

Appendix B1

Asbestos

B1-1-1. Policy: The DPW policy is to identify all asbestos containing material (ACM) within its area of responsibility. Further, DPW will control or abate all asbestos that poses an immediate health hazard. Asbestos that is non-friable and does not create an immediate health hazard will only be abated in conjunction with other abatement, renovation or demolition projects. For major renovation projects (i.e. individual rooms or buildings as a whole), all friable asbestos material will be removed and, when economical, non-friable materials. For demolition projects, all asbestos material will be removed except for non-friable material that will not become friable during demolition, as defined by 40 CFR 61 Subpart M, paragraph 61.145.

B1-1-2. Applicable Regulations:

a. Occupational Safety and Health Administration (OSHA) Regulations:

- (1) 29 CFR 1926.1101, Construction Standard for Asbestos
- (2) 29 CFR 1910.1001, General Industry Standard for Asbestos
- (3) 29 CFR 1910.134, Respiratory Protection Standard
- (4) 29 CFR 1910.1200, Hazard Communication Standard

b. Environmental Protection Agency (EPA) Regulations:

- (1) 40 CFR 61 Subpart M, EPA National Emission Standard for Hazardous Air Pollutants (NESHAP)
- (2) 40 CFR 763 Asbestos

c. Commonwealth of Virginia Regulations: Where state or local jurisdictions regulate asbestos abatement programs these regulations will be followed in addition to those listed in this document. Where there is a discrepancy in requirements, the most stringent will apply.

- (1) 18 VAC 15-20, Asbestos Licensing Regulations
- (2) 16 VAC 25-20, Licensed Asbestos Contractor Notification, Asbestos Project Permits, and Permit Fee
- (3) 16 VAC 25-30, Asbestos Emissions Standards for Demolition and Renovation

d. Army Regulations:

- (1) AR 200-1, Environmental Protection and Enhancement, Chapter 8, Asbestos Management
- (2) AR 11-34, The Army Respiratory Protection Program
- (3) TB MED 513, Occupational and Environmental Health Guidelines for the Evaluation and Control of Asbestos Exposure

B1-1-3. Definitions:

Abatement: Asbestos abatement includes the removal, enclosure, encapsulation or repair of asbestos containing

materials.

Asbestos: The term "asbestos" describes six naturally occurring fibrous minerals found in certain types of rock formations. "Asbestos" includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that have been chemically treated and/or altered.

Asbestos Containing Material (ACM): Any material containing more than one percent asbestos.

Category I nonfriable ACM: Asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy.

Category II nonfriable ACM: Any material, excluding Category I nonfriable ACM, containing more than 1 percent asbestos as determined using the methods specified in appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Class I asbestos work: Activities involving the removal of thermal system insulation (TSI) and surfacing ACM and presumed asbestos containing material (PACM).

Class II asbestos work: Activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Class III asbestos work: Repair and maintenance operations, where ACM, including thermal system insulation and surfacing material, is likely to be disturbed.

Class IV asbestos work: Maintenance and custodial activities during which employees contact ACM and PACM and activities to clean up waste and debris containing ACM and PACM.

Demolition: The wrecking or taking out of any load-supporting structural member and any related razing, removing, or stripping of asbestos products.

Disturbance: Contact which releases fibers from ACM or PACM or debris containing ACM or PACM. This term includes activities that disrupt the matrix of ACM or PACM, render ACM or PACM friable, or generate visible debris. Disturbance includes cutting away small amounts of ACM and PACM, no greater than the amount which can be contained in one standard sized glove bag or waste bag in order to access a building component. In no event shall the amount of ACM or PACM so disturbed exceed that which can be contained in one glove bag or waste bag which shall not exceed 60 inches in length and width.

Employee exposure: Exposure to airborne asbestos that would occur if the employee were not using respiratory protective equipment.

Friable Asbestos: Friable asbestos containing material refers to materials which when dry may be crumbled, pulverized, or reduced to powder by hand pressure. Friable asbestos containing materials are usually found on overhead surfaces, steel beams, ceilings, and occasionally on walls, pipes, and boiler lagging which were applied by spraying and troweling.

Non-Friable Asbestos: Non-friable asbestos material is material that cannot be easily crushed or broken. Non-friable asbestos containing materials are usually found in the form of roofing, flooring, and siding materials. NOTE: When previously non-friable asbestos becomes damaged to the extent that when dry it may be crumbled, pulverized or reduced to a powder during the removal, renovation, or demolition process, it should now be categorized as "friable" material.

Presumed Asbestos Containing Material (PACM): Thermal system insulation and surfacing material found in buildings constructed no later than 1980.

Regulated Area: An area established by the employer to demarcate areas where airborne concentrations of asbestos,

tremolite, anthophyllite, actinolite, or a combination of these minerals exceed, or can reasonably be expected to exceed, the permissible exposure limit. Now, the construction and shipyard employment standards add that such area must be established also where Class I, II and III activities will take place, regardless of exposure levels.

Regulated Asbestos-Containing Material (RACM): Friable asbestos material, Category I nonfriable ACM that has become friable, Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

Removal: All operations where ACM or PACM is taken out or stripped from structures or substrates, and include demolition operations.

Renovation: The modifying of any existing structure, or portion thereof.

Repair: Overhauling, rebuilding, reconstructing, or reconditioning of structures or substrates, including encapsulation or other repair of ACM or PACM attached to structures or substrates.

