mary E Roseblock
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Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
CS-45 / 22008394-045 Exterior Top Roof Mastic Coating On Metal Exhaust Duct Work, Mastic	Black Non-Fibrous Heterogeneous		100% Other	None Detected
CS-45 / 22008394-045 Exterior Top Roof Mastic Coating On Metal Exhaust Duct Work, Felt	Black Fibrous Heterogeneous	70% Cellulose	30% Other	None Detected
CS-46 / 22008394-046 Exterior Top Roof Mastic Coating On Metal Exhaust Duct Work, Mastic	Black Non-Fibrous Heterogeneous		100% Other	None Detected
CS-46 / 22008394-046 Exterior Top Roof Mastic Coating On Metal Exhaust Duct Work, Felt	Black Fibrous Heterogeneous	70% Cellulose	30% Other	None Detected
CS-47 / 22008394-047 Exterior Top Roof Mastic Pitch Pockets	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-48 / 22008394-048 Exterior Top Roof Mastic Pitch Pockets	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-49 / 22008394-049 Exterior Top Roof Curb Flashing, Flashing	Silver Non-Fibrous Heterogeneous		100% Other	< 1% Chrysotile
CS-49 / 22008394-049 Exterior Top Roof Curb Flashing, Tar Paper	Black Non-Fibrous Heterogeneous	65% Cellulose	35% Other	None Detected
CS-50 / 22008394-050 Exterior Top Roof Curb Flashing, Flashing	Silver Non-Fibrous Heterogeneous		100% Other	< 1% Chrysotile
CS-50 / 22008394-050 Exterior Top Roof Curb Flashing, Tar Paper	Black Non-Fibrous Heterogeneous	65% Cellulose	35% Other	None Detected

Analyst: Mary E Roseblock
Analysis Date: 3/1/2022

Approved Signatory: Johnathan Wilson
Date: 3/1/2022

SanAir Technologies Laboratory

SanAir ID Number
22008394
FINAL REPORT
3/1/2022 3:22:57 PM

Name: Boggs Environmental Consultants, Inc
Address: 200 West Main Street
Middletown, MD 21769
Phone: 301-694-5687

Project Number: WV22004
P.O. Number:
Project Name: Clay School
Collected Date: 2/16/2022
Received Date: 2/21/2022 10:05:00 AM

Analyst: Roseblock, Mary | Li, Elizabeth | Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
CS-51 / 22008394-051 Basement Carpet Mastic	Yellow Non-Fibrous Homogeneous		100% Other	None Detected
CS-52 / 22008394-052 Basement Carpet Mastic	Yellow Non-Fibrous Homogeneous		100% Other	None Detected
CS-53 / 22008394-053 Basement Carpet Mastic	Yellow Non-Fibrous Homogeneous		100% Other	None Detected
CS-54 / 22008394-054 2nd Floor Center Terra Cotta Tile Grout	Grey Non-Fibrous Homogeneous		100% Other	None Detected
CS-55 / 22008394-055 1st Floor Center Terra Cotta Tile Grout	Grey Non-Fibrous Homogeneous		100% Other	None Detected
CS-56 / 22008394-056 1st Floor West Terra Cotta Tile Grout	Grey Non-Fibrous Homogeneous		100% Other	None Detected
CS-57 / 22008394-057 1st Floor SW Bathroom Ceramic Tile Grate/Thinset, Tile	Beige Non-Fibrous Homogeneous		100% Other	None Detected
CS-57 / 22008394-057 1st Floor SW Bathroom Ceramic Tile Grate/Thinset, Grout	Grey Non-Fibrous Homogeneous		100% Other	None Detected
CS-58 / 22008394-058 1st Floor SW Bathroom Ceramic Tile Grate/Thinset, Tile	Beige Non-Fibrous Homogeneous		100% Other	None Detected
CS-58 / 22008394-058 1st Floor SW Bathroom Ceramic Tile Grate/Thinset, Grout	Grey Non-Fibrous Homogeneous		100% Other	None Detected

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Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
CS-59 / 22008394-059 1st Floor NW Gypsum Board Sheeting	White Non-Fibrous Homogeneous	5% Cellulose	95% Other	None Detected
CS-60 / 22008394-060 1st Floor NW Joint Finishing Compound, Joint Compound	White Non-Fibrous Homogeneous		100% Other	None Detected
CS-60 / 22008394-060 1st Floor NW Joint Finishing Compound, Finishing Compound	White Non-Fibrous Homogeneous		100% Other	None Detected
CS-61 / 22008394-061 Basement Gypsum Board Sheeting	White Non-Fibrous Homogeneous	5% Cellulose	95% Other	None Detected
CS-62 / 22008394-062 Basement Gypsum Board Sheeting	White Non-Fibrous Homogeneous	5% Cellulose	95% Other	None Detected
CS-63 / 22008394-063 Basement Joint Compound Finishing Compound	White Non-Fibrous Homogeneous		100% Other	None Detected
CS-64 / 22008394-064 Basement Joint Compound Finishing Compound	White Non-Fibrous Homogeneous		100% Other	None Detected
CS-65 / 22008394-065 2nd Floor Center Vinyl Cove Base + Mastic - 6", Cove Base	Brown Non-Fibrous Homogeneous		96% Other	4% Chrysotile
CS-65 / 22008394-065 2nd Floor Center Vinyl Cove Base + Mastic - 6", Mastic	Yellow Non-Fibrous Homogeneous		100% Other	None Detected
CS-66 / 22008394-066 2nd Floor Center Vinyl Cove Base + Mastic - 6", Cove Base	Brown Non-Fibrous Homogeneous		96% Other	4% Chrysotile

