

VA WNY Health Care System
3495 Bailey Avenue
Buffalo, New York

SECTION 02 82 11
ASBESTOS ABATEMENT

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ASBESTOS ABATEMENT SPECIFICATIONS

PART 1 - GENERAL

1.1 SUMMARY OF THE WORK

1.1.1 CONTRACT DOCUMENTS AND RELATED REQUIREMENTS

Drawings, general provisions of the contract, including general and supplementary conditions and other Division 01 specifications, shall apply to the work of this section. The contract documents show the work to be done under the contract and related requirements and conditions impacting the project. Related requirements and conditions include applicable codes and regulations, notices and permits, existing site conditions and restrictions on use of the site, requirements for partial owner occupancy during the work, coordination with other work and the phasing of the work. In the event the Asbestos Abatement Contractor discovers a conflict in the contract documents and/or requirements or codes, the conflict must be brought to the immediate attention of the Contracting Officer for resolution. Whenever there is a conflict or overlap in the requirements, the most stringent shall apply. Any actions taken by the Contractor without obtaining guidance from the Contracting Officer shall become the sole risk and responsibility of the Asbestos Abatement Contractor. All costs incurred due to such action are also the responsibility of the Asbestos Abatement Contractor.

1.1.2 EXTENT OF WORK

- A. Below is a brief description of the estimated quantities of asbestos containing materials to be abated. These quantities are for informational purposes only and are based on the best information available at the time of the specification preparation. The Contractor shall satisfy himself as the actual quantities to be abated. Nothing in this section may be interpreted as limiting the extent of work otherwise required by this contract and related documents.
- B. Removal, clean-up and disposal of asbestos containing materials (ACM) and asbestos/waste contaminated elements in an appropriate regulated area for the following approximate quantities;
 - 1. Insert approximate quantities of ACM or PACM to be abated.

1.1.3 RELATED WORK

- A. Section 07 84 00, FIRESTOPPING.
- B. Section 02 41 00, DEMOLITION.
- C. Division 09, FINISHES

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- D. Division 22, PLUMBING.
- E. Section 21 05 11, COMMON WORK RESULTS FOR FIRE SUPPRESSION / Section 22 05 11, COMMON WORK RESULTS FOR PLUMBING / Section 23 05 11, COMMON WORK RESULTS FOR HVAC AND STEAM GENERATION.
- F. Section 21 05 11, COMMON WORK RESULTS FOR FIRE SUPPRESSION / Section 22 05 11, COMMON WORK RESULTS FOR PLUMBING / Section 23 05 11, COMMON WORK RESULTS FOR HVAC AND STEAM GENERATION
- G. Section 23 07 11, HVAC, PLUMBING, AND BOILER PLANT INSULATION.
- H. Section 22 05 19, METERS AND GAGES FOR PLUMBING PIPING / Section 22 05 23, GENERAL-DUTY VALVES FOR PLUMBING PIPING / Section 22 05 33, HEAT TRACING FOR PLUMBING PIPING / Section 22 11 00, FACILITY WATER DISTRIBUTION / Section 22 13 00, FACILITY SANITARY SEWERAGE / Section 22 13 23, SANITARY WASTE INTERCEPTORS / Section 22 14 00, FACILITY STORM DRAINAGE / Section 22 66 00, CHEMICAL-WASTE SYSTEMS FOR LABORATORY AND HEALTHCARE FACILITIES / Section 23 11 23, FACILITY NATURAL-GAS PIPING.
- I. Section 23 21 13, HYDRONIC PIPING / Section 23 22 13, STEAM AND CONDENSATE HEATING PIPING.
- J. Section 23 31 00, HVAC DUCTS AND CASINGS / Section 23 37 00, AIR OUTLETS AND INLETS.

1.1.4 TASKS

The work tasks are summarized briefly as follows:

- A. Pre-abatement activities including pre-abatement meeting(s), inspection(s), notifications, permits, submittal approvals, regulated area preparations, emergency procedures arrangements, and standard operating procedures for asbestos abatement work.
- B. Abatement activities including removal, encapsulation, clean-up and disposal of ACM waste, recordkeeping, security, monitoring, and inspections.
- C. Cleaning and decontamination activities including final visual inspection, air monitoring and certification of decontamination.

1.1.5 CONTRACTORS USE OF PREMISES

- A. The Contractor and Contractor's personnel shall cooperate fully with the VA representative/consultant to facilitate efficient use of buildings and areas within buildings. The Contractor shall perform the work in accordance with the VA specifications, drawings, phasing plan and in compliance with any/all applicable Federal, identified State and Local regulations and requirements.
- B. The Contractor shall use the existing facilities in the building strictly within the limits indicated in contract documents as well as the approved

pre-abatement work plan. Asbestos abatement drawings of partially occupied buildings will show the limits of regulated areas; the placement of decontamination facilities; the temporary location of bagged waste ACM; the path of transport to outside the building; and the temporary waste storage area for each building/regulated area. Any variation from the arrangements shown on drawings shall be secured in writing from the VA representative through the pre-abatement plan of action.

1.2 VARIATIONS IN QUANTITY

The quantities and locations of ACM as indicated on the drawings and the extent of work included in this section are estimated which are limited by the physical constraints imposed by occupancy of the buildings. Accordingly, minor variations (+/- 5%) in quantities of ACM within the regulated area are considered as having no impact on contract price and time requirements of this contract. Where additional work is required beyond the above variation, the contractor shall provide unit prices for newly discovered materials and those prices shall be used for additional work required under the contractor. Unit prices are to be provided before the commencement of the work.

1.3 STOP ASBESTOS REMOVAL

If the Contracting Officer; their field representative; or the VPIH/CIH presents a written **Stop Asbestos Removal Order**, the Contractor/Personnel shall immediately stop all asbestos removal and maintain HEPA filtered air flow and adequately wet any exposed ACM. The Contractor shall not resume any asbestos removal activity until authorized to do so by the VA. A stop asbestos removal order may be issued at any time the VA determines abatement conditions/activities are not within specification requirements. Work stoppage will continue until conditions have been corrected to the satisfaction of the VA. Standby time and costs for corrective actions will be borne by the Contractor, including the industrial hygienist's time. The occurrence of any of the following events shall be reported immediately by the Contractor's competent person in writing to the VA representative and shall require the Contractor to immediately stop asbestos removal/disturbance activities and initiate fiber reduction activities:

- A. \geq 0.01 f/cc outside a regulated area or >0.05 f/cc inside a regulated area;
- B. breach/break in regulated area barrier(s);
- C. less than -0.02" WCG pressure in the regulated area;
- D. serious injury/death at the site;

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- E. fire/safety emergency at the site;
- F. respiratory protection system failure;
- G. power failure or loss of wetting agent; or
- H. any visible emissions observed outside the regulated area.

1.4 DEFINITIONS

1.4.1 GENERAL

Terminology and definitions inherent with asbestos abatement projects can be found in the definitions section 40 CFR Part 763, 29 CFR 1926.1101 and 12 NYCRR 56 definitions.

1.4.2 GLOSSARY

Authorized person - Any person authorized by the VA, the Contractor, or government agency and required by work duties to be present in regulated areas.

Authorized visitor - Any person approved by the VA; the contractor; or any government agency having jurisdiction over the regulated area.