Surfacing material: Material that is sprayed, troweled-on or otherwise applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purposes).

Thermal system insulation (TSI): ACM applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat loss or gain.

Time-Weighted Average (TWA): In air sampling, this refers to the average air concentration of contaminants during a particular sampling period. Generally, this is based on an 8 hour work day of a 40 hour work week.

B1-2. Responsibilities.

B1-2-1. Directorate of Public Works (DPW):

a. Asbestos Management Coordinator:

- (1) Overall responsibility and management of the Asbestos Management Program.
- (2) Maintains all records relating to asbestos identification, control and most removal actions. Daily removal notes will be maintained by the project supervisor for inclusion in the project folder.
- (3) Maintains computer data base of asbestos sample results for all real property facilities.
- (4) Ensures information is updated and available so users, engineers, shop personnel, custodial and others can identify potential asbestos containing areas.
- (5) Manages initial and follow-up asbestos surveys of all facilities.
- (6) Takes or coordinates collection and submission of bulk samples of suspect materials for analysis.
- (7) Coordinates results of testing with Industrial Hygiene to ensure appropriate personal protective equipment, work practices, and access controls are being utilized.
- (8) Has the authority to regulate areas containing visible contamination which may pose a potential health hazard to building occupants or maintenance personnel. Information regarding such areas is forwarded to the Industrial Hygiene Section for review, monitoring, and comments addressing the health hazard. Coordinates results

of testing with Industrial Hygiene and ensures that proper warnings and access controls are issued to users and building occupants.

(9) Provides summary copies of asbestos survey results and asbestos management plans to building users and/or DPW divisions required to perform maintenance or construction in a facility.

(10) Reviews work requests to determine if work may involve the disturbance of any asbestos containing materials.

(11) Reviews and approves asbestos abatement plans. Provides copies to Safety and Industrial Hygiene for compliance with OSHA regulations.

(12) Completes pre-work Asbestos Caution forms for all work that may involve potential disturbance of asbestos containing material (ACM). These forms will be maintained in the Work Request folder.

(13) Acts as clearing house and technical consultant for all asbestos actions. Abatement associated with work or demolition should be developed by the responsible DPW division and reviewed by the Asbestos Management Coordinator.

(14) Provides asbestos awareness training to DPW employees and other Post personnel.

(15) Maintains training requirements to be qualified as an Asbestos Inspector/Management Planner.

(16) Coordinates with FSD and ESD to ensure proper marking of ACM in the field. Conducts random periodic inspections to ensure ACM and/or regulated areas remain posted.

(17) Surveys and inspects condition of asbestos in all facilities as needed. Per request, surveys and inspects reported damage to ACM.

b. Engineering Services Division (ESD):

(1) Ensures adequate identification of asbestos containing material prior to the start of any construction project. Checks existing survey and testing records available from the Asbestos Coordinator. Requests additional asbestos testing by contractor or the Asbestos Coordinator, if required.

(2) Provides the Asbestos Coordinator with the results of any contractor testing so that asbestos data may be updated.

(3) Provides Asbestos Coordinator with results and documentation of all asbestos removal done through ESD contracts in order that asbestos data may be updated.

(4) Forwards copies of asbestos abatement plans to the Asbestos Coordinator, Post Safety, and Industrial Hygiene for review and approval.

(5) Ensures proper documentation, (e.g. State and Federal notification forms), is prepared and sent to proper authorities with copies to the Asbestos Coordinator prior to the start of any work.

(6) Informs the Asbestos Coordinator of any asbestos fiber release incident so that proper response action may be taken.

(7) Documents that Division employees are properly trained in asbestos matters.

c. Business Management Division:

(1) Processes work requests for self-help and troop projects.

(2) Ensures that Self-Help projects are reviewed for possible disturbance of asbestos materials. After receiving a defined scope of work from Estimating, the work request is forwarded to the Asbestos Coordinator, or a designated asbestos qualified person, for review. An Asbestos/Lead Based Paint Caution form, (Form 6), will be filled out by the Asbestos Coordinator or designated asbestos qualified person, signed by the facility user, and filed in the project folder. The work request is then returned to the Estimator to determine the potential cost of the project, to include any asbestos removal necessary. All ACM subject to disturbance in such projects must be abated by asbestos trained and qualified personnel prior to turning the work over to the building occupants as a Self-Help project.

(3) Ensures adequate funding is programmed for asbestos abatement projects.

(4) Ensures proper documentation (e. g. State and Federal notification forms) is prepared and sent to proper authorities with copies to the Asbestos Coordinator prior to the start of any work.

(5) Informs the Asbestos Coordinator of any asbestos fiber release incident so that proper action may be taken to clean it up.

(6) Documents that required DPW employees are properly trained in asbestos matters.

d. Environmental and Natural Resources Division (ENRD):

(1) Review all work order requests for possible environmental impact, to include asbestos.

(2) Reviews asbestos abatement plans for compliance with environmental regulations.

(3) Reports instances of environmental asbestos contamination to proper State, Federal and TRADOC authorities and ensures necessary cleanup actions are taken.

e. Facilities Support Division (FSD):

(1) Requests through Chief ENRD, Asbestos Coordinator to check existing survey and testing records prior to any work that may disturb any asbestos containing material. Requests additional testing if area to work in is questionable.

(2) Post and secure asbestos contaminated areas as requested by the Asbestos Coordinator.

(3) Performs asbestos abatement and control work using Individual Job Order or Service Order.

