NSC Abatement Services Inc.

122 East Third Street, Mount Vernon, N.Y. 10550

Tel. (914) 668-4111 Fax. (914) 668-4112

Standard Operating Procedures

Revised 01/10/2022

Table of Contents

Section I – Respiratory Protection Program
- Respirator Selection
- Inspection and Maintenance
- Cleaning
- Training
- Records
- Health and Safety Responsibilities

Section II – Site Management
- Project Organization

Section III – Abatement Execution
- Enclosing the Work Area
- Restricting Access
- Decontamination Enclosure Systems
- Removing Asbestos Containing Materials
- Monitoring Air Quality

Section IV – Emergency Procedures
- Emergency Medical Assistance Procedure
- Security, Fire and Emergency Evacuation
- Spill Response Emergency Procedure

Section V – Health & Safety Program
- Medical Surveillance (General)
- Protective Clothing
- Hygiene Facilities
- Training
- Air Monitoring and Recordkeeping
- Asbestos Abatement Medical Surveillance
- Emergency Action Plan
- Health and Safety Training
- Respiratory Protection Program
- Personal Protective Equipment
- Work Practices

Section VI – Materials Used During Abatement Projects

Section I

Respiratory Protection Program

Section I - Respiratory Protection Program

Respiratory protection is the heart of *NSC Abatement Services* health and safety program. *NSC Abatement Services* requires, at a minimum, half-face negative-pressure respiratory protection regardless of available engineering controls.

NSC Abatement Services respirator program ensures that:

- Respirators are regularly inspected and properly maintained.
- Employees are thoroughly trained in the use and care of respirators.
- Records are maintained regarding respirator use, maintenance and training
- Specific responsibilities are assigned to both management and laborers with respect to respirator use and maintenance.

Respirator Selection

NSC Abatement Services requires its employees to wear respirators at all times when working inside the containment or when there is a potential asbestos exposure.

NSC Abatement Services employs the following types of respirators according to various exposure levels:

- Below the PEL: Half-face, negative-pressure, cartridge units equipped with HEPA filters.
- At the PEL: Powered, air-purifying respirator (PAPR) units featuring a positive flow of at least 4 cubic feet of air per minute into the face piece. These units are equipped with HEPA filters.
- Above the PEL: Type-C, supplied-air respirator systems providing Grade-D air through CO monitors for maximum protection.

The capabilities of the various respirators are determined from governmental approvals, manufacturer's tests and ANSI Z 88.2.

Respirators are selected by the safety director and the industrial hygienist based upon the following criteria:

- Physical, chemical and physiological properties of the airborne contamination

- Concentrations of contamination.
- Nature of the work being performed.
- Quality of respirator fit.

Each employee is issued a respirator for that person's exclusive use. Each respirator is identified in a manner, which does not interfere with its performance. Individual fit testing is conducted for each employee.

Inspection & Maintenance

Respirators and related equipment are systematically inspected and maintained to retain their original effectiveness. Users routinely inspect their respirators before and after each use and after each cleaning.

The following components of the respirators are examined:

- Face piece
- Head bands.
- Valves.
- Hoses. Filter cartridge.
- Battery pack (if PAPR).

Respirators with any signs of deterioration, wear, damage, or other conditions that could prevent an airtight fit do not pass inspection and are repaired or replaced immediately.

Cleaning

Employees clean their respirators at the end of the work shift. Employees are thoroughly trained in this procedure, which includes:

- Removing cartridges in half-face and full-face, negative-pressure respirators. These cartridges are treated as asbestos waste and are discarded at the end of his/her work shift or when resistance in breathing occurs.
- Plugging cartridges in PAPR units, which may be re-used until their rated effective life is expired.

- Wearing face pieces into the decontamination shower and thoroughly rinsing under running water to remove all accumulation of debris. Employees thoroughly rub all contours of the face piece with their fingers to dislodge any debris.

- Rinsing in the shower, removing face pieces, washing them in a detergent-disinfectant solution, and rinsing in clean water in a clean area. If necessary, using a brush to scrub the face piece.

