

**Newport News Shipbuilding  
Contractor Environmental, Health and Safety  
Resource Manual**

**Asbestos**

## ASBESTOS

### 1. Purpose

This chapter establishes requirements for the storage, handling, use, and preparation for disposal of all asbestos-containing materials by individuals or companies under contract to Newport News Shipbuilding (NNS).

### 2. Scope

This chapter encompasses all contracted activities at Newport News job sites that involve the procurement, storage, handling, use, and disposal of asbestos.

### 3. References

- a. Public Law 91-596; Occupational Safety and Health Act of 1970, as amended.
  - (1) 29 CFR Part 1915.1001; Asbestos, (Shipyard Employment).
  - (2) 29 CFR Part 1926.1101; Asbestos (Construction Industry).
  - (3) 29 CFR Part 1910.134 "Respiratory Protection"
  - (4) 29 CFR Part 1910.1200; Hazard Communication
- b. 40 CFR Part 61, Subpart M, "National Emission Standard for Asbestos"
- c. 40 CFR part 763 "Asbestos"
- d. Virginia Code, Title 54.1, Chapter 5
- e. American National Standards Institute, "Fundamentals Governing the Design and Operations of Local Exhaust Ventilation Systems" -- ANSI Z9.2.

### 4. Definitions

- a. *Airborne Concentrations*: Measured concentrations of asbestos fibers in air, as number of fibers (five micrometers or more in length) per cubic centimeter of air (f/cc), based on sampling and analysis in accordance with OSHA regulations.

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- b. *Asbestos*: Includes chrysotile, amosite, crocidolite, tremolite asbestos, actinolite asbestos, anthophyllite asbestos and any of these minerals that has been chemically treated and/or altered.
  - c. *Asbestos Fibers*: Fibers of mineral origin (see above) having a minimum aspect ratio (length: width) of 3:1.
  - d. *Asbestos Work Area*: Any designated area in which suspected or known asbestos is being installed, removed, treated, or otherwise used.
  - e. *Asbestos Work Zone*: A completely enclosed area within an Asbestos Work Area.
  - f. *Asbestos Worker*:
    - (1) Any contractor employee, who handles, uses, installs, removes, cleans up, or is otherwise potentially exposed to asbestos.
    - (2) Any person so designated by the Environmental, Health and Safety Department.
  - g. *Employee*: A person who performs work and/or services for the benefit of the contractor, including sub-contractors.
  - h. *Friable*: Material that, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure and includes previously non-friable material after such previously non-friable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.
  - i. *Qualified Asbestos Worker*: A person shall be a qualified asbestos worker only when all of the following conditions are met:
    - (1) He is medically qualified in accordance with reference a.1 or a.2
    - (2) He has successfully completed respirator training and fit test program, in accordance with references a.1 – a.3.
    - (3) He has been trained in the hazards of asbestos and methods of control, in accordance with references a, b, c, and d.
    - (4) He shall maintain a current asbestos workers license in accordance with Virginia Code, Title 54.1, Chapter 5. (See Appendix B of this chapter for requirements for operations exclusively involving non-friable roofing, flooring, and siding material).

- j. *Time-Weighted Average Exposure*: A method of calculating an average exposure to a substance over an entire workshift (generally 8 hours).
- k. *Wetting Agent*: An additive to water that reduces surface tension and thereby increases the wetting ability of water.

## 5. General

- a. Any contractor performing asbestos work at Newport News must have an asbestos program that has been reviewed and accepted by the Newport News Environmental, Health and Safety contractor management office.

Note: This program review is not the same as the Asbestos Work Plan review discussed elsewhere in this chapter.

