CROSSROADS ENVIRONMENTAL, LLC

INSPECTIONS • PROJECT DESIGN • PROJECT MANAGEMENT • AIR MONITORING

SPECIFICATIONS FOR ASBESTOS ABATEMENT

'Old Cambridge House'
1024 W. Cambridge Drive
Greenwood, SC 29649

Date: March 9, 2026

PREPARED FOR:
Lander University
320 Stanley Avenue
Greenwood, SC 29649

PREPARED BY:
Crossroads Environmental, LLC
1258 Boiling Springs Road
Spartanburg, SC 29302
CRE Project No.: PD26-1181-26799

Prepared by:

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PD#: 00149, Exp. 10/14/26

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I. PREFACE/GENERAL DESCRIPTION

Air Monitoring and Project Management will be performed by a qualified and licensed environmental firm that has been hired by the Building Owner. The Building Owner or other representatives of the Building Owner shall not be held liable in any way for negligence, whereas it be intentional or unintentional on the part of the Contractor. The asbestos abatement activities are being performed prior to renovation/repair activities.

The 'Old Cambridge House' crawlspace, which is scheduled for abatement to allow for renovation and/or repair activities, is an approximately 2,450 square foot space. The crawl space is present under the majority of the two-story, brick structure. Inside, asbestos-containing insulation remains partially intact on limited, abandoned radiator steam line(s), while some of the insulation has fallen to the crawlspace floor. In addition to the asbestos-containing (ACM) insulation and debris, asbestos-containing HVAC duct mastic is present on limited duct runs. The crawlspace height ranges from approximately four feet to as little as two feet. A small basement equipment room is present on the northeast corner of the structure and additions are present on the east and west corners of the front porch; these areas do not feature steam insulation and are not included in the debris/TSI removal scope, but they do feature ACM duct mastic.

Please Note: Contractor is responsible for field verifying the ACM quantities. Additional asbestos-containing materials are associated with the structure but will not be impacted by the planned renovation/repair activities.

II. SCOPE OF WORK

The scope of work will include abatement of asbestos-containing HVAC duct mastic, and pipe insulation and associated debris inside the crawlspace of the 'Old Cambridge House' at 1024 W Cambridge Drive in Greenwood, South Carolina.

BASE BID:

MATERIAL	QUANTITY
• PIPE INSULATION & ASSOCIATED DEBRIS	2,450 SQ. FT. OF CRAWLSPACE
• HVAC DUCT MASTIC	170 LN. FT. OF DUCT

SCHEDULE

START DATE: TBD

COMPLETION DATE: TBD

III. CONTRACTOR INFORMATION

A. SUBMITTALS

Project documentation including insurance certificate (see insurance requirements), SC-DES Asbestos Abatement Contractor's License, personnel accreditations, Payment and Performance Bond, and waste shipment records must be submitted to the Building Owner's Representative. The contractor and personnel accreditations must be submitted prior to project start up; waste shipment records within 30 days after completion of project.

B. NOTIFICATIONS/LICENSES

The Contractor will be responsible for filing proper notification to SC-DES. The Contractor must have a current SC-DES Asbestos Abatement Contractor's License at the time of bid.

Contractor is responsible for obtaining a City Business license, where applicable.

C. OSHA

It is the abatement contractor's responsibility to fulfill all Occupational Safety and Health Administration (OSHA) requirements under CFR 1926.1101 and all other safety requirements that may be required by the work site.

D. PERSONNEL

THE CONTRACTOR MUST PROVIDE AN ADEQUATE NUMBER OF QUALIFIED PERSONNEL TO MEET THE SCHEDULE REQUIREMENTS OF THE PROJECT.

GENERAL SUPERINTENDENT/SUPERVISOR:
Provide a General Superintendent licensed in Asbestos work that is experienced in administration, environmental remediation, general contracting coordinating, including work practices, protective measures for building and personnel, disposal procedures, etc. This person is responsible for compliance with all applicable federal, state and local regulations, particularly those relating to asbestos-containing materials as outlined in OSHA 29 CFR 1926.1101, and including 1926.20 through 1926.32. The Superintendent needs to be knowledgeable of the South Carolina Department of Environmental Services Asbestos Regulation 61 61-86.1: Standards of Performance for Asbestos Projects, Effective May 27, 2011 and EPA NESHAP 61.140 Subpart M-National Emission Standard for Asbestos.

Experience and Training: The General Superintendent must be accredited as an Asbestos Abatement Supervisor in accordance with the AHERA regulation 40 CFR Part 763, Subpart E, Appendix C (ASHARA) and be licensed as a SC-DES Asbestos Supervisor.

The General Superintendent must be on site at all times, and must be able to communicate in the language of Regulatory Personnel.