Building/facility owner's Authorized Representative. A licensed asbestos contractor firm contractually responsible for execution of any building owner's responsibility, as required by this Part, during any phase of an asbestos project at the building owner's building/structure.

Contractor's Competent person - In addition to the definition in 29 CFR 1926.32(f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f); in addition, for Class I and II work who is specially trained in a training course which meets the criteria of EPA's Model Accreditation Plan (40 CFR 763) for supervisor.

Firestopping - Material used to close the open parts of a structure in order to prevent a fire from spreading.

Project Monitor - Person hired by the VA who meets the definition requirements of OSHA as a "Competent Person" at 29 CFR 1926.1101 (b); has completed EPA/NYSDOL approved courses for air sampling technician and project monitor; has formal training in respiratory protection and waste disposal; and has a minimum of four projects of similar complexity with this project of which at least three projects serving as the project monitor.

Operations Work Plan - Asbestos work procedures required to be submitted by the contractor before work begins.

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VA Authorized Representative. A licensed asbestos contractor firm contractually responsible for execution of any VA's responsibility during any phase of an asbestos project in a VA structure/building.

VA COTR - The VA official responsible for on-going project work.

1.4.3 REFERENCED STANDARDS ORGANIZATIONS

The following acronyms or abbreviations as referenced in contract/specification documents are defined to mean the associated names.

Names and addresses may be subject to change.

- A. VA Department of Veterans Affairs
810 Vermont Avenue, NW
Washington, DC 20420
- B. AIHA American Industrial Hygiene Association
2700 Prosperity Avenue, Suite 250
Fairfax, VA 22031
703-849-8888
- C. ANSI American National Standards Institute
1430 Broadway
New York, NY 10018
212-354-3300
- D. ASTM American Society for Testing and Materials
1916 Race St.
Philadelphia, PA 19103
215-299-5400
- E. CFR Code of Federal Regulations
Government Printing Office
Washington, DC 20420
- F. CGA Compressed Gas Association
1235 Jefferson Davis Highway
Arlington, VA 22202
703-979-0900
- G. CS Commercial Standard of the National Institute of Standards and Technology (NIST)
U. S. Department of Commerce
Government Printing Office
Washington, DC 20420
- H. EPA Environmental Protection Agency
401 M St., SW
Washington, DC 20460
202-382-3949

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- I. MIL-STD Military Standards/Standardization Division
Office of the Assistant Secretary of Defense
Washington, DC 20420
- J. MSHA Mine Safety and Health Administration
Respiratory Protection Division
Ballston Tower #3
Department of Labor
Arlington, VA 22203
703-235-1452
- K. NIST National Institute for Standards and Technology
U. S. Department of Commerce
Gaithersburg, MD 20234
301-921-1000
- L. NEC National Electrical Code (by NFPA)
- M. NEMA National Electrical Manufacturer's Association
2101 L Street, N.W.
Washington, DC 20037
- N. NFPA National Fire Protection Association
1 Batterymarch Park
P.O. Box 9101
Quincy, MA 02269-9101
800-344-3555
- O. NIOSH National Institutes for Occupational Safety and Health
4676 Columbia Parkway
Cincinnati, OH 45226
513-533-8236
- P. OSHA Occupational Safety and Health Administration
U.S. Department of Labor
Government Printing Office
Washington, DC 20402
- Q. UL Underwriters Laboratory
333 Pfingsten Rd.
Northbrook, IL 60062
312-272-8800

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R. USA United States Army
Army Chemical Corps
Department of Defense
Washington, DC 20420

S. New York State Department of Labor

1.5 APPLICABLE CODES AND REGULATIONS

1.5.1 GENERAL APPLICABILITY OF CODES, REGULATIONS, AND STANDARDS

- A. All work under this contract shall be done in strict accordance with all applicable Federal, identified State, and local regulations, standards and codes governing asbestos abatement, and any other trade work done in conjunction with the abatement. All applicable codes, regulations and standards are adopted into this specification and will have the same force and effect as this specification.
- B. The most recent edition of any relevant regulation, standard, document or code shall be in effect. Where conflict among the requirements or with these specifications exists, the most stringent requirement(s) shall be utilized.

1.5.2 ASBESTOS ABATEMENT CONTRACTOR RESPONSIBILITY

The Asbestos Abatement Contractor (Contractor) shall assume full responsibility and liability for compliance with all applicable Federal, identified State and Local regulations related to any and all aspects of the abatement project. The Contractor is responsible for providing and maintaining training, accreditations, medical exams, medical records, personal protective equipment as required by applicable Federal, identified State and Local regulations. The Contractor shall hold the VA and VA Authorized Representatives harmless for any Contractor's failure to comply with any applicable work, packaging, transporting, disposal, safety, health, or environmental requirement on the part of himself, his employees, or his subcontractors. The Contractor will incur all costs of the Contractor's Competent Person, including all sampling/analytical costs to assure compliance with OSHA requirements. In addition, any costs (labor, materials, and air sampling labor and analysis) after a failed final clearance will be the responsibility of the Contractor.

1.5.3 FEDERAL REQUIREMENTS

Federal requirements which govern asbestos abatement include, but are not limited to, the following regulations.

- A. Occupational Safety and Health Administration (OSHA)
 - 1. Title 29 CFR 1926.1101 - Construction Standard for Asbestos
 - 2. Title 29 CFR 1910.132 - Personal Protective Equipment

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3. Title 29 CFR 1910.134 - Respiratory Protection
4. Title 29 CFR 1926 - Construction Industry Standards
5. Title 29 CFR 1910.20 - Access to Employee Exposure and Medical Records
6. Title 29 CFR 1910.1200 - Hazard Communication
7. Title 29 CFR 1910.151 - Medical and First Aid

B. Environmental Protection Agency (EPA):

1. 40 CFR 61 Subpart A and M (Revised Subpart B) - National Emission Standard for Hazardous Air Pollutants - Asbestos.
2. 40 CFR 763.80 - Asbestos Hazard Emergency Response Act (AHERA)

C. Department of Transportation (DOT)

Title 49 CFR 100 - 185 - Transportation

1.5.4 STATE REQUIREMENTS

State requirements that apply in part or in whole to asbestos, include, but are not limited to, the following:

- A. 6 New York Code of Rules & Regulations Part 364 Waste Transporter Permits
- B. 6 NYCRR Part 360 Solid Waste Management Facilities
- C. 12 NYCRR Part 56, Asbestos

1.5.5 STANDARDS

A. Standards which govern asbestos abatement activities include, but are not limited to, the following:

1. American National Standards Institute (ANSI) Z9.2-79 - Fundamentals Governing the Design and Operation of Local Exhaust Systems Z88.2 - Practices for Respiratory Protection.
2. Underwriters Laboratories (UL) 586-90 - UL Standard for Safety of HEPA Filter Units, 7th Edition.

B. Standards which govern encapsulation work include, but are not limited to the following:

1. American Society for Testing and Materials (ASTM)

C. Standards which govern the fire and safety concerns in abatement work include, but are not limited to, the following:

1. National Fire Protection Association (NFPA) 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations.
2. NFPA 701 - Standard Methods for Fire Tests for Flame Resistant Textiles and Film.
3. NFPA 101 - Life Safety Code

1.5.6 EPA GUIDANCE DOCUMENTS

EPA guidance documents which discuss asbestos abatement work activities are listed below. These documents are made part of this section by reference. EPA publications can be ordered from (800) 424-9065.