(4) Prepares and ensures proper documentation, (e.g. State and Federal notification forms), is sent to proper authorities with copies to the Asbestos Coordinator prior to the start of any work.

(5) Informs the Asbestos Coordinator of any asbestos fiber release incident so that proper action may be taken to clean it up.

f. Family Housing Division (FHD):

(1) Ensures that all new occupants are informed of asbestos containing materials within their quarters and of proper procedures to take to prevent accidental disturbance of such materials.

(2) Informs the Asbestos Coordinator of any asbestos fiber release incident so that proper action may be taken to clean it up.

g. Fire Prevention and Protection:

(1) Informs the Asbestos Coordinator of any asbestos fiber release incident so that proper action may be taken to clean it up.

(2) Documents that employees are properly trained in asbestos matters.

B1-2-2. Post Safety:

a. Informs the Asbestos Coordinator of any fiber release incidents so that proper action may be taken to clean it up.

b. Reviews and approves asbestos abatement plans for compliance with OSHA regulations.

c. Upon request, provides guidance on implementing 29 CFR to all appropriate activities.

d. Conducts respirator fit testing for individuals participating in the installations respiratory protection program.

B1-2-3. MEDDAC:

a. Industrial Hygiene:

(1) Informs the Asbestos Coordinator of any fiber release incidents so that proper action may be taken to clean it up.

(2) Provides the Asbestos Coordinator with the results of all asbestos testing.

b. Occupational Health:

(1) Performs necessary medical exams as required in the asbestos medical surveillance program.

(2) Provides Pulmonary Function Testing to Government employees participating in a respiratory protection program.

(3) Maintains medical records for Government employees.

B1-2-4. Northern Region Contracting Center (NRCC):

a. Awards and administers contracts for asbestos removal and/or those requirements which contain some asbestos removal provisions. Further, will provide a final review of the specifications to assure asbestos removal provisions are included when appropriate.

b. When informed of a fiber release incident by the vendor or inspector, assures the Asbestos Coordinator is notified so proper action may be taken for clean up.

c. Insure that contracts dealing with such items as telephone line installation, utilities installation, computer data line insulation and exterminators have a requirement that contractors contact the asbestos management coordinator before starting work.

B1-3-1. Establishing Building Records for Asbestos Identification, Testing and Inspections:

a. IAW Army Regulation 200-1 Chapter 8, all Army structures located at Fort Eustis, Fort Story and area Army Reserve Centers were surveyed to determine the location, extent, and condition of asbestos containing materials.

During April 1993, DPW reviewed and accepted the final phase of this survey which was conducted by Dumas Engineering under contract number DABT57-91-C-0062. NOTE: This survey has its limitations because destructive sampling was not performed.

b. These reports will be maintained in the permanent asbestos building files, along with any additional sampling results, sketches or drawings showing location of samples taken, removal projects, or renovations which have taken place in the facility. All asbestos records shall be maintained by the Asbestos Coordinator, ENRD, DPW, Fort Eustis, Virginia and made available upon request.

c. Every fiber release incident that occurs or any changes in the condition of the building material shall be recorded. When unusual events occur at a work site, (for example, failure of pressure differential machine, rupture of temporary enclosures, etc.), there shall be a report submitted listing the events, persons affected, response, evaluation of results, and similar pertinent information. Protective measures and clean-up efforts taken shall also be included. Such information shall be reported on Form 2, and included in the asbestos building files.

d. A periodic surveillance of buildings shall be performed by the facility manager to ensure that ACM are in good condition, are not damaged and findings of the inspection report do not differ. Surveillance of all ACM shall be conducted annually and documented by a written inspection report, Form 1. Any damage of the ACM shall be reported immediately to the Asbestos Coordinator and appropriate response action implemented as soon as possible.

e. The results of the post wide survey and any additional sampling data collected by the Asbestos Coordinator or post Industrial Hygiene Section has been provided to building occupants to prevent the accidental disturbances of the materials. It should be understood that some areas may require additional sampling to fully identify all potential problems. As organizations relocate to other buildings, available asbestos survey information for the new locations should be requested through DPW.

f. The Directorate of Public Works will maintain a delivery order type contract, managed by ENRD, for the testing of suspect asbestos containing materials and associated air samples. Request for sampling should be routed through the Asbestos Coordinator.

g. Sampling results obtained from the delivery order type contract will be entered into the asbestos material data base. Samples collected by the DPW will also be entered into a sampling log book maintained by the Asbestos Coordinator.

h. Additional surveys or more extensive testing required in order to ensure adequate identification of all asbestos material during design and prior to construction of maintenance and repair projects are the responsibility of the project manager. Contracts for additional surveys will be executed through Engineering Services Division (ESD) and funded by DPW. Additional asbestos samples collected by trained in-house personnel may be analyzed through the delivery order contract for testing, currently being managed by ENRD. Copies of all surveys and testing results will be provided to the Asbestos Coordinator for inclusion into the asbestos database. Copies of sample results that suggest a high hazard potential will be sent to the post Industrial Hygienist for further action.