- Drying face pieces using either portable dryers or drying racks

- Storing respirators in plastic bags to protect them against dust, sunlight, extreme heat, extreme cold, excessive moisture, or damaging chemicals.

Training

All *NSC Abatement Services* employees are trained in the use and care of respirator equipment. Training is repeated as often as necessary to ensure that all employees remain familiar and competent in the proper use of respirators.

Without exception, all employees receive training in:

- Identifying the physical characteristics of the various kinds of asbestos contamination generated

- Understanding the health implications of exposure to asbestos contamination

- Determining which types of respirator systems are effective against the various types of airborne asbestos contamination.

- Recognizing the intended use and limitations of each type of respirator system.

- Properly wearing, adjusting, and testing respirators for an airtight fit.

- Cleaning and storing the various components of the respirator systems. Step-by-step, hands-on instruction for performing routine respirator inspections.

Additionally, job site Toolbox Safety Meetings are conducted at the beginning of each project, whenever new employees arrive at the job site and at additional times as required by job conditions or duration.

Records

NSC Abatement Services maintains thorough and accurate records of respirator use, as follows:

- The number and types of respirators in use.
- Employee training, including the name of the individual, length of time of training, nature of the training and date of training.
- Medical certification for each employee affirming that the individual is capable of wearing a respirator for the job site conditions normally encountered during asbestos abatement work.
- Fit tests.

Health & Safety Responsibilities

NSC Abatement Services ensures adherence to its respirator program by assigning specific responsibilities to both management and laborers. On most projects, a superintendent is designated as the safety director and is responsible for overall coordination of the health and safety program.

Safety Director

The superintendent appointed to be the project safety director is responsible for:

- Communicating to employees, in a clear and accurate manner, the biological dangers posed by exposure to airborne asbestos contamination.
- Providing employees with respiratory protection appropriate to the project environment.
- Organizing and implementing instruction programs and hands-on training in the use and maintenance of respirators and associated equipment.
- Administering the overall program, including record keeping.

Foreman

Each foreman is responsible for:

- Ensuring that employees are knowledgeable about the dangers of asbestos contamination and the need for adequate respiratory protection.
- Ensuring that employees have an adequate supply of respirators and all required parts and supplies for maintaining the systems.
- Ensuring that employees wear respirators whenever they are inside the containment area.
- Regularly inspecting respirators and related equipment and supplies to ensure that they are in proper operating condition.
- Maintaining, repairing, disinfecting and cleaning all respiratory equipment prior to its issue to employees.

Laborers

Laborers are responsible for:

- Understanding the basic characteristics of asbestos materials and their capacity for releasing invisible asbestos contamination.
- Recognizing the medical consequences of not being protected from breathing asbestos contamination.
- Using an assigned respirator in accordance with instruction and training.
- Daily cleaning, disinfecting and storing the respirator.
- Exercising care with the respirator and related equipment and supplies to avoid causing any damage.
- Wearing a respirator at all times in environments where airborne asbestos contamination is known or expected to be present.

Industrial Hygienist

When applicable, the industrial hygienist is responsible for:

- Providing competent technical assistance in determining which type of respirator is appropriate for the situation.
- Providing periodic surveillance of conditions in the work areas where respirators are in use.
- Periodically evaluating Infinity's respirator program
- Providing educational materials for educating employees about asbestos dangers as well as state-of-the-art respiratory protection.

Section II
Site Management

Section II - Site Management

The experience and qualification of its personnel — from top to bottom — are vital to the success and capability of any asbestos abatement contractor. Through controlled growth and low turnover, we have developed a team of highly skilled and trained asbestos abatement professionals capable of handling the most complex projects.

The founders and senior management all have built successful careers in engineering, construction and hazardous waste management. Our project managers and supervisors have been promoted from within the organization. They are thoroughly indoctrinated in *NSC Abatement Services* corporate commitment to providing quality, on-time service.

Our professional approach to project management enables *NSC Abatement Services* to:

- Respond quickly to client's needs.

