Vermont Regulations for Asbestos Control

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V.S.A. Title 18, Chapter 26

Effective February 1987; Amended November 1995

Vermont Department of Health
108 Cherry Street, Box 70
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Agency of Human Services

1. General Provisions

1.1 Purpose

These regulations, as authorized by 18 VSA Chapter 26, provide for the establishment of procedures to be followed and the standards for certification of asbestos contractors who perform asbestos abatement in any facility.

Pursuant to 18 VSA Chapter 26, these regulations require that all persons who perform asbestos abatement of asbestos-containing materials in any facility must obtain certification prior to commencing such asbestos abatement. The organizations or individuals who perform asbestos abatement are defined as Asbestos Abatement Contractor Entities, Asbestos Supervisor Contractors and Asbestos Worker Contractors. The organizations or individuals who perform activities for the evaluation of asbestos are defined as Asbestos Analytical Contractor Entities, Asbestos Analyst Contractor, Asbestos Consulting Contractor Entities and Asbestos Consultant Contractors. The organizations or individuals who perform activities for the purpose of accreditation or obtaining certification are defined as Training Contractor Entities. These regulations also set forth procedures for work practices and the standards for certification of Asbestos Contractor Training Courses to be used to meet certification requirements.

Alternative abatement methods for the control of asbestos-containing materials should be reviewed with the building owner prior to any removal of asbestos. The Vermont Department of Health does not require removal of asbestos-containing materials if they are intact, in good condition and have not been subject to damage by the general public and/or will not be disturbed by maintenance activities. When asbestos-containing materials will be disturbed either by renovation or demolition, removal of the asbestos-containing materials is required prior to the renovation or demolition commencing.

1.1.1 Scope

No person shall perform asbestos abatement in any facility without obtaining certification and a permit from the Commissioner. The Commissioner shall require the payment of fees at the time of application. The Commissioner shall not process an application for which a fee has not been paid. The Department also requires a 10 working day notification prior to the commencement of a demolition of a facility or an asbestos abatement activity in a facility.

1.1.2 Right of Entry

The Commissioner is authorized, upon presenting appropriate credentials, to seek permission to enter any asbestos abatement activity worksite located on public or private property, under the authority granted the Commissioner by 18 VSA Section 107. If permission is refused, the Commissioner may seek, pursuant to the authority granted by 18 VSA Section 121, a search warrant authorizing the inspection of such premises.

1.1.3 Enforcement

The Commissioner may enforce these regulations as necessary to protect the public health by exercising the authority granted the Commissioner by 18 VSA Chapters I, 3 and II.

1.1.4 Administrative Procedure

Any revocation, suspension, annulment or withdrawal of any certification shall be in accordance with 3 V.S.A. Chapter 25, Section 814.

1.1.5 Severability

If any provision of any section of these regulations or the application thereof to any firm, individual or circumstance is found by a court of competent jurisdiction to be illegal, invalid, or void, the remainder of these regulations shall be deemed unaffected and shall continue in full force and effect.

1.1.6 Homeowner Exemptions

Homeowners intending to do abatement in their own private residences must adhere to the work procedures of Sections 2.4.2, 2.4.3, 2.4.4, 2.4.5, 2.4.6, 2.6 and 6. If a homeowner chooses to hire an outside contractor to conduct asbestos abatement activities, then the contractor must be Vermont certified and follow all requirements per these regulations. Homeowners may collect bulk asbestos samples in their private residences. Samples shall be collected according to Department specifications and sent to a Department Certified Analytical Contractor Entity for analysis. Homeowners are exempt from Section 8; permit fees, when conducting their own abatement and may be exempt from Section 9.

1.2 Definitions

1.2.1 Adequately Wet- means sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible

emissions are observed coming from asbestos-containing materials, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

1.2.2 Agent - Any individual performing work on an asbestos project for the Asbestos Contractor Entity, who is not an employee of the Contractor Entity (e.g. Subcontractor).

1.2.3 Agricultural Barn - A building used exclusively for agricultural or horticultural activities, but not structures or buildings used for residential purposes or the processing or retailing of agricultural or horticultural commodities.

1.2.4 Airlock - A system for permitting entrance & exit while restricting air movement between a contaminated area and an uncontaminated area.

1.2.5 Amended water - Water to which a chemical wetting agent has been added to improve penetration.

1.2.6 Asbestos - The asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite -grunerite (amosite), anthophyllite, actinolite and tremolite.

1.2.7 Asbestos Abatement - The repair, enclosure, removal, encapsulation or any other activity for the evaluation or control of any material which contains more than one percent asbestos by weight or area.

1.2.8 Asbestos Abatement Contractor Entity - Any entity whose projects mainly consist of asbestos abatement activities as defined in 1.2.11.

1.2.9 Asbestos Abatement Project - Any asbestos abatement activity (clean-up, repair, encapsulation, enclosure, removal) involving more than ten (10) linear feet of asbestos containing material located on pipes or more than ten (10) square feet of asbestos-containing material from any surfaces, located in a single facility. This includes cleanup or decontamination of any facility after illegal/improper asbestos abatement activities have been performed. Asbestos abatement activities are asbestos abatement projects, as opposed to emergency asbestos projects or small scale, short duration activities, when the number of such activities can be predicted within

one year or scheduled to include planned maintenance activities and the total material to be disturbed exceeds these limits.

1.2.10 Asbestos Analyst Contractor - Any person, employed by a certified asbestos analytical contractor entity, who performs the actual analysis of bulk or air samples to determine either asbestos content or airborne fiber content, respectively, and has obtained a contractor certificate to perform these activities.

1.2.11 Asbestos Analytical Contractor Entity - Any entity that analyzes bulk or air samples for asbestos content or fiber counting and has obtained a contractors certificate to perform these activities.

1.2.12 Asbestos Contractor Entity - Any partnership, firm, association, corporation, sole proprietorship or other business concern as well as any governmental, religious or social organization or union involved in any asbestos abatement activity and has obtained a contractor entity certificate to perform these activities.

1.2.13 Asbestos Consultant Contractor - Any person who is directly involved with providing industrial hygiene services for asbestos abatement activities, sampling for asbestos, inspecting or evaluating a building for asbestos hazards, preparing management plans, or the development, design, inspection, monitoring, or implementation of an asbestos abatement project or any other services listed in Section 4.2 and has obtained a contractor certificate to perform these activities as either an inspector, inspector/management planner, project designer or a project monitor.

1.2.14 Asbestos Consulting Contractor Entity - Any entity whose projects mainly consist of asbestos abatement activities as defined in 1.2.12 and has more than one contractor involved in asbestos abatement activities.

1.2.15 Asbestos-Containing Material - Material that contains any type of asbestos in an amount greater than 1% by weight or area either alone or mixed with other fibrous or non-fibrous materials.

1.2.16 Asbestos Field Analyst Contractor - Any person, employed by a certified asbestos analytical contractor entity, who performs the actual analysis of air samples to determine airborne fiber content outside the analytical facility and has obtained a contractor certificate to perform these activities.

1.2.17 Asbestos Supervisor Contractor - Any person who engages in asbestos abatement activities and has obtained a certificate as a supervisor contractor to perform asbestos abatement activities.

1.2.18 Asbestos Waste - Any asbestos-containing materials removed during abatement. Materials used during abatement which have been contaminated by the abatement activities shall be disposed of as asbestos waste.

1.2.19 Asbestos Worker Contractor - Any person who engages in asbestos abatement activities and has obtained a contractor's certificate to perform such activities.

1.2.20 Certificate - The certificate issued to any person who meets the standards for certification for each specific category of asbestos contractor established by the Commissioner by rule.

1.2.21 Clean Room - An uncontaminated area or room which is a part of the contractor decontamination enclosure system with provisions for storage of contractor's street clothes and clean protective equipment.

1.2.22 Commissioner - The Commissioner of Health or the Commissioner's designee.

1.2.23 Contractor - Any individual, firm, partnership, association, corporation, sole proprietorship or other business concern as well as any governmental, religious, or social organization or union which agrees to perform services.

1.2.24 Contractor Training Course - The approved and certified contractor training course which is used for the purpose of obtaining Vermont contractor certification.

1.2.25 Demolition - The total razing of a facility or the wrecking or taking out of any load supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

1.2.26 Department - The Vermont Department of Health.

1.2.27 Dwelling - A building or structure which is intended to be used for living or sleeping by human occupants.

1.2.28 Emergency Asbestos Projects and Demolitions - Any asbestos abatement project or demolition of a facility requiring immediate action due to public health or safety reasons, which was not planned but results from a sudden, unexpected event that if not immediately attended to presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. This includes operations required by non-routine failures of equipment, but does not include scheduling conflicts.

1.2.29 Encapsulation - The application of an encapsulant to asbestos containing materials in a facility to control the release of asbestos fibers into the air, either by creating a membrane over the surface (bridging encapsulant) or by penetrating the material and binding its components together (penetrating encapsulant).

1.2.30 Enclosure - An airtight, impermeable, permanent barrier around asbestos-containing materials in a facility to prevent the release of asbestos fibers into the air.

1.2.31 EPA Guidance Document - EPA 560/5-85-024 Guidance for Controlling Asbestos-Containing Materials in Buildings, 1985. (Purple Book)

1.2.32 Equipment Room - A contaminated area or room which is part of the contractor decontamination enclosure system and has provisions for the storage of contaminated clothing and equipment.

1.2.33 Excursion Limit - Airborne concentration of asbestos of 1.0 fiber per cubic centimeter of air (1 f/cc) as averaged over a sampling period of thirty (30) minutes.

1.2.34 Facility - Any institutional, commercial, public building, industrial or residential structure, installation building, military or company housing, ships, railway, roadways grounds or

property. This excludes owner occupied residential dwelling; but includes any building vacated for demolition purposes.

1.2.35 Facility Owner - Any person or entity having legal title to property and/or buildings. For the purposes of publicly owned property only, the owner shall be defined as the chief executive officer of the state or municipal agency which owns, leases or controls the use of the property.

1.2.36 Friable Asbestos Containing Material - Material, that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

1.2.37 Glovebag - An impervious, seamless plastic bag like enclosure with built-in gloves, minimum of 6 mil, affixed with an air tight seal around asbestos-containing material so that it may be removed without generating airborne fibers to the atmosphere.

1.2.38 HVAC - Means the collective components of the heating, ventilation and air conditioning system, including but not limited to, filters, frames, cooling coil, condensate drip pans, and drainage piping, outside dampers and actuators, humidifiers, air distribution ductwork, automatic temperature controls and cooling towers.

1.2.39 HEPA filtration - High efficiency particulate air filtration capable of trapping all monodispersed particles larger than 0.3 micron in diameter with 99.97% efficiency.

1.2.40 Inspection - Means an activity to determine the presence or location, or to assess the condition of, friable or non-friable asbestos-containing or suspected asbestos-containing material.

1.2.41 Instructor - A qualified individual who provides instruction and training in his/her area of expertise.

1.2.42 Lock Down - The process of spraying the work area with an encapsulant or other material to prevent any remaining asbestos-containing materials from becoming airborne.