- A. Guidance for Controlling ACM in Buildings (Purple Book) EPA 560/5-85-024
- B. Asbestos Waste Management Guidance EPA 530-SW-85-007
- C. A Guide to Respiratory Protection for the Asbestos Abatement Industry EPA-560-OPTS-86-001
- D. Guide to Managing Asbestos in Place (Green Book) TS 799 20T July 1990

1.5.7 NOTICES

- A. Send written notification as required by the EPA prior to beginning any work on ACM.
- B. Provide notification of asbestos work to building occupants according to 12 NYCRR Part 56-3.6(a).
- C. Copies of notifications shall be submitted to the VA for the facility's records concurrently with notification to the EPA and Building occupants.

1.5.8 PERMITS/LICENSES

- A. The contractor shall apply for and have all required permits and licenses to perform asbestos abatement work as required by Federal and State regulations.

1.5.9 VA RESPONSIBILITIES

Prior to commencement of work:

- A. Notify occupants adjacent to regulated areas of project dates and requirements for relocation, if needed. Arrangements must be made prior to starting work for relocation of desks, files, equipment and personal possessions to avoid unauthorized access into the regulated area.
- B. The VA's Authorized Representative shall have three (3) years of project monitoring and air sampling experience for asbestos abatement projects; was project monitor for three (3) asbestos abatement projects which are similar in size and complexity as this project; has completed the EPA/NYSDOL training requirements/accreditation and refreshers for Air Sampling Technician and Project Monitor; and has appropriate medical/respiratory protection records/documentation.
- C. Ensure that the VA's Authorized Representative provides results of background air sampling to the Contractor that includes location of samples, person who collected the samples, equipment utilized and method of analysis. During abatement, VA's Authorized Representative will submit results of any bulk material analysis and air sampling data collected during

the course of the abatement to the Contractor. This information shall not release the Contractor from any responsibility for OSHA compliance.

1.5.10 SITE SECURITY

- A. Regulated area access is to be restricted to authorized, trained/accredited and protected personnel. This may include Contractor employees, employees of Subcontractors, VA employees and representatives, and any other designated individuals.
- B. Entry into the regulated area by unauthorized individuals shall be reported immediately to the Contractor's Competent Person by anyone observing the entry. The Contractor's Competent Person shall immediately notify the VA COTR.
- C. A sign-in sheet shall be maintained in the clean room of the decontamination unit. Anyone who enters the regulated area must record their name, affiliation, date, time in, and time out for each entry.
- D. Access to the regulated area shall be through a single decontamination unit. All other access (doors, windows, hallways, etc.) shall be sealed or locked to prevent entry to or exit from the regulated area. The only exceptions for this requirement are the waste/equipment load-out area during the removal of containerized asbestos waste from the regulated area, and emergency exits. Emergency exits shall not be locked from the inside, however, they shall be sealed with poly sheeting and taped until needed.
- E. The Contractor's Competent Person shall control site security during abatement operations and in the off-shift. The entrance shall be secured against and/or locked to prevent unauthorized personnel from entering.
- F. The Contractor will have the VA's assistance enforcement of restricted access to the regulated area.

1.5.11 EMERGENCY ACTION PLAN AND ARRANGEMENTS

- A. An Emergency Action Plan shall be developed prior to commencing abatement activities and shall be agreed to by the Contractor and the VA. The Plan shall meet the requirements of 29 CFR 1910.38 (a);(b).
- B. Emergency procedures shall be in written form and prominently posted in the clean room and equipment room of the decontamination unit. Prior to entering the regulated area everyone must read and sign these procedures to acknowledge understanding of the regulated area layout, location of emergency exits and emergency procedures.
- C. Emergency planning shall include written procedures on how to notify police, fire, and emergency medical personnel in an emergency; layout of

regulated area showing access and barriers that may affect response capabilities.

- D. Emergency planning shall include written procedures to address fire, explosion, hazardous atmospheres, electrical hazards, slips/trips and falls, confined spaces, and heat stress illness hazards as applicable.
- E. All Contractor employees must be trained in emergency procedures to include evacuation procedures in the event of workplace emergencies.
 - 1. For non life-threatening situations - employees injured or otherwise incapacitated shall decontaminate following normal procedures with assistance from fellow workers, if necessary, before exiting the regulated area to obtain proper medical treatment.
 - 2. For life-threatening injury or illness, worker shall be decontaminated after measures to stabilize the injured worker, remove them from the regulated area, and secure proper medical treatment.
- F. Telephone numbers of any/all emergency response personnel shall be prominently posted in the clean room, along with the location of the nearest telephone.
- G. The Contractor shall provide verification of first aid/CPR training for personnel responsible for providing first aid/CPR. OSHA requires medical assistance within 3-4 minutes of a life-threatening injury/illness. Bloodborne Pathogen training shall also be verified for those personnel required to provide first aid/CPR.
- H. The Emergency Action Plan shall provide for a Contingency Plan in the event that an incident occurs that may require the modification of the standard operating procedures during abatement. Such incidents include, but are not limited to, fire; accident; power failure; negative pressure failure; and supplied air system failure. The Contractor shall detail procedures to be followed in the event of an incident assuring that asbestos abatement work is stopped and wetting is continued until correction of the problem.

1.5.12 PRE-ABATEMENT MEETING

The Contractor and Contractor's Competent Person shall meet with the VA Certified Industrial Hygienist to discuss and determine procedures to be used during the project as well as submittals that will be required prior to starting work.

1.6 PROJECT COORDINATION

The following are the minimum administrative and supervisory personnel necessary for coordination of the work.

1.6.1 PERSONNEL

- A. Contractor's Competent Person(s) is responsible for compliance with these specifications and all other applicable requirements.
- B. Non-supervisory personnel shall consist of an adequate number of qualified personnel to meet the schedule requirements of the project.
- C. Minimum qualifications for Contractor and Contractor personnel are:
 - 1. The Contractor has conducted within the last three (3) years, three (3) projects of similar complexity and dollar value as this project; has not been cited and penalized for serious violations of asbestos regulations in the past three (3) years; has adequate liability/occurrence insurance for asbestos work; is licensed in applicable states; has adequate and qualified personnel available to complete the work; has comprehensive standard operating procedures for asbestos work; has adequate materials, equipment and supplies to perform the work.
 - 2. The Contractor's Competent Person has four (4) years of abatement experience of which two (2) years were as a Project Supervisor; meets the OSHA definition of a Competent Person; has been the Project Supervisor on two (2) projects of similar size and complexity as this project; has completed EPA/NYSDEL training requirements/accreditation(s) and refreshers for Contractor/Supervisor; and has all required OSHA documentation related to medical and respiratory protection.
 - 3. The Abatement Personnel shall have completed the EPA/NYSDEL training requirements/accreditation(s) and refreshers for worker course; have training on the standard operating procedures of the Contractor; have one year of asbestos abatement experience; have applicable medical and respiratory protection documentation; have current NYSDOL certificate.

