

## SECTION 15104

### WORKING WITH ASBESTOS CEMENT PIPE (ACP)

#### PART 1 - GENERAL

##### 1.01 DESCRIPTION

- A. Work Specified.  
The work specified shall include all labor, materials, tools, equipment, services, and incidentals necessary to modify and/or repair Asbestos Cement Pipe (ACP) as shown, specified and required.
- B. Related Work Specified Elsewhere.
  - 1. Section 15051 - Buried Piping Installation
  - 2. Section 15110 - Valves and Appurtenances
  - 3. Section 15140 - Testing and Disinfection

##### 1.02 QUALITY ASSURANCE

- A. CONTRACTOR'S Qualifications.
  - 1. CONTRACTOR shall have a minimum of 5 years documented experience working with asbestos cement pipe.
- B. Reference Standards.
  - 1. Code of Federal Regulations U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), 29 CFR 1926.1101, Asbestos.
  - 2. Code of Federal Regulations, 40 CFR Part 763, Subpart G – Asbestos Worker Protection.
  - 3. Part 56 of Title 12 of the official compilation of Codes, Rules and Regulations of the State of New York (12 NYCRR Part 56), Industrial Code Rule 56, Asbestos, per New York State Department of Labor.
  - 4. Part 360 of Title 6 of the official compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR Part 360), New York State's Solid Waste Management Facilities Regulations, per New York State Department of Environmental Conservation.
  - 5. Part 73 of Title 10 of the official compilation of Codes, Rules and Regulations of the State of New York (10 NYCRR Part 73), Asbestos Safety Training, per New York State Department of Health.
  - 6. New York State Department of Labor, Public Employee Safety and Health Bureau, PESH Act.
  - 7. AWWA Manual M28, Rehabilitation of Water Mains.
  - 8. AWWA Manual M9, Concrete Pressure Pipe.
  - 9. NSF/ANSI Standard 61.
  - 10. Underwriter's Laboratories (UL).
  - 11. International Organization for Standardization (ISO).
  - 12. Factory Mutual Research Corporation.
  - 13. Clean Air Act (CAA).

14. Safe Drinking Water Act (SDWA).
15. ANSI Z88.2-80, Practices for Respiratory Protection.
16. ANSI Z9.2-79, Fundamentals Governing the Design and Operation of Local Exhaust Systems.
17. 29 CFR 1910.1001, "Asbestos" (OSHA).
18. 29 CFR 1910.1200, "Hazard Communication" (OSHA).
19. 29 CFR 1910.134, "Respiratory Protection" (OSHA).
20. 29 CFR 1910.145, "Specification for Accident Prevention Signs and Tags" (OSHA).
21. 29 CFR 1926, "Construction Industry" (OSHA).
22. 29 CFR 1926.500 "Guardrails, Handrails and Covers" (OSHA).
23. 40 CFR 61, Subpart A, "General Provisions" (EPA)
24. 40 CFR 61, Subpart M, "National Emission Standard for Asbestos" (USEPA).
25. 49 CFR 171-172, "Transportation Standards" (USDOT).
26. Occupational Safety and Health Administration.
27. United States Department of Transportation (USDOT).
28. USEPA 530-SW-85-007, Asbestos Waste Management Guidance.
29. Guidance Document (AGD-v2.0) on 12 NYCRR, Part 56.
30. New York State Department of Environmental Conservation (NYSDEC).
31. New York State Department of Health (NYSDOH).
32. New York State Department of Labor (NYSDOL).
33. New York State Department of Transportation (NYSDOT).

### 1.03 SUBMITTALS

- A. CONTRACTOR shall submit the following prior to the start of work:
  1. The number of years your organization has been working with asbestos cement pipe under your present name.
  2. Any projects similar to this project completed by your organization. Include all projects completed within the last three years and all projects completed for the Authority specifically within the last five years.
  3. List the names of any company that has operated under the umbrella of your organization and the projects that they have completed.
  4. A list of current employees who have completed appropriate asbestos training and copies of their current certificates identifying their qualifications.
  5. A letter from the CONTRACTOR, on company letterhead, stating that they are knowledgeable of all current local, state, and federal requirements regarding asbestos work, that all work will meet those requirements, and that all workers shall be protected against exposure as defined by OSHA. Letter shall have an original signature, signed by an officer of the company.
  6. Written procedures for field repairs of pipe, pipe handling, and disposal.
  7. Project Close-out Submittals: Within 30 days of project completion, the CONTRACTOR shall submit 1 copy of the documents listed below to the ENGINEER and 1 set of documents shall be forwarded to the OWNER.
    - a. **Originals** of all waste disposal manifests, seals, and disposal logs.