1.2.43 Negative Pressure Glovebag - A glovebag as, described in 1.2.36, which has been modified to provide a constant level of negative pressure within the glovebag.

1.2.44 NIOSH Method 7400 - Asbestos and Other Fibers by PCM. National Institute of Occupational Safety and Health. Cincinnati, Ohio. 1984. 4th Revision dated 8/15/94 or latest revision.

1.2.45 Non-friable Asbestos-Containing Material - Any material, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

1.2.46 Notification - The process where by information regarding an asbestos abatement activity or demolition of a facility is provided in writing to the Department by an owner or operator.

1.2.47 Open Air Building - A building which is designed to allow unrestricted and constant passage of air throughout its structure.

1.2.48 Permissible Exposure Limit - Airborne concentration of asbestos of 0.1 fibers per cubic centimeter of air as an eight (8) hour time-weighted average (TWA).

1.2.49 Permit - The document which allows the commencement of an asbestos abatement project.

1.2.50 Public Building - Shall mean churches, court houses, jails, municipal rooms, state and county institutions, railroad stations, railroad cars, school buildings, school and society halls, hotels and restaurants and buildings, or portions of buildings, used or rented for tenements, boarders, or roomers, and places of amusement, factories, mills, workshops, or buildings in which persons are employed, and shall include all buildings used as nurseries, convalescent homes, homes for the aged, and outdoor structures used for public assembly. The word building shall mean barns, sheds, office buildings, stores, shops other than workshops, and space wherein goods are offered for sale at wholesale or retail. Public buildings shall not include a family residence or a family residence registered as a day care home.

1.2.51 Removal - The stripping of any asbestos-containing materials from surfaces or components of a facility or removal of a component covered with asbestos-containing material from a facility.

1.2.52 Renovation - Altering in any way one or more facility or structural components.

1.2.53 Repair - The restoration of asbestos-containing material that has been damaged, to seal exposed areas where asbestos fibers may be released including the repair of enclosures around asbestos-containing materials in a facility. Repair of previously encapsulated asbestos-containing materials may involve filling damaged areas with asbestos substitutes and re-encapsulating.

1.2.54 Sheets or Sheeting - Waterproof polyethylene sheets or sheeting which are used to construct airtight barriers.

1.2.55 Shower Room - A room between the clean room and the equipment room in the contractor decontamination enclosure equipped with cold, and hot or warm running water controllable at the tap in the shower stall and suitably arranged for complete showering during decontamination.

1.2.56 Small Scale, Short Duration Activity - Any asbestos abatement activity which encompasses up to and including ten linear feet of asbestos-containing material located on pipes or up to and including ten square feet of asbestos-containing material from any surface within the abatement area within a facility. Projects divided into smaller segments are asbestos abatement projects 1.2.9, not small scale, short duration activities.

1.2.57 Structural component - Any pipe, duct, boiler, tank, reactor, turbine or furnace at or in a facility or any structural member of a facility.

1.2.58 Structural member - Any load-supporting member of a facility, such as beams and load-supporting walls or any non-load-supporting member, such as ceilings and non-load-supporting walls.

1.2.59 Structure - A whole facility, building or a major portion thereof, such as a building wing.

1.2.60 Training Day - A day of training equals 8 hours including breaks and lunch.

1.2.61 Training Contractor Entity - Any firm, partnership, association, corporation, sole proprietorship or other business concern as well as any governmental, religious or social organization or union providing training for the purpose of accreditation or obtaining of Vermont certification.

1.2.62 Wet Methods or Wetted - The use of amended water or the use of removal encapsulants to control fiber release from asbestos-containing materials.

1.3. Procedures for Contractor Certification

1.3.1 Application for Certification

A) To apply for a certificate as an Asbestos Contractor Entity, (Abatement, Analytical, Consulting, Training), or an Asbestos Contractor (Inspector, Inspector/Management Planner, Project Designer, Project Monitor, Analyst, Supervisor or Worker), the party seeking such certification shall submit a signed, completed application with all necessary documentation and the fee, made payable to the Vermont Department of Health, in accordance with the fee schedule outlined in Section 8, and submit the application to the Department on forms provided by the Department.

i) All contractors must complete an initial or refresher training course, as required, which has been certified or approved by the Department and is in accordance with EPA Asbestos Model Accreditation Plan, 40 CFR Part 763, Subpart E. Appendix C.

ii) All contractors shall be required to pass an examination, in accordance with EPA Asbestos Model Accreditation Plan, 40 CFR Part 763, Subpart E, Appendix C. The examinations shall be administered by the certified training contractor entity or another authority approved by the department.

iii) All contractors shall maintain accreditation in each category, in accordance with EPA Asbestos Model Accreditation Plan, 40 CFR Part 763, Subpart E, Appendix C.

Within 15 working days after receiving an application, the Department shall notify the applicant of any deficiency in the application. Within 15 working days after receiving a completed application, including all additional information requested by the Department, the Department shall certify or deny the application. The Department may, on a case by case basis, extend the length of time for application review. The Department will notify the applicant of such extensions.

A) The Department will immediately return any application or fee which is incomplete. The Department may, within 15 working days after the filing of the application, require further information in order to better determine whether the application should be certified or denied.

B) If the Department requests further information from an applicant, and does not receive that information within 15 working days, then the application shall be considered abandoned and certification shall be denied. The fee will not be returned.

1.3.3 Denial of Applications

The Commissioner may deny an application for certification to any applicant who fails to meet the standards or who does not follow the procedures established by these regulations, including, but not limited to:

A) Failure to comply fully with applicable requirements, procedures, and standards set forth in these regulations.

B) Negligence on the part of the applicant and/or his/her employees or agents.

C) Submission of false information on an application, supplying false statements or failure to disclose required information.

D) Failure to submit the required information, fee payment and/or documentation with the application.

E) Any past violations of state or federal law pertaining to asbestos-related activities.

1.3.4 Suspension or Revocation of Certification

The Commissioner may suspend, modify, or revoke any certification issued under these regulations under the authority granted to the Commissioner by 18 VSA Section 123.

1.3.5 Expiration of Certification

Certifications shall expire one (I) year from the effective date on which the certificate was issued, unless suspended or revoked by the Commissioner before that time.

1.3.6 Renewal of Certification

A) Any request for renewal of certification issued under these regulations shall contain all the information requested by these regulations. A contractor may request the review of past submissions and petition the Department to reuse past documentation if the Department finds the past documentation to be complete.

B) Evidence of participation in annual refresher courses, specific to each contractor category, shall be provided with the renewal application.

C) An existing certification shall not expire until final action on the application has been taken by the Department, provided; i) the application has been filed in proper form for renewal and; ii) the application has been received at least 30 days prior to the expiration date of the existing certification.

1.3.7 Reciprocity

A) Each applicant for certification who is licensed, certified or permitted according to EPA Asbestos Model Accreditation Plan, 40 CFR Part 763, Subpart E, Appendix C for the appropriate asbestos abatement activity, consulting service, or analytical service in another state may petition the Department on a form provided by the Department to grant certification without repetition of the training requirements; provided the contractor meets the certification requirements outlined in these regulations for that type of certification and has paid the fee per Section 8.

2. CERTIFICATION STANDARDS FOR ASBESTOS ABATEMENT CONTRACTOR ENTITIES

2.1 Requirements for Certification

2.I.I General Requirements

No Asbestos Abatement Entity shall engage in any asbestos abatement activities unless it is certified to do so by the Commissioner or unless it qualifies for an exemption as set forth in Section 2.1.2.

2.1.2 Exemptions

Any contractor or entity who performs only small scale, short duration activities as defined in Section 1.2.47 of these regulations is exempted from the Asbestos Abatement Entity certification requirements contained in these regulations. However, any person performing small scale, short duration activities must be certified as an Asbestos Worker or an Asbestos Supervisor in accordance with Section 2.3 of these regulations.

Persons performing asbestos abatement activities involving only the specific asbestos-containing materials listed in Section 6.1 are exempted from the certification requirements, contained in Section 2.1, Section 4, and Section 8 of these regulations, provided they follow all requirements in Section 6 of these regulations.

2.1.3 Declaratory Ruling of Applicability

A) An individual may request in advance that the Department determine whether an activity is an asbestos abatement activity or project and thus subject to these regulations. The Department shall make the determination in writing not more than 30 days after it has received a written request describing the asbestos-containing materials and the proposed activity.

B) A declaratory ruling of applicability made by the Department may be appealed through the process set forth in 3 VSA Section 815.

2.1.4 Summary of Requirements for Contractor Certification

In order to be certified and maintain certification an Asbestos Abatement Entity shall:

A) Apply to the Department in accordance with Section 1.3 of these regulations.

B) Ensure that proper notification of any proposed asbestos abatement project is sent in writing to the Department in accordance with Section 2.2. and Section 7.

C) Ensure that records of all asbestos abatement projects which it performs are maintained and retained in accordance with Section 2.2.

D) Ensure that an Asbestos Supervisor who has been properly trained and certified in accordance with Section 2.3 of these regulations remains present on-site whenever any asbestos abatement activity is being carried out as part of an asbestos abatement project.

E) Submit evidence that all Asbestos Workers and Asbestos Supervisors in its employment have been properly trained and certified in accordance with Section 2.3.

F) Have implemented a respiratory protection program that is in accordance with Section 2.4 of these regulations and shall submit a copy of this written respiratory protection program to the Department.

G) Provide each contractor who engages in asbestos abatement activities the necessary protective gear and clothing in accordance with Section 2.4 of these regulations, and shall submit a written description to the department when applying for certification of the protective gear and clothing that shall be issued to all potentially exposed employees.

H) Provide or make available to all contractors who engage in asbestos abatement activities a medical monitoring program that is in accordance with the regulations in Section 2.4 of these regulations. A written copy of this program shall be submitted to the Department when certification is applied for.

I) Implement an exposure monitoring program that is in accordance with the regulations in Section 2.4 of these regulations during asbestos abatement projects for those individuals who may be exposed to airborne asbestos fibers and submit a written description of this program to the Department when applying for certification.

J) Ensure that all asbestos abatement activities performed by the Asbestos Abatement Entity and his employees and agents are carried out in accordance with the requirements in Sections 2.5 and 2.6 of these regulations.

K) Ensure that all contractors maintain their training accreditations and their certifications for as long as they continue to perform asbestos abatement activities.

L) If a supplied air system is used for asbestos abatement activities, the Asbestos Abatement Contractor Entity shall provide the Commissioner with the use of the system for on-site inspections.

M) The Asbestos Abatement Entity or an individual supervisor shall possess a minimum of:

i) Two years of experience in the performance of asbestos abatement projects using the work practices set forth in Section 2.5 and 2.6 of these regulations and successfully completed a Department certified Asbestos Abatement Contractors and Supervisors initial training course with annual refreshers;

or,

ii) Three years of experience in general contracting and successful completion of a Department certified Asbestos Abatement Contractors and Supervisors initial training course by the responsible supervisor who manages the asbestos abatement projects.

The Asbestos Abatement Entity shall submit evidence of this training and/or experience to the Department, including a summary of past contracts and/or projects completed. (One year is equal to fifty-two 40-hour weeks.)