- By systematically scheduling projects, monitoring equipment inventory, and maintaining supplies, *NSC Abatement Services* can have crews ready to begin work on a project at a client's convenience --even within hours. This careful management of resources ensures that no time is lost because equipment or supplies are not available.

- Protect clients against health, safety and regulatory issues.

  NSC Abatement Services structured management organization and stringent training requirements ensure that all work is performed according to specification and adheres to safety and quality requirements.

- Protect clients by maintaining accurate project records,

  NSC Abatement Services thorough and systematic project records help to keep each project on schedule and within budget. Moreover, accurate, detailed, and permanent training and health records provide crucial documentation to protect all parties from potential liabilities.

Project Organization

Project responsibilities are as follows:

Executive Project Sponsor

For each project, an executive sponsor sees that *NSC Abatement Services* commitments, as defined in the project contract, are met and that the project complies with *NSC Abatement Services* standards for quality work performed safely and on time.

The executive project sponsor remains responsive to client needs from beginning to end, applying *NSC Abatement Services* resources when necessary to keep the project moving efficiently or to resolve any issues that arise.

Project Manager-Organizational Chart

Kevin Fox-Sr. Project Manager
Tel. # - (914) 920-0326

Paul Cardenas
Tel. # - (718) 270-8700

The project manager is responsible for a project from start to finish. The project manager ensures that personnel and equipment are available when and where needed, oversees project costs and handles negotiations with subcontractors.

The project manager also assures responsive and continuing communication between *NSC Abatement Services* and the client, serving as the client's day-to-day contact. *NSC Abatement Services* assigns only key experienced staff to this position, since good project management is critical to successful project completion. All project managers have extensive backgrounds in asbestos abatement, general construction and hazardous waste management.

Before a project begins, the project manager conducts a kick-off meeting to acquaint the client with all of the *NSC Abatement Services* personnel involved, including the superintendents and, where applicable, the general contractor and industrial hygienist. He also meets with these individuals weekly (or biweekly, as appropriate) to review the status of the project, discuss any problems and maintain a communication channel.

The project manager is the company's liaison with various government agencies. Before a project begins, he notifies any applicable local, state, and regional agencies, including the Environmental Protection Agency. He also secures any required permits from the local health department, fire department, etc.

The project manager is responsible for seeing that health and safety standards are adhered to and that records are maintained in compliance with federal regulations. He also sends copies of this documentation to the client.

When the project is completed the project manager ensures that all asbestos waste is properly disposed of at a landfill approved by the Environmental Protection Agency.

The project manager's other regular duties include:

- Developing the project schedule

- Tracking the schedule and weekly costs.
- Keeping in contact daily with each superintendent and reviewing daily and weekly reports submitted by superintendents.
- Preparing invoices
- Notifying the warehouse superintendent of equipment requirements.

Superintendent

The superintendent prepares a daily log detailing:

- Names and locations of laborers.
- Equipment used.
- Notable events.
- Visitors

He also submits weekly time sheets, equipment status reports, and material usage reports to the project manager.

The superintendent is usually designated as the project safety coordinator and is responsible for administering our health and safety program, as described in this manual.

A superintendent is at the construction site when work is being performed. He directs all work inside the containment and is responsible for making sure the work is progressing as planned. He is the central core for the laborers, planning daily activities and assigning individual tasks.

Warehouse Superintendent

Functioning in parallel with the project organization, the warehouse superintendent monitors all equipment/supplies and ensures that an adequate inventory is maintained to satisfy our project requirements. This careful inventory control ensures that no delays are encountered because equipment or supplies are not available.

Operations

NSC Abatement Services performs all operations in strict accordance with OSHA, EPA, state and local (where applicable) regulations. Additionally, we adhere to any specific project specifications or local regulations.

Our operating procedures provide direction for:

- Enclosing and sealing the work area.
- Restricting access to the work area via a decontamination enclosure system.
- Removing and containing asbestos-contaminated materials.
- Monitoring and recording air quality,
- Adhering to an emergency and fire protection plan.