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Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
CS-66 / 22008394-066 2nd Floor Center Vinyl Cove Base + Mastic - 6", Mastic	Yellow Non-Fibrous Homogeneous		100% Other	None Detected
CS-67 / 22008394-067 2nd Floor Center Vinyl Cove Base + Mastic - 6", Cove Base	Brown Non-Fibrous Homogeneous		96% Other	4% Chrysotile
CS-67 / 22008394-067 2nd Floor Center Vinyl Cove Base + Mastic - 6", Mastic	Yellow Non-Fibrous Homogeneous		100% Other	None Detected
CS-68 / 22008394-068 2nd Floor Center Vinyl Cove Base + Mastic - 4", Cove Base	Brown Non-Fibrous Homogeneous		100% Other	None Detected
CS-68 / 22008394-068 2nd Floor Center Vinyl Cove Base + Mastic - 4", Mastic	Brown Non-Fibrous Homogeneous		100% Other	None Detected
CS-69 / 22008394-069 2nd Floor Center Vinyl Cove Base + Mastic - 4", Cove Base	Brown Non-Fibrous Homogeneous		100% Other	None Detected
CS-69 / 22008394-069 2nd Floor Center Vinyl Cove Base + Mastic - 4", Mastic	Brown Non-Fibrous Homogeneous		100% Other	None Detected
CS-70 / 22008394-070 2nd Floor Center Vinyl Cove Base + Mastic - 4", Cove Base	Brown Non-Fibrous Homogeneous		100% Other	None Detected
CS-70 / 22008394-070 2nd Floor Center Vinyl Cove Base + Mastic - 4", Mastic	Brown Non-Fibrous Homogeneous		100% Other	None Detected
CS-71 / 22008394-071 1st Floor - East Slate Window Sills	Black Non-Fibrous Homogeneous		100% Other	None Detected

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Analysis Date: 3/1/2022

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SanAir Technologies Laboratory

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Name: Boggs Environmental Consultants, Inc
Address: 200 West Main Street
Middletown, MD 21769
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Project Number: WV22004
P.O. Number:
Project Name: Clay School
Collected Date: 2/16/2022
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Analyst: Roseblock, Mary | Li, Elizabeth | Pisula, Nicholas

Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
CS-72 / 22008394-072 1st Floor - West Slate Window Sills	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-73 / 22008394-073 Basement Vinyl Cove Base + Mastic - 4", Cove Base	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-73 / 22008394-073 Basement Vinyl Cove Base + Mastic - 4", Mastic	Tan Non-Fibrous Homogeneous		100% Other	None Detected
CS-74 / 22008394-074 Basement Vinyl Cove Base + Mastic - 4", Cove Base	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-74 / 22008394-074 Basement Vinyl Cove Base + Mastic - 4", Mastic	Tan Non-Fibrous Homogeneous		100% Other	None Detected
CS-75 / 22008394-075 Basement Vinyl Cove Base + Mastic - 4", Cove Base	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-75 / 22008394-075 Basement Vinyl Cove Base + Mastic - 4", Mastic	Tan Non-Fibrous Homogeneous		100% Other	None Detected
CS-76 / 22008394-076 Basement 12x12 VFT W/ Specks + Mastic, Floor Tile	White Non-Fibrous Homogeneous		98% Other	2% Chrysotile
CS-76 / 22008394-076 Basement 12x12 VFT W/ Specks + Mastic, Mastic	Black Non-Fibrous Homogeneous		97% Other	3% Chrysotile
CS-77 / 22008394-077 Basement 12x12 VFT W/ Specks + Mastic, Floor Tile	White Non-Fibrous Homogeneous		98% Other	2% Chrysotile

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Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
CS-77 / 22008394-077 Basement 12x12 VFT W/ Specks + Mastic, Mastic	Black Non-Fibrous Homogeneous		97% Other	3% Chrysotile
CS-78 / 22008394-078 Basement 12x12 VFT W/ Specks + Mastic, Floor Tile	White Non-Fibrous Homogeneous		100% Other	None Detected
CS-78 / 22008394-078 Basement 12x12 VFT W/ Specks + Mastic, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-79 / 22008394-079 Exterior Door Masonry Sealant	Grey Non-Fibrous Homogeneous		100% Other	< 1% Chrysotile
CS-80 / 22008394-080 Exterior Door Masonry Sealant	Grey Non-Fibrous Homogeneous		100% Other	< 1% Chrysotile
CS-81 / 22008394-081 Exterior Door Masonry Sealant	Grey Non-Fibrous Homogeneous		100% Other	< 1% Chrysotile
CS-82 / 22008394-082 Exterior Window Masonry Sealant	Grey Non-Fibrous Homogeneous		100% Other	None Detected
CS-83 / 22008394-083 Exterior Window Masonry Sealant	Grey Non-Fibrous Homogeneous		100% Other	None Detected
CS-84 / 22008394-084 Exterior Window Masonry Sealant	Grey Non-Fibrous Homogeneous		100% Other	None Detected
CS-85 / 22008394-085 Exterior Masonry Grout	Grey Non-Fibrous Homogeneous		100% Other	None Detected