- b. Any job requiring handling, use, or removal of a material that is suspected of containing asbestos shall be treated as asbestos work in accordance with this chapter, unless the material is sampled and proven to be non-asbestos.
  - (1) Suspect materials are listed in the Newport News “Handbook for New Employees, Contractors and Visitors.” For further information on suspect asbestos-containing materials, contact the applicable contractor coordinator.
  - (2) All sampling must be conducted by AHERA accredited asbestos inspectors licensed in accordance with Virginia regulations. Analysis must be by a laboratory which is state – licensed and/or AIHA accredited for the types of asbestos analysis performed.
- c. The contractor shall maintain a current license to perform asbestos removal and encapsulation in accordance with the requirements of Virginia Code, Title 54.1, Chapter 5. (See Appendix B of this chapter for requirements for operations exclusively involving non-friable roofing, flooring, and siding material).
- d. It is the contractor's responsibility to provide written notification to the Virginia Department of Labor and Industry of any asbestos project equal to or exceeding 10 linear feet or 10 square feet, and to obtain the required work permit. It is also the contractor's responsibility to notify the EPA of asbestos projects if state notification is not required (such as on military vessels).
- e. The contractor is responsible for complying with all federal and state regulations.
- f. The contractor shall submit to the Newport News Contract Coordinator an Asbestos Work Plan outlining the contractor's procedure for complying with OSHA standards and this chapter (See Appendix C of this chapter). This

plan must be reviewed and approved by the Newport News Environmental, Health and Safety Department prior to commencing the asbestos work. The contractor may propose alternative work practices in the work plan which, upon acceptance by Newport News, will supersede corresponding sections of this chapter.

In this plan the contractor shall also make a determination as to whether or not asbestos concentrations are expected to equal or exceed 0.1 f/cc. The plan shall also include supporting rationale for the determination. Where no reasonable determination can be made, it shall be assumed that concentrations will exceed 0.1 f/cc and the appropriate actions taken.

- g. A trained competent person shall be designated as required by 29 CFR 1926.1101(o). Equivalent is the qualified person per 29 CFR 1915.1001 (o).
- h. Clean change, decontamination and shower facilities shall be provided where required by 29 CFR 1926.1101 (j) or 1915.1001 (i) as applicable.
- i. The contractor shall provide all safety equipment and engineering controls as required in this chapter or OSHA Regulations unless otherwise specified by the contract.
- j. A licensed project monitor shall be on site for the following asbestos projects in accordance with regulations of the Commonwealth of Virginia. (see Appendix B of this chapter for requirements for operations exclusively involving non-friable roofing, flooring, and siding material). A licensed asbestos project monitor is required:
  - (1) When the facility where the asbestos project is performed is occupied or will be occupied at the completion of the project, and,
  - (2) The asbestos project is 260 linear feet or more or is 160 square feet or more.
- k. The contractor is responsible for providing any other licensed persons or services required by the Commonwealth of Virginia. However, Newport News reserves the right to perform any activities it deems necessary (air sampling, site inspection, etc.) to protect our employees.
- l. Title to materials: asbestos-containing material shall remain the property of the owner.
- m. The contractor shall provide safe access to the owner to observe asbestos work.

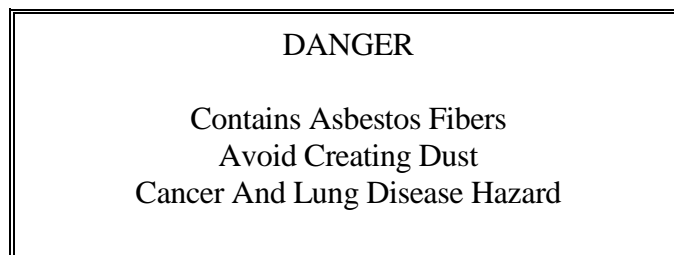
6. Asbestos Worker Qualification

- a. Each person who enters a designated asbestos work area shall, as a minimum, meet medical training and respirator fit test requirements of 29 CFR 1915.1001 or 29 CFR 1926.1101 as applicable. Project monitors, inspectors, and supervisors of asbestos workers performing asbestos work shall be licensed appropriately. (See Appendix B of this chapter for requirements for operations exclusively involving non-friable roofing, flooring, and siding material).
- b. To perform asbestos removal work, each employee must be a “Qualified Asbestos Worker”, as defined in paragraph 4.i of this chapter.
- c. Educational Requirements: All employees working with or handling asbestos shall be trained, at not less than one year intervals as required by OSHA asbestos regulation and Commonwealth of Virginia licensing regulations.
- d. Verification of employee licensure shall be provided to the Newport News Environmental, Health and Safety Department upon request.

7. Procurement

- a. Contractors shall not use asbestos-containing materials unless specifically authorized in the contract.
- b. Materials containing (or potentially containing) asbestos may not be brought on shipyard property unless there is prior written concurrence from the Newport News Environmental, Health and Safety Department.
- c. Material containing asbestos fibers shall be packaged in plastic bags or otherwise packaged in a manner that will prevent generation or release of asbestos fibers.