N) An employer will provide each employee documentation of the employee's training and Vermont certification once it has been received from the training facility or the Department.

2.1.5 Required Records

The Asbestos Abatement Entity shall record the following information for each asbestos abatement project:

A) The name, address and certificate number of each supervisor and worker participating in the project.

B) The location and work plan of the project, amount of asbestos involved in the project, a diagram of where asbestos-containing materials were removed, and where air clearance sampling was performed.

C) Scheduled and actual starting and completion dates. If the actual completion date differs from that originally scheduled, a statement of reasons for the difference shall be included.

D) Copies of all asbestos-related correspondence with regulatory agencies concerning the project (i.e., building or demolition permits, notices of violation).

E) The name and address of the authorized asbestos disposal facility to which the asbestos-containing materials and asbestos waste were taken, documentation of the amount of asbestos received for disposal, and confirmation of proper disposal.

F) The methodology and results of all air sampling conducted during the abatement process, the names and certification numbers of the Asbestos Consultant hired to perform such sampling, the name and certification number of the Asbestos Consultant performing the visual clearance, the name and certification number of the Asbestos Analyst, and the name and certification number of the Asbestos Analytical Entity employed to analyze such samples.

G) A complete list of Asbestos Workers, Asbestos Supervisors, and other contractors employees or agents participating in the asbestos abatement project. This list shall include all personnel entering the project area, entry and exit times and purpose for entry.

H) Descriptions of unplanned exposures to asbestos and worksite accidents.

2.1.6 Retention of Records

Each certified Asbestos Abatement Entity shall maintain records in accordance with Sections 2.1.4. and 9.1.2 of all asbestos abatement projects which it performs and shall make these records available to the Department upon request. The Asbestos Abatement Entity shall retain the records for no less than thirty (30) years after completion of the asbestos abatement project.

2.1.7 Documents to be Retained On Project Site

The following documents shall be retained on-site beginning on the first day of the project and remain on site for the duration of the asbestos abatement project:

A) A current copy of these regulations;

B) A copy of the project permit, project notification form, and any approved waivers must be conspicuously posted at the work site.

C) Copies of VRAC Appendix A shall be posted at the entrance to the clean room.

D) Copies of procedures to be followed during medical emergencies, including phone numbers of the nearest fire and police departments, local health officer, hospital and rescue squad, and directions for emergency personnel as to the site location shall be posted by the nearest telephone and at the entrance to the clean room;

E) Current copies of current certificates held by all Asbestos Contractors, and the Asbestos Entity actively engaged in the asbestos abatement project; and

F) Records of all exposure sampling (personal air samples) as required in Section 2.3.4;

G) A current copy of the Entity Respiratory Protection Program which shall include current Medical Monitoring and Exposure Monitoring documentation for all contractors actively engaged in the asbestos abatement project; including copies of emergency medical information.

H) A log of all personnel entering the project area, entry and exit times and purpose for entry. The project supervisor should ensure the log is maintained on a daily basis beginning the first day of the project;

I) Current documentation of fit testing, as required in Section 2.4.

2.2 Certification Standards for Worker Contractors and Supervisor Contractors

2.2.1 General Requirements

A) No person shall engage in any on-site supervision of Asbestos Workers during an asbestos abatement project without first obtaining certification as an Asbestos Supervisor.

B) Any person seeking certification as an Asbestos Worker or Asbestos Supervisor must apply for certification in accordance with Section 1.3 of these regulations.

2.2.2 Asbestos Worker Contractors

A) Scope

An individual certified as an Asbestos Worker may provide the following services only:

i) Conducts project setup, repairs, removals, encapsulations or enclosures of asbestos-containing materials or any handling of asbestos-containing materials.

B) Requirements for Asbestos Worker Contractor Certification

The Department shall issue certification as an "Asbestos Worker Contractor" to each applicant who fulfills the following standards:

i) is at least 18 years of age;

ii) has attended a Department certified initial training course and refresher(s) as required in Section 5;

2.2.3 Asbestos Supervisor Contractors

A) Scope

An individual certified as an Asbestos Supervisor may provide the following services only:

i) All services in 2.2.2(A).

ii) Supervises Asbestos Worker Contractors to ensure compliance with state and federal regulations.

iii) Ensures that individuals have the required respiratory and clothing protections when on the project site.

B) Requirements for Asbestos Supervisor Contractor Certification

The Department shall issue certification as an "Asbestos Supervisor Contractor" to each applicant who fulfills the following standards:

i) is at least 18 years of age;

ii) possesses documentation of at least four (4) months of experience in asbestos abatement activities inside a containment area (four months is defined as sixteen 40 hour work weeks);

iii) has attended a Department certified initial training course; and refresher(s) as required in Section 5;

2.3 Contractor Protection Standards

Employees in Vermont are protected under Vermont Occupational Safety and Health Administration (VOSHA) regulations. The Vermont Regulations for Asbestos Control apply to all persons conducting asbestos related activities.

2.3.1 Respiratory Protection

Each Asbestos Abatement Entity shall prepare and submit with its application for certification to the Department a written respiratory protection program. This program shall be followed and made available to all contractors in its employment at all asbestos abatement projects sites.

A) Selection of Respirators

i) An approved respirator shall be used by any person performing any asbestos abatement activity in accordance with Appendix B.

B) Fitting of Respirators

i) Each asbestos worker and supervisor shall be given an opportunity to select a respirator for proper and comfortable fit.

ii) Each asbestos worker and supervisor shall be instructed in the performance of positive and negative pressure sealing checks and be able to successfully perform them. Each asbestos worker and supervisor shall perform a sealing check every time a respirator is donned.

iii) Each asbestos worker and supervisor shall be fit tested by a supervisor or another person using generally acceptable qualitative or quantitative fit testing procedures. Each person shall adequately pass the selected fit test procedure every six months. Fit tests shall not be self-conducted. Fit test documentation shall be signed by both the person being fit tested and the person performing the fit test.

C) Prohibited Activity

i) Individuals shall not be permitted in the work area without the respiratory protection required for the level of exposure in the work area. This requirement shall be strictly enforced by the Asbestos Abatement Entity and the on-site asbestos supervisor.

ii) No eating, drinking, smoking, applying cosmetics, chewing tobacco/gum in the work area.

2.3.2 Contractor Protection Provisions

The Asbestos Abatement Entity shall provide each asbestos worker and supervisor at a minimum with personal protective equipment and clothing. Respirators shall be worn throughout the asbestos abatement project in accordance with VRAC Appendix B.

2.3.3 Medical Monitoring

Asbestos Abatement Entities shall ensure that any contractor who performs asbestos abatement activities is medically monitored with an initial and annual periodic re-examinations.

2.3.4 Personal Exposure Monitoring

A) General Requirements

The Asbestos Abatement Entity shall provide daily exposure monitoring for contractors during all phases of the asbestos abatement project.

Exposure sampling shall be conducted by a Project Monitor or a Supervisor. Analysis of the samples shall be performed by an Asbestos Analyst who has been certified by the Commissioner.

B) Recordkeeping

Records of all personal exposures shall be kept on the project site and available for review by the Abatement Entity, its employees and the Department for the duration of the asbestos abatement project. These records shall include the dates, times, and locations of sampling done, the sampling methods, the sampling rate and time period, the methods of sample analysis, the results of the sample analysis, and the name and certification number of the contractors wearing the pump and taking the samples.

2.4 Work Practice Procedures for Asbestos Abatement Projects

2.4.l General Requirements

Any asbestos abatement project or Small Scale Short Duration activity other than those exempted in Section 2.l.2 of these regulations must be performed by certified asbestos abatement entities, certified asbestos supervisors and certified asbestos workers. They shall comply with the work practice requirements set forth in Section 2.4 of these regulations.

2.4.2 General Requirements for Asbestos Abatement Projects

A) The duration of the asbestos abatement project for the purpose of requirements per Section 2.4.2 shall be considered from the time barrier construction or pre cleaning is started until acceptable final air-clearance results are obtained. The

decontamination system shall be set up prior to pre-cleaning for projects involving historical contamination or illegal removal clean-ups.

B) The area where asbestos abatement activities are conducted shall be isolated from the remainder of the facility by air-tight barriers attached securely in place from inside the work area. All openings between the work area and all other areas including, but not limited to, windows, doorways, elevator openings, corridor entrances, ventilation openings, drains, ducts, grills, grates, diffusers and skylights, shall be sealed airtight with a minimum of one layer of 6 mil sheeting. This shall be accomplished in a manner which prevents asbestos contamination of the ambient air.

C) All movable objects shall be removed from the work area, when feasible. Cleaning of contaminated items shall be performed if the item is to be salvaged or reused, otherwise the item shall be properly disposed of as asbestos waste. All non-moveable objects in the work area shall be covered with a minimum of one layer of 6 mil sheeting secured into place after pre-cleaning of the area has been conducted.

D) Floor sheeting shall completely cover all floor surfaces and consist of a minimum of 2 layers of 6 mil sheeting. Floor sheeting shall extend up sidewalls at least 12" and be sized to minimize seams. No seams shall be located at wall-to-floor joints. Smooth, painted non-porous or unpainted concrete surfaces are exempt from this requirement. Floor sheeting shall be disposed of as asbestos waste.

E) Wall sheeting shall completely cover all wall surfaces and consist of a minimum of one layer of 6 mil sheeting. Wall sheeting shall be installed to minimize joints and shall extend beyond wall/floor joint at least 12". No seams shall be located at wall-to-wall joints. Smooth, painted, non-porous walls, ceramic tiled or unpainted concrete surfaces are exempt from this requirement. Wall sheeting shall be disposed of as asbestos waste.

F) A worker decontamination enclosure system consisting of a clean room, shower room and equipment room, each separated from each other and from the work area by airlocks, accessible through doorways protected with at least two overlapping sheets shall be provided. Except for the

doorways, the worker decontamination enclosure system shall be airtight. All entry and exit from the work area shall be through this system, including a thorough showering before entering the clean room. Clean towels, soap and shampoo shall be available throughout the project. Shower waste water shall be drained, collected and filtered through a system before disposal into the sanitary system. Filtered waste water shall be discharged in accordance with applicable codes. The sequence of entering and exiting the decon shall be per appendix A. No asbestos-contaminated individuals or items shall enter the clean room.

G) All HVAC equipment in or passing through the work area shall be shut down, tagged and locked out and measures taken to prevent accidental startups. All intake and exhaust openings and any seams in system components shall be sealed or taped with at least one layer 6 mil sheeting.

H) Asbestos danger signs shall be displayed at all approaches to the project site.

I) Following abatement, clean-up procedures using HEPA vacuuming and wet cleaning techniques shall be performed. Wet cleaning shall be performed, followed by HEPA vacuuming after surfaces have been allowed to dry. The sequence of wet cleaning and vacuuming shall be repeated until no visible residue is observed in the work area. Visual clearance shall be performed by a project monitor. Visual inspection and air clearance samples shall not be collected until the work area is completely dry. The process of applying lockdown encapsulant materials may follow only after the work area has been visually cleared and has met an acceptable clearance level as detailed in 2.4.2(s). Documentation of the visual clearance shall be submitted to the asbestos abatement entity and the building owner within 30 days of the completion of the project and to the Department, upon request.