Section III
Abatement Execution

Section III – Abatement Execution

Enclosing the Work Area

Before any asbestos removal operations begin, the work area is enclosed and sealed as follows:

- Where possible, heating, ventilation and air-conditioning (HVAC) systems are shut down and isolated to prevent contamination and fiber dispersal to other areas of the facility.
- Objects in the work area are covered with plastic sheeting and sealed with tape.
- Openings including, but not limited to, windows, corridors, doorways, skylights, ducts, and grilles, are sealed with plastic sheeting.
- Floor and wall surfaces are covered with plastic sheeting and sealed with tape. As an added precaution, the plastic on the floor is extended a minimum of 12 inches to overlap the plastic on the walls.
- A negative-pressure differential is maintained in the enclosed area using HEPA-filtered, air-moving devices. These devices operate continuously throughout the duration of the project.

Restricting Access

Access to asbestos-contaminated work areas is strictly regulated and limited to authorized persons. A daily roster is kept of all persons entering and exiting the areas. During Working Hours, a NYSDOL Certified Asbestos Supervisor will be present to prevent any unauthorized/certified personnel from entering asbestos abatement regulated work area. Work area will be fitted with an attached, fully sheathed, and lockable decontamination unit which will prevent access to asbestos abatement regulated work area during hours of non-active abatement during hours that NSC Representatives are not on site.

All entrances or approaches to the work area are posted with warning signs.

DANGER

ASBESTOS

AUTHORIZED PERSONNEL ONLY

CANCER AND LUNG DISEASE HAZARD

RESPIRATORS & PROTECTIVE CLOTHING

ARE REQUIRED IN THIS AREA

No food, beverages, or tobacco products are permitted in the work area.

Decontamination Enclosure System

All employees must enter and exit the work area through a decontamination enclosure system.

The decontamination enclosure system consists of three chambers: the clean room, the shower area, and the equipment room; each separated by an airlock.

Doorways to these chambers are constructed to provide a sealed enclosure and consist of three sheets of overlapping polyethylene sheeting. One sheet is secured at the top and left sides; the second sheet at the top and right side; and the third sheet at the top and left side.

Clean Room

The clean room is equipped with lockers or appropriate storage containers for employee's use.

Shower Area

Generally, showers are contiguous to the clean room and the equipment room. When showers are not contiguous, employees wear two suits. The outer suit is HEPA vacuumed and removed before the workers proceed to the shower area.

Equipment Room

The equipment room is supplied with impermeable, labeled bags and containers for disposing of contaminated protective clothing and equipment.

Entering the Work Area

Employees must pass through the decontamination enclosure system before entering the work area. They enter through the clean room where they remove street clothing and deposit it in a locker. They put on protective clothing and respiratory equipment. They then pass through the equipment room before entering the work area.

Leaving the Work Area

Before leaving the contaminated work area, employees remove all gross debris from their protective clothing. They then enter the equipment room where they remove protective clothing and deposit it in labeled, impermeable bags and containers. Leaving their

respirators on, they proceed to the shower area where they follow specific procedures for cleaning the respirators. Finally, they enter the clean room and change into street clothes.

Removing Asbestos-Containing Materials

Airborne asbestos fiber concentrations are reduced when the asbestos-containing material is wet. *NSC Abatement Services* laborers wet all material to be removed with an amended water solution. The material is kept wet as it is sealed in containers for disposal. Some environments prohibit the use of wet methods (e.g. live electrical equipment or materials which were previously coated with an encapsulant). In those situations, prior written approval is obtained for dry removal.

In addition to observing these directives for removing asbestos-containing materials, *NSC Abatement Services* laborers also follow specific procedures to contain the materials:

- Asbestos-containing materials are removed in manageable sections which will fit in 6-mil polyethylene bags.

- Double bags are used to contain the waste material. Some localities require that fiber or metal drums be used to transport the asbestos-containing material. The project manager clarifies any special requirements prior to project commencement.