ASBESTOS SUPERVISOR(S):
Provide full time Supervisor(s) for inside the asbestos work area with experience in asbestos abatement projects including work practices, protective measures for building and personnel, disposal procedures, etc. One inside supervisor must be able to communicate in the language of the workers and be able to communicate in English to the Building Owner's Representative(s) and/or state regulatory personnel. All inside supervisor(s) are responsible for compliance with all applicable federal, state and local regulations, particularly those relating to asbestos-containing materials as outlined in OSHA 29 CFR 1926.1101, and including 1926.20 through 1926.32. The Supervisor(s) need to be knowledgeable of the South Carolina Department of Environmental Services Asbestos Regulation 61 61-86.1: Standards of Performance for Asbestos Projects, Effective May 27, 2011 and EPA NESHAP 61.140 Subpart M-National Emission Standard for Asbestos.

Experience and Training: The Asbestos Supervisor(s) (competent person) must be accredited as an Asbestos Abatement Supervisor in accordance with the AHERA regulation 40 CFR Part 763, Subpart E, Appendix C (ASHARA) and be licensed as SC-DES Supervisors.

NON-SUPERVISORY PERSONNEL:

Provide an adequate number of qualified personnel to meet the schedule requirements of the project. Submit to the Owner's Representative a request for approval for any person intended to be employed in the project with said employees' name, social security number, qualifications, "Certificate of Workers' Acknowledgment", and "Affidavit of Medical Surveillance and Respiratory Protection".

Experience and Training: All workers employed for abatement throughout the project shall be accredited as an Asbestos Abatement Worker in accordance with the AHERA regulation 40 CFR Part 763, Subpart E, Appendix C (ASHARA) and be licensed as SC-DES Asbestos Workers.

EVERY ASBESTOS ABATEMENT ENTITY PERFORMING WORK MUST HAVE HIS/HER ORIGINAL LICENSE, AS WELL AS A COPY OF HIS/HER MOST CURRENT TRAINING CERTIFICATE.

E. INSURANCE REQUIREMENTS

1. Contractor must include with his bid documents, a copy of his Certificate of Insurance. Insurance coverage shall include **General Liability, Automobile Liability, Asbestos Pollution Liability, and Worker's Compensation with no less coverage than $1 Million ($1,000,000) for each category. The policy shall state that Sunset Clause or similar clause or clauses of intent are not included in the coverage.**

2. **Asbestos Pollution Liability Insurance is required**. A completed Certificate of Insurance for Asbestos Pollution Liability Insurance must be submitted **naming the Building Owner, the Owner's Managing Agent and the facility as an additional named insured. This can be submitted upon award of the contract.**

3. Contractor shall provide "occurrence" insurance from exposure to asbestos. An "A+" rated insurance carrier shall be provided. If the insurer has less than an "A+" rating, the Contractor shall obtain

approval for the insurance carrier from the Building Owners prior to commencement of the project.

4. The Contractor shall purchase and maintain in a company or companies acceptable to the Owner such insurance as will protect him from claims set forth below which may arise out of or result from the Contractor's operations under the Contract, whether such operations be by himself or by any Subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable:

   (a) Claims under workers' compensation, disability benefits and other similar employee benefit acts;

   (b) Claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;

   (c) Claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;

   (d) Claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the Contractor, or by any other person;

   (e) Claims for damages other than to the work itself because of injury to or destruction of tangible property, including loss of use resulting there from; and

   (f) Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

5. The insurance shall be written for not less than any limits of liability specified in the Contract Documents, or required by law, whichever is greater.

   (a) Minimum limits of liability for the following types of insurance are required as follows:

   <u>All Limits in Thousands</u>

   1. Comprehensive General Liability, including:

a. General Aggregate	$1,000
b. Products-Comp/Ops Aggregate	$1,000
c. Personal & Advertising Injury	$1,000
d. Fire Damage	$ 50
e. Medical Expense (Any one person)	$ 5

2. Worker's Compensation, including:

a. Worker's Compensation Insurance	$1,000
b. Employer's Liability	$1,000

3. Comprehensive Automobile Liability,

4. Combined single limit, including:

a. All owned Automobiles	$1,000
b. Non-owned Automobiles	$1,000
c. Hired Car Coverage	$1,000

(b) In addition to Contractual Liability including indemnification provision Bodily Injury and Property Damage coverage under both Comprehensive General and Comprehensive Automobile forms shall include 'occurrence' basis working, which means an event, or continuous or repeated exposure to conditions which unexpectedly causes injury or damage during policy period.

(c) Contractor shall either (1) require each of his Subcontractors to procure and maintain during the life of his subcontract, Subcontractors Comprehensive General Liability, Automobile Liability and Property Liability Insurance of the type and in the same amounts as specified in above, or (2) insure the activities of his Subcontractors in his own policy.

6. The insurance shall include contractual liability insurance applicable to the Contractor's obligations under indemnification provision.

(a) To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner and their agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or

destruction of tangible property (other than the Work itself) including the loss of use resulting there from and (2) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligations shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this Paragraph.

(b) Certificate of Insurance must be filed by an insurer authorized to do business in South Carolina by the South Carolina State Insurance Commission. All blanks and questions on the Certificate must be filled out completely. Incomplete or inadequate Certificate will be returned to the Contractor as unsatisfactory and commencement of his work will be delayed until satisfactory Certificate is submitted. Such delay will not warrant extension of contract time.