J) Negative pressure ventilation units with HEPA filtration and in sufficient number to provide one workplace air change every 15 minutes shall be operated for the duration of the project. These HEPA units shall exhaust filtered air to the outside of the facility. A continuous reading manometer is recommended for the duration of the project. Procedures for operation and positioning of the negative pressure units shall be as detailed in the EPA Guidance Document (Purple Book).

K) All asbestos-containing waste shall be thoroughly wetted and kept wet before being placed into containers for disposal.

L) Asbestos waste shall be placed in impermeable containers for transport to the landfill. Metal or fiber drums with locking-ring tops shall be used when asbestos waste contains sharp-edged components. Double impermeable bags of 6 mil thickness each which can be securely sealed may be used to contain waste. Large components or structural members may be wrapped airtight in two layers of 6 mil sheeting secured with tape for disposal.

M) All containers (e.g. bags, drums, wrapped components) shall be labeled in accordance with USEPA 40 CFR 61 regardless of project size.

N) Disposal of asbestos waste shall occur in a manner that is in accordance with the Vermont Agency of Natural Resources, Solid Waste Management requirements.

O) Disposal shall occur at a location approved for handling asbestos waste by the Vermont Agency of Natural Resources or other designated agency having jurisdiction over solid waste disposal. The abatement entity shall submit copies of all disposal receipts to the facility owner and to the Department, as required per Section 2.4.2(U)(V).

P) Transport of asbestos waste shall occur in a manner that is in accordance with the Vermont Agency of Transportation requirements, and USEPA 40 CFR 61.

Q) At the completion of asbestos abatement projects, a visual clearance shall be conducted to determine if all visible residue has been abated from the project area in accordance with the scope of the project. Clearance air sampling shall be conducted to determine and document airborne fiber levels in the work area. Visual clearance and final air clearance shall not be conducted by an employee of the abatement contractor.

R) Air clearance samples shall be collected by a certified project monitor and analyzed by a certified asbestos analytical entity using certified analysts. On-site analysis can only be performed by a certified field analyst.

S) Air volumes taken for clearance sampling shall be sufficient to accurately determine (to a 95 percent probability) fiber concentrations to 0.010 fibers/cubic centimeter of air (f/cc). Final air clearance is complete only when fiber concentrations of all samples taken are 0.010 (f/cc) or less inside the work area. Final air clearance by TEM will be accepted using AHERA, 40 CFR Part 763, Asbestos-Containing Materials in Schools: Final Rule and Notice protocol.

T) Clearance air sampling shall be conducted in the area of abatement, and in representative location(s). Prior to air monitoring, floors, ceiling and walls shall be swept with the exhaust of a minimum one (1) horsepower leaf blower. Stationary fans shall be placed in locations which will not interfere with air monitoring equipment. Fan air shall be directed toward the ceiling. One fan shall be used for each 10,000 ft^3 of the worksite. Air clearance samples shall be required when an abatement activity involves more than 10 linear feet or 10 square feet of asbestos containing material in a work area (e.g. enclosure, containment, within the criticalled area). Air samples shall be collected as follows:

>10 square feet to 100 square feet of asbestos-containing material and/or >10 linear feet to 100 linear feet of asbestos-containing material. No fewer than 2 samples.

>100 square feet to 1000 square feet of asbestos-containing material and/or >100 linear feet to 1000 linear feet of asbestos-containing material. No fewer than 3 samples.

>1000 square feet of asbestos-containing material and/or >1000 linear feet of asbestos-containing material. No fewer than 5 samples.

Where there is a project involving both square and linear footage to be abated the number of air clearance samples taken will be determined by the greater amount abated.

School buildings regulated under AHERA 40 CFR Part 763 are exempt from this Section (2.4.2(T)).

U) Copies of all clearance documents shall be submitted by the Consultant to the Department, facility owner, and abatement entity within 30 days of the project completion. Upon

request, the consultant shall submit these documents to the facility occupants. The abatement entity shall submit the disposal documents to the Department within 30 days of the project completion.

V) The documents per Section 2.4.2(U) shall include the following: visual clearance, final air clearance, and disposal documents in a format approved by the Department. The following information shall be included on each air sample report: specific location of the abatement project, name of the abatement entity performing the project, description of the sampling activity, including the specific location where samples were taken, and conditions under which the samples were obtained, name and signature of the consultant performing the sampling activity, date and time samples were obtained, total run time, flow rate, and volume of the samples (in liters), name and address of the certified analytical entity performing analysis, name and signature and certification number of the analyst, method of analysis used, detection level of the analysis, and results of analysis (expressed in fibers/cc for phase contrast microscopy). For AHERA projects, the report must state that the analytical entity meets requirements of AHERA 40 CFR 763.90 (i)(2) (ii). Documentation of visual clearance shall include, but not be limited to the following: date of visual inspection, state project permit number, project location, abatement entity, printed name, certificate number and signature of the consultant, and results of inspection stating that project location passed visual clearance.

2.4.3 Specific Requirements for Removal of Asbestos-Containing Materials

A) All asbestos-containing material shall be thoroughly wetted through to the substrate prior to removal and kept wet before being placed into containers for disposal.

B) Structural components shall be removed intact or in large sections and carefully lowered to the floor, whenever possible. Chutes may be utilized.

C) Asbestos-containing material shall be removed in small sections and placed wet into containers. At no time shall the material be allowed to accumulate on the floor or become dry. Structural components shall be thoroughly wetted prior to

wrapping in a minimum 2 layers of 6 mil polyethylene sheeting for disposal.

2.4.4 Specific Project Requirements for the Encapsulation of Asbestos-Containing Materials

A) Prior to encapsulation, loose or hanging asbestos-containing material shall be removed.

B) Any remaining or existing asbestos-containing materials pertaining to the scope of work shall be in good condition and adhere well to the substrate. Filler material applied to gaps in existing material shall contain no asbestos, shall adhere well to the substrate and shall provide an adequate base for the encapsulating agent.

C) Encapsulants shall be applied using only airless spray equipment with the nozzle pressure and tip size set according to the manufacturer's recommendations.

D) Encapsulated materials shall be specifically designated by signs, labels, color coding or some other mechanism to warn individuals who may in the future be required to disturb the material.

2.4.5 Specific Requirements for the Enclosure of Asbestos-Containing Materials

A) Prior to enclosure, loose or hanging asbestos-containing material shall be removed.

B) Acceptable enclosures shall be airtight and of permanent construction, so that the area behind them is inaccessible.

C) All areas of asbestos-containing materials shall be wetted if they are to be disturbed during the installation of hangers, brackets or other portions of the enclosure.

D) Filler material applied to gaps in existing material shall contain no asbestos, and shall adhere well to the substrate.

E) Enclosures for asbestos-containing materials shall be specially designated by signs, labels, color coding or some other mechanism to warn individuals who may in the future be required to enter or disturb the enclosure.

2.4.6 Specific Requirements for Abatement Projects Involving Loose/ Dirt Floor Surfaces

A) Prior to pre-cleaning activities, a three stage decontamination chamber shall be in place, negative air filtration units shall be running and critical barriers shall be erected. During pre-cleaning activities, all visible asbestos-containing materials (acm's) must be removed from loose/dirt surfaces or cleaned from deteriorating surfaces.

B) When dirt floors are present, a layer of soil shall then be scraped, bagged and disposed of as asbestos waste. Enough soil must be removed to eliminate all acm's that may have accumulated over time. All deteriorating surfaces should be thoroughly hepa vacuumed.

C) Dirt floors and deteriorating surfaces shall then be covered with a minimum of one layer of 6 mil. sheeting. Placement of this sheeting creates a barrier between the loose surface and the work area.

D) Setup and removal activities shall then occur in accordance with the VRAC 2.4.2. A total of two layers of 6 mil. sheeting shall be on the floor before removal begins.

E) At the completion of the final cleaning, critical barriers and one layer of 6 mil. sheeting shall remain in place. Final visuals and final aggressive clearance air sampling shall then take place as per VRAC Section 2.5.2 Q-T inclusive.

F) After the work area has yielded an acceptable clearance and final air sampling result, remaining barriers can be removed.

2.5 Work Practice Procedures for Small Scale, Short Duration Activities

2.5.l General Requirements

All small scale, short duration activities as defined in Section 1.2.56 of these regulations shall be performed by an Asbestos Worker or Supervisor who has been trained and certified in accordance with Section 2.2 of these regulations. The Asbestos Worker or Supervisor engaged in such small scale, short duration activities shall take the following minimum precautions to prevent the release of asbestos fibers into the environment.

A) Individuals shall not be permitted in the work area without the respiratory protection required for the level of exposure in the work area.

B) No eating, drinking, smoking, applying cosmetics, chewing tobacco/gum in the work area.

C) Airtight barriers shall be constructed for small scale, short duration activities involving abatement of asbestos-containing materials, to ensure that asbestos fibers released during abatement activities are contained within the work area. Glovebags are permitted in place of barriers for removal of asbestos-containing materials located on pipes.

D) Entry into the area by persons other than those necessary to perform the small scale, short duration activity shall be restricted. Signs shall be posted to prevent entry by unauthorized persons.

E) All HVAC equipment in or passing through the work area shall be shut down and measures taken to prevent accidental startups.

F) All asbestos-containing materials shall be wetted prior to being disturbed and shall be kept wet until they are placed in a container.

G) HEPA vacuum equipment and/or wet cleaning techniques shall be used to clean-up the work area following abatement until there is no visible residue.

H) Asbestos-containing waste shall be placed in appropriately labeled impermeable and airtight containers (6 mil sheeting, bags or fiber or metal drums) prior to disposal.

I) The waste shall be contained, transported to and disposed of at an approved facility as required in Section 2.4.2. l, m, n, o, and p.

J) Prior to leaving the worksite, the contractors shall clean their protective clothing with a portable HEPA-equipped vacuum and dispose per 2.5.1(H) and (I).

K) A notification letter shall be sent to the Department per Section 9.1.1 of these regulations.

L) If final visual and air clearances are conducted, then copies of all visual and air clearance results shall be submitted, upon request, to the department, facility owner, facility occupants and the abatement contractor by the consultant contractor or consultant contractor entity within 30 days of the activity.

2.6 Alternatives to Work Practices

2.6.1 Alternative Procedures

The Department may, on a case-by-case basis, approve an alternative procedure for control of emissions from an asbestos abatement project or small scale, short duration activity. The alternative procedure shall be submitted in writing and in advance to the Department. If the proposed alternative procedure provides an equivalent or greater measure of asbestos control than the procedure prescribed by these regulations, then the Department may grant approval. The alternative procedure may not be used until either a verbal or written approval is received from the Department. A written approval will be sent to the requesting entity.

The alternative procedure may be requested by the asbestos abatement entity or asbestos consulting entity. If an alternative procedure is approved, the entity shall reference the alternative procedure request in its project notification when possible. The Department recommends that alternative procedure requests be submitted in writing and approved prior to project bidding in order to obtain competitive bids.