At least two labels shall be affixed to each package in conspicuous places. Labels shall include the following wording:



## 8. Handling

- a. Asbestos shall be handled in the "least hazardous" manner possible, including complete packaging, adequate labeling, etc., as defined in this chapter or specified by the Environmental, Health and Safety Department.
- b. Materials which, because of handling or poor repair, may generate asbestos fibers shall be taped, covered with plastic, painted, or otherwise sealed prior to all handling operations.
- c. All piping, valves and equipment containing asbestos to be removed shall be totally sealed in plastic bags or sheets and labeled prior to removing the equipment.

## 9. Asbestos Work Area - Establishment

- a. Prior to initiating any job involving known or suspected asbestos, the contractor must prepare an Asbestos Work Plan (See Appendix C), and have it approved by the Newport News Environmental, Health and Safety Department. To obtain approval, a cover sheet, (available from the contractor coordinator or EH&S) signed by the contractor and the contractor coordinator or designee, must be submitted to the EH&S department with the plan. The EH&S department shall approve the plan or recommend the changes the contractor must make to the plan to obtain approval.
- b. All employees in the area of the asbestos work shall be notified of the nature and location of the asbestos work by the cognizant contractor coordinator.
- c. Asbestos project monitors shall be present on the job site each day asbestos work is being performed. The monitor shall perform the duties established in 18 VAC 15-20-455 and shall maintain a daily log of all work performed. The daily log shall include inspection reports, air sampling data, type of work performed by the contractor, problems encountered and corrective action. The daily log shall be delivered to the Newport News coordinator at the conclusion of the asbestos work.
- d. As a minimum, a containment system shall be used to prevent the release of asbestos particles from any asbestos operations/work areas. This containment system must meet the requirements of reference a.1 or a.2 as applicable.
  - (1) A work zone shall be defined as the area in which the actual asbestos job is performed. These areas shall be totally enclosed by tents,

glovebags, etc., or the compartment or room in which the asbestos work is performed shall be completely cleared of all "non-asbestos qualified" personnel and operations. Appropriate warning signs shall be placed at the work zone. Only the Environmental, Health and Safety Department may determine when a total enclosure is not feasible. Entry into the work zone requires the use of full body coveralls, gloves, and approved respirators.

- (2) The asbestos work area shall be defined as an area which includes the work zone and is enclosed by red rope barriers. Entry into the work area requires the use of an approved respirator.
  - (3) For removal, demolition and renovation operations (unless glovebags are used in accordance with requirements of reference a.1 or a.2), an enclosure consisting of a clean room, shower area, equipment room, and work area shall be established in accordance with OSHA regulations. 29 CFR 1926.1101, Appendix F shall be used as a guideline for performing this type of work.
  - (4) The contractor shall ensure that all enclosures, except glove bags, are inspected to ensure integrity and are measured to ensure a pressure differential of -0.02 inches of water or greater prior to removing asbestos.
  - (5) The contractor shall ensure that glove bags are inspected and smoke tested to ensure integrity prior to removing asbestos. Glovebags shall be maintained under negative pressure.
- e. On all jobs where an asbestos work zone has been established a perimeter monitor shall be appointed by the contractor and stationed immediately outside the designated asbestos work area and in sight of all unsecured entrances. All unsecured entrances into the work area must be within sight of the monitor at all times. The perimeter monitor shall advise all personnel of the proper personal protective equipment required to enter the area, and report violations to supervision. The perimeter monitor shall ensure that any Newport News Shipbuilding personnel who must enter the asbestos work area sign the "Asbestos Job Form" NN 4657 (latest revision). Completed forms shall be submitted to the Newport News Shipbuilding EH&S department.
  - f. Newport News Shipbuilding notes that some asbestos work operations may be conducted without full enclosures. See Appendix A for a list of such operations. Specific control procedures must be addressed in the Contractor's Asbestos Work Plan.

## 10. Asbestos Work Area - Control



- a. Engineering Control - Engineering controls such as, but not limited to, substitution, isolation, enclosure, and exhaust ventilation shall be used to control asbestos exposures below the levels prescribed in this chapter:

(NOTE: OSHA requires that engineering controls be implemented to the most feasible extent possible before other methods of control are utilized.)