- Bags are not overfilled and are securely sealed prior to their removal from the work area to prevent accidental opening or leakage.

DANGER

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

CANCER & LUNG DISEASE HAZARD

RQ HAZARDOUS SUBSTANCE,

SOLID, NOS, ORM-e, NA 9188

(ASBESTOS)

- Removed asbestos containing materials are promptly cleaned up and disposed of in leak-tight containers.

- Double-bagged asbestos materials are removed from the work area in covered trucks or enclosed dumpsters by licensed asbestos haulers. The materials are taken to landfills that are licensed by the Environmental Protection Agency to receive asbestos waste. All waste materials are properly labeled.

Monitoring Air Quality

NSC Abatement Services monitors the fiber levels to which employees are exposed and maintains records consistent with OSHA requirements.

Air samples from both personnel and work areas are taken

Personnel Samples

Taken from a representative number of laborers on each job and used to determine the level of respiratory protection needed and efficiency of work practices.

Area Samples

Taken prior to job start-up, while work is in progress, and after final cleanup.

Clearance Samples

Must achieve a fiber level of less than .01 fibers/cc before containment is dismantled.

Air sampling is performed using Gillian Model D-800 air-sampling pumps or equivalent using open-faced cassettes. Analysis is performed by an independent testing laboratory.

The following data are recorded:

- Date of measurement.
- Type of operation involving exposure (e.g. set-up, removal, bagging, or cleanup).
- Sampling and analytical methods used and evidence of accuracy.
- Number, duration, and results of samples.
- Type of protective devices worn,
- Name, social security number, activity and exposure of employees monitored.

Section IV
Emergency Procedures

Section IV - Emergency Procedures

All *NSC Abatement Services* employees are informed and trained for emergency procedures needed to be performed in any emergency situation.

NSC Abatement Services emergency procedures provide direction for:

- Emergency Medical Assistance Procedures
- Security, Fire and Emergency Evacuation
- Emergency Spill

Emergency Medical Assistance Procedures

Posting of emergency numbers is done in areas where phones are located. Supervisors are trained in Standard First Aid and Cardio-Pulmonary Resuscitation. A map showing routes to be taken to the nearest emergency facility or hospital is also placed on walls to insure that the proper and fastest route to the hospital is used. Telephone calls are then made to that facility telling them of the arrival of an injured employee, so they can prepare for his arrival. If the accident involves chemical spill, then a Material Safety Data Sheet goes along to the facility.

Security, Fire & Emergency Evacuation

A controlled access to the regulated area shall be established. Only authorized personnel shall be permitted to enter the regulated area. Regulatory personnel, media, etc., shall not enter the site without appropriate authorization.

An individually tailored emergency and fire protection plan is established specifically for each project. Each plan includes emergency escape routes and phone numbers, procedures for accountability for all employees, manner and means for notifying appropriate authorities and proper training of all employees as to their specific duties during an emergency.

All persons entering the regulated area shall be equipped with appropriate personal protective equipment and devices. All persons entering the regulated area shall be subject to the Health and Safety requirements set forth by *NSC Abatement Services*. All *NSC Abatement Services* employees have been trained in OSHA Hazard Communication CFR 1910.1200.

During the project, our employees inside containment as well as outside containment will use hand-held walkie-talkies. In case of an emergency, walkie-talkies, fire extinguishers and first aid stations are placed in various locations throughout the work zone.

Tailgate Safety Meetings are held before operations begin. These meetings describe the hazards, safety and evacuations protocol. In case of any emergency, a placard has been placed with emergency numbers in case of fire, injury, etc. We use the buddy system when working in containment.

Warning signs shall be posted, as per OSHA regulation, to alert any unauthorized personnel from entering the work site. Exits will be clearly marked inside the work area using high-visibility yellow tape. Arrows indicating exit routes will also be marked on the walls to aid personnel in evacuation.

In the event of an emergency, worker decontamination will take low priority, where bodily injury or life-threatening situations exist. Fire prevention in the work area is a function of good housekeeping and employee training and education in fire hazards and prevention. All employees will be alerted to the nearest telephone locations where fire, police, ambulance and nearest hospital emergency telephone numbers will be posted.