3. CERTIFICATION STANDARDS FOR ANALYTICAL CONTRACTOR ENTITIES AND ASBESTOS ANALYST CONTRACTORS

3.I Applicability

All analytical services must be conducted by a Vermont certified analytical entity or an analyst under the employment of a Vermont certified analytical contractor entity. Samples collected in Vermont but sent out of state for analysis must be analyzed by a Vermont certified analytical contractor.

No firm or individual shall provide any asbestos-related analytical services to an Asbestos Abatement Entity, consultant, individual, or other party, or in conjunction with an Asbestos Abatement Project in the State of Vermont without first being certified by the Commissioner under this section to provide such services.

3.2 Requirements for Certification of Analytical Contractor Entities

3.2.1 General Requirements

To be certified as an Asbestos Analytical Entity, the party seeking certification shall apply to the Department in accordance with Section 1.3 of these regulations. The applicant shall allow the Department to perform on-site inspections of its facilities, equipment and records.

All final air clearance analysis reports shall be in a Department approved format, containing all required information per Section 2.4.2(V).

3.2.2 Bulk Sample Analysis

A) Proficiency Testing

To be certified to analyze bulk samples of suspect asbestos-containing materials, the applicant shall show evidence of proficiency in a recognized national or state quality assurance program. The applicant shall participate in all proficiency rounds available from the program unless granted a waiver from the Department.

B) Methodology

i) The applicant shall use Polarized Light Microscopy (PLM) for the analysis of bulk samples for asbestos content unless certified to use an electron microscopy

method (See Section 3.2.2.B.ii). The technique used shall be in accordance with current EPA Guidelines.

ii) Electron microscopy may be used to analyze bulk samples for asbestos content if the applicant has been certified to do so by the Department. To receive electron microscopy approval the laboratory shall submit the procedures to be used for asbestos analysis, detection limits and minimum fiber sizes routinely detected. The individual who directly supervises the electron microscopy analysis must have at least one (1) year experience in materials analysis by electron microscopy.

iii) Point Counting: If a result obtained from point counting differs from the result obtained by visual estimation, the point counting result takes priority.

3.2.3 Air Sample Analysis

A) Proficiency Testing

i) To be certified to analyze air samples for asbestos content by phase contrast microscopy (PCM) the applicant shall show evidence of proficiency in Asbestos Analysis by the National Institute for Occupational Safety and Health's Proficiency Analytical Testing Program/American Industrial Hygiene Association Proficiency Analytical Testing Program for Phase Contrast Microscopy (PAT Program) or the Asbestos Analysts Registry (AIHA). The applicant shall participate in all rounds available, unless granted a waiver from the Department.

ii) To be certified to analyze air samples for asbestos content by Transmission Electron Microscopy, the applicant shall show evidence of proficiency in Asbestos Analysis by the National Institute of Standards and Technology (NIST). The applicant shall participate in all rounds available, unless granted a waiver from the Department.

B) Methodology

i) The applicant shall use Phase Contrast Microscopy for the analysis of air samples for asbestos content unless certified to use an electron microscopy method (See Section 3.2.3.B.ii). The technique used shall be in accordance with VOSHA 29 CFR 1926.1101 for personal air monitoring and in accordance with the most recent NIOSH 7400 method for all other air sampling.

ii) Transmission Electron Microscopy (TEM) may be used to analyze air samples for asbestos content if the applicant has been certified to do so by the Department. To receive electron microscopy certification, the applicant shall submit the TEM procedures to be used for asbestos analysis, detection limits and minimum fiber sizes routinely detected in accordance with 40 CFR Part 763, Appendix A to subpart E, Section III. In addition, evidence shall be submitted that the individual who directly supervises the electron microscopy analysis has at least 1 year experience in materials analysis by transmission electron microscopy.

3.2.4 Chain of Custody and Quality Assurance

The applicant shall make available upon request its chain of custody protocol and quality assurance procedures to be followed during analysis of bulk and air samples for asbestos content. The applicant shall maintain documentation that these protocols and procedures have been followed. The written report of protocol and procedures shall include but not be limited to reviews of:

A) methodology of analysis
B) sample handling and storage
C) federal reference for method, equivalent, and alternate test procedures
D) instrumentation selection and use
E) calibration and standardization
F) replicate sample analysis
G) blind samples
H) data handling, evaluation, and storage procedures
I) quality control

J) interlaboratory quality assurance
K) intralaboratory quality assurance

The written laboratory protocols and procedures shall be submitted as part of the documentation necessary for obtaining certification. When the applicant renews its certification, it shall submit the updated manual with the renewal application.

3.3 Certification Standards for Asbestos Analyst Contractors

3.3.1 General Requirements

There are five types of asbestos analyst certifications. The five types of asbestos analyst certifications are: PCM Analyst, PLM Analyst, TEM-Air Analyst, TEM-Bulk Analyst, and Field Analyst. An individual shall not perform tasks included in analyst types for which that individual is not certified. To obtain certification as an asbestos analyst(s), the individual shall apply to the Department in accordance with Section 1.3 of these regulations.

3.3.2 Training Requirements for Asbestos Phase Contrast Microscopy Analyst Contractors

To obtain certification the individual shall show evidence of successfully completing:

A) An OSHA or NIOSH approved course for "Sampling and Evaluating Airborne Asbestos Dust" (i.e., NIOSH 582);

or

B) An in-house training course, equivalent to the OSHA/NIOSH approved course, taught under the supervision of an individual who meets the requirements of Section 3.3.2(A).

3.3.3 Training Requirements for Asbestos Phase Contrast Microscopy Field Analyst Contractors

A) Those who conduct analysis outside the certified laboratory must show evidence of successful participation in a recognized national or state quality assurance program (i.e. AIHA, Asbestos Analyst Registry) and shall show evidence of successfully completing 3.3.2 above.

3.3.4 Training Requirements for Asbestos Polarized Light Microscopy

Analyst Contractors

To obtain certification, the individual shall show evidence of successfully completing:

A) A course for the analysis of asbestos bulk samples by Polarized Light Microscopy(PLM). (i.e.: the McCrone course for Asbestos Analysis)

or

B) An in-house training course taught under the supervision of an individual who meets the requirements of 3.3.3 (a); The applicant shall maintain documentation that these requirements have been satisfied and shall make this documentation available for review by the Department, at the Department's request. The Department shall be notified within 30 days by letter of any changes to the contractor's staff.

3.3.5 Training Requirements for Asbestos Transmission Electron Microscopy Analyst Contractors

To obtain certification, the individual shall show evidence of successfully completing:

A) A course for the analysis of asbestos samples by Transmission Electron Microscopy (TEM)(i.e. the McCrone course for TEM)

or

B) An in-house training course taught under the supervision of an analyst contractor who meets the requirements of 3.3.5 (A);

3.4 Certification Documents of Asbestos Analyst Contractors

The employer will provide each contractor documentation of the contractor's training accreditation or Vermont certification once it has been received from the training facility or the Department.

3.5 Documents to be Retained on Project Site

A) A current copy of Field Analyst Certificate.
B) A current copy of Analytical Entity Certificate.

4. CERTIFICATION STANDARDS FOR CONSULTING CONTRACTOR ENTITIES AND CONSULTANT CONTRACTORS

4.I Applicability

Persons collecting bulk asbestos samples in their own homes or asbestos-containing materials per Section 6 in a facility are exempt from these requirements. Samples shall be collected according to Department specifications and sent to a Department Certified Analytical Contractor Entity for analysis.

4.I.I General Requirements

A) No individual shall provide any of the services in Section 4.5 within the State of Vermont without first being certified by the Commissioner to provide such services.

B) To obtain certification as an Asbestos Consultant or Consulting Entity, the party seeking certification shall apply to the Department in accordance with Section 1.3 of these regulations.

C) All Asbestos Abatement Activities carried out under the direction of a certified Asbestos Consultant shall be performed in accordance with Sections 2.3, 2.4, 2.5 of these regulations.

D) All Asbestos Consultants shall have their current certificates at the worksite.

E) A consultant shall provide all project documents to the Department, upon request.

4.1.2 Experience Requirements

For the purposes of Section 4.1.2 experience requirements, the following areas are defined:

i) Engineering - any service or creative work, the adequate performance of which requires engineering education, training and experience in the application of special knowledge of the mathematical, physical and engineering sciences. This includes consultation, investigation, evaluation, planning and design of engineering works and systems, planning the use of land and water and accomplishing engineering surveys.

Such services or work may be either for public or private purposes, and may be performed in connection with any utilities, structures, buildings, machines, equipment, processes, work systems, projects and equipment systems of a mechanical, electrical, hydraulic, pneumatic or thermal nature, insofar as they involve safeguarding life, health or property.

ii) Industrial Hygiene - the recognition of environmental factors and stresses associated with work and work operations and the understanding of their effects on people and their well-being in the workplace and the community; the evaluation, through training and experience, and with the aid of quantitative measurement techniques, of the magnitude of these factors and stresses in terms of ability to impair one's health and well-being. This would include the prescription of methods to control or reduce such factors and stresses when necessary to alleviate their effects.

iii) One year of experience is defined as fifty-two (52) 40-hour work weeks. One month of experience is defined as four (4) 40-hour work weeks.

4.2 Certification Standards for Asbestos Consulting Contractor Entities

4.2.1 Summary of Requirements.

A) Apply to the Department in accordance with Section 1.3 of these regulations.

B) Ensure that records of all asbestos projects for which the Consulting Entity performs consulting services are maintained and retained in accordance with Section 4.3.1.

C) Submit evidence that all consultants in its employment have been properly trained and have obtained certification in accordance with Section 4.5.

D) Implement a respiratory protection program that is in accordance with Section 4.4.1 of these regulations and submit a copy of this written respiratory protection program to the Department.

E) Provide each consultant in its employment who engages in asbestos activities the necessary protective gear and clothing in accordance with Section 4.4.2 of these regulations, and submit to the Department a written description of the protective gear and clothing that shall be provided.

F) Provide or make available to all consultants in its employment who engage in asbestos activities a medical monitoring program that is in accordance with the regulations in Section 4.4.3. A written copy of this program shall be submitted to the Department.

G) Implement an exposure monitoring program, in accordance with Section 4.4.4 of these regulations, for consultants in its employment who may be exposed to airborne asbestos fibers during asbestos abatement activities, and submit a written description of this program to the Department.

H) Ensure that all consultants in its employment maintain their training accreditations and their certifications.

I) An employer will provide each employee documentation of the employee's training accreditation and Vermont certification once they have been received from the training facility or the Department.

4.3 Recordkeeping

4.3.1 Retention of Records

Each Asbestos Consulting Entity shall maintain records in accordance with Sections 4.3.2 and 4.3.3 of all asbestos projects and small scale, shore duration activities, and shall make these records available to the Department upon request. These records shall be retained for no less than thirty (30) years after completion of the asbestos project and small scale, short duration activity.

4.3.2 Required Records

The Asbestos Consulting Entity shall record the following information for each asbestos project and small scale, short duration activity:

A) The name, address and certification number of each consultant participating in the project/small scale, short duration activity.

B) The scheduled plan for monitoring, the location of the project/small scale, short duration activity, and the estimated amount of asbestos involved in the project/small scale, short duration activity.

