

January 28, 2025

Mr. Robby Waltz
Dorchester School District Two
164 McQueen Boulevard
Summerville, South Carolina 29483

Reference: Asbestos Project Design
Newington Elementary – Interior Cementitious Wall Panels
10 King Charles Circle
Summerville, South Carolina 29485
High Tide Environmental Project No. 25-2231-N

Dear Mr. Waltz,

High Tide Environmental, LLC is pleased to provide you with this asbestos project design to support abatement of asbestos containing materials within the above-referenced structure.

This document is for the sole use of the client and use by any other parties is at such party's sole discretion. The information, results, and conclusions provided in this report are only representative of conditions at the time of assessment and the specific areas addressed. This report is not intended to be a bidding document, should not be used as such, and all field conditions should be verified.

We are grateful to be of service to you and take pride in serving our local community.

Sincerely,

High Tide Environmental, LLC



James Lawrence McMillan, MBA, CIEC
Owner - High Tide Environmental, LLC
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**HIGH TIDE
ENVIRONMENTAL**

Asbestos Project Design

Newington Elementary School – Cementitious Panels

10 King Charles Circle
Summerville, South Carolina
High Tide Project No. 25-2231-N



Prepared for:

Dorchester School District Two
164 McQueen Boulevard
Summerville, South Carolina 29483

Prepared by:

James McMillan, MBA, CIEC
High Tide Environmental, LLC
SCDES Asbestos Project Designer #PD-000248



**HIGH TIDE
ENVIRONMENTAL**

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1.0 - PROJECT BACKGROUND

High Tide Environmental, LLC was requested to develop an asbestos abatement plan (project design) to support the removal of identified asbestos containing materials (ACMs) from the interior of Newington Elementary School located at 10 King Charles Circle in Summerville, South Carolina. The main Newington Elementary School building is one-story, approximately 90,000 square feet in size, and situated on a concrete slab, on-grade.

The subject ACM to be addressed as part of this project design consists of cementitious (Transite™) panels located on interior walls throughout the facility. This material was reported as an ACM by Dorchester School District Two, and documentation related to previous assessments of this material is held by District Staff. High Tide Environmental conducted a brief site visit on January 15, 2025, to assist in the preparation of this asbestos project design and to assess the quantity and condition of the identified materials.

Based on information provided by Dorchester School District Two and observations during our site visit, it is our understanding that the following ACMs associated with the subject structure are planned for removal and disposal:

- Interior Cementitious Wall Panels; Approximately 40,100 Square Feet.

An asbestos project design is required by the South Carolina Department of Environmental Services (SCDES) for projects involving the removal of greater than 3,000 square feet of **friable** asbestos containing material. It is our understanding that the subject asbestos containing cementitious paneling is to be removed using exclusively non-friable methods. However, a written project design was requested by Dorchester School District Two for due diligence, precautionary, and documentation purposes.

2.0 - SUMMARY OF WORK

- 2.1 Remove and dispose of the previously identified asbestos containing interior cementitious wall panels.
- 2.2 The following materials shall be removed using non-friable methods:
 - a. Interior Cementitious Wall Panels; Approximately 40,100 Square Feet
- 2.3 Worker protection is the Contractor's responsibility, and practices shall be in performed in compliance with the Occupational Safety and Health Administration (OSHA) 29 CFR 1926.1101.
- 2.4 The Contractor shall be licensed by the SCDES asbestos section to perform asbestos abatement activities in the state of South Carolina.
- 2.5 At the discretion of the owner or the owner's representative, air monitoring will be performed prior to, during, and after abatement activities in accordance with SCDES requirements. Air Monitoring is addressed in Section 7.0 of this plan.
- 2.6 The Contractor shall assume complete and full responsibility for compliance with all applicable local, state, and federal regulations relating to the asbestos removal and disposal activities. The Contractor shall hold the owner and owners representative harmless for the failures in compliance with applicable laws and regulations.