1.7 RESPIRATORY PROTECTION

1.7.1 GENERAL - RESPIRATORY PROTECTION PROGRAM

The Contractor shall develop and implement a Respiratory Protection Program (RPP) which is in compliance with the most current OSHA requirements found at 29 CFR 1926.1101 and 29 CFR 1910.134. ANSI Standard Z88.2-1992 provides excellent guidance for developing a respiratory protection program. All respirators used must be NIOSH approved for asbestos abatement activities. The written respiratory protection shall, at a minimum, contain the requirements found at 29 CFR 1910.134 (c)(1)(i - ix) - Respiratory Protection Program.

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1.8 WORKER PROTECTION

1.8.1 TRAINING OF ABATEMENT PERSONNEL

Prior to beginning any abatement activity, all personnel shall be trained in accordance with OSHA 29 CFR 1926.1101(k)(9) and EPA/NYSDEL requirements for asbestos abatement. Training shall have been conducted by a third party, EPA/NYS approved trainer.

1.8.2 MEDICAL EXAMINATIONS

Medical examinations meeting the requirements of 29 CFR 1926.1101 (m) shall be provided for all personnel working in the regulated area, regardless of exposure levels. A current physician's written opinion as required by 29 CFR 1926.1101 (m)(4) shall be provided for each person.

1.8.3 PERSONAL PROTECTIVE EQUIPMENT

Provide whole body clothing, head coverings, gloves and foot coverings and any other personal protective equipment as determined by conducting the hazard assessment required by OSHA at 29 CFR 1910.132(d). The Contractor's Competent Person shall ensure the integrity of personal protective equipment worn for the duration of the project.

1.8.4 REGULATED AREA ENTRY PROCEDURE

The Contractor's Competent Person shall ensure that each time workers enter the regulated area, they comply with the requirements in 12 NYCRR Part 56-8.3(a).

1.8.5 PERSONAL DECONTAMINATION PROCEDURE

The Contractor's Competent Person shall require all personnel to adhere to the requirements in 12 NYCRR Part 56-8.3(a)(2).

1.8.6 REGULATED AREA REQUIREMENTS

The Contractor's Competent Person shall meet all requirements of 29 CFR 1926.1101 (o) and assure that all requirements for regulated areas at 29 CFR 1926.1101 (e) are met. All personnel in the regulated area shall not be allowed to eat, drink, smoke, chew tobacco or gum, apply cosmetics, or in any way interfere with the fit of their respirator.

1.9 DECONTAMINATION FACILITIES

1.9.1 DESCRIPTION

Each regulated area will have a with personnel (PDF) and waste/equipment decontamination facilities (WEDF) or a combination PEF/WEDF facility. Ensure that the PDF are the only means of ingress and egress to the regulated area and that all equipment, bagged waste, and other material exit the regulated area only through the WEDF.

1.9.2 GENERAL REQUIREMENTS

All personnel entering or exiting a regulated area must go through the PDF and shall follow the requirements of 12 NYCRR Part 56-8.3(a)(2). All waste, equipment and contaminated materials must exit the regulated area through the WEDF and be decontaminated in accordance with 12 NYCRR Part 56-8.9. The PDF/WEDF will be constructed in accordance with the requirements of 12 NYCRR Part 56-7.5. If the building adjacent area is occupied, construct a solid barrier on the occupied side(s) to protect the sheeting and reduce potential for non-authorized personnel entering the regulated area.

1.9.3 TEMPORARY FACILITIES TO THE PDF AND WEDF

The Contractor's Competent Person shall work with the COTR to ensure temporary utilities are available for use in the restricted area. Backflow prevention must be provided at the point of connection to the VA water system. Water supply must be of adequate pressure and meet requirements of 29 CFR 1910.141(b). All electrical devices in the restricted area will be attached to a ground fault circuit interruption (GFCI). A sub-panel should provide temporary power.

PART 2 - PRODUCTS, MATERIALS AND EQUIPMENT

2.1 MATERIALS AND EQUIPMENT

2.1.1 GENERAL REQUIREMENTS

Prior to the start of work, the contractor shall provide and maintain a sufficient quantity of materials and equipment to assure continuous and efficient work throughout the duration of the project. Work shall not start unless the following items have been delivered to the site and the Contractor's Competent Person has submitted verification to the VA's representative.

- A. All materials shall be delivered in their original package, container or bundle bearing the name of the manufacturer and the brand name (where applicable).
- B. Store all materials subject to damage off the ground, away from wet or damp surfaces and under cover sufficient enough to prevent damage or contamination. Flammable materials cannot be stored inside buildings. Replacement materials shall be stored outside of the regulated area until abatement is completed.
- C. The Contractor shall not block or hinder use of buildings by patients, staff, and visitors to the VA in partially occupied buildings by placing materials/equipment in any unauthorized place.

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- D. The contractor's Competent Person shall inspect for damaged, deteriorating or previously used materials. Such materials shall not be used and shall be removed from the worksite and disposed of properly.
- E. Polyethylene sheeting in the regulated area and PDF/WEDF shall be a minimum of 6-mils. And fire retardant.
- F. The method of attaching polyethylene sheeting shall be agreed upon in advance by the Contractor and the VA and selected to minimize damage to equipment and surfaces. Method of attachment may include any combination of moisture resistant duct tape, furring strips, spray glue, staples, nails, screws, lumber and plywood for enclosures or other effective procedures capable of sealing polyethylene to dissimilar finished or unfinished surfaces under both wet and dry conditions.
- G. Installation and plumbing hardware, showers, hoses, drain pans, sump pumps and waste water filtration system shall be provided by the Contractor.
- H. An adequate number of HEPA vacuums, scrapers, sprayers, nylon brushes, brooms, disposable mops, rags, sponges, staple guns, shovels, ladders and scaffolding of suitable height and length as well as meeting OSHA requirements, fall protection devices, water hose to reach all areas in the regulated area, airless spray equipment, and any other tools, materials or equipment required to conduct the abatement project. All electrically operated hand tools, equipment, electric cords shall be connected to GFCI protection.
- I. Special protection for objects in the regulated area shall be detailed (e.g., plywood over carpeting or hardwood floors to prevent damage from scaffolds, water and falling material).
- J. Disposal bags - 2 layers of 6 mil, for asbestos waste shall be pre-printed with labels, markings and address as required by OSHA, EPA and DOT regulations.
- K. The VA shall be provided a copy of the chemical inventory for all hazardous chemicals under OSHA 29 CFR 1910.1200 - Hazard Communication. Material Safety Data Sheets (MSDS) must be maintained in the work area. Chlorinated compounds shall not be used with any spray adhesive or other product. The contractor shall ensure appropriate encapsulant(s) is provided.
- M. OSHA DANGER demarcation signs, as many and as required by OSHA 29 CFR 1926.1101(k)(7) shall be provided and placed by the Contractor's Competent Person. All other posters and notices required by Federal and State regulations shall be posted in the Clean Room.

- N. Adequate and appropriate PPE for the project and number of personnel/shifts shall be provided. All personal protective equipment issued must be based on a hazard assessment conducted under 29 CFR 1910.132(d).

2.1.2 NEGATIVE PRESSURE FILTRATION SYSTEM

The Contractor shall maintain a negative air pressure, relative to areas outside of the enclosure in accordance with 12 NYCCR Part 56-7.8.