F. BUILDING OWNER AND OWNER'S REPRESENTATIVE

1. **BUILDING OWNER:**
Lander University
320 Stanley Avenue
Greenwood, SC 29649
Contact: Mr. Max Sargent
msargent@lander.edu
(864) 388-8009

2. **FACILITY:**
'Old Cambridge House'
1024 W. Cambridge Drive
Greenwood, SC 29649

3. **DESIGN:**
Crossroads Environmental, LLC
1258 Boiling Springs Rd.
Spartanburg, SC 29303
Point of Contact: Evans Harris
(864) 541-8736
E-mail address: eharris@crossroadsenv.net

G. SUMMARY OF TASKS:

Contractor shall remove and dispose of all asbestos-containing and/or asbestos contaminated material affected as indicated in the specifications for **'Old Cambridge House'.**

Contract work includes:

1. Pre-abatement activities including pre-construction meeting, inspection, notifications, permits, submittal approvals, preparations, emergency arrangements and submittal of plan of action.
2. Abatement activities including preparation of work site, removal and disposal of asbestos containing and/or contaminated waste, recordkeeping, security of job site, pre-work and post-work inspections, and OSHA compliance air monitoring.
3. Cleaning, Decontaminating, and Clearance activities including final inspection, clearance testing, certification of decontamination, and all post work submittals.
4. Any equipment that is unable to be moved must be polyed and protected during abatement.
5. Installation of 6 mil poly flooring throughout crawlspace.

H. STOP WORK:

If the Building Owner or Owner's Representative verbally issues a stop work order, the abatement contractor shall immediately and automatically stop all work and initiate fiber reduction activities. Do not resume asbestos removal until authorized by the Building Owner or the Owner's Representative. Do not recommence work until authorized by the Building Owner or the Owner's Representative. Standby time and cost required for corrective action will be at the contractor's expense. The occurrence of the following events shall be reported in writing to the Owner's Representative and shall require the contractor to immediately stop asbestos removal and initiate fiber reduction and other appropriate activities:

1. Excessive airborne fibers outside the containment area (>0.01 f/cc or established background levels, whichever is greater).
2. Break in either the primary or critical containment barriers.
3. Serious injury to a worker within the containment area that necessitates interruption of the normal decontamination procedures.
4. Presence of a fire and/or safety emergency.
5. Respiratory Protection System failure.

6. Power failure.

I. CONTRACTOR'S USE OF PREMISES:

The Contractor shall cooperate fully with the Owner's Representative to minimize conflicts and to facilitate safe and efficient usage of the building. **Contractor will confine operations to the areas where he will perform the work in accordance with the specifications. Portions of the site beyond areas on which work is indicated are not to be disturbed. Contractor is not allowed to enter the interior of the structure.**

J. POWER

Contractor is responsible for providing their own power; power at structure will not be available to Contractor.

K. WATER

Contractor is responsible for providing their own water; water at structure will not be available to Contractor.

L. SANITARY FACILITIES:

Contractor will be responsible for providing portable(s) toilets for their employees throughout the project. Environmental/Demolition Contractor is to follow OSHA Regulation 29 (CFR1926.51 (c)) "Toilets at construction jobsites."

M. DRIVEWAYS AND PARKING AREAS:

1. Do not unreasonably encumber the site with materials or equipment. Confine stockpiling of materials to areas designated by the Building Owner.

2. Lock automotive type vehicles, such as passenger cars and trucks and other mechanized or motorized construction equipment, when parked and unattended, so as to prevent unauthorized use. Do not leave such vehicles or equipment unattended with the motor running or the ignition key in place or accessible to unauthorized persons.

IV. PERSONAL PROTECTIVE EQUIPMENT

The following work practices must be employed during the abatement of the above materials accordingly:

A. WORKER PROTECTION:

Before beginning work of this section provide workers with the required protective equipment. Require that appropriate protective equipment be used at all times.

Protective Clothing:
Coveralls: Provide disposable full-body coveralls with head covers, and require that they be worn by all workers in the Work/Isolation Area. Provide a sufficient number for all required changes, for all workers in the Work/Isolation Area.

Boots: Provide work boots with non-skid soles, and where required by OSHA, foot protection, for all workers. Provide boots at no cost to workers. Do not allow boots to be removed from the Work/Isolation Area for any reason, after being contaminated with asbestos-containing material. Thoroughly clean, decontaminate and bag boots before removing them from Work/Isolation Area at the end of the work.

Hard Hats: Provide head protection (hard hats) as required by OSHA for all workers, and provide 4 spares for use by Owner's Representative, Project Administrator, and Owner. Require hard hats to be worn at all times that work is in progress that may potentially cause head injury. Provide hard hats with plastic strap type suspension. If hats are utilized in the Work/Isolation Area, thoroughly clean, decontaminate and bag hats before removing them from Work/Isolation Area at the end of the work.