B1-3-2. Procedure for Handling Hazardous Asbestos Areas:

a. Potential hazardous asbestos areas are identified from asbestos surveys, tests, or reported to the asbestos coordinator as fiber release incidents of known asbestos materials.

b. Potential asbestos hazards will be logged in by the Asbestos Coordinator using Form 2.

c. When deemed necessary, the Asbestos Coordinator may regulate access to hazardous areas to ensure the safety of works and building occupants. Information regarding such areas will be forwarded to the Industrial Hygiene Section for review of actions, monitoring recommendations, and comments addressing the health hazards.

d. The Asbestos Coordinator will notify the user of completed actions and when it is safe to return to the area. If

additional cleanup or abatement is required, the building user, appropriate DPW personnel, or the Asbestos Coordinator will submit a work order for required abatement work.

B1-3-3. Initial Notifications and Warnings:

a. Building Occupants: Protocol shall be established for building occupants to report to the Directorate of Public Works, Asbestos Coordinator, any incidents where damage to ACM is obvious. Building occupants are not to disturb any ACM. Facility Maintenance personnel shall receive a two hour training course on Asbestos Awareness.

b. Outside Contractors: Outside contractors such as telephone workers, utility workers, computer installers and exterminators shall be required to report to the Directorate of Public Works prior to beginning any work. Outside contractors shall not be permitted to perform work in areas where ACM is physically contacted unless appropriate safeguards are taken, such as proper training and use of personal protective equipment.

c. Asbestos Abatement Contractors: Prior to the start of any asbestos abatement activity, the contractor or project manager shall submit a work permit, Form [3], indicating the specific type and location of ACM, the amount of ACM to be removed, and general procedures for removal to the Asbestos Coordinator for review and approval. Asbestos abatement contractors shall report all activities to the Asbestos Coordinator and/or designated person for DPW. A final report, (Form 4), shall be submitted by the contractor to the Asbestos Coordinator upon completion of the work.

d. Federal, State, and Local Notifications:

(1) When a renovation project results in the removal of at least 160 square feet or 260 linear feet of ACM, the appropriate government agencies shall be notified before work begins. Such notification is required under EPA National Emission Standards for Hazardous Air Pollutants (NESHAPS) and must be sent 20 days before the start of abatement. Notification is the responsibility of the asbestos abatement contractor. The notification shall be sent to the Virginia Department of Environmental Quality. Notification must be thoroughly documented. Copies must be provided to the Asbestos Coordinator. It is the responsibility of the Project Manager to ensure the abatement contractor forwards copies of notifications to DPW.

(2) There shall be notification of any asbestos work to be performed in buildings where occupants could be exposed to a fiber release. This notification shall be in writing to the building supervisor and posted on the bulletin board of that building area. Signs shall be posted in the area where asbestos work is performed.

(3) Other contractors shall be notified at the job site of the nature of the asbestos abatement activities, location of the asbestos containing material, and controlled access by O&M personnel. This notice shall be in writing complying with the Hazard Communication Regulation OSHA 29 CFR 1910.1200 and 1926.1101.

(4) Notify contractors/subcontractors of activities in immediate area.

(5) Notify utility companies.

(6) Notify building occupants.

f. Signs:

(1) Signs shall be posted to all asbestos abatement areas. Signs shall be 20 inch by 14 inch manufactured danger sign at each entrance to the work area displaying the following legend with letter sizes and styles of visibility required by 29 CFR 1926.1101.

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING
REQUIRED IN THIS AREA

(2) Warnings are not intended to be publicly advertised but are designed as a last line of defense against inadvertent contact with ACM by unprotected individuals. These will be found conspicuously posted in mechanical closets containing damaged ACM, at the entrance and around the perimeter of all in progress abatement projects or contaminated areas that have been isolated.

B1-3-4. Training Requirements: All personnel involved in asbestos work will be properly trained in accordance with applicable federal and state regulations.

a. Asbestos Inspector/Management Planner: DPW will be responsible for maintaining an accredited asbestos inspector/management planner within the organization. The individual must have successfully completed a 40 hour asbestos inspector/ management course approved by the EPA. Annual refresher courses must be complete in order to maintain accreditation.

b. Asbestos Supervisor: All Class I & II asbestos work require an accredited/licensed Asbestos Supervisor to oversee the project. The individual must have successfully completed a 40 hour asbestos contractor/ supervisor training course approved by the EPA. Annual refresher courses must be completed in order to maintain accreditation.

c. Asbestos Worker: All individuals performing Class I & II asbestos work are required to have successfully completed a 32 hour asbestos worker training course approved by the EPA. Annual refresher courses must be completed in order to maintain accreditation.

d. Operation and Maintenance Workers:

(1) Maintenance employees shall be capable of recognizing ACM and trained in special techniques required in working around ACM. They should be responsible for notifying the manager of building maintenance if ACM is disturbed or damaged in any way. Trained staff shall perform routine inspections of ACM for progressive damage or deterioration. Complaints from the building occupants shall be reported directly to the manager of building maintenance who will then inform the Asbestos Coordinator of such complaints.

(2) The maintenance and custodial staff conducting any Class III asbestos work, activities resulting in the disturbance of ACM, must successfully complete 16 hours of O&M training from an EPA approved school.

e. Asbestos Awareness: Maintenance personnel, construction inspectors, engineers, or any individual that may be subject to working around ACM will be required to attend 2 hours of asbestos awareness training. Asbestos awareness training will be provided annually by DPW for its employees. DPW will also provide annual asbestos awareness training to facility managers or maintenance staff from other directorates that will be conducting periodic surveillance of ACM.

**NOTE: Information regarding the location of ACBM will be made available for short-term workers, such as utilities workers and building repair and renovation contractors. Information may be requested from the Asbestos Coordinator, DPW.