- (1) Ventilation

- (a) HEPA Filtered exhaust ventilation systems must be provided for any job involving asbestos cutting, scoring, or removal of lagging or other friable asbestos. All total enclosures used for the control of asbestos (including glove bags) shall be maintained under negative pressure by filtered mechanical exhaust ventilation.
- (b) All HEPA filtered exhaust and dust collection systems shall be designed, constructed, installed, and maintained in accordance with a consensus standard such as reference (e).
- (c) All ventilation (except that used for asbestos control purposes as determined by the Environmental, Health and Safety Department) shall be secured and sealed in and around the asbestos work area prior to beginning asbestos work.
- (d) Filter assemblies for asbestos ventilation shall be labeled as containing asbestos. Ductwork located upstream from the filter assemblies shall be marked with a red stripe, and considered to be asbestos contaminated. This requirement does not apply to "negative air" units such as MicroTrap.
- (e) All exhaust and dust collection assemblies are to be provided by the contractor, unless otherwise specified in the contract.

- (2) Wet Methods

- (a) Unless otherwise authorized by the Environmental, Health and Safety Department, asbestos shall be handled, removed, cut, scored, or otherwise worked in a wet state to prevent the release of airborne fibers. Water used for this purpose shall be treated with a wetting agent.
- (b) When wet methods cannot be used, the Environmental, Health and Safety Department shall be notified and local exhaust ventilation shall be used at each work operation. The exhaust ventilation shall be a 4" diameter tube (or larger) and shall be placed as close as

possible to the point of fiber generation, but no further than one duct diameter.

(3) Power Tools

No power tools may be used on asbestos unless the Newport News EH&S department approves their use as described in the contractor's work plan. Power tools shall be equipped with HEPA filtered local exhaust ventilation.

b. Respiratory Protection

- (1) All personnel entering or working in a designated asbestos work area shall wear NIOSH approved, non-disposable respiratory protection.
- (2) Employees who have facial hair which may contact the sealing surface or valves of the respirator shall not be permitted to wear respirators or enter areas requiring respiratory protection.
- (3) Respirator filters shall be discarded as asbestos waste when excessive breathing resistance is encountered or at the end of the job, whichever comes first.
- (4) Before storing respirators used for asbestos work, the respirator facepiece shall be cleaned, and the respirator placed in a plastic bag.

c. Special Clothing

- (1) All personnel entering or working in an asbestos work zone shall be provided with, and shall wear, fullbody coveralls impermeable to asbestos fibers, including full head and shoe covering, and gloves.
- (2) Asbestos accumulations shall be vacuumed from protective clothing and shall not be blown free with compressed air or other gases.
- (3) Removal of protective clothing and equipment used for asbestos work shall be accomplished in a manner which prevents the spread of asbestos particles.

d. Housekeeping

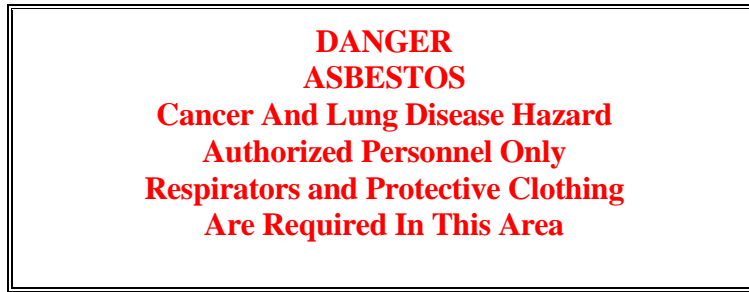
- (1) Prior to initiating work with asbestos, an asbestos vacuum cleaner shall be procured for personal and area cleanup.
  - (a) Vacuum cleaners shall have a HEPA filter to prevent release of asbestos fibers into the exhausted air and to facilitate proper disposal. Vacuum cleaners shall be used and identified for asbestos

use. Vacuum cleaners used for asbestos must be approved by the Environmental, Health and Safety Department prior to use.