3.0 – SUBMITTALS

- 3.1 The contractor shall provide the following submittals prior to the start of work:
 - A. SCDES Project License, indicating approved landfill.
 - B. Asbestos Abatement Hazard Plan

Submit a detailed plan of the safety precautions, work procedures and sequence to be used in the removal and disposal of materials containing asbestos. The plan shall include but not be limited to the precise personal protective equipment to be used, the location of asbestos control areas, removal method, interface of trades involved in the construction, sequencing of asbestos related work, disposal plan, type of wetting agent, planned air monitoring strategies, and a detailed

description of the method to be employed to control pollution. This plan must be approved prior to the start of any asbestos work. The Contractor shall meet with the Owner's Representative prior to beginning work, to discuss in detail the asbestos plan, including work procedures and safety precautions. Once reviewed and accepted by the Owner's Representative, the plan will be enforced as if an addition to the specification.

3.2 The contractor shall provide the following after completion of work:

- A. Disposal manifest(s)

4.0 - WORK PROCEDURES

4.1 Work Area Preparation – Non-Friable Activities

- A. Perform asbestos removal and disposal in accordance with 29 CFR 1926.1101, 40 CFR 61 Subpart M, 40 CFR 763 and SCDES regulation 61-86.1 and as specified herein. Eating, smoking, drinking, or applying cosmetics shall not be permitted in the asbestos work or control areas. Personnel of other trades not engaged in the removal of asbestos containing materials shall not be permitted in the work area.
- B. Before work begins in an area, a decontamination area constructed with polyethylene sheeting shall be established outside the work area where workers can remove and store clothing and equipment. Decontamination procedures, at a minimum, must consist of HEPA vacuuming and removing asbestos contaminated disposable protective clothing while still wearing respirators at the boundary of the asbestos work area and sealing in impermeable bags or containers for disposal. Dispose of protective clothing as asbestos waste.
- C. Isolate the work area from adjacent areas to prevent contamination beyond the isolated area. Shut down the heating, ventilating, and air conditioning system in the area of work.
- D. The Contractor shall provide temporary facilities for workers.
- E. One layer of 6-mil polyethylene sheeting, large enough for the panels to be laid atop of the plastic, shall be placed on the floor prior to cementitious panel removal in each area.
- F. The subject asbestos containing cementitious paneling shall not be subjected to grinding, sanding, cutting, chipping, drilling or abrading. Special care shall be taken to minimize breakage of the subject material, and each panel shall be removed

whole.

- G. In areas where hardware or other fixtures are affixed to the subject cementitious panels, removal of hardware (screws, nails, etc.) shall be performed using hand tools and utilizing wet methods. Hardware shall not remain in removal areas and shall be disposed of as asbestos contaminated waste. No water may be left standing on the floor at the end of the workday.
- H. If a suspected asbestos fiber release occurs, stop work immediately, correct the condition to the satisfaction of the Owner or their Representative including clearance sampling, prior to resuming work.
- I. Remove panels, allow for minimal accumulations and immediately place on to 6-mil sheeting. Panels, or manageable stacks of panels, shall be subsequently wrapped in 6-mil sheeting, sealed, and removed from the work area. Asbestos waste shall not remain in the work area at the end of each day.
- J. The abatement area shall be thoroughly cleaned using wet methods and amended water and allowed to dry prior to visual inspection. Once allowed to dry, surfaces throughout the area shall be HEPA vacuumed. No visible dust or debris shall be visible following removal.

4.2 Negative Pressure Enclosure (NPE)

This section applies to regulated (friable) removal activities.