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Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
CS-86 / 22008394-086 Exterior Masonry Grout	Grey Non-Fibrous Homogeneous		100% Other	None Detected
CS-87 / 22008394-087 Exterior Masonry Grout	Grey Non-Fibrous Homogeneous		100% Other	None Detected
CS-88 / 22008394-088 1st Fl SW Seam Tape On Fiberglass Pipe Insulation	White Fibrous Heterogeneous	55% Cellulose 20% Glass	25% Other	None Detected
CS-89 / 22008394-089 1st Fl Center Seam Tape On Fiberglass Pipe Insulation	White Fibrous Heterogeneous	55% Cellulose 20% Glass	25% Other	None Detected
CS-90 / 22008394-090 2nd Fl Center Seam Tape On Fiberglass Pipe Insulation	White Fibrous Heterogeneous	55% Cellulose 20% Glass	25% Other	None Detected
CS-91 / 22008394-091 Cafeteria Mastic Glue Daubs Under Pegboard ACT, Mastic	Brown Non-Fibrous Homogeneous		100% Other	None Detected
CS-91 / 22008394-091 Cafeteria Mastic Glue Daubs Under Pegboard ACT, Ceiling Tile	Brown Fibrous Homogeneous	99% Cellulose	1% Other	None Detected
CS-92 / 22008394-092 Cafeteria Mastic Glue Daubs Under Pegboard ACT, Mastic	Brown Non-Fibrous Homogeneous		100% Other	None Detected
CS-92 / 22008394-092 Cafeteria Mastic Glue Daubs Under Pegboard ACT, Ceiling Tile	Brown Fibrous Homogeneous	99% Cellulose	1% Other	None Detected
CS-93 / 22008394-093 Cafeteria Mastic Glue Daubs Under Pegboard ACT, Mastic	Brown Non-Fibrous Homogeneous		100% Other	None Detected

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Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
CS-93 / 22008394-093 Cafeteria Mastic Glue Daubs Under Pegboard ACT, Ceiling Tile	Brown Fibrous Homogeneous	99% Cellulose	1% Other	None Detected
CS-94 / 22008394-094 Cafeteria Arch Decorative Plaster	White Non-Fibrous Homogeneous		100% Other	None Detected
CS-95 / 22008394-095 Cafeteria Arch Decorative Plaster	White Non-Fibrous Homogeneous		100% Other	None Detected
CS-96 / 22008394-096 Cafeteria Arch Decorative Plaster	White Non-Fibrous Homogeneous		100% Other	None Detected
CS-97 / 22008394-097 Cafeteria 12x12 VFT W/ Specks, Floor Tile	Tan Non-Fibrous Homogeneous		97% Other	3% Chrysotile
CS-97 / 22008394-097 Cafeteria 12x12 VFT W/ Specks, Mastic	Black Non-Fibrous Homogeneous		98% Other	2% Chrysotile
CS-98 / 22008394-098 Electrical Panel Fabric Insulated Wiring	Various Fibrous Heterogeneous	80% Cellulose	20% Other	None Detected
CS-99 / 22008394-099 Electrical Panel Fabric Insulated Wiring	Various Fibrous Heterogeneous	80% Cellulose	20% Other	None Detected
CS-100 / 22008394-100 Electrical Panel Fabric Insulated Wiring	Various Fibrous Heterogeneous	80% Cellulose	20% Other	None Detected
CS-101 / 22008394-101 Electrical Panel Fabric Insulated Wiring	Various Fibrous Heterogeneous	80% Cellulose	20% Other	None Detected

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Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
CS-102 / 22008394-102 Lower Roof Built Up Roofing EPDM W/ Mastic, Coating	Silver Non-Fibrous Heterogeneous		100% Other	None Detected
CS-102 / 22008394-102 Lower Roof Built Up Roofing EPDM W/ Mastic, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-102 / 22008394-102 Lower Roof Built Up Roofing EPDM W/ Mastic, Felt	Black Fibrous Heterogeneous	75% Glass	25% Other	None Detected
CS-103 / 22008394-103 Lower Roof Parapet Wall Flashing Multi Layer, Coating	Silver Non-Fibrous Heterogeneous		100% Other	None Detected
CS-103 / 22008394-103 Lower Roof Parapet Wall Flashing Multi Layer, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected
CS-103 / 22008394-103 Lower Roof Parapet Wall Flashing Multi Layer, Felt	Black Fibrous Heterogeneous	75% Glass	25% Other	None Detected

Analyst: Mary E Roseblock
Analysis Date: 3/1/2022

Approved Signatory: Johnathan Wilson
Date: 3/1/2022

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Samples are held for a period of 60 days. Fibers smaller than 5 microns cannot be seen with this method due to scope limitations.

For NY state samples, method EPA 600/M4-82-020 is performed.

NYELAP Disclaimer:
Polarized- light microscopy is not consistently reliable in detecting asbestos in floor covering and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

Asbestos Certifications
NVLAP lab code 200870-0
City of Philadelphia: ALL-460
PA Department of Environmental Protection Number: 68-05397
California License Number: 2915
Colorado License Number: AL-23143
Connecticut License Number: PH-0105
Massachusetts License Number: AA000222
Maine License Number: LB-0075, LA-0084
New York ELAP lab ID: 11983
Rhode Island License Number: PCM00126, PLM00126, TEM00126
Texas Department of State Health Services License Number: 300440
Commonwealth of Virginia 3333000323
Washington State License Number: C989
West Virginia License Number: LT000616
Vermont License: AL166318
Louisiana Department of Environmental Quality: 212253, Cert 05088

Revision Date: 8/14/2020

SanAir Technologies Laboratory
1551 Oakbridge Drive Suite B
Powhatan, VA 23139
804-897-1177 / 888-895-1177
Fax 804-897-0070
www.sanair.com