Goggles: Provide eye protection (goggles) as required by OSHA for all workers involved in scraping, spraying, or any other activity which may potentially cause eye injury. Thoroughly clean, decontaminate and bag goggles before removing them from Work/Isolation Area at the end of the work.

B. RESPIRATORY PROTECTION:

Description of Work:
Instruct and train each worker involved in asbestos abatement or maintenance and repair of Class I, II, and III asbestos-containing materials in proper

respiratory use and require that each worker always wear a respirator, properly fitted on the face in the Work/Isolation Area from the start of any operation which may cause airborne asbestos fibers until the Work/Isolation Area is completely decontaminated. Use respiratory protection appropriate for the fiber level encountered in the work place or as required for other toxic or oxygen-deficient situations encountered.

Respiratory Protection Program: Comply with ANSI Z88.2 - 1992 "Practices for Respiratory Protection" and OSHA 29 CFR 1910.134 and CFR 1926.1101. Require that respiratory protection be used at all times where there is any possibility of disturbance of asbestos-containing materials whether intentional or accidental. Require that a respirator be worn by anyone in a Work/Isolation Area at all times, regardless of activity, during a period that starts with any operation which could cause airborne fibers until a negative exposure assessment has been completed.

General: The employer shall provide respirators, and ensure that they are used where required. Respirators shall be used in the following circumstances:

- During all Class I asbestos jobs.
- During all Class II work where the ACM is not removed in a substantially intact state.
- During all Class II and III asbestos jobs where the employer doe not produce a "negative exposure assessment".
- During all Class III jobs where TSI or surfacing ACM or PACM is being disturbed.
- During all Class IV work performed within the regulated areas where employees performing other work are required to wear respirators.
- During all work where employees are exposed above the TWA (0.1 f/cc) or excursion limit (1.0 f/cc).

V. PREPARATION OF THE WORK AREA(S)

A. REGULATED AREA DEMARCATION

The Regulated area is the location where environmental remediation work occurs. All class I, II, and III asbestos work as defined in OSHA CFR 1926.1101 (b) shall be conducted within regulated areas.

All work areas where asbestos work or other contaminants are being removed must be demarcated with barrier tape and signs. Waterproof signage must be utilized during all outdoor removal.

Access to the regulated area shall be limited to persons authorized in accordance with OSHA and SC-DES.

Prohibited activities within the regulated area include but are not limited to: no eating, drinking, smoking, chewing of tobacco or gum, or applying of cosmetics.

The competent person shall ensure that all asbestos work performed within regulated area is supervised by a competent person, which is defined in South Carolina as a licensed Supervisor.

WORK/ISOLATION AREA:
The Work/Isolation area that is located within the regulated area is a variable of the extent of work of the Contract. It may be a portion of a room, a single room, or a complex of rooms. A "Work/Isolation Area" is considered contaminated during the work, and must be separated from the balance of the building, and decontaminated at the completion of the asbestos-control work.

Completely separate the Work/Isolation Area from other parts of the building to prevent asbestos-containing dust or debris from passing beyond the work/isolated area. Should the area beyond the Work/Isolation Area(s) become contaminated with asbestos-containing dust or debris because of the work, clean those areas in accordance with the specifications. Perform all such required cleaning or decontamination at no additional cost to owner.

Place all tools, scaffolding, staging, etc. necessary for the work in the area to be separated prior to completion of Work/Isolation Area separation.

CONTROL ACCESS:
Provide Warning Signs at each access to Regulated Area on doors and/or critical barriers. Post an approximately 20 inch by 14 inch manufactured caution sign displaying the following legend with letter sizes and styles of a visibility required by OSHA 29 CFR 1926.1101:

LEGEND:

DANGER
ASBESTOS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
AUTHORIZED PERSONNEL ONLY
WEAR RESPIRATORY PROTECTION AND PROTECTION CLOTHING IN THIS AREA

Provide spacing between respective lines at least equal to the height of the respective upper line.

B. CRITICAL BARRIERS AND PRIMARY BARRIERS:

CRITICAL BARRIERS:

Individually seal each opening between the work area and uncontaminated areas including windows, doorways, elevator openings, corridor entrances, drains, ducts, electrical outlets, grilles, grates, diffusers, and skylights with duct tape and a minimum of two (2) independent layers of polyethylene sheeting at least 6 millimeters (mil) in thickness taped securely in place. Seal all stationary equipment with a minimum of one (1) layer of polyethylene sheeting at least 4 mil in thickness. Maintain all seals until all work including Project Decontamination is complete and passing clearance results have been obtained.

C. VIEWPORT

Install viewing port(s) of plexi-glass for the Building Owner, inspectors and his representatives, measuring 24 inches by 24 inches in an external wall of the contained work area. A viewing port needs to be placed at each end of the containment. If the Contractor deems that a viewport isn't feasible and the Project Designer agrees, then the Contractor must submit a variance request to SC-DES to omit the viewport.