- (b) Only the X36 Waterfront Support Services Department may empty and service asbestos vacuum cleaners supplied by Newport News.
- (2) Work zones shall be kept free of accumulations of asbestos.
- (3) Drop cloths shall be used in all designated asbestos work zones, including under glove bags.
- (4) Compressed air or gases shall not be used for cleaning-up or "blowing down." Asbestos shall not be collected by dry-sweeping with brooms or use of compressed air.
- (5) Any dust collectors used (bag houses, filters, etc.) shall be serviced regularly by the contractor to prevent recirculation of asbestos fibers. Clean-up and disposal shall be performed in accordance with the provisions of this chapter.
- (6) All asbestos, including waste (e.g., gasket material, strapping, wallboard, insulation, etc.) shall be treated as and disposed of as asbestos waste.
- (7) No equipment or material shall leave an asbestos work area unless it has been:
  - (a) cleaned thoroughly to remove all traces of asbestos, or
  - (b) bagged and labeled, or
  - (c) sealed and labeled.

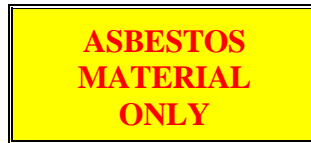
## 11. Warning Signs, Barrier Ropes, and Labels

- a. All signs, ropes, and labels are to be provided by the contractor, unless otherwise specified in the contract.
- b. Warning Signs
  - (1) Warning signs shall be displayed at all approaches and entrances around the perimeter of each asbestos work zone. They shall be standard informational signs, with ***standard black, red, and white format***, approximately 20" X 14," reading:

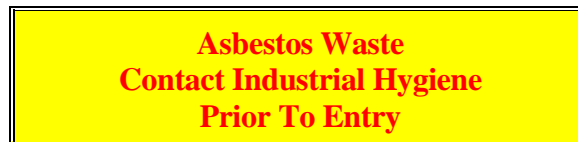


Alternatively, signs with a NN format with red lettering on yellow background may be obtained from the Contract Coordinators for limited use.

- (2) Signs shall also be posted around asbestos storage areas. They shall be standard informational signs, with red lettering on yellow background, approximately 10" x 12" reading:



- (3) Asbestos waste containers with a capacity greater than 60 gallons shall have signs posted on every side that read:



The signs shall be no smaller than 12" X 15".

- (4) All signs shall be suspended on barrier ropes, bulkheads, doorways, or other conspicuous locations.
- (5) Unauthorized/unqualified personnel are prohibited from crossing any barriers identified with the above ropes and signs.

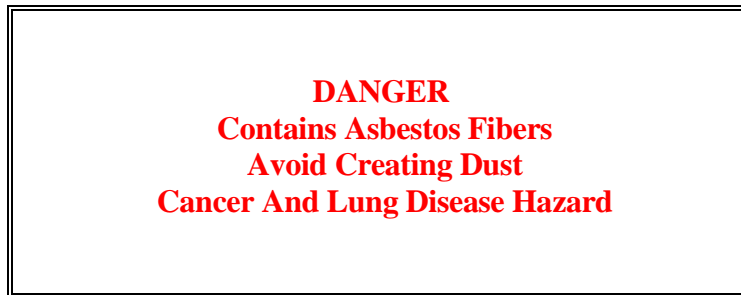
c. Barrier Ropes

- (1) All asbestos work areas shall be enclosed with red barrier rope.
- (2) All asbestos storage areas shall be enclosed with red barrier rope.

- (3) Red rope shall not be used for any purpose other than as required by this chapter, or other specific NN procedure.

d. Labels

- (1) Commercially available labels shall be affixed to all raw materials, waste, contaminated clothing, and other items or containers of asbestos-containing materials. Labels shall be approximately 5 ½ " x 3 ½ ", red and white Danger format and read:



For limited cases, NN labels with red labeling or yellow background are available through the Contract Coordinator may be used.

These labels are not required for pre-printed waste bags.

- (2) All asbestos waste to be shipped outside of the shipyard shall be identified with the name of the waste generator and the location at which the waste was generated.