Asbestos Chain of Custody

SanAir ID Number W008394

Company: Boggs Environmental Consultants	Project #: WV22004	Collected by: Andy Hanson
Address: 200 West Main Street	Project Name: Clay School	Phone #: 301-694-5687
City, St., Zip: Middletown, MD 21769	Date Collected: 2/16/2022	Fax #: 301-694-9799
State of Collection: WV Account#:	P.O. Number:	Email: ahanson@boggsenvironmental.com

Bulk

ABB	PLM EPA 600/R-93/116	☑
	Positive Stop ☐	
ABEPA	PLM EPA 400 Point Count	☐
ABB1K	PLM EPA 1000 Point Count	☐
ABBEN	PLM EPA NOB	☐
ABBCH	TEM Chatfield	☐
ABBTM	TEM EPA NOB	☐

Air

ABA	PCM NIOSH 7400	☐
ABA-2	OSHA w/ TWA*	☐
ABTEM	TEM AHERA	☐
ABATN	TEM NIOSH 7402	☐
ABT2	TEM Level II	☐

Soil/Vermiculite

ABSE	PLM EPA 600/R-93/116 (Qual.)	☐
ABSP	PLM CARB 435 (LOD <1%)	☐
ABSP1	PLM CARB 435 (LOD 0.25%)	☐
ABSP2	PLM CARB 435 (LOD 0.1%)	☐

Water

ABHE	EPA 100.2	☐

New York ELAP

PLM NY	PLM DO@600/M4,82,020	☐
ABEPA2	NY ELAP 198.1	☐
ABENY	NY ELAP 198.6 PLM NOB	☐
ABBNY	NY ELAP 198.4 TEM NOB	☐

Dust

ABWA	TEM Wipe ASTM D-6480	☐
ABDMV	TEM Microvac ASTM D-5755	☐

Other

Matrix		
		☐

Turn Around Times				
	3 HR (4 HR TEM) ☐	6 HR (8HR TEM) ☐	12 HR ☐	24 HR ☐
	2 Days ☐	3 Days ☐	4 Days ☐	5 Days ■

Special Instructions

Sample #	Sample Identification/Location	Volume or Area	Sample Type	Flow Rate*	Time* Start – Stop	
	Please See BEC Sample Log					

Relinquished by	Date	Time	Received by	Date	Time
			[illegible]	2/21/22	10:05

Unless scheduled, the turn around time for all samples received after 3 pm EST Friday will begin at 8 am Monday morning. Weekend or Holiday work must be scheduled ahead of time and is charged for rush turn around time. Work with standard turn around time sent Priority Overnight and Billed to Recipient will be charged a $10 shipping fee.

BOGGS
ENVIRONMENTAL CONSULTANTS

22008394

ASBESTOS INSPECTION BULK SAMPLING LOGSHEET

Date: 2/16/2022

Staff: Andy Hanson, Ricky Robinson, Garrett Kehler

Project #: WV22004

Project Location: Clay School
131 15th Street, Wheeling, WV

Page: 1 of 6

Sample #	Ha #	Location	Material Identification Color/Description	Quantity (sf, lf, yd³)	Friable/ Nonfriable CHECK F	CHECK NF
CS-1	1	3RD Floor - NE	Finished Wall/Ceiling Plaster		x	
2	1	3RD Floor - Center			x	
3	1	2ND Floor Center			x	
4	1	2ND Floor - NW			x	
5	1	1ST Floor - NW			x	
6	1	1st Floor - SE			x	
7	1	Basement			x	
8	2	3RD Floor - SW	Black Vinyl Cove Base + Mastic - 6"			x
9	2	2ND Floor - SW				x
10	2	1ST Floor - SW				x
11	3	3RD Floor - SW	Chalk Board Mastic			x
12	3	2ND Floor - SW				x
13	3	1st Floor - SW				x
14	4	2ND Floor Center	Air Cell Pipe Insulation		x	
15	4	1st Floor Center			x	
16	4	1st Floor SW			x	
17	5	2ND Floor Center	Pipe Packing Material		x	
18	5				x	
19	5				x	
20	6	3RD Floor Center	Gray Patching Material Behind Chalkboards			x

W0083394

BOGGS
ENVIRONMENTAL CONSULTANTS

ASBESTOS INSPECTION BULK SAMPLING LOGSHEET

Date: 2/16/2022

Staff: Andy Hanson, Ricky Robinson, Garrett Kehler

Project #: WV22004

Project Location: Clay School
131 15th Street, Wheeling, WV

Page: 2 of 6

Sample #	Ha #	Location	Material Identification Color/Description	Quantity (sf, lf, yd³)	Friable/ Nonfriable CHECK F	Friable/ Nonfriable CHECK NF
5-21	6	2nd Floor NE Corner	Gray Patching Material Behind Chalkboards			✓
22	6	2nd Floor Center	"			✓
23	6	1st Floor - SW	"			✓
24	6	1st Floor Center	"			✓
25	7	3rd Floor Center	9"x9" Red Vinyl Floor Tile + Mastic			✓
26	7	2nd Floor Center	"			✓
27	7	1st Floor Center	"			✓
28	8	3rd Floor Center	9"x9" Black Vinyl Floor Tile + Mastic			✓
29	8	2nd Floor Center	"			✓
30	8	1st Floor Center	"			✓
31	9	3rd Floor - NE	Brown Blown In Insulation		✓	
32	9	3rd Floor - Center	"		✓	
33	9	3rd Floor SW	"		✓	
34	10	Center Stairwell	Red Vinyl Stair Treads			✓
35	10	SE Stairwell	"			✓
36	10	NW Stairwell	"			✓
37	11	Exterior Roof - Top	Built Up Roofing - Rubber EPDM w/ Mastic			✓
38	12	"	Built Up Roofing - Black Tar + Ballasts - 2nd Layer			✓
39	13	"	Built Up Roofing - Brown Insulation Board - 3rd Layer/4th Layer			✓
40	11	"	Built Up Roofing - Rubber EPDM w/ Mastic			✓