2.1.3 DESIGN AND LAYOUT

Before start of work submit the design and layout of the regulated area, PDF/WEDF, and the negative air machines. The submittal shall indicate the number of, location of and size of negative air machines. The point(s) of exhaust, air flow within the regulated area, anticipated negative pressure differential, and supporting calculations as well as the method of supplying power to the units and designation/location of the panels shall be submitted`.

2.1.4 NEGATIVE AIR MACHINES (HEPA UNITS)

When required for compliance with 29 CFR 1926.1101, the negative air machine must comply with the following:

- A. Negative Air Machine Cabinet: The cabinet shall be constructed of steel or other durable material capable of withstanding potential damage from rough handling and transportation. The width of the cabinet shall be less than 30" in order to fit in standard doorways. The cabinet must be factory sealed to prevent asbestos fibers from being released during use, transport, or maintenance. Any access to and replacement of filters shall be from the inlet end. The unit must be on casters or wheels.
- B. Negative Air Machine Fan: The rating capacity of the fan must indicate the CFM under actual operating conditions. Manufacturer's typically use "free-air" (no resistance) conditions when rating fans. The fan must be a centrifugal type fan.
- C. Negative Air Machine Final Filter: The final filter shall be a HEPA filter. The filter media must be completely sealed on all edges within a structurally rigid frame. The filter shall align with a continuous flexible gasket material in the negative air machine housing to form an air tight seal. Each HEPA filter shall be certified by the manufacturer to have an efficiency of not less than 99.97% when challenged with 0.3 μ m dioctylphthalate (DOP) particles. Testing shall have been done in accordance with Military Standard MIL-STD-282 and Army Instruction Manual 136-300-175A. Each filter must bear a UL586 label to indicate ability to perform under specified conditions. Each filter shall be marked with the

name of the manufacturer, serial number, air flow rating, efficiency and resistance, and the direction of test air flow.

- D. Negative Air Machine Pre-filters: The pre-filters, which protect the final HEPA filter by removing larger particles, are required to prolong the operating life of the HEPA filter. Two stages of pre-filtration are required. A first stage pre-filter shall be a low efficiency type for particles 10 μm or larger. A second stage pre-filter shall have a medium efficiency effective for particles down to 5 μm or larger. Pre-filters shall be installed either on or in the intake opening and the second stage filter must be held in place with a special housing or clamps.
- E. Negative Air Machine Instrumentation: Each unit must be equipped with a gauge to measure the pressure drop across the filters and to indicate when filters have become loaded and need to be changed. A table indicating the cfm for various pressure readings on the gauge shall be affixed near the gauge for reference or the reading shall indicate at what point the filters shall be changed, noting cfm delivery. The unit must have an elapsed time meter to show total hours of operation.
- F. Negative Air Machine Safety and Warning Devices: An electrical/ mechanical lockout must be provide to prevent the fan from being operated without a HEPA filter. Units must be equipped with an automatic shutdown device to stop the fan in the event of a rupture in the HEPA filter or blockage in the discharge of the fan.
- G. Negative Air Machine Electrical: All electrical components shall be approved by the National Electrical Manufacturer's Association (NEMA) and Underwriter's Laboratories (UL). Each unit must be provided with overload protection and the motor, fan, fan housing, and cabinet must be grounded.

2.1.1.5 PRESSURE DIFFERENTIAL

The fully operational negative air system within the regulated area shall continuously maintain a pressure differential of -0.02" water column gauge. The Contractor's Competent Person shall be responsible for providing, maintaining, and documenting the negative pressure and air changes as required by 12 NYCCR 56-7.3 and this specification.

2.1.1.6 MONITORING

The pressure differential shall be continuously monitored and recorded between the regulated area and the area outside the regulated area with a monitoring device that incorporates a strip chart recorder. The strip chart recorder shall become part of the project log and shall indicate at least -0.02" water column gauge for the duration of the project.

2.1.7 TESTING THE SYSTEM

The Contractor's Competent Person will demonstrate and document the operation and testing of the negative pressure system to the VA using smoke tubes and a negative pressure gauge. Testing must be done initially and at the start of each work shift.

2.1.8 DEMONSTRATION OF THE NEGATIVE AIR PRESSURE SYSTEM

The demonstration of the operation of the negative pressure system to the VA shall include, but not be limited to, the following:

- A. Plastic barriers and sheeting move lightly in toward the regulated area.
- B. Curtains of the decontamination units move in toward regulated area.
- C. There is a noticeable movement of air through the decontamination units. Use the smoke tube to demonstrate air movement from the clean room to the shower room to the equipment room to the regulated area.
- D. Use smoke tubes to demonstrate air is moving across all areas in which work is to be done. Use a differential pressure gauge to indicate a negative pressure of at least -0.02" across every barrier separating the regulated area from the rest of the building. Modify the system as necessary to meet the above requirements.

2.1.9 USE OF SYSTEM DURING ABATEMENT OPERATIONS

Use of the negative air system will comply with the requirements in 29 CFR 1926.1101, Asbestos, paragraph (g)(5)(i) and 12 NYCRR Part 56-7.8, Engineering Controls.

2.1.10 DISMANTLING THE SYSTEM

After satisfactory completion of the final visual and final air clearance and approval by the VA representative, the units may be shut down. The units shall have been **completely decontaminated**, all pre-filters removed and disposed of as asbestos waste, asbestos labels attached and the units inlet/outlet sealed with 2 layers of 6 mil poly.

2.2 CONTAINMENT BARRIERS AND COVERINGS IN THE REGULATED AREA

2.2.1 GENERAL

The regulated work area will be established and the work area prepared in accordance with the requirements of 29 CFR 1926.1101 (e) and/or 12 NYCRR Part 56-7. Should areas adjacent to the regulated area become contaminated, work shall immediately and the contaminated areas cleaned up at no additional cost to the VA.

2.2.2 CONTROLLING ACCESS TO THE REGULATED AREA

Access to the regulated area shall comply with 29 CFR 1926.1101 (j)(1) and/or 12 NYCRR Part 56-8.3. Any alternate method must be submitted for VA written approval.

2.2.3 FIRESTOPPING

- A. Through penetrations caused by cables, cable trays, pipes, sleeves must be firestopped with a fire-rated firestop system providing an air tight seal.
- B. Firestop materials that are not equal to the wall or ceiling penetrated shall be brought to the attention of the VA Representative. The contractor shall list all areas of penetration, the type of sealant used, and whether or not the location is fire rated. Any discovery of penetrations during abatement shall be brought to the attention of the VA representative immediately. All walls, floors and ceilings are considered fire rated unless otherwise determined by the VA Representative or Fire Marshall.
- C. Any visible openings whether or not caused by a penetration shall be reported by the Contractor to the VA Representative for a sealant system determination. Firestops shall meet ASTM E814 and UL 1479 requirements for the opening size, penetrant, and fire rating needed.

2.3 MONITORING, INSPECTION AND TESTING

2.3.1 GENERAL

- A. Project monitoring of the abatement work will be conducted by an independent third party consultant. The VA representative is responsible for arranging for these services. The independent third party consultant must follow the monitoring protocol established in 12 NYCRR Part 56 as well as the necessary inspections of the work site and recordkeeping. The cost of the air monitoring services will be borne by the VA except for any repeat of final inspection and testing that may be required due to unsatisfactory initial results. Any repeated final inspections and/or testing, if required, will be paid for by the Contractor.
- B. Personal air monitoring is the responsibility of Contractor and must comply with 29 CFR 1926.1101(f).
- C. If fibers counted during abatement work, either inside or outside the regulated area, utilizing the NIOSH 7400 air monitoring method, exceed the specified respective limits, the Contractor shall stop work. The Contractor may request confirmation of the results by analysis of the samples by TEM. Request must be in writing and submitted to the VA's representative. Cost for the confirmation of results will be borne by the Contractor for both the collection and analysis of samples and for the time delay that may/does result for this confirmation.