D. DECONTAMINATION UNIT:

Provide attached Personnel Decontamination facility for containment areas. Construct the decontamination facility in compliance with OSHA 29 CFR 1926.1101 and SC-DES Regulations. This requires that the decontamination enclosure (decon) include a clean room, airlock, shower with controllable hot and cold water, airlock, and equipment room. In addition, the Contractor must provide an adequate changing area that allows privacy when dressing out and a proper storage space for street clothes. Steps required to exit the work area through the decon are as follow:

1) Remove gross contamination and debris from protective clothing before entering the equipment room.
2) Enter equipment room and remove and dispose of suit.
3) Enter shower with respirator on, pass filters into equipment room for disposal.
4) After showering, enter clean room to put on street clothes.
5) The decontamination chambers must remain free of debris and standing water.

The Contractor must ensure that all contaminated water is filtered through a five-micron or smaller filter and discharged to a sanitary sewer system. No water (contaminated or filtered) shall be allowed to lead or drain outside of the work area.

E. LOAD-OUT:

Provide decontamination area for removal of bagged waste from work area. Where feasible, this load-out area should be separate from the personnel decon.

F. TEMPORARY LIGHTING FOR FULL CONTAINMENT:

Disconnect all existing power to lighting circuits in Work Area as described in Temporary Enclosures. All lighting to the Work Area and Decontamination facilities is to be provided from temporary electrical panel(s).

Provide the following or equivalent light level: One 100-watt incandescent lamp per 1,000 square feet of floor area, uniformly distributed, for general construction lighting, or equivalent illumination of a similar nature. In corridors and similar traffic areas provide one 100-watt incandescent lamp every 25 feet. In stairways, scaffold level, and at ladder runs, provide one lamp minimum per landing, located to illuminate each landing and flight. Provide sufficient temporary lighting to ensure proper workmanship everywhere.

- Provide lighting in areas where work is being performed to supply a 100-watt minimum light level in all areas of the work area.

- Provide lighting in any area being subjected to a visual inspection to supply a 100-watt minimum light level in all areas of the work area.

- Provide lighting in the Decontamination Unit supplying a 75-watt minimum light level.

- Provide sufficient lighting circuits as required by the work. All lighting circuits are to originate at temporary electrical panel.

G. <u>HEPA FILTERED FAN UNITS</u>:

Use units in the work areas that meet the following requirements.

Cabinets are to be constructed of durable materials able to withstand damage from rough handling and transportation. The width of the cabinet should be less than 30 inches to fit through standard-size doorways. Provide units whose cabinets are:

* Factory-sealed to prevent asbestos-containing dust from being released during use, transport, or maintenance
* Arranged to provide access to and replacement of all air filters from intake end
* Mounted on casters or wheels
* Rate capacity of fan according to usable air movement capacity under actual operating conditions.
* Clean and operates with sufficient number of pre and secondary filters to be changed out throughout the day.

Provide an operational air circulation system supplying a minimum of the following air circulation rate: 4 air changes per hour to achieve required air circulation according to the following procedure:

Air Circulation Required in Cubic Feet of Air per Minute (CFM) =

$$\frac{\text{Volume of Work/isolation Area (cu. ft.)}}{60 \text{ (minutes per hour)}} \times \text{Number of air changes per hour (4)}$$

CFM/Capacity of unit= Number of units required

Capacity of a unit for purposes of this section is the capacity in cubic feet per minute with fully loaded filters (pressure differential which causes loaded filter warning light to come on) in the machine's labeled operating characteristics or 50% of the manufacturer's rated capacity for the unit. The capacity of the combined units shall at least be capable of maintaining a negative pressure differential of -0.02 inches of water around the entire perimeter of the <u>Work/isolation</u> Area.

Provide a minimum of 2 additional units per containment as back-ups.

Contractor is responsible for calculating the correct number of units per containment and for providing enough units during the removal process to ensure negative pressure.

ALL UNITS SHOULD HAVE NEW HEPA FILTERS INSTALLED PRIOR TO PLACEMENT ON PROJECT SITE. IF A UNIT IS FOUND TO CONTAIN A DIRTY UNIT, THE CONTRACTOR WILL BE REQUIRED TO HAVE NEW HEPA FILTERS INSTALLED IMMEDIATELY OR HAVE THE UNIT WITH THE DIRTY FILTER REMOVED FROM THE JOBSITE.

H. MANOMETER

A manometer must be utilized to measure the relative pressure. The inlet sensor of the manometer shall be located at the farthest point from any source of make-up air. The manometer must be calibrated by the Supervisor prior to the start of each work shift. The manometer record of daily readings must be recorded four times per eight-hour shift by the Licensed Air Monitor.

I. EQUIPMENT

The Contractor must ensure that all necessary equipment to perform the job efficiently is provided.