22008394

BOGGS
ENVIRONMENTAL CONSULTANTS

ASBESTOS INSPECTION BULK SAMPLING LOGSHEET

Date: 2/16/2022

Staff: Andy Hanson, Ricky Robinson, Garrett Kehler

Project #: WV22004

Project Location: Clay School
131 15th Street, Wheeling, WV

Page: 3 of 6

Sample #	Ha #	Location	Material Identification Color/Description	Quantity (sf, lf, yd³)	Friable/ Nonfriable CHECK F	Friable/ Nonfriable CHECK NF
CS-41	14	Exterior-Top Roof	Parapet Wall Flashing (Multilayer)			✓
42	14	↓	↓			✓
43	15		End Cap Mastic			✓
44	15		↓			✓
45	16		Mastic Coating on Metal Exhaust Ductwork			✓
46	16		↓			✓
47	17		Mastic Pitch Pockets			✓
48	17		↓			✓
49	18		Curb Flashing			✓
50	18	↓	↓			✓
51	19	Basement	Yellow Carpet Mastic			✓
52	19	↓	↓			✓
53	19	↓	↓			✓
54	20	2nd Floor Center	Terra Cotta Tile Grout			✓
55	20	1st Floor Center	↓			✓
56	20	1st Floor West	↓			✓
57	21	1st Floor SW	Bathroom Ceramic Tile Grout/Thinset			✓
58	21	1st Floor SW	↓			✓
59	22	1st Floor NW	Gypsum Board Sheeting			✓
60	23	1st Floor NW	Joint Finishing Compound			✓

ZW008894

BOGGS
ENVIRONMENTAL CONSULTANTS

ASBESTOS INSPECTION BULK SAMPLING LOGSHEET

Date: 2/16/2022

Staff: Andy Hanson, Ricky Robinson, Garrett Kehler

Project #: WV22004

Project Location: Clay School
131 15th Street, Wheeling, WV

Page: 4 of 6

Sample #	Ha #	Location	Material Identification Color/Description	Quantity (sf, lf, yd³)	Friable/ Nonfriable CHECK F	Friable/ Nonfriable CHECK NF
CS-61	22	Basement	Gypsum Board Sheeting			X
62	22	"	"			X
63	23	"	Joint Finishing Compound			X
64	23	"	"			X
65	24	2nd Floor Center	Brown Vinyl Cove Base + Mastic - 6"			X
66	24	"	"			X
67	24	"	"			X
68	25	2nd Floor Center	Brown Vinyl Cove Base + Mastic - 4"			X
69	25	"	"			X
70	25	"	"			X
71	26	1st Floor - East	Black Slate Window Sills			X
72	26	1st Floor West	"			X
73	27	Basement	Black Vinyl Cove Base + Mastic - 4"			X
74	27	"	"			X
75	27	"	"			X
76	28	Basement	12" x 12" White VFT w/ Gray Specks + Mastic			X
77	28	"	"			X
78	28	"	"			X
79	29	Exterior	White Door Masonry Sealant			X
80	29	"	"			X

JAH 2/11/22 10:05

BOGGS
ENVIRONMENTAL CONSULTANTS

2208394

ASBESTOS INSPECTION BULK SAMPLING LOGSHEET

Date: 2/16/2022

Staff: Andy Hanson, Ricky Robinson, Garrett Kehler

Project #: WV22004

Project Location: Clay School
131 15th Street, Wheeling, WV

Page: 5 of 6

Sample #	Ha #	Location	Material Identification: Color/Description	Quantity (sf, lf, yd³)	Friable/ Nonfriable: CHECK F	Friable/ Nonfriable: CHECK NF
CS-81	29	Exterior	White Door Masonry Sealant			X
82	30	Exterior	Brown Window Masonry Sealant			X
83	30	↓	↓			X
84	30	↓	↓			X
85	31	Exterior	White Masonry Grout			X
86	31	↓	↓			X
87	31	↓	↓			X
88	32	1st fl SW	Seam tape on fiberglass pipe insulation			X
89	32	1st fl Center	↓			X
90	32	2nd fl Center	↓			X
91	33	Cafeteria	Mastic Glue Daubs under Pegboard ACT			X
92	33	↓	↓			X
93	33	↓	↓			X
94	34	↓	Arch decorative Plaster			X
95	34	↓	↓			X
96	34	↓	↓			X
97	28	↓	12"x12" White VFT w/ Gray Specks			X
98	35	Electrical Panel	Fabric Insulated Wiring Black			X
99	36	↓	White			X
100	37	↓	Red			X

BOGGS
ENVIRONMENTAL CONSULTANTS

WV8394

ASBESTOS INSPECTION BULK SAMPLING LOGSHEET

Date: 2-16-22

Staff: Andy Hanson, Rick Robinson, Garrett Kohler

Project #: WV22054

Project Location: Clay School
131 15th St Cohesley, WV

Page: 6 of 6

Sample #	Ha #	Location	Material Identification: Color/Description	Quantity (sf, lf, yd³)	Friable/ Nonfriable: CHECK F	Friable/ Nonfriable: CHECK NF
CS- 101	38	Electrical Panel	Fabric Insulated Wiring Blue			✓
102	11	Lower Roof	Built up roofing EPDM w/ Mastic			✓
103	14	2	Parapet wall flashing multi layer			✓