- b. OSHA compliance air monitoring records conducted during the work.
  - c. Daily progress log, including entry/exit log.
  - d. A list of all workers used in the performance of the project, including name, NYSDOL certification number and expiration date, and NYSDOH 2832 number and expiration date.
  - e. All documentation identifying that asbestos materials have been properly handled, secured, labeled, and disposed of properly at an approved facility capable of accepting asbestos materials.
  - f. Disposal site/landfill permit from applicable regulatory agency.
  - g. Final project notifications.
8. The CONTRACTOR shall submit a site-specific Health and Safety Plan for review prior to any work activities. The Health and Safety Plan shall include, but not be limited to, Workers' 40-hour OSHA training and 8-hour refresher training certification and copies of fit testing and medical clearance records.

#### 1.04 COMPETENT PERSON

- A. Prior to the start of work on any given day, CONTRACTOR shall designate one individual on site as the Competent Person.
- B. *Competent Person* means, in addition to the definition in 29 CFR 1926.32 (f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32 (f): in addition, for Class I and Class II work who is specially trained in a training course which meets the criteria of EPA's Model Accreditation Plan (40 CFR 763) for supervisor, or its equivalent and, for Class III and Class IV work, who is trained in a manner consistent with EPA requirements for training of local education agency maintenance and custodial staff set forth at 40 CFR 763.92 (a)(2).
- C. The Competent Person shall have the authority to stop the work or change the work practices, as necessary, to insure compliance with all state and federal regulations.
- D. The Competent Person shall maintain all required logs for asbestos work and submit copies of all logs to ENGINEER and OWNER as requested, or at project completion.
- E. The Competent Person shall be responsible for worker and job site safety as required by all relevant asbestos regulations and OSHA requirements.
- F. The name(s) and contact phone number of the competent person shall be given to the ENGINEER and OWNER before the work is to begin.

## 1.05 PERMITS AND COMPLIANCE

- A. The CONTRACTOR shall assume full responsibility and liability for compliance with all applicable federal, state, and local laws, rules, and regulations pertaining to work practices, protection of workers, authorized visitors to the site, and persons and property adjacent to the work areas.
- B. The CONTRACTOR shall perform asbestos related work in accordance with New York State (NYS) Industrial Code Rule 56, and 29 CFR 1926 as specified herein. Where more stringent requirements are specified, adherence is required to the more stringent requirements.
- C. The CONTRACTOR shall be responsible for all fees related to the asbestos abatement work, including, but not limited to, licenses; permits; project notifications; variance petitions, applications, and re-openings; and Worker certifications.
- D. The CONTRACTOR may, at their own cost, petition applicable regulatory agencies for, obtain and use site-specific variance(s) to conduct the asbestos abatement work. Should the CONTRACTOR choose to apply for any variance, all conditions and provisions of the site-specific variance are subject to the review and approval of the ENGINEER.

## 1.06 PROJECT LOG BOOK

- A. Provide a permanently bound project log book. The log book shall contain, on the first page, the project name; name, address, and telephone number of OWNER; name, address, and telephone number of ENGINEER; name, address, and telephone number of the CONTRACTOR; and emergency numbers, including, but not limited to, local Fire/Rescue Department.
- B. All entries into the log shall be made in non-washable, permanent ink, and such pen shall be strung to or otherwise attached to the log to prevent removal from the log-in area. Under no circumstances shall pencil entries be permitted.
- C. All persons entering and exiting the Work area shall sign the log and include name, employer, NYSDOL certification number, and time of entrance and exiting.
- D. The Project Supervisor shall document all Work performed daily and note all visual assessments required by NYS Industrial Code Rule 56.