C) Scheduled and actual starting and completion dates.

D) Copies of all asbestos-related correspondences with regulatory agencies concerning the project/small scale, short duration activity, if able to obtain.

E) A complete list of all asbestos contractors or agents participating in the asbestos project/small scale, short duration activity, if able to obtain.

F) Descriptions of unplanned exposures to asbestos and worksite accidents, if able to obtain.

G) Visual clearance documentation shall be submitted to the Department, facility owner, and the abatement contractor within thirty (30) days of the completion of the project/small scale short duration activity.

H) The methodology and results of all air sampling conducted during the project/small scale, short duration activity, the name and certification number of the consultant performing the air sampling, name and certification number of the analyst performing the analysis, and the name and certification number of the Asbestos Analytical Entity employed to analyze such samples.

I) Final air clearance records shall be submitted to the Department and the abatement entity within thirty (30) days of the completion of the project/small scale, short duration activity.

4.3.3 Documents to be Retained On Project/Small Scale, Short Duration Activity Site

The following documents shall be retained on-site beginning on the first day of the project/small scale, short duration activity and remain on-site for the duration of the asbestos project/small scale, short duration project:

A) A current copy of these regulations;

B) Records of all air sampling as required in Section 4.4.4.

C) A current copy of the Entity Respiratory Protection Program which shall include Medical Monitoring and Exposure Monitoring documentation for all contractors in its employment actively engaged in the asbestos abatement project; including copies of emergency medical information.

D) The current certificates of all on-site consultants in its employment.

E) The current certificate of the Consulting Entity.

F) Current documentation of respirator fit testing, as required in Section 4.4.

4.4 Consultant Contractor Protection Standards

4.4.1 Respiratory Protection

Each Asbestos Consulting Entity shall prepare and submit, with its application for certification to the Department, a written respiratory protection program. This program shall be followed and made available to consultants in its employment.

A) Selection of Respirators

i) An approved respirator shall be used by any person performing any asbestos activity in accordance with Appendix B.

B) Fitting of Respirators

i) Each consultant shall be given an opportunity to select a respirator for proper and comfortable fit.

ii) Each consultant shall be instructed in the performance of positive and negative pressure sealing checks and be able to successfully perform them. Each consultant shall perform a sealing check every time a respirator is donned.

iii) Each asbestos consultant shall be fit tested using generally acceptable qualitative or quantitative fit testing procedures, and shall adequately pass the selected fit test procedure. The consultant shall adequately pass the selected fit test procedure every six months. Fit tests shall not be self administered.

C) Prohibited Activity

i) Individuals shall not be permitted in the work area without the respiratory protection required for the level of exposure in the work area. This requirement shall be strictly enforced by the Project Monitor.

ii) No eating, drinking, smoking, applying cosmetics, chewing tobacco/gum in the work area.

4.4.2 Consultant Contractor Protection Provisions

The Asbestos Consulting Entity shall provide each asbestos consultant, at a minimum, with personal protective equipment and clothing.

4.4.3 Medical Monitoring

The Asbestos Consulting Entity shall ensure that any contractor who performs asbestos consultant activities is medically monitored with an initial examination and annual periodic re-examinations.

4.4.4 Personal Exposure Monitoring

A) General Requirements

The Asbestos Consulting Entity shall provide daily exposure monitoring for its consultants during all stages of the asbestos abatement activity.

Personal exposure monitoring shall be conducted by a Project Monitor or a Supervisor. Analysis of the samples shall be performed

by an Asbestos Analyst who has been certified by the Commissioner.

B) Recordkeeping

Records of all personal exposures shall be kept on the project site and available for review for the duration of the asbestos project. These records shall include the dates, times, sampling locations, sampling methods, sampling rate, time period, methods of sample analysis, the results of the sample analysis, the name and certification number of the analyst and the name and certification numbers of the Consultants wearing the pump and Contractors taking the samples.

4.5 Certification Standards for Individual Consultant Contractors

There are four types of consultant certifications: Inspector, Inspector/Management Planner, Project Monitor, and Project Designer. An individual shall not perform tasks included in consultant types for which that individual is not certified. All consultants must apply to the Department in accordance with Section 1.3 of these regulations and meet the requirements of (the current) EPA Asbestos Model Accreditation Plan, 40 CFR Part 763, Subpart E, Appendix C.

4.5.1 Inspector Contractor Certification

A) Scope

An individual certified as an Asbestos consultant and holding an inspector certificate may provide the following services only:

i) inspecting buildings for the presence of asbestos-containing materials and determining whether suspect asbestos-containing materials are friable or non-friable.

ii) planning bulk sampling strategies.

iii) collection of bulk samples from suspect asbestos-containing materials in a manner sufficient to determine the presence of asbestos-containing materials.

iv) evaluating the condition of asbestos-containing materials in buildings.

B) Requirements for Inspector Certification

The following are the minimum requirements necessary to establish competence for certification:

i) Possession of a High School diploma or G.E.D. and successful completion of an Inspector training course certified by the Department per Section 5 and one year of experience in asbestos abatement activities;

or

ii) Possession of two years of college education from an accredited college or university and successful completion of an Inspector training course which is certified by the Department per Section 5;

or

iii) three years of experience in engineering or industrial hygiene, and successful completion of a Inspector training course certified by the Department per Section 5.

4.5.2 Inspector/Management Planner Contractor Certification

A) Scope

An individual certified as an Asbestos Inspector/Management Planner may provide the following services only:

i) all services in section 4.5.1.A

ii) utilize information developed from facility inspections to assess the potential hazards of asbestos-containing materials.

iii) develop management plans.

iv) advising clients on selection and use of personal protective equipment.

B) Requirements for Inspector/Management Planner Contractor Certification

The following are the minimum requirements necessary to establish competence for certification:

i) Possession of one year of experience in asbestos abatement activities and successful completion of an Inspector/Management Planner training course certified by the Department per Section 5;

or

ii) Possession of two years of college education from an accredited college or university and one year of experience in asbestos abatement activities and successful completion of an Inspector/Management Planner training course certified by the Department per Section 5;

or

iii) Possession of a bachelor's degree from an accredited four-year college or university, and successful completion of an Inspector/Management Planner training course certified by the Department per Section 5.

or

iv) three years of experience in engineering or industrial hygiene, and successful completion of an Inspector/Management Planner training course certified by the Department per Section 5.

4.5.3 Project Monitor Contractor Certification

A) Scope

An individual certified as an Asbestos Project Monitor Consultant may provide the following services only:

i) collection of air samples.

ii) performing visual inspections of completed asbestos abatement projects to determine if the projects are completed.

iii) collection of clearance air monitoring samples.

iv) advising clients on selection and use of personal protective equipment.

v) monitoring asbestos abatement projects for compliance with project design and State and Federal regulations.

vi) assessing the health hazards associated with the presence of asbestos-containing materials in buildings.

B) Requirements for Project Monitor Contractor Certification

The following are the minimum requirements necessary to establish competence for certification:

i) Status as either an American Board of Industrial Hygiene Certified Industrial Hygienist, or a Registered Professional Engineer or Registered Architect and 3 months asbestos abatement activities and successful completion of a Contractor/Supervisor asbestos training course, certified by the Department per Section 5, and an Air Sampling for Project Monitors training course approved by the Department, per Section 5;

or

ii) Possession of a bachelor's degree from an accredited four-year college or university and six months of experience in asbestos abatement activities and successful completion of a Contractor/Supervisor asbestos training course, certified by the Department, per Section 5 and an Air Sampling for Project Monitors training course, approved by the Department per Section 5;

or

iii) Possession of two years of college education from an accredited college or university and one year of experience in asbestos abatement activities and

successful completion of a Contractor/Supervisor training course certified by the Department per Section 5 and an Air Sampling for Project Monitors training course, approved by the Department per Section 5;

or

iv) Possession of a High School Diploma or G.E.D., four years experience in engineering or industrial hygiene and one year experience in asbestos abatement activities and the successful completion of a Contractor/Supervisor asbestos training course, certified by the Department per Section 5 and an Air Sampling for Project Monitors training course approved by the Department per Section 5.

4.5.4 Project Designer Contractor Certification

A) Scope

An individual who has obtained certification as a Project Designer may provide the following services only:

i) designing, preparing and evaluating asbestos abatement project specifications.

ii) Determining how asbestos abatement should be conducted.

B) Requirements for Project Designer Contractor Certification

The following are the minimum requirements necessary to establish competence for certification:

i) Status as either an American Board of Industrial Hygiene Certified Industrial Hygienist, or a Registered Professional Engineer or Registered Architect and six months of asbestos abatement activities and the successful completion of a Project Designer or a Contractor/Supervisor training course, certified by the Department per Section 5;

or

ii) Possession of a bachelor's degree from an accredited college or university and one year of experience in asbestos abatement activities and the successful completion of a Project Designer or a Contractor/Supervisor training course which have been certified by the Department per Section 5;

or

iii) Possession of an associates degree from an accredited college or university and two years of experience in engineering or industrial hygiene and one year of experience in asbestos abatement activities and the successful completion of a Project Designer or a Contractor/Supervisor training course which have been certified by the Department per Section 5;

or

iv) Possession of a High School diploma or G.E.D.and four years of experience in engineering or industrial hygiene and one year of experience in asbestos abatement activities and the successful completion of a Project Designer or a Contractor/Supervisor training course which have been certified by the Department per Section 5.

4.6 Independent Consultant Contractor Recordkeeping Requirements

4.6.1 Retention of Records

Each Independent Consultant shall maintain records in accordance with Sections 4.6.2 and 4.6.3 of all asbestos projects/small scale, short duration activities and shall make these records available to the Department upon request. These records shall be retained for no less than thirty (30) years after completion of the asbestos project/small scale, short duration activity.

4.6.2 Required Records

The Independent Consultant shall record the following information for each asbestos project/small scale, short duration activity:

A) The name, address and certification number of each consultant participating in the project/small scale, short duration activity.

B) The scheduled plan for monitoring, the location of the project/small scale, short duration activity and the estimated amount of asbestos involved in the project/small scale, short duration activity.

C) Scheduled and actual starting and completion dates.

D) Copies of all asbestos-related correspondences with regulatory agencies concerning the project/small scale, short duration activity, if able to obtain.

E) A complete list of all asbestos contractors or agents participating in the asbestos project/small scale, short duration activity, if able to obtain.

F) Description of unplanned exposures to asbestos and worksite accidents, if able to obtain.

G) Visual clearance documentation shall be submitted to the Department, facility owner, and the Abatement Contractor within thirty (30) days of the completion of the project/small scale, short duration activity.

H) The methodology and results of all air sampling conducted during the project/small scale, short duration activity, the name and certification number of the consultant performing the air sampling, name and certification number of the Analyst performing the analysis, and the name and certification number of the Asbestos Analytical Entity employed to analyze such samples.

I) Final air clearance records shall be submitted to the Department and the abatement entity within thirty (30) days of the completion of the project.

4.6.3 Documents to be Retained on Project and Asbestos Abatement Site

The following documents shall be retained on-site beginning on the first day of the project and remain on-site for the duration of the asbestos project:

A) A current copy of these regulations;

B) Records of all air sampling as required in Section 4.6.2.