2/22/22 10:05

APPENDIX D

BEC STAFF QUALIFICATIONS

ENVIRONMENTAL · GEOTECHNICAL
BUILDING SCIENCES · MATERIALS TESTING

Approval Number: 21 14 01

Certificate of Achievement

Awarded to

Andrew Hanson

In recognition of successful completion of the course entitled

ASBESTOS BUILDING INSPECTOR/ MANAGEMENT PLANNER REVIEW

An 8-Hour annual review program of study presented in accordance with the provisions of the U.S Environmental Protection Agency Model Accreditation Plan 40 CFR Part 763, Appendix C to SUBPART E, for Accreditation under TSCA Title II

ENVIRONMENTAL · GEOTECHNICAL
BUILDING SCIENCES · MATERIALS TESTING

Location: Columbia, MD

21-1076
Certificate Number

November 23, 2021
Examination Date

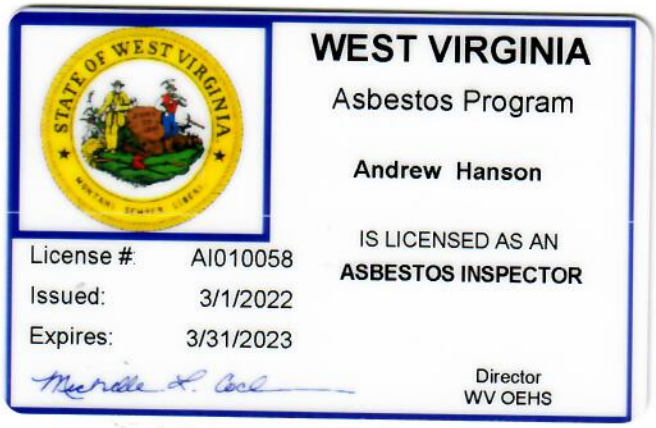
Clayton E. Miller Course Instructor

November 23, 2021
Course Date

November 23, 2022
Expiration Date

Carla M. Gomez Course Director

9231 Rumsey Road Columbia, Maryland 21045 410-381-0232 Office 410-423-9235 Direct



WEST VIRGINIA

Asbestos Program

Andrew Hanson

IS LICENSED AS AN

ASBESTOS INSPECTOR

License #: AI010058

Issued: 3/1/2022

Expires: 3/31/2023

Director
WV OEHS

ATLAS

Approval Number: 21 14 01

Certificate of Achievement

Awarded to

Richard Robinson

In recognition of successful completion of the course entitled

ASBESTOS BUILDING INSPECTOR REVIEW

A 4-Hour annual review program of study presented in accordance with the provisions of the U.S Environmental Protection Agency Model Accreditation Plan 40 CFR Part 763, Appendix C to SUBPART E, for Accreditation under TSCA Title II

ATLAS

21-194
Certificate Number

Location: Columbia, MD

January 25, 2022
Examination Date

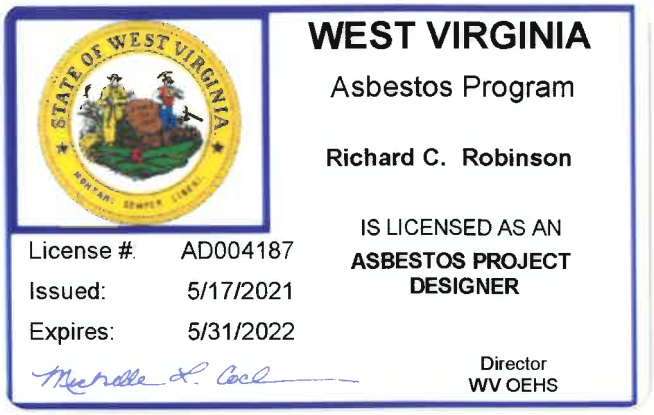
Clayton E. Miller Course Instructor

January 25, 2022
Course Date

January 25, 2023
Expiration Date

Carla M. Gomez Course Director

9231 Rumsey Road Columbia, Maryland 21045 410-381-0232 Office 410-423-9235 Direct



WEST VIRGINIA

Asbestos Program

Richard C. Robinson

IS LICENSED AS AN

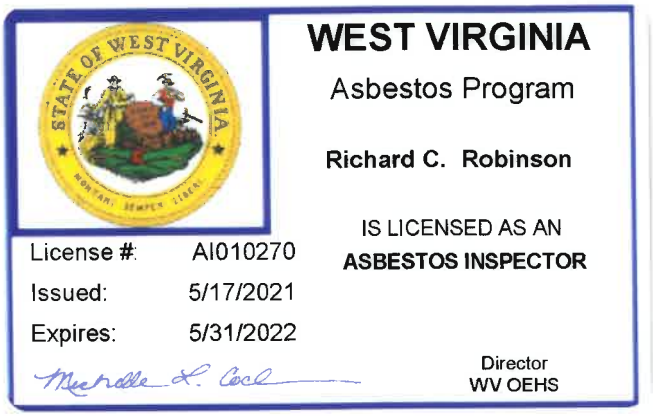
ASBESTOS PROJECT DESIGNER

License #: AD004187

Issued: 5/17/2021

Expires: 5/31/2022

Director
WV OEHS



WEST VIRGINIA

Asbestos Program

Richard C. Robinson

IS LICENSED AS AN

ASBESTOS INSPECTOR

License #: AI010270

Issued: 5/17/2021

Expires: 5/31/2022

Director
WV OEHS

SanAir Technologies Laboratory

The Identification Specialists

Analysis Report
prepared for
Boggs Environmental Consultants, Inc

Report Date: 2/6/2025

Project Name: The Clay School

Project #: WV24048

SanAir ID#: 25007558

NVLAP TESTING

NVLAP LAB CODE 200870-0

10501 Trade Court, North Chesterfield, Virginia 23236
888.895.1177 | 804.897.1177 | fax: 804.897.0070 | LabReports@SanAir.com | SanAir.com

