

SECTION 02 82 00

ASBESTOS REMEDIATION

PART 1 - GENERAL

1.1 SUMMARY

- A. The work covered by this section includes the handling of materials containing asbestos which are encountered during removal and demolition operations and the incidental procedures and equipment required to protect workers and occupants of the building or area, or both, from contact with airborne asbestos fibers. The work also includes the disposal of the removed asbestos-containing materials (ACM).
- B. Provide all labor, materials, tools, equipment, and insurance as required to remove and dispose of asbestos as indicated on the contract drawing D101.
- C. Contractor shall follow the design provided by Terracon for this project.

1.2 DEFINITIONS

- A. Amended Water: Water containing a wetting agent or surfactant. The wetting agent specified here is 50% polyoxyethylene ester and 50% polyoxyethylene ether in a concentration of one (1) ounce in five (5) gallons of water.
- B. Asbestos: The term "asbestos" includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.
- C. Asbestos Control Area: An area where asbestos removal operations are performed which is isolated by physical barriers to prevent the spread of asbestos fibers.
- D. Asbestos Fibers: This expression refers to asbestos fibers having an aspect ratio of 3:1 and longer than five (5) micrometers.
- E. Area Monitoring: Sampling of asbestos fiber concentrations within the asbestos control area and outside the asbestos control area which is representative of the airborne concentrations of asbestos fibers which may reach the breathing zone.
- F. Asbestos Floor Covering Materials: Nonfriable resilient sheet vinyl, vinyl asbestos or asphalt tile and asbestos adhesive.

- G. Friable Asbestos Material: Material that contains more than one percent asbestos by weight and that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.
- H. HEPA Filter Equipment: High-efficiency particulate air filtered vacuuming equipment with a filter system capable of collecting and retaining asbestos fibers. Filters shall be of 99.97 percent efficiency for retaining fibers of 0.3 microns or larger.
- I. Non-friable Asbestos Material: Material that contains asbestos in which the fibers have been locked in by a bonding agent, coating, binder, or other material so that the asbestos is well bound and will not release fibers in excess of background levels during any appropriate use, handling, storage, transportation, processing or disposal.
- J. Personal Monitoring: Sampling of asbestos fiber concentrations within the breathing zone of an employee.
- K. Small Scale Project: An asbestos removal project taking place in a particular room or space which does not require the removal of more than 20 linear feet of pipe insulation (on pipe diameters smaller than 6"), or 10 square feet of asbestos containing material (ACM) or ACM debris.
- L. Time-Weighted Average (TWA): The TWA is an 8-hour time-weighted average airborne concentration of fibers longer than five (5) micrometers, per cubic centimeter of air.

### 1.3 QUALIFICATIONS

All asbestos removal work shall be done by a contractor licensed by the State of Louisiana, Louisiana State Licensing Board for Contractors, and regularly engaged in such work. One Supervisor/Contractor acting as the qualifying party or responsible individual for the company, must be accredited with LDEQ.

### 1.4 REFERENCES

- A. The publications listed below form a part of this specification. The Contractor shall comply with all the requirements of the latest edition of these regulations.
  - 1. Code of Federal Regulations (CFR) Publications:
    - a. 29 CFR, Part 1910.1001 & 1926.58, Asbestos
    - b. 29 CFR, Part 1910.134, Respiratory Protection
    - c. 29 CFR, Part 1910.145, Specifications for Accident Prevention Signs and Tags
    - d. 29 CFR, Part 1926.20 Sub-part C, General Safety and Health Provisions
    - e. 34 CFR Part 231, Appendix C, Procedures for Containing and Removing Building Materials Containing Asbestos

- f. 40 CFR, Part 61 Sub-parts A and M, US Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants.
    - g. 40 CFR, Part 763, EPA Asbestos
  - 2. American Society for Testing and Materials (ASTM) Publication:
    - a. E 849, Safety and Health Requirements Relating to Occupational Exposure to Asbestos
  - 3. U.S. Environmental Protection Agency (EPA) Publications:
    - a. EPA 560/5-85-024, Guidance for Controlling Asbestos-Containing Materials in Buildings
  - 4. State and Local Regulations:
    - a. The Contractor Shall Comply with all current State of Louisiana and St. Tammany Parish Regulations, including all abatement workers and supervisors performing work in Louisiana are required to be accredited by LDEQ.
    - b. All personnel working as Asbestos Workers, Supervisor/Contractors (including air monitoring personnel), Inspectors, Management Planners, or Project Designers must be accredited by Louisiana Department of Environmental Quality. Initial and subsequent refresher AHERA training by an EPA recognized training provider or training provider recognized by a state program with EPA authorization is required for accreditation as well as a picture for an I.D. card, and fees.
- B. Acquisition of Publications: Referenced CFR publications may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

## 1.5 NOTIFICATIONS

- A. Notification of any Renovation activity which disturbs Regulated Asbestos Containing Material (RACM) requires a 10-work day notice. The typed/completed form must be mailed or hand delivered with fee. See AAC-2 form for fee information.

## 1.6 SUBMITTALS

- A. The following shall be submitted in accordance with the requirements of the Contract Documents and as stated herein.

### 1. ASBESTOS ABATEMENT CONTRACTOR DATA

- a. Qualifications: Documentation of the successful completion of at least three jobs comparable in complexity and care required. References of at least three previous jobs must be supplied to the Engineer.
- b. Contractor's Information (for Supervisory Personnel): List Supervisory Personnel: Name, title, length of service with company, specific training courses taken on occupational safety and health hazards associated with asbestos corrective actions. Information showing the supervisory official shall have a minimum of two years experience in the removal of asbestos materials.
- c. Contractor's Information (for Asbestos Workers and Laborers): List names, length of service with the Contractor's company, specific training in occupational safety and health hazards associated with asbestos corrective action, and specific experience of all Contractor personnel who shall be working on this project. Minimum experience requirement per employee shall be one year (including training periods) in the removal of asbestos materials.
- d. Contractor's Information (for Medical Requirements): The Contractor shall submit proof that all personnel participating in this program are in full compliance with medical surveillance provisions of OSHA or State of Louisiana requirements.