2.3.2 SCOPE OF SERVICES OF THE PROJECT MONITOR

- A. The purpose of the work of the Project Monitor is to: assure quality; adherence to the specification; resolve problems; prevent the spread of

contamination beyond the regulated area; and assure clearance at the end of the project. In addition, their work includes performing the final inspection and testing to determine whether the regulated area or building has been adequately decontaminated. All air monitoring is to be done utilizing PCM/TEM. The Project monitor perform monitoring and inspections in accordance with 12 NYCRR Part 56.

- B. All documentation, inspection results and testing results generated by the Project Monitor will be available to the Contractor for information and consideration. The Contractor shall cooperate with and support the Project Monitor for efficient and smooth performance of their work.
- C. The monitoring and inspection results of the Project Monitor will be used by the VA to issue any Stop Removal orders to the Contractor during abatement work and to accept or reject a regulated area or building as decontaminated.

2.3.3 MONITORING, INSPECTION AND TESTING BY CONTRACTOR'S COMPETENT PERSON

The Contractor's Competent person will ensure that personal air monitoring is conducted in accordance with 29 CFR 1926.1101(f). The Contractor's Competent Person will perform inspection and testing of the work areas as described in 12 NYCRR Part 56. Documentation will be maintained in accordance with 12 NYCRR Part 56-7.3, Asbestos Abatement Contractor Daily Project Log. In addition, the following items will be included in the log:

- A. Visual inspection by Project Monitor.
- B. Copies of all asbestos waste shipment records.
- C. A copy of the asbestos pre-construction asbestos survey.
- D. The quantity and location of asbestos that was removed.

2.4 OPERATIONS WORK PLAN

The Contractor must develop an Operations Work Plan in printed form consisting of text, diagrams, sketches, and pictures that establish and clearly explain the procedures to be followed during all phases of the work by the Contractor's personnel. The Operations Work Plan must be modified as needed to address specific requirements of this project and the specifications. The Operations Plan shall be submitted for review and approval prior to the start of any abatement work. The minimum topics and areas to be covered by the Operations Plan are:

- A. Personnel Qualifications
- B. Contractor Qualifications
- C. Copy of worker's Medical Surveillance Records
- D. Fire Alarm and Emergency Action Plan/Contingency Plans and Arrangements

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- E. Security and Safety Procedures
- F. Copy of Respirator fit tests and training
- G. Personal Protective Equipment to be used on the project
- H. Boundaries of the Regulated Area and location of any temporary walls.
- I. Proposed location and construction of storage facilities and field office.
- J. Location of water and electrical connections to building services.
- K. Waste transport routes through the building to the waste storage container.
- L. Location of the Decontamination Facilities and Entry/Exit Procedures
- M. Location of Negative Pressure Systems
- N. Removal Procedures for ACM to include any Phasing that may need be done.
- O. Removal of Contaminated Soil (if applicable)
- P. Final disposal location of ACM waste/equipment.

2.5 SUBMITTALS

- A. Operations Work Plan
- B. Site Specific Safety Plan with task hazard analysis
- C. A list of and verification of training for all personnel in the OSHA 10-hour construction safety training course. Contractor's Competent Person must show verification of the OSHA 30-hours construction safety training course.

2.5.1 PRE-START MEETING SUBMITTALS

Submit to the VA a minimum of 14 days prior to the pre-start meeting the following for review and approval. Meeting this requirement is a prerequisite for the pre-start meeting for this project:

- A. Operations Work Plan
- B. Proof that the required permits, site location and arrangements for transport and disposal of asbestos containing/contaminated materials have been made including copies of the NYS Waste Transporter Permit (6 NYCRR part 364) handling procedures and other federal or state required permits.
- C. Submit required notifications and arrangements made with regulatory agencies having regulatory jurisdiction.
- D. Submit the name, address and verification of the laboratory and/or personnel to be used for analysis of air samples. Include the accreditation of the analytical laboratory (ELAP and/or NVLAP certificates).
- E. Submit qualifications verification: Submit the following evidence of qualifications. Make sure that all references are current and verifiable by providing current phone numbers and documentation.

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1. Asbestos Abatement Company: Project experience within the past 3 years; listing projects first most similar to this project: Project Name; Type of Abatement; Duration; Cost; Reference Name/Phone Number; Final Clearance; Completion Date
2. List asbestos regulatory citations, penalties, damages paid and legal actions taken against the company in the last 3 years. Provide copies and all information needed for verification.

2.5.2 SUBMITTALS DURING ABATEMENT

- A. The Contractor's Competent Person shall maintain and submit a daily log that meets the requirements of 12 NYCRR 56, Asbestos, Subpart 56-7.3.
- B. During the project, legible copies of the following items must be maintained at the job site, and available for review:
 1. The company's operations work plan.
 2. The company's respiratory protection program.
 3. Material safety data sheets for all substances to be used on the project.
 4. A copy of the "Certificate of Worker's Acknowledgment" for all persons to be employed on the project.
 5. NYSDOL Asbestos Handling Certifications (DOH 442) for all persons employed on the project (likeness on photographs must be clear).
 6. The supervisor's daily log with entry/exit logs organized by date.
 7. Daily sign-in log.
 8. Any and all changes to the Contract should any occur.
 9. Personal sampling results and chains of custody within 24 hours of sampling.

2.5.3 SUBMITTALS AT COMPLETION OF ABATEMENT

- A. The Contractor shall submit a project report consisting of the following:
 1. Copy of the daily log book.
 2. Work area daily entry/exit logs.
 3. Personnel paperwork for each Employee actually utilized on project including:
 - a. Copy of valid respirator fit test issued within the twelve month period preceding the conclusion of abatement.
 - b. Copy of Certifying Physicians report indicating ability to safely don respiratory protection issued within the previous 12 month period.
 - c. An affidavit indicating completion of training and certification of each Contractor's employee employed on the project.

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5. Personal air sampling records including chain-of-custody forms and laboratory results. These records must also include the accreditation of the analytical laboratory (ELAP or NVLAP certificates).
6. All receipted waste shipment records and completed trucking/manifest forms which have been signed and certified by the Landfill's Owner/Manager as having accepted the shipped waste.
7. A certificate of completion, signed and dated by the Contractor, in accordance with Attachment #1.

PART 3 - EXECUTION

3.1 PRE-ABATEMENT ACTIVITIES

3.1.1 PRE-ABATEMENT MEETING

The VA representative, upon receipt, review, and substantial approval of all pre-abatement submittals and verification by the Contractor's Competent Person that all materials and equipment required for the project are on the site, will arrange for a pre-abatement meeting between the Contractor, the Contractor's Competent Person, the Project Monitor, and the VA representative(s). The purpose of the meeting is to discuss any aspect of the submittals needing clarification or amplification and to discuss any aspect of the project execution and the sequence of the operation. The Contractor shall be prepared to provide any supplemental information/documentation to the VA's representative regarding any submittals, documentation, materials or equipment. Upon satisfactory resolution of any outstanding issues, the VA's representative will issue a written order to proceed to the Contractor. No abatement work of any kind described in the following provisions shall be initiated prior to the VA written order to proceed.