B1-3-5. Asbestos Control Actions:

a. Repair and Renovation Work Order Request System:

(1) When Work Order Requests are submitted through DPW, the Project Review Committee will determine which projects will be conducted as Self-Help, in-house, or contracted out. After receiving a defined scope of work from the Estimator, the work request will be reviewed by ENRD to determine the potential for disturbance of ACM during the repair/renovation project. All ACM subject to disturbance in such projects must be abated by asbestos trained and qualified personnel prior to turning the work order over to the building occupants as a Self-Help project or DPW's shops as in-house projects.

(2) Work Requests which are contracted out may or may not include asbestos removal as part of the contract. These Work Requests will be reviewed by ENRD in the same manner.

b. Special Work Practices for Maintenance Activities: Even normal maintenance activities may disturb ACBM and raise the level of airborne asbestos fibers. Maintenance workers should avoid conducting any work as to disturb any ACM. It is the responsibility of the supervisor and the workers to check existing asbestos records prior to conducting any maintenance or repair activities.

c. Building Demolition: Prior to any demolition, facilities must have had an asbestos survey conducted IAW VR 394-01-7, Virginia Asbestos Survey Standards for Buildings to be Renovated or Demolished. DPW and the demolition or renovation contractor will comply with the procedures specified in 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Revision, Final Rule.

(1) Remove all regulated asbestos containing material (RACM) from a facility being demolished or renovated before any activity begins which would break up, dislodge, or similarly disturb the material or preclude access to the material for subsequent removal. RACM need not be removed before demolition if:

(a) It is Category I nonfriable ACM that is not in poor condition and is not friable.

(b) It is on a facility component that is encased in concrete or other similarly hard material and is adequately wet whenever exposed during demolition; or

(c) It was not accessible for testing and was, therefore, not discovered until after demolition began and, as a result of the demolition, the material can not be safely removed. If not removed for safety reasons, the exposed RACM and any asbestos-contaminated debris must be treated as asbestos-containing waste material and adequately wet at all times until disposed of.

(d) They are Category II nonfriable ACM and the probability is low that the materials will become crumbled, pulverized, or reduced to powder during demolition.

B1-4. Operation and Maintenance Program.

B1-4-1. Introduction: This O&M program is not intended to be substituted for permanent, large scale abatement, but a safe, controlled method of working with ACM to prevent the emission of asbestos fibers into the air. Any O&M removal will be limited to operations where removal is secondary to another job, such as pipe fitting replacement and repair or electrical wiring, where contact with the ACM is either a possibility or a certainty. Any accidental damage to ACM by weather, physical means, leaking pipes, and etc., will be repaired in the same fashion. Any large scale, more than 20 LF a day or a single mechanical unit, ACM removal project will demand the use of a licensed abatement contractor following an approved asbestos abatement plan developed specifically for that project.

B1-4-2. Small Scale Versus Large Scale Disturbances:

a. Small Scale: Work will be considered small scale, capable of being performed by individuals with Asbestos Operations and Maintenance training, when there is:

- (1) Removal of less than 3 sq. ft. of surfacing material.
- (2) Removal of no more than 3 LF of air cell pipe insulation less than 6 inches in diameter.
- (3) Removal of no more than 3 LF of preformed plaster type pipe insulation less than 6 inches in diameter.
- (4) Removal of less than 3 sq. ft. of boiler insulation.
- (5) Removal of less than 3 sq. ft. of molded plaster pipe fitting.
- (6) Drilling or otherwise abrading of no more than 3 sq. ft. of floor tile, cement asbestos board, etc.

b. Large Scale: Maintenance activities which involve removal of more than 20 linear feet a day or a single mechanical unit will be considered to be large scale disturbances. Any large scale ACM removal project will demand the use of a licensed abatement contractor or DPW's in-house abatement team. All large scale removal projects will require the submission of an asbestos abatement plan developed specifically for that project. Abatement plans should be routed through the project engineer, Chief ENRD, ATTN: Asbestos Coordinator, Post Safety, and Industrial Hygiene for review and approval prior to the commencement of work.

c. Other: Work which involves the removal of more material than specified as a small scale O&M repair, but less than a large scale ACM removal, will require the use of a licensed asbestos contractor. A detailed asbestos abatement plan will not be required, however, Forms 3 and 4 shall be submitted to the Chief, ENRD, ATTN: Asbestos Coordinator for approval and inclusion in the asbestos files.

B1-4-3. Emergencies: In the event of an unexpected asbestos spill, the following procedures shall be implemented:

- a. The occupants shall leave the area immediately, taking nothing with them.
- b. The area shall be closed off to admit no one except the asbestos response team.
- c. Signs shall be posted warning of the danger.
- d. Verbal warnings shall be given to all other occupants in the building.
- e. The Asbestos Coordinator shall be notified of the accident.
- f. The occupants of that area shall be moved to another area where they can be decontaminated and away from others to prevent further contamination.

g. Industrial Hygiene or a contracted laboratory team shall suit-up to enter the room and place the area air sample pumps in the contaminated area.

h. The area shall remain closed until the results of the bulk analysis and/or the air sample is analyzed to determine the extent of contamination.

i. The building occupants shall be notified of the accident that day if the results of the tests are positive.

j. If the results are positive, then no further action shall be taken until the DPW gives the order to clean up the spill.

k. DPW maintains an environmental testing contract with a local laboratory which can provide sampling and results within 24 hours. The testing contract is currently being managed by ENRD, Asbestos Coordinator.

l. If the results of the tests from the area are positive, the area shall remain closed until it is cleaned and the final air sample results are taken. All items in the area must remain in place until the area has been decontaminated.

m. Failure to comply with any of these rules and safety operations shall result in disciplinary action being taken.

n. State and federal regulations are designed to protect the occupants of the location from exposure to asbestos. This program can work if all employees understand the danger of asbestos and the consequences of failure to follow these regulations.