C) Current certificates.

D) Current documentation of respirator fit testing as required in Section 4.6.4.

4.6.4 Independent Consultant Contractor Protections Standards

A) Selection of Respirators

i) An approved respirator shall be used by any person performing any asbestos activity per Appendix B.

ii) Respirators shall be selected that meet or exceed the level of protection per Appendix B.

B) Fitting of Respirators

i) Each consultant shall select a respirator for proper and comfortable fit.

ii) Each consultant shall be instructed in the performance of positive and negative pressure sealing checks and be able to successfully perform them. Every consultant shall perform a sealing check every time a respirator is donned.

iii) Each Asbestos Consultant shall be fit tested using generally acceptable qualitative or quantitative fit testing procedures and shall adequately pass the selected fit test procedure. The consultant shall adequately pass the selected fit test procedure every six months. Fit tests shall not be self administered.

C) Prohibited Activity

i) Individuals shall not be permitted in the work area without the respiratory protection required for the level of exposure in the work area.

ii) No eating, drinking, smoking, applying cosmetics, chewing tobacco/gum in the work area.

4.6.5 Independent Consultant Contractor Protection Provisions

4.6.6 Medical Monitoring

The Independent Asbestos Consultant shall be medically monitored with an initial examination and annual periodic re-examinations.

4.6.7 Personal Exposure Monitoring

A) General Requirements

The Independent Asbestos Consultant shall perform representative exposure monitoring during all stages of the asbestos abatement.

Analysis of the samples shall be performed by an Asbestos Analyst who has been certified by the Commissioner.

B) Recordkeeping

Records of all exposures shall be kept on the asbestos abatement site and available for review for the duration of the asbestos project and asbestos abatement. These records shall include the dates, times, and sampling locations, sampling methods, sampling rate, time period, methods of sample analysis, the results of the sample analysis, the name and certification number of the analyst and the names and certification numbers of the consultants wearing the pumps and the contractors taking the samples.

5. CERTIFICATION STANDARDS FOR TRAINING CONTRACTOR ENTITIES AND CONTRACTOR TRAINING COURSES

5.1 General Requirements

All training courses which are used to fulfill the certification requirements must be certified or approved by the Department. Any applicant seeking certification of an asbestos training course shall comply with the requirements of this section and shall apply to the Department as required by these regulations before certification may be granted by the Department.

5.2 Certification of Training Contractor Entities

5.2.1 Summary of Requirements

In order to obtain certification, a Training Entity shall:

A) Apply to the Department in accordance with Section 1.3 of these regulations. An entity fee is not required, but the certification fee for individual training courses shall be submitted with each application.

B) Ensure that records of all training courses which the Training Entity offers are maintained and retained in accordance with the EPA Asbestos Model Accreditation Plan, 40 CFR, Part 763, Subpart E, Appendix C.

C) Maintain evidence that training course instructor(s) are qualified and experienced in accordance with EPA Asbestos Model Accreditation Plan, 40 CFR, Part 763, Subpart E, Appendix C.

D) Ensure that training certificates awarded clearly state the attendee's name, unique certificate number, type of training, type and date of examination administered, dates of attendance and name, Address and telephone number of the training entity.

E) Certificates shall include a statement that the person has completed the requisite training for asbestos accreditation under TSCA Title II.

5.2.2 Notification

A Training Entity must notify the Department in writing two weeks prior to each offering of a course. A planned schedule such as a course brochure will meet this requirement. If a course is unexpectedly conducted, the Department will require notification 24 hours in advance.

5.2.3 Retention of Records and Access

Each Training Entity shall maintain records in accordance with EPA Asbestos Model Accreditation Plan, 40 CFR, Part 763, Subpart E, Appendix C. These records must be provided to the Department upon request.

If a training provider ceases to conduct training, the training provider must notify the Department and give it the opportunity to take possession of their asbestos training records.

5.3 Initial Contractor Course Content and Requirements

5.3.1 Asbestos Contractor Training

At a minimum, the initial training courses for Asbestos Workers, Asbestos Supervisors, and Asbestos Consultants (Inspectors, Inspector/Management Planners, Project Designers, and Project Monitors) shall present information as described in EPA Asbestos Model Accreditation Plan, 40 CFR Part 763, Subpart E, Appendix C.

5.3.2 Asbestos Project Monitor Contractor Training

The initial training courses for Asbestos Project Monitors are the Asbestos Abatement Contractor/Supervisors Training (Section 5.3.1) and the Air Sampling for Project Monitors training (Section 5.3.3.) or courses as described in EPA Asbestos Model Accreditation Plan, 40 CFR Part 763, Subpart E, Appendix C.

5.3.3 Visuals Clearance and Air Sampling for Project Monitor Contractor Training

This training course shall be approved by the Department, and may be given in-house. The initial training shall consist of a minimum of one (1) day and shall adequately present the following topics (Note: Individuals who have taken the NIOSH 582 course or an equivalency training may substitute that training for the following):

A) Overview of Technical Guidance.

1) EPA/NIOSH methods, AHERA method, OSHA Reference Method and ASTM E1368.

B) Overview of all applicable State and Federal Regulations.

1) AHERA requirements

C) Visual Clearances/Monitoring

1) Inspections during abatement
2) ASTM E1368 Methods
3) Conducting inspections for completeness of removal

D) Discussion of Sample Analysis Methods.

1) Phase Contrast Microscopy (PCM)
2) Transmission Electron Microscopy (TEM)
3) Comparison of these Methods for Post-Abatement Air Testing.

E) Air Sampling Procedures.

1) Sampling Equipment and Calibration

i) Types of Filter Media
ii) Type of Filter Cassettes
iii) Controlled Flow Pumps (Low vs high volume)

2) Sampling Procedures

i) Checking Filter Assemblies, filter orientation, storage & shipment of filters
ii) Measuring Air Flow or flow regulating devices
iii) Pump Failure
iv) Determining Sampling Times and Volumes
v) Field Operations, recordkeeping
vi) Sampling Strategy
vii) Calibration techniques (primary & secondary standards) frequency temperature/pressure effects

F) Air Testing Criteria for Determining Work-Site Cleanliness After Abatement

1) Recommended Release Criteria
2) Statistical Considerations for Using Release Criteria

i) Sampling Volume and Time
ii) The Number and Locations of Sampling Pumps
iii) Comparing Measured Levels of Airborne Asbestos
iv) Recommended Actions if the Work Site Fails Clearance

G) Quality Assurance Practices

H) Quality Control Practices

I) Recordkeeping Practices

J) Safety Considerations

K) Course Review

5.4 Refresher Contractor Course Contents and Requirements

Refresher training courses shall be in accordance with EPA Asbestos Model Accreditation Plan, 40 CFR Part 763, Subpart E, Appendix C.

5.5 Examinations

All individuals are required to complete an initial or refresher training course and pass an initial or a refresher examination in accordance with EPA Asbestos Model Accreditation Plan, 40 CFR Part 763, Subpart E, Appendix C.

5.6 Certification Standards for Individual Contractor Training Courses

5.6.1 Requirements

The contractor applying for certification of each asbestos training course must submit a completed application and the fee per Section 8. Within 15 working days after receiving an application, the Department shall acknowledge receipt of the application and notify the applicant of any deficiency in the application. Within 15 working days after receiving a completed application, including any additional information requested by the Department, the Department shall certify or deny the application. If the

Department requests further information from an applicant and does not receive that information within 15 days, then the application shall be considered abandoned and denied. All required information must be submitted by the applicant as per the instructions on the Department application form.

5.6.2 Denial of Applications

The Commissioner may deny an application for training course certification to any training entity that fails to meet the standards established by these regulations, including, but not limited to:

A) Failure to demonstrate the ability of the training course to comply fully with the applicable requirements, procedures, and standards set forth in these regulations.

B) Past history of incompetence or negligence in providing training courses on the part of the responsible individual and/or employees or agents currently in his employment.

C) Submission of false information on an application.

D) Failure to demonstrate the ability of the training course to effectively train course participants.

5.7 Granting Certification of an Asbestos Contractor Training Course

The Department shall conduct an on-site observation & evaluation of the training course, if deemed necessary. If the Department determines that the applicant's asbestos training course instructors and facilities meet the requirements set forth in these regulations certification will be granted for a period of two years. The costs to the Department for visitation, including travel, food, and lodging costs, of any asbestos training course shall be completely at the expense of the party seeking certification of that course. In lieu of visitation, the training entity may be required to submit to the Department a representative video tape (in VHS format) of the training course for review and evaluation. Any change in a certified course must be reported to the Department prior to presenting the changed course.

5.8 Certificates

After certification has been granted, a certificate shall be issued to the applicant for each individual training course and shall contain the following information:

A) Date of issuance.

B) Date of expiration.

C) The name and address of the training entity.

D) Title of course.

5.9 Expiration of Certificates

Certification shall expire two (2) years from the effective date on the certificate.

5.10 Renewal of Certificates

To renew an asbestos training course certificate, the applicant shall resubmit the information required in Section 5.6 of these regulations without reference to any previously submitted material. Visitation is not required for renewal.

Existing certification shall not expire until final action on the application has been taken by the Department if the training entity has filed a complete renewal application with the Department 30 days in advance of the expiration date.

5.11 Reciprocity

Each applicant for certification of an asbestos training course which is licensed, certified, permitted or approved by a state other than Vermont or by a federal agency may petition the Commissioner for granting of certification without visitation of the in-progress training course by the Department. The Commissioner shall evaluate the requirements for approval, permitting, or licensing permit of the approving authority and shall grant certification without visitation if the Commissioner determines that the requirements of the authority are equal to or greater than the requirements for certification in the State of Vermont. If the Asbestos Training course seeking certification is not licensed, certified, permitted or approved by a state other than Vermont or by a federal agency, then visitation of the course by a Department representative is necessary and the costs to the Department for visitation shall take place completely at the expense of the party seeking certification of that course.

6. EXEMPTIONS FOR SPECIFIC ASBESTOS-CONTAINING MATERIALS

6.1 Applicability

Asbestos Abatement Activities involving the following materials shall be exempt from the requirements of Sections 2,4,7,8, and 9 of these regulations, only if all such activities are carried out in accordance with all of the standards in Section 6. If the material becomes friable during the abatement, then the abatement must be continued per Section 2.4 of these regulations.

A) vinyl asbestos flooring and mastics

B) exterior asbestos roofing materials

C) exterior asbestos siding materials

D) exterior asbestos cement piping

E) exterior asbestos transite board

F) asbestos transite board and asbestos cement piping in open air buildings

G) asbestos transite board in Agricultural Barns

6.2 Worker Protection Standards

All employees in Vermont are protected under Vermont Occupational Safety and Health Administration (VOSHA) regulations. The Vermont Regulations for Asbestos Control (VRAC) apply to all persons conducting asbestos activities.

A) The Department recommends that an approved respirator and protective clothing be properly used by any person performing asbestos abatement activities on Section 6 materials.

6.3 Work Practice Procedures

A) All asbestos-containing materials shall be adequately wetted prior to removal and kept wet until disposed.