3.1.2 PRE-ABATEMENT INSPECTIONS AND PREPARATIONS

Before any work begins on the construction of the regulated area, the Contractor will:

- A. Conduct a space-by-space inspection with an authorized VA representative and prepare a written inventory of all existing damage in those spaces where asbestos abatement will occur. Still or video photography may be used to supplement the written damage inventory. Document will be signed and certified as accurate by both parties.
- B. The VA Representative, the Contractor, and the Project Monitor must be aware of 10/95 A/E Quality Alert indicating the failure to identify asbestos in the areas listed. Make sure these areas are looked at/reviewed on the project: Lay-in ceilings concealing ACM; ACM behind

walls/windows from previous renovations; inside chases/walls; transite piping/ductwork/sheets; behind radiators; roofing materials; below window sills; water/sewer lines; electrical conduit coverings; crawl spaces (previous abatement contamination); flooring/mastic covered by carpeting/new flooring; exterior insulated wall panels; on underground fuel tanks; steam line trench coverings.

- C. Ensure that all furniture, machinery, equipment, curtains, drapes, blinds, and other movable objects required to be removed from the regulated area have been cleaned and removed or properly protected from contamination. Removal shall be coordinated with VAMC and Contractor.
- D. If present and required, remove and dispose of carpeting from floors in the regulated area.
- E. Inspect existing firestopping in the regulated area. Correct as needed.

3.1.3 PRE-ABATEMENT CONSTRUCTION AND OPERATIONS

- A. Perform all preparatory work for the first regulated area in accordance with the approved work schedule and with this specification.
- B. Upon completion of all preparatory work, the Project Monitor will inspect the work and systems and will notify the VA's representative when the work is completed in accordance with this specification.

3.2 ASBESTOS ABATEMENT

- A. Asbestos abatement will comply with the submitted and approved Operations Work Plan. Compliance with the regulatory requirements of 29 CFR 1926.1101 is mandatory. Any aspect of asbestos abatement not directly addressed in the Operations Work Plan will be done in accordance with 12 NYCRR 56. Deviations from the established regulatory procedures of 12 NYCRR 56 and OSHA require the approval of the VA Representative and the Project Monitor.
- B. Insure safe temporary power sources include GFCI protection in accordance with all applicable electrical code requirements and OSHA requirements for temporary electrical systems. Electricity shall be provided by the VA.
- C. Shut down and lock out heating, cooling, and air conditioning system (HVAC) components that are in, supply or pass through the regulated area. Investigate the regulated area and agree on pre-abatement condition with the VA's representative. Seal all intake and exhaust vents in the regulated area with duct tape and 2 layers of 6-mil poly. Also, seal any seams in system components that pass through the regulated area. Remove all contaminated HVAC system filters and place in labeled 6-mil polyethylene disposal bags for staging and eventual disposal as asbestos waste.

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- D. The Contractor shall provide sanitary facilities for abatement personnel and maintain them in a clean and sanitary condition throughout the abatement project.
- E. The VA will provide water for abatement purposes. The Contractor shall connect to the existing VA system. The service to the shower(s) shall be supplied with backflow prevention.
- F. Access to the regulated area shall be permitted only through the PDF. All other means of access shall be closed off by proper sealing and DANGER signs posted on the clean side of the regulated area where it is adjacent to or within view of any occupiable area. An opaque visual barrier of 6 mil poly shall be provided so that the abatement work is not visible to any building occupants. If the area adjacent to the regulated area is accessible to the public, construct a solid barrier on the public side of the sheeting for protection and isolation of the project. The barrier shall be constructed with nominal 2" x 4" (50mm x 100mm) wood or metal studs 16" (400mm) on centers, securely anchored to prevent movement and covered with a minimum of 1/2" (12.5mm) plywood. Any alternative method must be given a written approval by the VA's representative.
- G. If the regulated area barrier is breached in any manner that could allow the passage of asbestos fibers or debris, the Contractor's Competent Person shall immediately stop work, continue wetting, and proceed to extend the regulated area to enclose the affected area as per procedures described in this specification. If the affected area cannot be enclosed, decontamination measures and cleanup shall start immediately. All personnel shall be isolated from the affected area until decontamination/cleanup is completed as verified by visual inspection and air monitoring. Air monitoring at completion must indicate background levels.
- H. All floors within 10' of glovebag work shall be covered with 2 layers of 6 mil fire retardant poly.
- I. The Contractor's Competent Person shall assure the wetting of ACM meets the definition of "adequately wet" in the EPA NESHAP's regulation and OSHA's "wet methods" for the duration of the project. A removal encapsulant may be used instead of amended water with written approval of the VA's representative.
- J. Dispose of waste ACM and debris which is packaged in accordance with these specifications, OSHA, EPA and DOT. The landfill requirements for packaging must also be met. Disposal shall be done at the approved landfill.

Disposal of non-friable ACM shall be done in accordance with applicable regulations.

- K. Air testing and other requirements which must be met before release of the Contractor and re-occupancy of the regulated area space are specified in Final Testing Procedures.
- L. The Project Monitor will perform a thorough and detailed visual inspection after each phase of cleaning to determine whether there is any visible residue in the regulated area. If the final visual inspection is acceptable, the Project Monitor will perform clearance sampling using aggressive clearance as detailed in 40 CFR 763 Subpart E (AHERA) Appendix A(III)(B)(7)(d) unless other methods are approved by the VA Representative and the Project Monitor.

3.3 AIR SAMPLING AND ANALYSIS

- A. Area Air Sampling and Analysis (if required)
 - 1. The VA shall be responsible for hiring an independent third party firm to perform the required area air sampling and analysis.
 - 2. The Contractor is required to ensure cooperation of its personnel with the Project Monitor for general air sampling, and testing of each work area after completion of asbestos work prior to removal of containment barriers.
 - 3. Air samples shall be analyzed using Phase Contrast Microscopy (PCM) in accordance with NYSDOL Industrial Code Rule 56 and NIOSH method 7400 except final clearance air samples which will use Transmission Electron Microscopy (TEM).
 - 4. Turn-around time for laboratory analysis of area air samples shall not exceed 24 hours. Copies of all area air monitoring results shall be immediately transmitted to the VA or their Representative.
 - 5. If final air clearance is unsatisfactory, the Contractor shall be responsible for recleaning the area and for any and all costs incurred for additional air monitoring.
- B. Personal Air Sampling.
 - 1. Contractor will be responsible for personal air monitoring of workers and short term excursion level testing. Signed copies of the laboratory results shall be provided to the Authority or their Representative within 24 hours for evaluation and action if required.
 - 2. All personal samples shall be collected and analyzed according to the OSHA recognized method by the contractor's certified and approved analytical firm. The analysis of personal air samples shall be conducted by an approved laboratory, subject to approval of the VA or their Representative.

3.3.1 LABORATORY TESTING OF SAMPLES

The services of an AIHA accredited laboratory will be employed by the Project Monitor to perform analysis of the air samples. Samples analysis results should be received within 24 hours. A complete record, certified

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by the laboratory, of all air monitoring tests and results will be furnished to the VA's representative and the Contractor.