#### 1.7 GENERAL REQUIREMENTS

- A. The State of Louisiana regulates the removal and disposal of asbestos materials from ceilings, walls, pipes, and other surfaces in buildings.
- B. The regulations require wetting of the asbestos material before, during and after stripping to prevent dust emissions. The regulations use "stripping" to refer to taking asbestos off ceilings, walls, pipes and other surfaces; and "removal" to refer to taking stripped asbestos material out of the building for disposal. No dry "stripping/removal" shall be permitted.
- C. The Contractor shall have at all times at his/her office and in view at the job site, one current copy of the OSHA Regulations 1910.1001, Asbestos, and Environmental Protection Agency 40 CFR, Part 61, Sub-part M, National Emission Standard for Asbestos.
- D. The Contractor shall schedule with the LDEQ, inspections of the asbestos containment prior to the start of the asbestos work and following completion of the asbestos work but prior to the dismantling of the containment.
- E. Louisiana Department of Environmental Quality regulates workplace practices and the airborne concentration levels to which asbestos workers can be exposed. The regulations apply to removal, encapsulation, and enclosure operations involving asbestos materials.

- F. Louisiana Department of Environmental Quality has established limits on the level of airborne asbestos to which a worker may be exposed on a daily basis. Over an eight-hour period, the average airborne asbestos concentration level (also known as the Time-Weighted Average) to which a worker may be exposed may not exceed 0.2 fibers longer than five (5) micrometers per cubic centimeter of air (0.2 f/cc). A downward revision of these levels has been proposed, and whatever levels are valid at the time the work is done shall be those that are applicable.
- G. The Contractor shall use air monitoring results from the owner's third party Industrial Hygiene firm to determine whether airborne concentrations of asbestos exceed these exposure limits in the asbestos control area.

## 1.8 WORKER PROTECTION

- A. The Contractor shall follow the protection requirements in the plan that has been designed by Terracon for this project.

## PART 2 - PRODUCTS

### 2.1 LABELS AND SIGNS

- A. Provide labels printed in English. Provide label of a sufficient size to be clearly legible. Affix labels to asbestos materials, scrap, waste, debris, sealed impermeable bags, asbestos waste drums, and other asbestos-contaminated products.

- B. Asbestos Waste Drum Labels: Provide labels with the following legend:

**CAUTION  
CONTAINS ASBESTOS  
DISPOSE OF IN AN  
APPROVED LANDFILL ONLY**

- C. Provide labels with the following legend:

**DANGER  
CONTAINS ASBESTOS FIBERS  
AVOID CREATING DUST  
CANCER AND LUNG DISEASE HAZARD  
BREATHING ASBESTOS DUST MAY CAUSE  
SERIOUS BODILY HARM**

- D. Asbestos Control Area Signs: Provide signs with the following legend:

**DANGER  
ASBESTOS  
CANCER AND LUNG DISEASE HAZARD**

**AUTHORIZED PERSONNEL ONLY  
RESPIRATORS AND PROTECTIVE CLOTHING  
ARE REQUIRED IN THIS AREA**

PART 3 - EXECUTION

3.1 ASBESTOS CONTROL AREA PREPARATION

- A. The Contractor shall follow the control area requirements in the plan that has been designed by Terracon for this project.
- B. Signs and Labels:
  - 1. Asbestos Control Area Signs: Provide and mount Asbestos Control Area signs at all approaches to asbestos control areas. Locate signs at such a distance that personnel may read the sign and take the necessary protective steps required before entering the area. Signs shall be in vertical format conforming to 29 CFR, Part 1910.145 (a)(4), minimum 20 by 14 inches and display the legend specified in Part 2 - Products.
  - 2. Danger Labels: Provide and affix danger labels to all asbestos material, packaged wastes and other products contaminated with asbestos. Provide labels of sufficient size to be clearly legible, displaying the legend specified in Part 2-Products.

3.2 METHOD OF ASBESTOS REMOVAL

- A. The Contractor shall follow the asbestos removal method requirements in the plan that has been designed by Terracon for this project.

3.3 DISPOSAL OF ASBESTOS MATERIAL

- A. The Contractor shall remove and transport all waste to an Environmental Protection Agency approved disposal site off the project property. The Contractor shall submit copies of the NESHAP asbestos waste manifests to the Engineer after completion.
- B. No contaminated containers (even if clean on the outside and sealed) shall be left exposed, stored, etc., in any unsecured location either inside or outside/external to the asbestos control area and/or the building.
- C. Disposal

1. It is important that proper disposal procedures be utilized during removal, regardless of the method. Extreme care should be taken. As dry removal or dust is encountered, workers should be provided with proper respiratory protection.
2. All removed materials shall be placed in heavy duty (6 mil.) plastic bags or impermeable type containers.
3. Exposed floor area shall be HEPA vacuumed and/or wet mopped. Dry sweeping is not permitted.
4. Vacuum cleaner bags shall be removed with care and placed in plastic bags or containers for disposal.
5. All trash containers shall be tightly sealed and labeled as specified in Part 2 - Products.

#### 3.4 AIR MONITORING AND ANALYSIS

- A. The owner shall contract with an independent air sampling firm for the necessary project air sampling and analysis on this asbestos remediation project.

#### 3.5 RESPIRATORS

- A. Contractor shall provide workers with respirator protection as detailed in the design by Terracon.

END OF SECTION 028200