12. Asbestos Work Area - Clearance

- a. The contractor shall clean and vacuum the area.
- b. All warning signs, ropes, and barriers shall remain in place until each particular job is completed and cleared by an approved project monitor.
- c. Clearance consists of a detailed visual inspection to ensure that no debris is present in the work area and air samples to ensure airborne fiber concentrations of 0.01 f/cc or less.
- d. Clearance inspections/sampling will be performed by persons meeting the following requirements:
  - (1) Individuals and organizations performing the inspections are presented in the contractor's Asbestos Work Plan,

- (2) Newport News approves the use of the individuals/organizations (Newport News expects the contractor to have no financial interest in the individual/organization),
- (3) Inspectors work under the direction of a Certified Industrial Hygienist (CIH),
- (4) Laboratories performing air sample analysis are approved by Newport News, are AIHA accredited, or, for on-site analysis, analysts are listed in the AIHA asbestos registry.
- (5) Newport News reserves the right to inspect the area prior to removal of asbestos controls.

### 13. Storage

- a. Unattended asbestos-containing material that has been removed from service shall be properly labeled, held in a temporary asbestos storage area, the area roped off with red ropes and "asbestos material only" signs installed.
- b. All asbestos materials shall be stored in plastic bags or otherwise packaged in a manner that will prevent generation or release of asbestos fibers, and shall be properly labeled.
- c. On rare occasions it may be necessary to actually enter an asbestos waste container to remediate a discrepancy. Entry into any asbestos waste container (bins, dumpster, etc.) shall require gloves, coveralls (with head and foot covers) and asbestos respirator (see II.F.3). Asbestos qualification shall also be required. The Environmental, Health and Safety Department must be contacted prior to this operation.

### 14. Disposal

- a. All asbestos waste material shall be packaged, sealed, and labeled in plastic bags or other impermeable containers while still in the work zone. These bags/containers shall be handled carefully to avoid rupture of the container and possible release of asbestos fibers. All waste shall be double bagged or double wrapped with 6-mil minimum plastic.
- b. All asbestos waste to be disposed of by Newport News shall be placed in dumpsters provided for that purpose. Dumpsters must be labeled in accordance with section 11 above.
- c. If disposal is not available through Newport News contracts, the contractor shall be responsible for asbestos disposal which shall be in accordance with

all state and federal regulations, and described in the contractor's Asbestos Work Plan.

#### 15. Asbestos Incidents

Asbestos incidents such as spills, violations, etc., shall be reported to the Environmental, Health and Safety Department (688-5523) through the contractor coordinator for resolution. Reporting, securing, and cleaning of a major asbestos incident (one which results, or may result in a potential release of significant levels of airborne asbestos fibers) shall be accomplished in accordance with the following requirements:

- a. The Newport News contractor coordinator shall notify the Environmental, Health and Safety Department (688-5523). If the Environmental, Health and Safety Department cannot be notified immediately (such as third shift or weekends), the O15 Communication Center (0-2222 or \*911) shall be notified, and the following information shall be given:
  - (1) Your name and contractor's name or affiliation.
  - (2) The number of the telephone from which you are calling.
  - (3) Nature and location of the incident.
- b. Once notified, the Environmental, Health and Safety Department (O27) will assume complete control of the incident, to include securing the area and clean-up activities. Affected personnel shall follow O27 instructions.

#### 16. Shipyard Facilities

Requests for services or questions concerning the health hazards or renovation of Shipyard Facilities potentially containing asbestos shall be directed to the Newport News contract coordinator.

#### 17. Recordkeeping

Contractors are responsible for maintaining appropriate records of medical exams, monitoring, waste disposal, or any other records required by state or federal regulation.

#### 18. Violations

- a. The Company reserves the right to audit the work of the contractor to determine compliance with this chapter, and applicable state or federal regulations.

- b. Contractors and/or vendors who fail to perform work strictly according to this chapter or applicable state or federal regulations may be subject to action such as, but not limited to:
  - (1) Termination of contract.
  - (2) Immediate removal of contractor personnel and/or equipment from shipyard property.
  - (3) Restriction from future work at Newport News.

#### 19. Variances

- a. Only the Environmental, Health and Safety Department may grant variances to any provisions of this chapter.
- b. Variances to OSHA regulations must be approved by the State Department of Labor and Industry or the U.S. Department of Labor as appropriate.



## **APPENDIX A Special Procedures**

Newport News has determined that the operations listed in this appendix may be performed using controls other than total enclosures. Specific control procedures must be addressed in the contractor's Asbestos Work Plan.

**IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ASBESTOS WORK IS PERFORMED IN ACCORDANCE WITH ALL APPLICABLE STATE AND FEDERAL REGULATIONS, AND TO PERFORM ALL NECESSARY EMPLOYEE EXPOSURE EVALUATIONS TO VERIFY COMPLIANCE. NEWPORT NEWS HAS NOT EVALUATED THESE OPERATIONS IN REGARDS TO CONTRACTOR EMPLOYEE ASBESTOS EXPOSURE.**

Working with asbestos gaskets.

Working with asbestos packing.

Working with asbestos friction material.

Working with wire and cable.

Removal of asbestos containing vinyl mastic material.

Removal of less than 10 square feet of asbestos floor tile.

Digging in asbestos contaminated soil.

Punching holes in floor tile.

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**APPENDIX B**  
**Requirements for Operations Involving Non-Friable**  
**Roofing, Flooring, and Siding Materials**

**1. *Scope***

a. **Applicability**

This appendix applies to work involving roofing, siding, and flooring determined to be non-friable.

b. **Determination of Friability**

Only the Environmental, Health and Safety Department may make the determination that a material is non-friable. In general, only roofing tar and pitch is considered non-friable. It is the experience of Newport News that roofing and siding in the shipyard becomes friable during removal.

**2. *Licensing***

Contractors shall be licensed in accordance with all state and federal regulations. Contractor employees shall be trained in accordance with applicable state and federal regulations.

**3. *Work plan***

Contractors removing asbestos-containing material under this appendix shall provide a work plan in accordance with Appendix C of this chapter. The plan must include a detailed description of the removal technique and tools and the methods which will be used to prevent the spread of asbestos containing material from the work area.

**4. *Work area set-up***

Controlled work areas shall be established to control the spread of asbestos-containing material from the work area. Appropriate measures shall be taken to ensure that asbestos-containing material is not tracked from the work area.

a. **Demarcation**

The work area shall be marked with red rope or barrier tape and signs shall be conspicuously posted to prevent unauthorized persons from entering the work area. Asbestos regulated-area signs described elsewhere in this chapter shall not be used to identify a non-friable material work area.

b. **Ventilation**

Ventilation shall be secured as required elsewhere in this chapter.

c. Work practices

Work shall be performed in such a manner as to ensure that non-friable material does not become friable. Work practices shall be described in the abatement plan.

d. Power tools

Power tools may not be used unless their use is specifically described in the work plan and their use has been approved by the Environmental, Health and Safety Department.

e. Clean-up

(2) Extent of cleaning

The work area shall be cleaned of all asbestos-containing debris.

(3) Compressed air

Compressed air may not be used for cleaning.

(4) Sweeping

Dry sweeping may not be performed.

(5) Vacuums

Vacuum cleaners must be designated for asbestos use and must be filtered as required elsewhere in this chapter

f. Disposal

Asbestos containing debris shall be packaged, labeled, and disposed of as asbestos waste as described elsewhere in this chapter.

## **APPENDIX C**

### **Elements of an Asbestos Work Plan**

Paragraph II.A.3. of this chapter requires the Contractor to submit an Asbestos Work Plan in writing to NNS prior to commencing work. At a minimum, the Plan shall include the following elements:

1. A physical description of the work area,
2. A description of the approximate amount of material to be removed,
3. A description of the containment to be used for asbestos removal,
4. A schedule for turning off and sealing existing ventilation systems,
5. Personnel hygiene procedures,
6. Labeling procedures,
7. A description of personal protective equipment and clothing to be worn by employees,
8. A description of the local exhaust ventilation systems to be used,
9. A description of work practices to be observed by employees,
10. A description of the methods to be used to remove the asbestos-containing material,
11. The wetting agent to be used,
12. A description of the sealant to be used at the end of the project,
13. An air monitoring plan,
14. A description of the clearance procedure to be followed
15. If Newport News does not handle the waste:
  - a. a description of the method to be used to transport waste material
  - b. the location of the dump site
16. Copies of all State and Federal asbestos project notification forms.
17. The shipyard will be notified immediately of any breach of containment, spills, or any other unexpected event that may release asbestos. The plan shall also include how the shipyard will be notified, including the names and phone numbers of specific individuals (usually the contractor coordinator).