- A. HEPA filter exhaust systems equipped with new HEPA filters for each project shall be used. Exhaust equipment and systems shall comply with ANSI Z9.2-79 and used according to manufacturer's recommendations.
- B. A system of HEPA-equipped air filtration devices shall be configured so that a pressure differential is established between the work area (where possible) and the surrounding area (-0.02 to -0.04" water column). A continuous chart-recorded manometer shall be used to confirm this condition. Note that when walls and/or ceilings are removed, pressure differentials inside of the containment(s) will need to be maintained.
- C. Negative air machines will be exhausted to the exterior of the building.
- D. The pressure differential is maintained at all times after preparation is complete and until the final visual inspection and air samples indicate the area is clean and acceptable for occupancy. This means that the negative air machines need to continue to run during the days, nights, and weekends, while work is not being conducted in order to maintain continuous negative pressure inside of

containment(s).

- E. The Abatement Contractor's on-site supervisor shall check daily for leaks and log his checks.
- F. There shall be a minimum of four air changes per hour in any containment. Air changes can be calculated using the following formula.

$$\text{Air Changes Per Hour} = \frac{\text{Volume of Air Flow per Minute} \times 60 \text{ Minutes}}{\text{Cubic Feet of Work Area}}$$

5.0 - CONTROL AREAS

- 5.1 The work area and NPE (if applicable) shall be secured at the end of each shift in such a way that prevents entry into the work area by unauthorized personnel.
- 5.2 An asbestos control area shall be established in work areas as required by SCDES and OSHA.
 - A. Work area boundaries shall be established with red asbestos danger tape, at a minimum.
 - B. Appropriate signage in accordance with OSHA 29 CFR 1926.1101 and SCDES shall be placed at all approaches to the work area. Labels shall also be placed on all bagged asbestos waste or contaminated debris. Signage and labels should read as follows:

DANGER
ASBESTOS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
AUTHORIZED PERSONNEL ONLY

6.0 - WORKER PROTECTION

6.1 General

- A. Train all workers in accordance with 29 CFR 1926 and SCDHEC regulations regarding the dangers inherent in handling asbestos, breathing asbestos dust, proper work procedures and personal and area protective measures.
- B. Provide disposable full-body coveralls and disposable head covers and require that they be worn by all workers in the work area. Provide a sufficient number for all required changes, for all workers in the work area.
- C. Gloves: Provide work gloves to all workers and require that they be worn at the appropriate times. Do not remove gloves from the work area. Dispose of work gloves as asbestos-contaminated waste at the completion of the project.
- D. Respirators, disposable coveralls, head covers, and footwear covers shall be provided by the Abatement/Demolition Contractor for the workers. Respirators and protective clothing shall be worn by the consultant, air monitor, and other authorized representatives who may inspect the job site.
- E. Gloves, hardhats, safety glasses - provide appropriate safety equipment to all workers.

6.2 Respiratory Protection

- A. Provide workers with personally issued and marked respiratory equipment approved by NIOSH and MSHA and suitable for the asbestos exposure level in the work areas according to OSHA Standard 29 CFR 1926.1101 and other possible contaminants employees might be exposed to during the project.
- B. Provide respiratory protection from the time the first operation involved in the project requires contact with asbestos-containing materials (including construction of decontamination units, construction of airtight barriers/barricades, and placing of plastic sheeting on walls) until acceptance of final air clearance test results by the industrial hygiene firm or air monitor.
- C. The minimum respiratory protection for the project during gross removal of friable materials (or if non-friable materials become friable by Abatement/Demolition Contractors removal methods) shall be half-mask respirators.
- D. Fit testing shall be performed at the beginning of the project, and at any change in

respiratory protection equipment. Fit testing is to be performed by one of the methods listed in the 29 CFR 1926.1101, Appendix C.

- E. Do not allow the use of single-use, disposable, or quarter-face respirators for any purpose.

7.0 - AIR MONITORING

For the non-friable removal of asbestos containing materials, air monitoring may be performed at the discretion of the owner or owner's representative. This may include background, daily, and clearance monitoring. Work areas involving 160 square feet or greater of friable ACMs require clearance samples collected and analyzed by Transmission Electron Microscopy (TEM). TEM clearance testing shall be conducted in accordance with 40 CFR 763 and the clearance criteria shall be 70 structures per square millimeter of air (s/mm²) based on the mean of five samples.