B1-5-1. Asbestos Abatement and Removal: Asbestos containing material is usually removed by contract. Whatever method is used, all federal and state regulations must be followed.

a. Contract removal:

(1) Contract removal may be conducted by individual asbestos abatement contracts, as delivery order in a requirements contract, or as part of a related construction contract. All asbestos removal work will be administered by Engineering Services Division.

(2) Contractors will be responsible for proper notification to state and federal agencies. Copies of this notification will be provided to the Chief, ENRD, ATTN: Asbestos Coordinator. The project engineer should also ensure that a copy is placed in the project folder.

(3) Prior to the start of work, the contractor will submit an asbestos abatement plan to the DPW for approval. A copy of this plan will be sent to the Chief, ENRD, ATTN: Asbestos Coordinator for review and approval. The plan will also be forwarded to Post Safety Office and Industrial Hygiene for review.

(4) Upon completion of the removal project, a report will be provided to the DPW, with a copy to the Chief, ENRD, ATTN: Asbestos Coordinator, detailing the ACM that was removed from the area abated.

B1-5-2. State and Federal Requirements:

a. Commonwealth of Virginia Requirements:

(1) The Commonwealth of Virginia requires notification to the Department of Labor and Industry at least 20 calendar days prior to the commencement of an asbestos project.

(2) The state notification form (Form 5) shall be used for all notifications.

(3) All asbestos projects of 10 linear feet or 10 square feet or more must be reported to the Virginia Department of Labor and Industry; amounts less than these do not have to be reported. This waiver for reporting requirements for small jobs does not apply to the record keeping requirements of state regulations; therefore, records must be kept

regardless of project size.

(4) Notification of less than 20 days may be allowed in case of emergencies. Notification for emergency removal projects must be submitted within 24 hours of initiation of the project. Emergency projects include but are not limited to:

(a) leaking or ruptured pipes,

(b) accidentally damaged or fallen asbestos that could expose non-asbestos workers or the public,

(c) unplanned mechanical outages or repairs essential to work process that require asbestos removal and could only be removed safely during the mechanical outage. A written description of why this project is considered an emergency must be submitted on the notification. ** Lack of planning or inspection for asbestos before commencement of a general renovation project does not constitute an emergency project.**

(5) Amended notifications may be submitted for modifications.

(a) Amended notices for start up dates must be received by at least one day prior to the removal date of the original notification. Submission of a re-notification shall be required after the original start date has passed.

(b) Amended notices for extension of project completion dates must be submitted by the end of the completion date on the original notification. Submission of a re-notification for extension of completion dates shall be required after the original completion date has passed.

(c) An amended notice must be submitted for any project which is completed prior to completion date indicated on the notification. This amended notice shall be submitted within 24 hours upon completion of the project.

(d) An amended notice may be submitted when additional asbestos containing materials are discovered during the course of an on-going removal project.

(6) Any project cancellation must be reported to the state.

b. Federal Requirements (EPA-NESHAP):

(1) In addition to reporting to the Department of Labor and Industry, projects of 160 square feet or 260 linear feet or greater must be reported to the U.S. Environmental Protection Agency.

(2) The Virginia notification form may be used for EPA notification.

c. Demolition Projects: Demolition of any facility as defined by 40 CFR 61.141 must be reported to the Department of Labor and Industry and to the U.S. Environmental Protection Agency.

d. Addresses:

(1) Commonwealth of Virginia

Virginia Department of Labor and Industry
Asbestos Program
Powers-Taylor Building
13 South Thirteenth Street
Richmond, VA 23219

Telephone # (804) 786-9865

FAX # (804) 371-7634

(2) EPA Region III

US Environmental Protection Agency Region III
Curtis Building
Sixth and Walnut Street
Philadelphia, PA 19106
ATTN: Asbestos Coordinator

Telephone # (215) 597-1970
FAX # (215) 597-3156 or (215) 597-7906

B1-6-1. Packing and Labeling Waste:

a. Friable asbestos waste and contaminated materials, including plastic from enclosures, rags, mop heads, contaminated coveralls, respirator filters, etc., will be sealed in impermeable bags or two layers of polyethylene sheeting and affixed with hazard labels for disposal at a state approved landfill dump site. Labels will be affixed to all asbestos material, scrap, waste, debris and other products contaminated with asbestos in accordance with the DOT regulations and the OSHA Asbestos Standard. Caution labels will be of sufficient size to be clearly legible, displaying the following:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
AVOID BREATHING AIRBORNE ASBESTOS
RQ (ASBESTOS)
Class 9
NA 2212, III

b. In accordance with DOT regulations and 40 CFR 61.150, the bags will be labeled with the DOT class 9 symbol, the name of the generator and the location at which the waste was generated.