VI. REMOVAL PROCEDURES

- **REMOVAL OF ASBESTOS-CONTAINING PIPE INSULATION IN CRAWL SPACE UNDER NEGATIVE PRESSURE CONTAINMENT:**

Once the negative pressure enclosure has been constructed, lightly mist to the satisfaction of Owner's Representative and/or the Owner's Industrial Hygienist (IH) asbestos-containing materials to be removed. Accomplish misting by using a fine spray (mist) of amended water. Use a mixture of surfactant and water which results in wetting of the Asbestos-Containing Material and retardation of fiber release during disturbance of the material equal to or greater than that provided by the use of one ounce of a surfactant consisting of 50% polyoxyethylene ester and 50% polyoxyethylene ether mixed with five gallons of water. Saturate material through to the substrate sufficiently to wet to the substrate without causing excess dripping. Allow time for amended water to penetrate material thoroughly. Spray material repeatedly during the work process to maintain a continuously wet condition. If a removal encapsulant is used, apply in strict accordance with manufacturer's written instructions.

Mist the work area continuously with amended water whenever necessary to reduce airborne fiber levels.

As the material is removed, pack material while still wet into labeled 6-mil disposal bags. Do not allow material to dry out. Evacuate air from disposal bags with a HEPA filtered vacuum cleaner before sealing. Use the "gooseneck" procedure to seal bags by twisting the neck of the bags, sealing with duct tape, bending the neck of the bag over, and sealing again with a minimum three wraps of duct tape. Clean outside of bag and move to Wash-Down Station adjacent to Equipment Decontamination Unit.

Dispose of all rags, plastic sheet, etc. in accordance with requirements of the "Disposal of Asbestos-Containing Waste Material".

Decontaminate Equipment: After the completion of all work, decontaminate all equipment and machinery used for work of this section. Accomplish decontamination as required by the section on Project Decontamination.

- **REMOVAL OF HVAC DUCT INSULATION MASTIC WITHIN NEGATIVE PRESSURE CONTAINMENT:**

Wet mastic material and cut duct insulation to remove from duct so as not to disturb mastic. Immediately bag material for disposal. Uninsulated duct work to remain within crawlspace must be HEPA-vacuumed and/or wet-wiped as part of fine cleaning following bulk removal. A lockdown encapsulant should be applied to all equipment to remain in crawlspace.

- **REMOVAL OF DEBRIS WITHIN NEGATIVE PRESSURE CONTAINMENT:**

Remove all visible TSI debris, moisture barrier, and contaminated loose dirt down to hard pan directly beneath TSI debris, and any porous materials found in the crawlspace. All must be handled and disposed of as ACM.

VII. WASTE STORAGE AND DISPOSAL PROCEDURES

All materials are to be contained in one of the following: (1) Two 6 mil disposal bags, twist the top of both bags closed, fold over (gooseneck style), and seal both bags with duct tape; (2) Two 6 mil disposal bags, using the same procedures as above, and a fiberboard or steel drum; (3) One 6 mil disposal bag, using the same procedures as above, or a fiberboard or steel drum to be buried with the waste.

Waste stored on the site prior to disposal, must be maintained in a secured, locked location where access is controlled.

LABELING OF DISPOSAL CONTAINERS:
On the outside of the chosen disposal container, the following three labels must be placed and visible:

First Label: Provide in accordance with 29 CFR 1910.1200(f) of OSHA's Hazard Communication standard:
Second Label: Until October 1, 1993, provide in accordance with U. S. Department of Transportation regulation on hazardous waste marking. 49 CFR Parts 171 and 172. Hazardous Substances: Final Rule. Published November 21, 1986 and revised February 17, 1987:
Third Label: Provide in accordance with 40 CFR Part 61 (AMENDED), subpart M, section 61.150(a)(1)(v) of EPA's National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Provision. Published November 20, 1990.

All waste is to be hauled by a waste hauler with all required licenses form all state and local authority with jurisdiction. Protect walls, floors, and ceilings of the interior of the truck or enclosed dumpster with one layer of 6 mil polyethylene sheeting. Floor sheeting shall be installed first and shall extend up the side wall at least 12 inches and taped securely into place. Wall sheeting shall overlap by at least six inches and be taped into place. Ceiling sheeting shall extend down the sides of the walls at least six inches and be taped into place. Take containers from the Work Area directly to a sealed truck or dumpster. Do not transport disposal bagged materials on open trucks. Comply with any local or state regulations for prior notice and delivery, and comply with any special landfill requirements.

At a disposal site, vehicles shall approach the dump location as closely as possible for unloading of the asbestos waste. Bags, drums and wrapped components shall be inspected when unloaded at the disposal site. Material in damaged containers shall be re-wrapped or re-packed in empty bags or drums. If more than 25% of the bags are broken or damaged, return to work site for re-bagging. Waste containers shall be placed on the ground at the disposal site, not pushed or thrown out. Following the removal of all containerized waste, polyethylene sheeting shall be removed and discarded in bags or drums along with contaminated cleaning materials and protective clothing. Clean cargo area of the truck or dumpster by wet-wiping with amended water and/or using a HEPA vacuum cleaner.

Retain Waste Shipment Records (WSRs) from landfill and/or processor for materials disposed of. At completion of hauling and disposal of each load submit copy of waste manifest and landfill receipts to Owner's Representative and comply with local and state regulations for disposal documentation.