## 1.07 PERSONAL PROTECTIVE EQUIPMENT

- A. All use of Personal Protective Equipment (PPE) shall be in compliance with applicable OSHA regulations and procedures.
- B. The minimum PPE is Level D Modified (hard hat, safety glasses, and steel-toed boots), at all times at the project site both inside and outside the work areas.

- C. Additional PPE is required to reduce exposure to asbestos. CONTRACTOR shall comply with all OSHA regulations throughout construction operations

#### 1.08 SIGNS AND LABELS

- A. Provide warning signs and barrier tapes at all approaches to the Work area. locate signs at such distance that personnel may read the sign and take the necessary protective steps required before entering the area.
- B. Provide danger signs, 3-inch wide red barrier tape, and asbestos danger labels on all asbestos materials as required by regulations.

#### 1.09 POLYETHYLENE SHEETING

- A. Unless otherwise indicated, polyethylene sheeting used on this project shall be at least 6 mil fire retardant sheeting.
- B. Decontamination enclosure systems shall utilize at least 6 mil opaque fire retardant plastic sheeting.

#### 1.10 HEPA VACUUM EQUIPMENT

- A. All vacuuming performed in association with the abatement shall be conducted using HEPA-filter equipped industrial vacuums conforming to ANSI Z9.2.

#### 1.11 DISPOSAL BAGS, DRUMS, AND CONTAINERS

- A. Provide 6 mil polyethylene disposal bags printed with asbestos caution labels. Bags shall be also imprinted with USDOT required markings.

#### 1.12 SUFACTANT (AMENDED WATER)

- A. Wet all ACM prior to removal with surfactant mix, and apply in accordance with manufacturer's printed instructions.

#### 1.13 OTHER PRODUCTS OR MATERIALS

- A. Other products or materials that are required for use during abatement activities shall comply with local, state, and federal codes and regulations, if applicable. The CONTRACTOR is expected to furnish and utilize industry standard equipment and materials. The CONTRACTOR shall not furnish equipment or materials that have been altered in such a manner that violates local, state, and/or federal codes and regulations, or presents unnecessary health and safety risk.

### PART 2 – MATERIALS – NOT USED

## PART 3 - EXECUTION

### 3.01 WORKING WITH ASBESTOS CEMENT PIPE (ACP)

#### A. Documentation.

1. The CONTRACTOR shall maintain a bound daily project log throughout the project. This daily project log will contain all of the pertinent events and daily inspections that occur throughout the project. The daily project log shall be updated daily and kept on-site throughout the project.
2. In addition to the daily project log, the CONTRACTOR shall maintain a project book, (required by ICR 56) that contains the remainder of documents that might be generated on the project including: daily sign in/out sheets; personal and environmental air sampling analysis; licenses; certifications and notifications.
3. All project documentation shall be kept on the site at all times and be made available upon verbal request of the Commissioner of Labor, their designated representatives, ENGINEER, OWNER, or any other enforcement agency that has jurisdiction over the asbestos work.

#### B. Setup Procedures.

1. The material is classified by definition under 40 CFR 61, Subpart M, Section 61.141 as Category II, non-friable ACM, unless, when dry, it can be crumbled, pulverized, or reduced to powder by hand pressure. At that time, it becomes classified as regulated ACM (RACM) and subject to regulation under Subpart M. It is the intent of this specification to define procedures that maintain the AC pipe in an intact state. CONTRACTORS shall not use procedures that subject the AC pipe to forces that will crumble, pulverize, or reduce to powder the AC pipe. By using procedures that have a low to no probability of fiber release, the pipe retains its classification as Category II, non-friable ACM. These procedures will protect workers from the health risk associated with airborne asbestos.
2. Prior to exposing the waterline, CONTRACTOR shall have all necessary materials for working around asbestos cement pipe on site.
3. CONTRACTOR shall properly secure the site, labeling the area and setting up a marked perimeter to minimize exposure for workers or visitors without PPE.
4. The Competent Person shall be on site at all times Work is progressing.
5. All Work shall be performed in such a manner as to minimize the risk of exposure to personnel and to minimize the risk of release of asbestos or asbestos-containing debris to the environment.
6. All Work shall be performed in strict accordance with the Project Documents and all governing codes, rules, and regulations. The information contained within this specification section will be considered part of the Project Documents. Where conflicts occur between the Project Documents and applicable codes, rules, and regulations, the more stringent procedure(s) shall apply.

