

## SECTION 02051

### ASBESTOS WORK PLAN: REPAIR, REMOVAL AND MAINTENANCE OF ASBESTOS-CONTAINING CEMENTITIOUS PIPES

#### ASBESTOS WORK PLAN

The following work plan is for the repair, removal and maintenance of asbestos cement pipe (AC). This work plan should be considered as minimal guidelines for the disturbance of the material. The Contractor shall utilize all appropriate controls and work practices necessary to protect workers, people in the vicinity of the work area, and the environment, regardless of the inclusion or exclusion of this work plan. Contractor questions should be resolved prior to the start of the abatement project. The primary concerns and considerations of these work practices is the protection of human health and the environment, as well as to minimize the Owner's and Contractor's liability exposure before, during and after the abatement process.

#### GENERAL

The City of Naples, shall employ: referred to as the Contractor, for the purpose of repair, removal and maintenance of AC pipe.

#### INDEMNITY

The Contractor shall indemnify, defend and save the Owner harmless from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the of the Contractor and persons employed or utilized by the Contractor in the performance of the work associated with the project. The Contractor shall defend on behalf of the

Owner, severally, or Owner and Contractor jointly, any claim or action for or arising out of the foregoing. The monetary limitation on the extent of indemnification pursuant to this paragraph shall be \$ 1 million per occurrence. The Contractor shall indemnify, defend and save the Owner harmless against all damages, losses, and claims resulting from the activities, or lack of activities associated with the project. The Contractor

shall defend on behalf of the Owner, severally, or Owner and Contractor jointly, any claim or action for or arising out of the foregoing.

## REGULATIONS, CODES AND STANDARDS

The Contractor shall comply with all regulations, codes and standards. These shall include, but are not limited to:

1. Title 29, Code of Federal Regulations, Section 1910.134 and 1926.1101. Occupational Safety and Health Administration (OSHA), US Department of Labor.
2. Title 40, Code of Federal Regulations, Part 61, Subparts A and M, National Emission Standards for Hazardous Air Pollutants. US Environmental Protection Agency (EPA).
3. State of Florida's Administrative Code 62-204.800. US EPA National Emission Standards for Hazardous Air Pollutants (NESHAPS) Asbestos Regulations (40 CFR 61, Subpart M).
4. State of Florida, Chapter 62-257, Florida Administrative Code.
5. Florida Statutes, Chapter 469, Licensing Requirements (Exemptions 469.002)
6. State of Florida, City of Naples codes and ordinances as applicable.

## CONTRACTOR STAFFING

1. All work will be supervised by a qualified individual meeting the requirements of a *Competent Person\** and possessing the following minimum qualifications and training:

- Satisfactory completion of an Asbestos Abatement Project Supervisor course
- Medical examination for respirator use
- Fit test for respirator type
- Training in the maintenance, repair and removal of AC pipe

\* A Competent Person, is capable of identifying existing asbestos hazards at the work place, determine if a Negative Exposure Assessment (NEA) exists, is qualified to train other workers, and has the authority to take prompt corrective measures to eliminate a hazardous exposure. In addition the competent person must be trained in a training course which meets the criteria of EPA's Model Accreditation Plan (40 CFR 763) for supervisor.

2. Any direct contact with AC pipe will be performed by qualified workers possessing the following minimum qualifications and training:

- Satisfactory completion of an OSHA Class II Worker course \*\*

- Medical examination for respirator use
- Fit test for respirator type
- Training in the maintenance, repair and removal of AC pipe

\*\*Class II Training Requirements must be met for work involving building materials including roofing, flooring, siding materials, ceiling tiles or transite panels training shall include at a minimum the elements in paragraph 29 CFR 1926.1101 (k) (9)(iv)(A) and specific work practices and engineering controls set forth in paragraph (g). It shall include hands-on training and it is to be at least 8 hours in length. Annual refresher course work is required. The length of time for the refresher training is not specified.

3. Personal Protective Equipment (PPE) for each worker will include hard hat, steel toed shoes, disposable protective clothing, respiratory protection and high visibility reflective vests. Respirators shall be fitted with a P-100 filtering cassette. (The use of disposable protective clothing, and respiratory protection will be determined by the establishment of a Negative Exposure Assessment and continual personnel air monitoring).

## WORK PROCEDURES

Controlling Government Regulation:

OSHA's Construction Industry Standard for Occupational Exposure to Asbestos Subpart Z, 29 CFR 1926.1101 Asbestos.

Work-Task Assumptions/Requirements of the Employer at Project Work-Site:

Prior to commencing the demolition and removal of the A-C pipe, the contractor has:

- \_ (1) Determined by thorough inspection the existence and the extent of any ACM.
- \_ (2) Given written notice to appropriate governmental agency at the beginning of abatement activity.
- \_ (3) Conducted an Initial Exposure Assessment (IEA) test plan or baseline report, which complies with the criteria in Paragraph (f)(2)(iii) of the above referenced controlling government regulations (section), and which demonstrates that the employees' exposure to airborne asbestos fibers during removal of the Asbestos-Cement (A-C) pipe is expected to be consistently below the Permissible Exposure Levels (PELs) i.e... exposure must be less than 0.1 fiber/cubic centimeter (cc) of air for an eight (8) hour time-weighted average limit (TWA), and less than 1.0 fiber/cc of air as averaged over a sampling period of thirty (30) minutes, all as determined by the method prescribed in Appendix A to the referenced section, or by an equivalent method, and

therefore, the employer intends to do the A-C pipe removal through the use of Negative Exposure Assessments (NEAs).