As per NESHAPS 61.150 vii(3)(4) waste shipment records shall obtained from the landfill/or hauler within 35 days, if not received within 45 days, EPA shall be notified by the contractor of unresponsive records.

VIII. AIR MONITORING AND PROJECT COMPLETION

A qualified and licensed air monitoring firm shall provide all air monitoring and perform all visual inspections.

DAILY AREA AIR MONITORING:
The purpose of the Owner's daily area air monitoring is to evaluate quality, resolve problems, and minimize the potential for the spread of contamination beyond the work area. In addition, the work of the Owner's IH includes performance of the final visual inspection and testing to determine whether a space or a building has been adequately decontaminated. All daily and clearance air monitoring is to be done utilizing Phase Contrast Microscopy (PCM) except for Final Clearance Monitoring as specified in the following paragraphs. Owner's Air Monitor will perform the following tasks:

1. Perform continuous air monitoring, inspection and testing outside the work area during actual abatement work to detect any faults in the work area isolation and any adverse impact on surrounding areas from work area activities

2. Perform final inspection at the conclusion of the abatement and clean-up work to certify compliance with decontamination standard.

All data, inspection results, and testing results generated by the Owner's IH will be available to the contractor for information and consideration. Contractor shall provide cooperation and support to the Owner's IH for efficient and smooth performance of their work.

Monitoring and inspection results of the IH may be used to issue any stop removal orders to the contractor during abatement work and to accept or reject an area or a building as decontaminated.

This section also sets forth airborne fiber levels both inside and outside the work area as action levels, and describes the action required by the Contractor if an action level is met or exceeded.

STOP ACTION LEVELS:

Outside Work Area: If any air sample taken outside of the Work Area exceeds 0.01 f/cc or the base line established by background air monitoring, immediately and automatically stop all work except corrective action. The Owner's Representative will determine the source of the high reading and notify the Contractor in writing.

If the high reading was the result of a failure of Work Area isolation measures initiate the following actions:

- Immediately erect new critical barriers to isolate the affected area from the balance of the building. Erect Critical Barriers at the next existing structural isolation of the involved space (eg. wall, ceiling, floor).

- Decontaminate the affected area in accordance with Project Decontamination Procedures.

- Require that respiratory protection as set forth in Respiratory Protection be worn in affected area until area is cleared for re-occupancy in accordance with Final Clearance Monitoring.

If the high fiber reading was the result of other causes, initiate the corrective action as determined by the Owner's Representative.

CONTRACTOR RELEASE CRITERIA FOR FINAL WORK AREA CLEARANCE:

1) VISUAL INSPECTION

The visual inspection will be performed at the request of the Supervisor following fine cleaning of the work area.

2) ENCAPSULATION

A coating of compatible encapsulant must be applied to porous surfaces that have been stripped and cleaned of ACM. This must be compatible with the substrate of the replacement material.

3) FINAL AIR MONITORING

TEM air clearance will be required. Aggressive sampling is not feasible due to dirt floor of crawlspace.

Sampling sensitivity in the tables below refer to:

Analytical Sensitivity for TEM analysis as set forth in the analytical method used and/or the AHERA regulation.

TEM samples will be secured as indicated below:

TRANSMISSION ELECTRON MICROSCOPY:

In each homogeneous work area after completion of all cleaning work, a minimum of 5 samples, or sufficient for the size of the project, will be taken and analyzed as follows:

Location Sampled	Number of Samples	Analysis Method	Analytical Sensitivity (fibers/cc)	Recommended Volume (liters)	Rate in Liters per Minute (LPM)
Work Area	A minimum of 5	TEM	0.005	1,200-1,800	1-10
Outside of Work Area	5*	TEM	0.005	1,200-1,800	1-10
Work Area Blank	1	TEM	0.005	0	Open for 30 Seconds
Outside of Work Area Blank	1	TEM	0.005	0	Open for 30 Seconds
Laboratory Blank	1	TEM	0.005	0	Do Not Open

* If samples collected inside of the work area report >70 structures/mm^2, TEM samples shall be collected outside of the work area.

Analysis will be performed using the analysis method set forth in the AHERA Regulation 40 CFR Part 763 Appendix A.

Asbestos Structures referred to in this Section include asbestos fibers, bundles, clusters or matrices, as defined by method of analysis.

Release Criteria: Decontamination of the work site is complete if:
The arithmetic mean (average) asbestos concentration is less than 70 structures per square millimeter of filter area.

LABORATORY TESTING AND ANALYTICAL METHODS:

PHASE CONTRAST MICROSCOPY (PCM):
Analysis of background and daily samples will be performed utilizing the methods set forth in NIOSH 7400 method.

TRANSMISSION ELECTRON MICROSCOPY (TEM):
Analysis of clearance samples will be performed using the analysis method set forth in the AHERA regulation 40 CFR Part 763 Appendix A. Samples will be sent by overnight courier for analysis by Transmission Electron Microscopy. Samples will not be carried on weekends, so that samples shipped on Friday will arrive on the following Monday. Results will normally be available during the 2nd working day after receipt of samples by the laboratory. All Transmission Electron Microscopy results will be available to the Contractor.