7. The CONTRACTOR shall take notice, and make employees aware, of occupational safety hazards associated with the abatement work and other work being performed on-site. The CONTRACTOR shall comply with any site-specific training that may be required by the OWNER.
8. Performance of the Work and preparation and processing of submittals shall be coordinated to comply with the overall project schedule and construction activities that are scheduled for the site, as specified in other applicable sections of the project Documents.
9. Title to Materials: ACM resulting from demolition work, except as otherwise indicated, shall remain the property of the OWNER. The CONTRACTOR is responsible for disposal, as specified, and maintaining records of disposal.

C. Removal of Asbestos-Containing Materials.

1. Perform all asbestos removal work using wet removal procedures. Mix and apply surfactant in accordance with manufacturer's written instructions. Dry removal procedures are not permitted.
2. Sufficiently wet asbestos materials with a low pressure, airless, fine spray of amended water to ensure full penetration prior to ACM removal. Re-wet materials that do not display evidence of saturation.
3. All removed material shall be placed into 6 mil plastic disposal bags or other suitable container upon detachment from the substrate or whenever there is enough accumulation to fill a single bag or container. Maintain work area surfaces free of accumulation of asbestos debris.
4. Power or pressure washers are not permitted for asbestos removal or clean-up procedures.
5. All construction and demolition debris determined by the ENGINEER to be contaminated with asbestos shall be handled and disposed of as asbestos waste.
6. Should the area beyond the Work area become contaminated with ACM or elevated fiber levels, immediately stop work and institute emergency procedures. Contaminated non-work areas shall be isolated and subsequently decontaminated in accordance with procedures established for asbestos removal. All costs incurred from decontaminating such non-work areas and the contents thereof shall be borne solely by the CONTRACTOR, at no additional cost to the OWNER.
7. Spoils are to be gently placed in trucks or on ground and not dropped, to minimize dust creation.
8. The Competent Person shall oversee all work being performed and direct the work, as necessary, to insure all regulations and safety requirements are being met.
9. Backfill should be installed into the excavation carefully, to reduce dust generation. Compaction of backfill should also involve wetting, to minimize dust generation.

D. Prohibited Work Practices and Engineering Controls.

1. CONTRACTOR shall not use procedures that subject AC pipe to forces that will crumble, pulverize, or reduce to powder the AC pipe.

2. The following work practices and engineering controls shall **not** be used for work related to AC pipe or for work which disturbs ACM regardless of asbestos exposure or the results of the Initial Exposure Assessments:
  - a. High-speed abrasive disc saws and sanders not equipped with point of cut ventilator or enclosures with HEPA filtered exhaust air.
  - b. Carbide-tipped cutting blades.
  - c. Electrical drills, chisels, and rasps used to make field connections in AC pipe.
  - d. Shell cutters used to cut entry holes in AC pipe.
  - e. A hammer and chisel without using wet techniques to remove pipe connections.
  - f. Compressed air used to remove asbestos or material containing asbestos.
  - g. Dry sweeping, dry shoveling, or other dry clean-up of dust and ACM debris.
  - h. Employee rotation as a means of reducing employee exposure to asbestos.
- E. Decontamination Procedures.
  1. The work area shall be properly decontaminated, to minimize transfer of asbestos fibers. Drop cloths, enclosures, and workers' PPE shall be appropriately cleaned with vacuums (with HEPA filtration), wetted as necessary to minimize dust generation, removed in an appropriate decontamination area, bagged, labeled, and disposed of properly.
  2. Any asbestos materials removed from the work, (including pipe, drop cloths, used HEPA filters, etc.) shall be properly contained, labeled, and disposed of according to all state and federal regulations.
- F. Disposal of Asbestos Waste.
  1. All asbestos waste shall be stored, transported, and disposed of in accordance with the following regulations as a minimum.
    - a. NYSDEC 6 NYCRR Parts 360 and 364.
    - b. USEPA NESHAPS 40 CFR 61.
    - c. USEPA Asbestos Waste Management Guidance EPA/530-SW85.
- G. Payment.
  1. All costs for work involving asbestos cement pipe, including permitting, logging, and disposal, are included in the various pipe items.

END OF SECTION