B) Asbestos-containing materials shall not be sanded, sawn, chipped, ground, abraded, drilled, or subjected to any other dust producing activity.

C) Asbestos-containing materials shall be removed in sections as large as technically feasible and carefully lowered or transported via a chute to the ground.

D) All asbestos waste shall be packaged, labeled in accordance with USEPA 40 CFR 61 regardless of type and amount of asbestos-containing materials.

E) Transport of asbestos waste shall occur in a manner that is in accordance with the Vermont Agency of Transportation Requirements.

F) Disposal of asbestos waste shall occur in a manner that is in accordance with the Vermont Agency of Natural Resources Solid Waste Management requirements.

G) Disposal shall occur at a location approved for handling asbestos waste by the Vermont Agency of Natural Resources or other designated agency having jurisdiction over solid waste disposal.

6.4 Alternatives to Work Procedures

The Department may, on a case by case basis, approve an alternative procedure request for asbestos abatement activities. The alternative procedure shall be submitted in writing and in advance to the Department for approval. If the proposed alternative procedure provides an equivalent or greater measure of control of emissions from asbestos abatement activities than the procedure prescribed by these regulations, then the Department may grant approval. The alternative procedure may not be used until a verbal or written approval is given by the Department.

6.5 Specific Requirements for Preventive Measures-Protective Barriers

A) For the purpose of preventing asbestos-containing material from becoming damaged, a protective barrier may be constructed.

B) The asbestos-containing materials must be intact and in good condition. The construction of the barrier must not disturb the asbestos-containing materials.

C) Barriers shall be specially designated by signs, labels, color coding or some other mechanism to warn individuals who

may in the future be required to remove or disturb the barriers that asbestos-containing materials are present.

D) For these purposes, it is not required by the Department to have contractor certification.

6.6 Bulk Sampling

Persons collecting bulk samples in their own homes or asbestos-containing materials per Section 6 in a facility are exempt from Section 4 requirements. Samples shall be collected, however, according to Department specifications.

7. PERMITS AND FEES

7.1 Applicability

No person shall perform an asbestos abatement project without certification and a permit from the Commissioner pursuant to 18 VSA 1334. Fees shall be paid at the time of application for the permit. No application for a project permit will be processed unless the fee has been paid. Application for a project permit shall be submitted to the Commissioner no later than ten (10) working days prior to beginning the project or at such time that the project has been approved by the Department. The Department will immediately return any application and fee submitted without all required documentation or the appropriate fee. The fee will be based on the total amount of linear and square feet of asbestos involved in each building involved in the project. Any amendments to the notification which increases the scope of work into a higher permit fee category will result in additional permit fees due. The difference in the two fees shall be submitted to the Department within 24 hours of discovery.

7.2 Permit Fees

PERMIT CATEGORY	FEE
>10 square feet to 100 square feet	$ 50.00
>10 linear feet to 100 linear feet	$ 50.00
>100 square feet to 1000 square feet	$100.00
>100 linear feet to 1000 linear feet	$100.00
>1000 square feet	$200.00
>1000 linear feet	$200.00

7.3 Permit Fee Submittal

The person seeking a permit shall submit a completed application with all necessary documentation and the fee made payable to the Vermont Department of Health in the entire amount required in accordance with Section 7.1 and with the fee schedule outlined in Section 7.2 of these regulations. Only one permit is required for each project.

8. CONTRACTOR CERTIFICATION FEES

8.1 Applicability

No person, required to be certified shall perform any asbestos abatement activities without obtaining certification from the Commissioner pursuant to 18 VSA Chapter 26. Fees shall be paid at the time of application for a certificate. No application for certification will be processed unless the fee has been paid. The Department will immediately return any application submitted without the appropriate fee. For those persons employed by the State of Vermont who must be certified to carry out their job duties, a fee of one dollar shall be submitted with each application. For those Entities applying for certification in more than one category, the first application shall be submitted with the initial fee. Each additional Entity application shall include the additional fee.

8.2 Certification Fees

CONTRACTOR CATEGORIES	FEE	
Entities	$500.00	Initial
	$50.00	Additional
Consultants	$150.00	Initial
	$125.00	Additional
Analysts	$50.00	
Workers	$50.00	
Supervisors	$100.00	
Training Courses - Two Year Period		
Initial	$400.00	
Refresher	$250.00	

8.3 Certification Fee Submittal

The person seeking certification shall submit a completed application with all necessary documentation and the fee made payable to the Vermont Department of Health in the entire amount required in accordance with Section 8.1 and with the fee schedule outlined in Section 8.2 of these regulations. Any incomplete application will be returned with the submitted fee.

9. Notification Requirements

9.1 Demolition, Renovation and Asbestos Abatement Projects

A) Prior to any demolition or renovation of a facility or portion of a facility, the facility owner shall determine, through an asbestos assessment, the presence of asbestos-containing materials. This assessment shall be conducted by a certified Asbestos Inspector. No person shall demolish or renovate a facility or portion of a facility without first obtaining confirmation from the facility owner that an asbestos assessment has been performed according to this section. Even if no asbestos-containing materials are found in a facility which is to be demolished, the Department shall be notified 10 working days in advance of the demolition. The notification will be in accordance with (C) of this section.

B) If the assessment indicates the presence of asbestos-containing materials and these materials will be disturbed due to the demolition or renovation, then they shall be removed according to the requirements of Sections 2.4.1, 2.4.2, 2.4.3, 2.5.1, Section 6, and the USEPA 40 CFR Part 6I prior to the demolition or renovation activities commencing. Private residences due for renovation or demolition are only exempt from this section when another private residence is to be rebuilt in its place. The Asbestos Abatement Entity intending to engage in an asbestos abatement project shall notify the Department 10 working days in advance of the abatement. The notification will be submitted with the notification permit fee payment as specified in Section 7. Notification will be in accordance with (C) of this section. The project shall not start until the entity has received the project permit. The contractor shall notify the department if the contractor is to be off-site for one or more days during the project.

i) A diagram of the project area shall be submitted and include the following:

a) Location of each individual containment area and amount(s) of acm in each individual containment area.

b) Location of decontamination unit(s) and waste load-out (if applicable).

c) Location of Negative Air Filtration Unit(s) and points of venting for each unit.

C) The written notification shall be received by the Department on a Department provided form or facsimile. Items on the notification document shall include, but not be limited to: entity name, supervisor and consultant names, and certification numbers, (when known), building name and address, building owner's name and address, if present, location and type of asbestos-containing material, type of abatement activity, project beginning and completion dates, scheduled work hours (if other than 8am-5pm), quantity of asbestos-containing materials involved, disposal site, alternative work practices requested, and the section number of general asbestos work practices to be used. The Department shall be notified within twenty-four (24) hours of changes to the notification.

9.1.1 Asbestos Small Scale Short Duration Notification

A completed small scale short duration notification shall be sent to the Department, on a Department provided form, for all asbestos small scale, short duration activities within 48 hours of the activity.

9.1.2 Emergency Asbestos Abatement Projects

An Asbestos Abatement Entity shall notify the Department by telephone at 1-800-439-8550 within twenty-four (24) hours and in writing, postmarked no later than forty-eight (48) hours following the beginning of an emergency asbestos abatement project. Information is to include requirements per Section 9, written notification, permit fee per Section 7 and details of the emergency. Problems with scheduling do not constitute an emergency. Full work procedures of VRAC 2.4.2 must be utilized during emergency projects, unless alternatives have been approved by the department.

APPENDIX A

WORK AREA ENTRY AND EXIT PROCEDURES

General Requirements

The following procedures shall be followed throughout the asbestos abatement project until satisfactory clearance air monitoring results have been achieved:

A) Entry and exit. All persons shall enter and exit the work area through the personal decontamination enclosure system.

B) Entry/exit log. All persons who enter the work area or an enclosure shall sign the entry/exit log, upon every entry and exit.

C) Knowledge of procedures. All persons, before entering the work area or an enclosure, shall read and be familiar with all posted regulations, personal protection requirements, including work area entry and exit procedures, and emergency procedures. The entry/exit log headings shall indicate, and the signatures shall be used to acknowledge, that these have been reviewed and understood by all persons prior to entry.

D) Personal protective equipment. All persons shall proceed first to the clean room, remove all street clothing, store these items in clean sealable plastic bags or lockers and don protective clothing. All authorized visitors shall also don NIOSH-approved respiratory protection. Clean respirators and protective clothing shall be utilized by each authorized visitor for each separate entry into the work area. Respirators shall be inspected prior to each use and tested for proper seal using quantitative or qualitative fit checks.

E) Tools. Persons wearing designated personal protective equipment shall proceed from the clean room through the shower room to the equipment room, where necessary tools are collected and any additional clothing shall be donned, before entry into the work area.

F) Removal of gross contamination. Before leaving the work area, all persons shall remove gross contamination from the outside of respirators and protective clothing by brushing, wet cleaning, and/or HEPA vacuuming.

G) Removal of personal protective equipment. Persons shall proceed to the equipment room, where all protective clothing shall be removed. Disposable clothing shall be deposited into labeled containers for disposal. Reusable contaminated clothing, footwear, headgear and gloves shall be

stored in the equipment room when not being used in the work area. Authorized visitors shall not remove respirators during this process.

H) Showering. Still wearing respirators, persons shall proceed to the shower area, clean the outside of the respirator, and then fully shower and shampoo to remove residual asbestos contamination. Respirators shall be washed thoroughly with soap and water. Some types of respirators will require slight modification of these procedures. An airline respirator with HEPA filtered disconnect protection shall be disconnected in the equipment room and worn into the shower. A powered air-purifying respirator facepiece shall be disconnected from the filter/power pack assembly prior to entering the shower.

I) Clean room/clothing. After showering and drying, all persons shall proceed to the clean room and don clean personal protective equipment if returning to the work area or street clothing if exiting the enclosure.

APPENDIX B
RESPIRATOR SELECTION

Where respirators are used, the employer shall select and provide, at no cost to the employee, the appropriate respirator as specified in Table 1, and shall ensure that the employee uses the respirator provided.

The employer shall select respirators from among those jointly approved as being acceptable for protection by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR Part 11.

Airborne concentrations of asbestos or conditions of use	Required respirator
Not in excess of 1 f/cc (10)XPEL), or otherwise as required independent of exposure	Half-mask air purifying respirator other than a disposable respirator, equipped with high efficiency filters
Not in excess of 5 f/cc (50XPEL)	Full facepiece air-purifying respirator equipped with high efficiency filters.
Not in excess of 10 f/cc (100XPEL)	Any powered air-purifying respirator equipped with high efficiency filters or any supplied air respirator operated in continuous flow mode.
Not in excess of 100f/cc(1000XPEL)	Full facepiece supplied air respirator operated in pressure demand mode.
Greater than 100 f/cc (1,000 X PEL) or unknown concentration.	Full facepiece supplied air respirator operated in pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus.

Note: a. Respirators assigned for high environmental concentrations may be used at lower concentrations, or when required respirator use is independent of concentration.

b. A high efficiency filter means a filter that is at least 99.97 percent efficient against mono-dispersed particles of 0.3 micrometers in diameter or larger.