SanAir ID Number
25007558
FINAL REPORT
2/6/2025 4:41:28 PM

Name: Boggs Environmental Consultants, Inc
Address: 200 West Main Street
Middletown, MD 21769
Phone: 301-694-5687

Project Number: WV24048
P.O. Number: WV24048
Project Name: The Clay School
Collected Date: 1/28/2025
Received Date: 2/3/2025 12:54:00 PM

Dear Richard Robinson,

We at SanAir would like to thank you for the work you recently submitted. The 2 sample(s) were received on Monday, February 03, 2025 via UPS. The final report(s) is enclosed for the following sample(s): 12825-1, 12825-2.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

Sandra Sobrino
Asbestos & Materials Laboratory Manager
SanAir Technologies Laboratory

Final Report Includes:
- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

Sample conditions:
- 2 samples in Good condition.

SanAir Technologies Laboratory

SanAir ID Number
25007558
FINAL REPORT
2/6/2025 4:41:28 PM

Name: Boggs Environmental Consultants, Inc
Address: 200 West Main Street
Middletown, MD 21769
Phone: 301-694-5687

Project Number: WV24048
P.O. Number: WV24048
Project Name: The Clay School
Collected Date: 1/28/2025
Received Date: 2/3/2025 12:54:00 PM

Analyst: Mayes, Jean

Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
12825-1 / 25007558-001 Commingled Debris On Floor Surfaces, Plaster	Grey Non-Fibrous Heterogeneous	1% Cellulose	99% Other	None Detected
12825-1 / 25007558-001 Commingled Debris On Floor Surfaces, Skim Coat	White Non-Fibrous Homogeneous		100% Other	None Detected
12825-1 / 25007558-001 Commingled Debris On Floor Surfaces, Insulation	Grey Fibrous Heterogeneous		30% Other	70% Chrysotile
12825-1 / 25007558-001 Commingled Debris On Floor Surfaces, Wrap	Tan Fibrous Heterogeneous	95% Cellulose	5% Other	None Detected
12825-1 / 25007558-001 Commingled Debris On Floor Surfaces, Floor Tile	Brown Non-Fibrous Homogeneous		96% Other	4% Chrysotile
12825-1 / 25007558-001 Commingled Debris On Floor Surfaces, Mastic	Black Non-Fibrous Homogeneous		100% Other	None Detected
12825-2 / 25007558-002 Fire Door Insulation	White Non-Fibrous Heterogeneous		92% Other	8% Amosite

Analyst: Jean Mayes
Analysis Date: 2/6/2025

Approved Signatory: Johnathan Wilson
Date: 2/6/2025

Disclaimer and Additional Information:
Asbestos Bulk PLM EPA 600/R-93/116

This report is the sole property of the client named on the chain-of-custody (COC) submitted to SanAir Technologies Laboratory, Inc. (SanAir). Results in the report are confidential information intended only for the use by the customer listed on the COC. Neither results nor reports will be discussed with or released to any third party without our client's written permission. The final report shall not be reproduced, except in full, without written approval of the laboratory to assure that parts of the report are not taken out of context. This report and any information contained within shall not be edited, altered, or modified in any way by any persons or agencies receiving, viewing, distributing, or otherwise possessing a copy of this final report. The laboratory reserves the right to perform amendments to any finalized report, of which shall supersede and make obsolete any previous editions. Such changes, modifications, additions, or deletions shall be effective immediately upon notice thereof, which may be given by means including but not limited to posting on the SanAir client portal website, electronic or conventional mail, or by any other means.

The information provided in this report applies only to the samples submitted and is relevant only for the date, time, and location of sampling. The accuracy of the results is dependent upon the client's sampling procedure and information provided to the laboratory by the client on the COC. SanAir assumes no responsibility for the sampling procedure and will provide evaluation reports based solely on the sample(s) in the condition received at the laboratory and information provided by the client on the COC, such as: project number, project name, collection dates, P.O. number, special instructions, samples collected by, sample numbers, sample identifications, sample type, selected analysis type, flow rate, total volume or area, and start-stop times that may affect the validity of the results in this report. Samples were received in good condition unless otherwise noted on the report. When the client requires samples to be tested that deviates from a specific method or condition, all reported results may be affected by the deviation. SanAir assumes no responsibility or liability for the manner in which the results are used or interpreted.

This report does not constitute nor shall not be used by the client to claim product, process, system, or person certification, approval, or endorsement by NVLAP, NIST, NELAC, AIHA LAP, LLC or any other U.S. governmental agencies; all or somet tests contained in this report may not be accredited by every local, state, and federal regulatory agencies. Refer to the SanAir website at www.sanair.com for copies of current certificates and scopes of various accreditations, certifications, and licenses or contact the laboratory for inquiries regarding the status or scope of an accreditation or certification.

Samples are held for a period of 60 days. Fibers smaller than 5 microns cannot be seen with this method due to scope limitations. For NY state samples, method EPA 600/M4-82-020 is performed.