B1-8-2. Handling, Transportation, and Disposal:

a. The abatement contractor will mark vehicles used to transport asbestos waste during the loading and unloading of the waste so that a person can easily read:

DANGER
ASBESTOS DUST HAZARD
CANCER AND LUNG DISEASE HAZARD

b. The hauling and disposal of asbestos waste will comply with 40 CFR 61, Subpart M, DOT regulations, and Virginia Solid Waste Management Regulations VR 672-20-10. Workers will wear appropriate respirators and personal protective equipment when handling asbestos material at the disposal site.

c. Signs will remain until final cleanup is completed and the air monitoring indicates the area safe for reoccupancy. The contracting officer, or during in-house abatement projects the Asbestos Coordinator, will be notified before unrestricted entry in the area is permitted.

d. Do not transport asbestos waste in the passenger compartment of any vehicle. Line the transporting area of the vehicle with polysheeting. Once asbestos waste has been unloaded remove polysheeting and dispose of as

contaminated asbestos waste.

e. Ensure all asbestos waste is properly documented from point of origin to the Central Accumulation Site to the final landfill. Documentation of proper disposal of asbestos waste at the landfill will be provided to the contracting officer within 3 working days after delivery.

FORM 1

PERIODIC SURVEILLANCE

Building _____.

Reinspections by an accredited EPA AHERA Building Inspector shall be conducted once every three years beginning in: _____.

Periodic Surveillance activities must be conducted once every year by an individual who is aware of potential hazards of asbestos and is able to recognize changes in material condition. Periodic surveillance shall be conducted every year beginning in: _____.

LOG OF INSPECTIONS

<u>DATE</u>	<u>TYPE OF INSPECTION</u>	<u>PERFORMED BY</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

FORM 2

RECORD OF ASBESTOS PROBLEM OR FIBER RELEASE EPISODE

This form is to be kept by the Asbestos Coordinator as documentation of both major and minor fiber release episodes or problems.

DIRECTIONS: Record all information in the event of any fiber release episode or problem.

Date: _____ Facility No: _____ Reported

By: _____ Location/Description: _____

Industrial Hygiene Notified: YES NO Date: _____

Date: _____ Preventive Measures Taken: _____

Size: _____ Notification Required: YES NO Date: _____

Date: _____ Final Repair/Clean-up Method: _____

Repairs By: _____

Date completed and Facility Reopened: _____

FORM 3

ASBESTOS WORK PERMIT

Building Number: _____ Date: _____

Location (specific rooms or area): _____

Contact Name: _____ Phone: _____

Description of work to be done:

By: In-house ___ Contract ___ Work Order No: _____

Estimated amount of asbestos involved: _____

State notification required: YES NO

Personnel Protection required: YES NO

Air monitoring required: YES NO See Industrial Hygiene

Special Requirements: _____

APPROVED: In-house Contract

DISAPPROVED: (Reason) _____

Asbestos Coordinator: _____ Date: _____

1.

FORM 4

ASBESTOS ABATEMENT FINAL REPORT

Building Number: _____

Work Order Number: _____

Start Date: _____ Completion Date: _____

Description and quantity of asbestos materials removed (include sketch):

Names of DPW personnel or Contractor involved:

Attach copies of all air monitoring results including final clearance.

Signature of responsible person: _____

Date: _____

FORM 5

**VIRGINIA AND FEDERAL
ASBESTOS PERMIT APPLICATION AND NOTIFICATION
FOR DEMOLITION/RENOVATION**



DLI PERMIT NUMBER: _____

ASBESTOS PERMIT APPLICATION AND NOTIFICATION FOR DEMOLITION / RENOVATION

1. TYPE OF NOTIFICATION: ORIGINAL AMENDED CANCEL NESHAPS

2. FACILITY INFORMATION: (facility owner, removal, demolition & other contractors)

OWNER: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

CONTACT: _____ TELEPHONE #: _____

REMOVAL CONTRACTOR: _____ LICENSE #: _____

FEDERAL EMPLOYER IDENTIFICATION NUMBER: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

CONTACT: _____ TELEPHONE: _____

DEMOLITION CONTRACTOR: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

CONTACT: _____ TELEPHONE #: _____

OTHER OPERATOR: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

CONTACT: _____ TELEPHONE #: _____

3. TYPE OF OPERATION: DEMOLITION RENOVATION EMERGENCY RENOVATION ENCAPSULATE

4. IS ASBESTOS PRESENT: YES NO

5. FACILITY DESCRIPTION (INCLUDE BUILDING NAME, NUMBER AND FLOOR OR ROOM NUMBER):

BUILDING NAME: _____

STREET ADDRESS: _____ COUNTY: _____

CITY: _____ STATE: _____ ZIP CODE: _____

SITE LOCATION: _____

BUILDING SIZE: _____ # FLOORS: _____ AGE IN YEARS: _____

PRESENT USE: _____ PRIOR USE: _____

6. SCHEDULED DATES: REMOVAL START: _____ FINISH: _____

REMOVAL TIMES: _____ DAYS OF OPERATION: (MON - SUN) _____

WORKSHIFT HOURS: (MON - FRI) _____

(SAT - SUN) _____

7. SCHEDULED DATES: DEMOLITION START: _____ FINISH: _____

ASBESTOS PERMIT APPLICATION AND NOTIFICATION FOR DEMOLITION/RENOVATION

8. PROCEDURE, INCLUDING ANALYTICAL METHOD, USED TO DETECT THE PRESENCE OF ASBESTOS:

INSPECTOR:		VA. CERTIFICATION #:	
9. ACM TO BE REMOVED		10. ACM NOT REMOVED	
DESCRIPTION	AMOUNT	DESCRIPTION	AMOUNT
PIPE	LNFT	FRIABLE	FT
SURFACE AREA	SQFT	CATEGORY I	FT
VOL. ACM OFF FACILITY (NESHAPS)	CUFT	CATEGORY II	FT