SAMPLE VOLUMES:
The number and volume of air samples taken by the Owner will be in accordance with all regulations and standards governing air monitoring. Additional samples may be taken at Owner's or Owner's Representatives discretion. If airborne fiber counts exceed allowed limits, additional samples will be taken as necessary to monitor fiber levels.

SAMPLE CASSETTES:

PCM: Samples will be collected on 25 mm cassettes with a 0.80 micrometer mixed cellulose ester filter.

TEM: Samples will be collected on 25 mm cassettes with 0.45 micrometer mixed cellulose ester filter.

WRITTEN REPORTS:
Written reports will be posted at the job site on a daily basis, and within 24 hours of collection of the samples. Location will be determined by Owner's

Representative and Contractor's General Superintendent. Clearance results shall be posted at the site prior to tear-down of the containment area(s).

ADDITIONAL TESTING:
The Contractor may conduct his own air monitoring and laboratory testing. If he elects to do this the cost of such air monitoring and laboratory testing shall be at no additional cost to the Owner.

PERSONAL MONITORING:
Contractor is responsible for performing air monitoring to meet Contractor's OSHA requirements for personnel sampling or any other purpose.

IX. SUBMITTALS

The attached sheets include the submittal requirements prior to the start of work, and before project closeout. Submittal for the section At Project Closeout must be submitted to the Owner's Representative with the Final Payment Request.

SUBMITTAL CHECKLIST - MANDATORY

Submittal for section Before Start of Work must be turned in to the Owner or the Owner's Representative at the Pre-Construction Meeting. If no Pre-Construction Meeting is held, then the paperwork must be submitted to the Owner's or the Owner's Representative Office 48 Hours before the start of work. The Owner or Owner's Representative will then give the contractor written permission to begin work. The Contractor will not begin work without written permission.

BEFORE START OF WORK

_____1. Contractor's anticipated work schedule must be provided to the Project Manager five (5) working days prior to the start of work.
_____2. Copy of Contractor's SC-DES Contractor's License.
_____3. Copies of SC-DES Licenses for each individual that will be working on the job site.
_____4. SC-DES Permit
_____5. Insurance Certificate
_____6. P&P Bond

Submittal for the section Periodically During Work or Before Project Closeout must be submitted to the Owner or Owner's Representative with the Progressive Payment Request. If Progressive Payments are not indicated, then the submittals must be turned into the Owner or Owner's Representative Office before the Project Closeout. Contractor must have written permission from Owner or Owner's Representative before beginning Project Closeout.

PERIODICALLY DURING WORK OR BEFORE PROJECT CLOSEOUT

_____ 7. Copy of containment checklist filled out by Air Monitor and Contractor
_____ 8. Daily Logs filled out and signed by the Project Supervisor
_____ 9. Daily Sign In\Sign Out Sheets
_____ 10. Contractor's copy of Initial Exposure Assessment
_____ 11. Contractor's copy of Daily Air Monitoring Results
_____ 12. Accident and Incident Investigation Report
_____ 13. Visitor Log and signed Visitor's Authorization Form
_____ 14. Documentation of Manometer Readings and Asbestos Filtration (AFD) and Water Filtration (WFD) Device Inspections
_____15. Personnel Air monitoring reports

Submittal for the section At Project Closeout must be submitted with the Final Payment Request.

AT PROJECT CLOSEOUT

_____ 16. Certification of Removal (summary of removal on company letterhead)
_____17. Certifications or other data as necessary to show compliance with these specifications and governing regulations.
_____ 18. Asbestos Chain-of-Custody Form (Trip Ticket) completed by and signed by the Contractor Representative, Transporter and Disposal Site Representative within 35 days as required by NESHAPS 61.150 vii(3)(4)
_____ 19. Contractor's Application for Payment (Invoice)

APPLICATION FOR PAYMENT

The Application for Payment may be submitted upon project completion.

Applications for Payment must be addressed to:

Lander University
320 Stanley Avenue
Greenwood, SC 29649
Contact: Mr. Max Sargent
msargent@lander.edu

All Final Submittals must be e-mailed to the below address for review:

Evans Harris
Crossroads Environmental, LLC
eharris@crossroadsenv.net

ITEMS TO BE SUBMITTED BY THE AIR MONITORING FIRM(S)

_____ 20. Air monitoring reports posted within 24 hours
_____ 21. Summary to owner within 5 days
_____ 22. Clearance results
_____ 23. Copy of Air Monitoring license(s)

CROSSROADS ENVIRONMENTAL, LLC

SAMPLE LOCATION SKETCH

Sketch #: 001
Project Name: 1024 W Cambridge Drive
Project ID: 26799-PD
Date: 3/5/2026

KEY:
- ACM Duct Mastic Boundaries
- ACM Air-Cell/Debris Boundaries
- Air-Cell (Steam Lines)
- Crawl Space Access