3.4 ABATEMENT CLOSEOUT AND CERTIFICATE OF COMPLIANCE

3.4.1 COMPLETION OF ABATEMENT WORK

After thorough decontamination, and satisfactory compliance with the clearance criteria the following will be completed:

- A. Remove all equipment, materials, and debris from the project area.
- B. Package and dispose of all asbestos waste as required.
- C. Repair or replace all interior finishes damaged during the abatement work.
- D. Fulfill other project closeout requirements as specified elsewhere in this specification.

3.4.2 CERTIFICATE OF COMPLETION BY CONTRACTOR

The Contractor's Competent Person shall complete and sign the "Certificate of Completion" in accordance with Attachment 1 at the completion of the abatement and decontamination of the regulated area.

3.4.3 WORK SHIFTS

All work shall be accomplished during between 7:00 AM and 4:30 PM, Monday - Friday excluding Federal Holidays. Any change in the work schedule must be approved in writing by the VA Representative.

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ATTACHMENT #1

CERTIFICATE OF COMPLETION

DATE:

PROJECT NAME:

VAMC/ADDRESS:

1. I certify that I have personally inspected, monitored and supervised the abatement work of (specify regulated area or Building):
which took place from / / / to / /
2. That throughout the work all applicable requirements/regulations and the VA's specifications were met.
3. That any person who entered the regulated area was protected with the appropriate personal protective equipment and respirator and that they followed the proper entry and exit procedures and the proper operating procedures for the duration of the work.
4. That all employees of the Contractor engaged in this work were trained in respiratory protection, were experienced with abatement work, had proper medical surveillance documentation, were fit-tested for their respirator, and were not exposed at any time during the work to asbestos without the benefit of appropriate respiratory protection.
5. That I performed and supervised all inspection and testing specified and required by applicable regulations and VA specifications.
6. That the conditions inside the regulated area were always maintained in a safe and healthy condition and the maximum fiber count never exceeded 0.5 f/cc, except as described below.
7. That the negative pressure system was installed, operated and maintained in order to provide a minimum of 4 actual air changes per hour with a continuous -0.02" of water column pressure.

Signature/Date:

Signature/Date:

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ATTACHMENT #2

CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

PROJECT NAME:

DATE:

PROJECT ADDRESS:

ABATEMENT CONTRACTOR'S NAME:

WORKING WITH ASBESTOS CAN BE HAZARDOUS TO YOUR HEALTH. INHALING ASBESTOS HAS BEEN LINKED WITH VARIOUS TYPES OF CANCERS. IF YOU SMOKE AND INHALE ASBESTOS FIBERS YOUR CHANCES OF DEVELOPING LUNG CANCER IS GREATER THAN THAT OF THE NON-SMOKING PUBLIC. Your employer's contract with the owner for the above project requires that: You must be supplied with the proper personal protective equipment including an adequate respirator and be trained in its use. You must be trained in safe and healthy work practices and in the use of the equipment found at an asbestos abatement project. You must receive/have a current medical examination for working with asbestos. These things shall be provided at no cost to you. By signing this certificate you are indicating to the owner that your employer has met these obligations.

RESPIRATORY PROTECTION: I have been trained in the proper use of respirators and have been informed of the type of respirator to be used on the above indicated project. I have a copy of the written Respiratory Protection Program issued by my employer. I have been provided for my exclusive use, at no cost, with a respirator to be used on the above indicated project.

TRAINING COURSE: I have been trained by a third party, State/EPA accredited trainer in the requirements for an AHERA/OSHA Asbestos Abatement Worker training course, 32 hours minimum duration. I currently have a valid State accreditation certificate. The topics covered in the course include, as a minimum, the following:

- Physical Characteristics and Background Information on Asbestos
- Potential Health Effects Related to Exposure to Asbestos
- Employee Personal Protective Equipment
- Establishment of a Respiratory Protection Program
- State of the Art Work Practices
- Personal Hygiene
- Additional Safety Hazards
- Medical Monitoring
- Air Monitoring
- Relevant Federal, State and Local Regulatory Requirements, Procedures, and Standards
- Asbestos Waste Disposal

MEDICAL EXAMINATION: I have had a medical examination within the past 12 months which was paid for by my employer. This examination included: health history, occupational history, pulmonary function test, and may have included a chest x-ray evaluation. The physician issued a positive written opinion after the examination.

Signature:

Printed Name:

Social Security Number:

Witness:

VA WNY Health Care System
3495 Bailey Avenue
Buffalo, New York

ATTACHMENT #3

AFFIDAVIT OF MEDICAL SURVEILLANCE, RESPIRATORY PROTECTION AND
TRAINING/ACCREDITATION

VA PROJECT NAME AND NUMBER:

VA MEDICAL FACILITY:

ABATEMENT CONTRACTOR'S NAME AND ADDRESS:

1. I verify that the following individual

Name:

Social Security Number:

who is proposed to be employed in asbestos abatement work associated with the above project by the named. Contractor, is included in a medical surveillance program in accordance with 29 CFR 1926.1101(m), and that complete records of the medical surveillance program as required by 29 CFR 1926.1101(m)(n) and 29 CFR 1910.20 are kept at the offices of the Contractor at the following address.

Address:

2. I verify that this individual has been trained, fit-tested and instructed in the use of all appropriate respiratory protection systems and that the person is capable of working in safe and healthy manner as expected and required in the expected work environment of this project.
3. I verify that this individual has been trained as required by 29 CFR 1926.1101(k). This individual has also obtained a valid State accreditation certificate. Documentation will be kept on-site.
4. I verify that I meet the minimum qualifications criteria of the VA specifications for a CPIH.

Signature of CPIH:

Date:

Printed Name of CPIH:

Signature of Contractor:

Date:

Printed Name of Contractor:

VA WNY Health Care System
3495 Bailey Avenue
Buffalo, New York

ATTACHMENT #4

ABATEMENT CONTRACTOR/COMPETENT PERSON(S) REVIEW AND ACCEPTANCE OF THE VA'S
ASBESTOS SPECIFICATIONS

VA Project Location:

VA Project #:

VA Project Description:

This form shall be signed by the Asbestos Abatement Contractor Owner and the Asbestos Abatement Contractor's Competent Person(s) prior to any start of work at the VA related to this Specification. If the Asbestos Abatement Contractor's/Competent Person(s) has not signed this form, they shall not be allowed to work on-site.

I, the undersigned, have read VA's Asbestos Specification regarding the asbestos abatement requirements. I understand the requirements of the VA's Asbestos Specification and agree to follow these requirements as well as all required rules and regulations of OSHA/EPA/DOT and State/Local requirements. I have been given ample opportunity to read the VA's Asbestos Specification and have been given an opportunity to ask any questions regarding the content and have received a response related to those questions. I do not have any further questions regarding the content, intent and requirements of the VA's Asbestos Specification.

At the conclusion of the asbestos abatement, I will certify that all asbestos abatement work was done in accordance with the VA's Asbestos Specification and all ACM was removed properly and no fibrous residue remains on any abated surfaces.

Abatement Contractor Owner's Signature

Date

Abatement Contractor Competent Person(s)

Date

Date

Date

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