11. DESCRIPTION OF PLANNED DEMOLITION OR RENOVATION WORK, AND METHOD(S) TO BE USED:

12. DESCRIPTION OF WORK PRACTICES AND ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE DEMOLITION AND RENOVATION SITE:

13. WASTE TRANSPORTER #1: NAME:

ADDRESS:

CITY:

STATE:

ZIP CODE:

CONTACT:

TELEPHONE:

WASTE TRANSPORTER #2: NAME:

ADDRESS:

CITY:

STATE:

ZIP CODE:

CONTACT:

TELEPHONE:

14. WASTE DISPOSAL SITE: NAME:

LOCATION:

CITY:

STATE:

ZIP CODE:

TELEPHONE:

LANDFILL PERMIT #:

15. IF DEMOLITION ORDERED BY A GOVERNMENT AGENCY, IDENTIFY THE AGENCY BELOW:

NAME:

TITLE:

AUTHORITY:

DATE OF ORDER: _____ DATE ORDERED TO BEGIN: _____

16. FOR EMERGENCY RENOVATIONS:

DATE AND HOUR OF EMERGENCY: _____ TIME: _____

DESCRIPTION OF THE SUDDEN, UNEXPECTED EVENT:

EXPLANATION OF HOW THE EVENT CAUSED UNSAFE CONDITIONS OR WOULD CAUSE EQUIPMENT DAMAGE

17. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR

ASBESTOS PERMIT APPLICATION AND NOTIFICATION FOR DEMOLITION/RENOVATION

PREVIOUSLY NONFRIABLE ASBESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED, OR REDUCED TO POWDER:

18. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THE NESHAP REGULATIONS WILL BE ON-SITE DURING THE DEMOLITION OR RENOVATION AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE AT THE PROJECT SITE FOR INSPECTION. (40 CFR PART 61, SUBPART M, REQUIRED AFTER NOVEMBER 20, 1991)

SUPERVISOR:	_____	LICENSE #:	_____
PROJECT MONITOR:	_____	LICENSE #:	_____
PROJECT DESIGNER:	_____	LICENSE #:	_____
LABORATORY:	_____	LICENSE #:	_____

SIGNATURE OF OWNER/OPERATOR _____ DATE: _____

19. I CERTIFY THAT THE INFORMATION SUBMITTED IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND THAT ACCREDITED PERSONS ARE BEING USED ON THIS PROJECT.

NAME: _____ TITLE: _____

SIGNATURE: _____ DATE: _____

20. AMOUNT OF ASBESTOS FEE SUBMITTED: \$ _____

An asbestos project permit fee shall be submitted with the completed project notification. The fee shall be in accordance with the following schedule unless a blanket notification (as described below) is granted.

1. \$50 for each project equal to or greater than 10 linear feet or 10 square feet up to and including 260 linear feet or 160 square feet.
2. \$100 for each project equal to or greater than 260 linear feet or 160 square feet up to and including 2600 linear feet 1600 square feet.
3. \$470 for each project of more than 2600 linear feet or 1600 square feet.
4. If the amount of the asbestos is reported in both linear feet and square feet the amounts will be added and treated as if the total were all in square feet for this subsection.
5. \$15 for each amended notification.

A blanket notification, valid for a period of one year, may be granted to a contractor who enters into a contract for asbestos removal or encapsulation on a specific site which is expected to last one year or longer.

Address all notifications as described below:

ASBESTOS PROGRAM
DEPARTMENT OF LABOR AND INDUSTRY
POWERS-TAYLOR BUILDING
13 SOUTH THIRTEENTH STREET
RICHMOND, VA. 23219
FAX (804) 371-7634

CREDIT CARD TYPE: (CHECK ONE)

VISA CARD # _____ EXP. DATE: _____

MASTERCARD AUTHORIZED SIGNATURE: _____

FORM 6

ASBESTOS AND LEAD-BASED PAINT CAUTION FORM

PROJECT NUMBER: _____
FACILITY: _____
WORK DESCRIPTION: _____

DPW has completed a survey in accordance with Army Regulation 200-1, which requires that all Army structures be surveyed to determine the location, quantity and condition of any asbestos containing materials (ACM). A similar survey will be conducted to evaluate the extent of lead-based paint (LBP) in selected facilities. This information will be provided to building occupants to prevent the accidental disturbance of these materials. It is understood that some areas may require additional sampling to fully identify all potential problems.

The following materials have been identified in your facility:

I, the undersigned, hereby verify that I have been informed of the presence or possible presence of asbestos containing material and/or lead-based paint in this facility.

Prior to working in the facility of known or assumed asbestos containing material and/or lead-based paint, I shall notify DPW, obtain approval and follow procedures designed to protect myself, other building occupants, and the environment.

I fully understand that the materials mentioned above must not be disturbed, removed, or altered in any fashion. Work which requires the disturbance of ACM or LBP must be accomplished by properly trained and licensed personnel. Coordinate with DPW to ensure the material is handled and disposed of in accordance with all appropriate Federal/State laws and regulations.

Name of Requestor _____(please print)
Signature _____
Organization _____
Telephone number _____