Procedures for Removal of Asbestos-Cements (A-C) Pipe, Also Commonly Referred to as Transite Pipe This work activity is identified as a Class II asbestos removal activity by OSHA's Subpart Z, 29 CFR 1926.1101, with the A-C pipe removal is being done utilizing a valid Negative Exposure Assessment (NEA).

#### Preparation

Establish a regulated work area (RWA) using barricade tape.<Provide a hand/face wash station at the entry point to the RWA.<Post asbestos-warning signs at the RWA entry point.<Establish a waste loadout area attached to the RWA.<Once an RWA is established and work begins, no access should be permitted without the required personal protective equipment.

Prior to commencing work a ten day NESHAP notification (DEP Form 62-257 .900(1)

Effective 10-12-08) must be submitted the Florida Department of Environmental Protection (FDEP) office located at the following address:

FDEPAir Resource Management

2295 Victoria Avenue, Ste 364

P.O. Box 2549

Fort Myers, Florida 33902-2549

The form can be accessed online at:

[http://www.dep.state.fl.us/air/rules/forms/asbestos/dep62\\_257\\_900\(1\).pdf](http://www.dep.state.fl.us/air/rules/forms/asbestos/dep62_257_900(1).pdf)

#### Air Monitoring and Sampling of Exposure to Airborne Asbestos Fibers:

As the work begins the competent person (or third party consultant) must conduct and record objective data to confirm the Initial Exposure Assessment (IEA), and that the specific job-site work activity confirms the findings of the IEA, and that the PELs are not being exceeded for this work activity.

#### Excavation:

1. Machine excavate to expose A-C pipe.
2. Hand excavate areas under pipe where cuts/breaks are planned.
3. Excavation operations should be carefully executed so that pipe damage does not occur prior to removal.

#### Abandonment of AC Pipes

1. AC pipes can be abandoned in-place. The procedure for abandonment of pipes in place includes filling the section of pipe with a grout/cement slurry. The location of the pipes should be recorded on the master drawing of the right-of-way.
2. At no time will bursting, crushing, grinding or pulverizing of the AC pipe be conducted.

#### AC Pipe Removal:

1. All pipe cutting or breaking operations require adequate wetting with potable water to prevent A-C materials from being crumbled by hand pressure and to keep the asbestos fibers from becoming air-borne (friable).
2. Plan pipe cuts/breaks as necessary to accommodate the size/weight of pipe being removed.
3. Use a hammer or wheel-type pipe cutter (or equivalent tool) to make the initial cut and drain the pipe of residual liquids. If gas powered cutters are to be used they should be connected to a HEPA filtered vacuum and used in a manner that will not create elevated airborne fibers. If a gas powered cutter is utilized that is not connected to a HEPA filtration system, the work area should be contained to prevent the release of airborne fibers. In addition, a sufficient supply of water shall be applied to the cut point to further prohibit the release of asbestos fibers. A layer of 6 mil polyethylene should be placed beneath the cut point to contain the debris that will be generated. The debris shall be collected and treated as asbestos-containing waste.
4. Remove pipe sections at joint collars by breaking them with a sledgehammer, or cutting them with a wheel-type pipe cutter (soil-pipe cutter).
5. Where pipe re-connection is required, trim pipe ends in a manner that will not cause asbestos fibers to become airborne. Any debris that is generated shall be collected and treated as asbestos-containing waste.
6. When applicable, remove pipe sections from trench in an "intact" condition. Wet and containerize waste materials as you go. Using lifting straps and methods that do not damage the pipe remove the material from the trench.
7. WASTE PIPES: The pipe should be placed in a leak tight waste container. An alternative option would be to wrap each section of pipe with two layers of 6 mil polyethylene. For both options water should be applied to each section of pipe before it is contained.
8. Identify A-C materials and stock-pile the waste in a designated load-out area with the following label warnings: (The label must also identify the generator of the AC Pipe waste).  
DANGER Contains Asbestos Fibers-Avoid Creating Dust

#### Cancer and Lung Disease Hazard

Transportation of Asbestos Waste

9. All asbestos-containing waste shall be transported to a class I landfill in leak tight containers. Each shipment must be properly marked with the following notation:

DANGER Contains Asbestos Fibers Avoid Creating Dust Cancer and Lung

Disease Hazard

10. All asbestos-containing waste shall be disposed of in a timely manner at a class I landfill. All waste must be disposed of within a 30 day period from the time of removal. A waste shipment record must be provided for each shipment.

References:

1. Underground Contractors Association of Illinois Best Practices for Removing Asbestos Cement Pipe

Acknowledgement of Requirements

Signed: \_\_\_\_\_

Firm: \_\_\_\_\_

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

END OF SECTION