7.1 Friable Removal Activities

- A. Where applicable, asbestos air monitoring shall be performed in accordance with the SCDES Standards of Performance for Asbestos Projects, Regulation 61-86.1. Air Monitoring shall be performed prior to, during, and after reported completion of abatement activities. The purpose of ambient air monitoring is to detect discrepancies in the work area isolation such as:
 - i. Contamination of the building outside of the work area with airborne asbestos fibers.
 - ii. Failure of filtration or rupture in the negative pressure system.
 - iii. Confirm the work practices established by the contractor and respiratory protection provided for employees are adequate.
- B. Work Area Airborne Fiber Levels: The air monitor will collect samples inside the containment and in adjacent areas. The purpose of this air monitoring will be to detect airborne fiber levels which may challenge the ability of the work area isolation procedures to protect adjacent areas from contamination by airborne fibers.
 - i. Background, Daily, and Clearance air monitoring shall be performed for indoor friable abatement activities, as required by the SCDES regulations 61-86.1. The air monitor shall be licensed by the SCDES as

an Air Sampler, and analysis of samples via PCM shall be performed in accordance with the procedure outlined in NIOSH 7400.

- ii. **Daily Air Monitoring:** Daily air monitoring shall be conducted in each section of the work area in which containment techniques are being utilized. Sample and analysis turnaround time shall not exceed twenty-four hours. If air sampling results indicate airborne asbestos fiber concentration at or above 0.01 fibers per cubic centimeter, or the background level, whichever is greater, work shall be stopped immediately, and methods shall be altered to reduce the airborne asbestos fiber concentrations. Work shall not resume until less than 0.01 fibers per cubic centimeter is attained.
- iii. **Work Area Clearance:** In accordance with SCDES regulations, projects involving greater than 160 SF of friable material, require clearance air sampling using Transmission Electron Microscopy (TEM). Five (5) TEM air samples will be required for clearance of each containment following a visual clearance of each work area where containments have been erected. If the arithmetic mean of the five (5) samples collected from the inside of the containment is less than 70 structures/square millimeter, the area passes clearance.

8.0 - WASTE AND DISPOSAL

- 8.1 All asbestos materials and miscellaneous contaminated debris shall be properly sealed and protected, and the load out vehicle/dumpster shall be locked, while located on the facility site and then transported to a predesignated disposal site in accordance with 40 CFR 61.150 and Department of Transportation (DOT) 49 CFR Parts 100-399.
- 8.2 An enclosed vehicle will be used to haul waste material to the disposal site. No rental vehicles or trailers shall be used. Vehicle selection, vehicle covers, and work practices shall assure that no asbestos becomes airborne during the loading, transport and unloading activity, and that material is placed in the waste site without breaking any seals.
- 8.3 Waste disposal polyethylene bags (6-mil) and containers, non-porous (steel/plastic) drums or equivalent, with labels, appropriate for storing asbestos waste during transportation to the disposal site shall be used. In addition to the OSHA labeling requirements, all containers shall be labeled with the name of the waste generator and the location at which the waste was generated.

- 8.4** The Abatement Contractor shall transport the containers and bags of waste material to the approved waste disposal site. The sealed plastic bags shall be placed into the burial site unless the bags have been broken or damaged. Upon the landfill's approval damaged bags shall be left in the non-porous containers and the entire contaminated package shall be buried. Uncontaminated containers may be reused.
- 8.5** Workers loading and unloading the asbestos will wear respirators and disposable clothing when handling material. Asbestos warning signs shall be posted during loading and unloading of asbestos waste.
- 8.6** The Abatement Contractor shall use the SCDES's Waste Shipment Record for disposal records as per 40 CFR 61.150 and distribute a copy of all waste shipment records to the Air Monitor after the completion of the project.

END OF PROJECT DESIGN

APPENDICES

APPENDIX I – SCDES LICENSE



James McMillan – SCDHEC Asbestos License