NYELAP Disclaimer:
Polarized-light microscopy is not consistently reliable in detecting asbestos in floor covering and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

Asbestos Accreditations, Certifications, and Licenses
National Voluntary Laboratory Accreditation Program (NVLAP) Lab Code 200870-0
City of Philadelphia Department of Public Health Air Management Services, Certification#ALL-460
Commonwealth of Pennsylvania Department of Environmental Protection Number 68-05397
California State Environmental Laboratory Accreditation Program Certificate Number 2915
Colorado Department of Public Health and Environment Registration Number AL-23143
Connecticut Department of Public Health Environmental Laboratory Registration Number PH-0105
Massachusetts Department of Labor Standards Asbestos Analytical Services License Number: AA000222
State of Maine Department of Environmental Protection License Number: LB-0075
New York State Department of Health Laboratory ID: 11983
State of Rhode Island Department of Health Certification No.: PLM00126
Texas Department of State Health Services License Number: 300440
Commonwealth of Virginia Department of Professional and Occupational Regulation Number: 3333000323
State of Washington Department of Ecology Laboratory ID: C989
State of West Virginia Bureau for Public Health Analytical Laboratory Number: LT000616
Vermont Department of Health License Number: Asb-Co-An-000006
Louisiana Department of Environmental Quality AI Number 212253, LELAP Lab ID #05088

SanAir Technologies Laboratory
1551 Oakbridge Drive Suite B
Powhatan, VA 23139
804-897-1177 / 888-895-1177
Fax 804-897-0070
www.sanair.com

Asbestos Chain of Custody

SanAir ID Number: 25007558

Company: Boggs Environmental Consultants	Project #: WV24048	Collected by: Richard Robinson
Address: 200 West Main Street	Project Name: The Clay School	Phone #: 509-205-8863
City, St., Zip: Middletown, MD 21769	Date Collected: 1/29/2025	Fax #: 301-694-9799
State of Collection: WV Account#: 2845	P.O. Number: WV24048	Email: RRobinson@boggsenvironmental.com

Bulk

ABB	PLM EPA 600/R-93/116	☑
	Positive Stop ☐	
ABEPA	PLM EPA 400 Point Count	☐
ABB1K	PLM EPA 1000 Point Count	☐
ABBEN	PLM EPA NOB	☐
ABBCH	TEM Chatfield	☐
ABBTM	TEM EPA NOB	☐

Air

ABA	PCM NIOSH 7400	☐
ABA-2	OSHA w/ TWA*	☐
ABTEM	TEM AHERA	☐
ABATN	TEM NIOSH 7402	☐
ABT2	TEM Level II	☐

Soil/Vermiculite

ABSE	PLM EPA 600/R-93/116 (Qual.)	☐
ABSP	PLM CARB 435 (LOD <1%)	☐
ABSP1	PLM CARB 435 (LOD 0.25%)	☐
ABSP2	PLM CARB 435 (LOD 0.1%)	☐

Water

ABHE	EPA 100.2	☐

New York ELAP

PLM NY	PLM EPA 600/M4-82-020	☐
ABEPA2	NY ELAP 198.1	☐
ABENY	NY ELAP 198.6 PLM NOB	☐
ABBNY	NY ELAP 198.4 TEM NOB	☐

Dust

ABWA	TEM Wipe ASTM D-6480	☐
ABDMV	TEM Microvac ASTM D-5755	☐

Matrix	Other	
		☐

Turn Around Times				
	3 HR (4 HR TEM) ☐	6 HR (8HR TEM) ☐	12 HR ☐	24 HR ☐
	2 Days ☐	3 Days ☒	4 Days ☐	5 Days ☐

Special Instructions: Perform Qualitative PLM 600 on 12825-1 of debris + regular PLM 600 on 12825-2

Sample #	Sample Identification/Location	Volume or Area	Sample Type	Flow Rate*	Time* Start – Stop	
12825-1	Comminuted Debris on floor Sirtuus					
12825-2	Fill Door Insulation					

Relinquished by	Date	Time	Received by	Date	Time
Richard Robinson	1/30/2025	1202	AL	2/3/25	10:55AM

Unless scheduled, the turn around time for all samples received after 3 pm EST Friday will begin at 8 am Monday morning. Weekend or Holiday work must be scheduled ahead of time and is charged for rush turn around time. Work with standard turn around time sent Priority Overnight and Billed to Recipient will be charged a $10 shipping fee.

25001554

Outlook

Re: [Reply Needed] WV24048 - ANA Confirmation

From Ricky Robinson <rrobinson@boggsenvironmental.com>
Date Mon 2/3/2025 12:54 PM
To Support <support@sanair.com>
Cc AsbestosVA <AsbestosVA@sanair.com>; AsbestosOH <AsbestosOH@sanair.com>

That's fine thank you

Sent from my iPhone

> On Feb 3, 2025, at 12:47 PM, Support <support@sanair.com> wrote:
>
> [EXTERNAL]
>
> Good Afternoon,
>
> For the asbestos project mentioned above, sample 1 was noted as a 'Qualitative PLM' analysis, however the lab was able to identify homogenous bulk building material and therefore we are not able to perform ABQ analysis. Instead, we can offer to proceed with ABB (PLM EPA 600/R-93/116) analysis on the sample. Please confirm that this is acceptable to proceed.
>
> Please let me know if you have any questions.
>
> Respectfully,
>
> Cecelia Toler
> Customer Service Representative
> SanAir Technologies Laboratory, Inc.
> 10501 Trade Court
> N. Chesterfield, VA 23236
> Phone 804-897-1177 Ext 208
> Fax 804-897-0070
> **www.SanAir.com**
>
> **<Outlook-emfx3exw.png>**
>
>

MC 2/3/25