The project superintendent is responsible for implementing and assuring the above procedures.

Spill Response Emergency Procedures

This procedure establishes guidelines for the orderly handling and reporting of emergency situations, which occur or could develop.

Spills of a minor nature will be immediately cleaned up and disposed of properly

In case of a major spill, employees will respond with spill-containment apparatus and immediately notify the site consultant or owner. All *NSC Abatement Services* personnel involved in responding to a spill are trained in the proper response methods and duties.

Section V
Health & Safety Program

Section V – Health & Safety Program

We are committed to providing our employees with state-of-the-art protection against the hazards of airborne asbestos contamination. By observing safety requirements and regulations, *NSC Abatement Services* protects its clients against potential legal actions relating to asbestos exposure.

NSC Abatement Services health and safety program focuses on five major areas:

- Medical Surveillance
- Protective Clothing.
- Hygiene Facilities.
- Training.
- Respiratory Protection (See Summary Respiratory Protection Program) The first four areas are described in this section. Respiratory protection and related training are described separately in the Respiratory Protection Program section.

Medical Surveillance

All *NSC Abatement Services* employees are required to undergo **a** comprehensive physical examination when hired and annually thereafter. The examinations—conducted by independent health care facilities—include:

- Medical and work histories.
- Chest X-rays (two views).
- Spectrum cytology.
- Pulmonary lung function testing

We maintain all medical records for length of service plus 30 years.

Protective Clothing

All employees working inside the containment area wear Tyvek® disposable coveralls or similar full-body clothing. Additionally, gloves, hoods and boots or disposable shoe covers are required. In accordance with 29 CFR 191 0.132 when indicated by site assessment, employees wear face shields, goggles or other protective equipment.

Hygiene Facilities

Every *NSC Abatement Services* site has a decontamination unit that consists of an equipment room, shower area and clean room. Employees enter and exit the containment area through this unit, as described in our general operating procedures. Separate storage facilities are located in the clean room to prevent cross contamination of protective clothing/equipment and street clothes.

Training

The care and skills exercised by workers who remove asbestos-containing material are critical to the success of a project.

All *NSC Abatement Services* employees and managers receive extensive training in asbestos hazards and asbestos abatement operating procedures. We provide EPA-approved training courses to our employees.

The curriculum includes:

- Recognizing asbestos and asbestiforms.
- Understanding the health effects associated with these substances and learning the appropriate work practices for performing in asbestos-containing environments.
- Utilizing protective controls to minimize exposure, including:
    - engineering controls work practices
    - respirator usage
    - housekeeping practices hygiene facilities
    - protective clothing
    - decontamination procedures emergency procedures
    - waste disposal procedures
- Medical surveillance and health requirements

Project managers attend additional training and educational programs to stay abreast of rapidly changing industry standards.

Laborers and superintendents receive a minimum of four and five full days of initial training, respectively.

In addition, our employees attend courses on miscellaneous subjects such as first aid safety, scaffolding, hazard communication, etc.

Employee training records are maintained for employee's length of service plus thirty years. We ensure that this information is accurate and accessible so that our clients can be assured that each employee is qualified for the work to be performed.

Air Monitoring & Recordkeeping

Environmental (Work Place Air)

Permissible Exposure Limit (PEL) — Results of industrial hygiene monitoring and surveillance shall be compared with OSHA PEL of 0.1 fibers, longer than 5 micrometers, per cubic centimeter of air, determined as a time-weighted average (TWA) concentration, for an 8-hour workday, 40-hour workweek.

Monitoring & Recordkeeping Requirements

Monitoring and recordkeeping, consistent with OSHA requirements for asbestos handling operations, shall be conducted. Personnel air samples will be taken of a representative sample of workers on each job. This initial sampling will be used to determine the effectiveness of the respirator, efficiency of the job work practices and for documentation purposes. Personnel samples will provide an 8-hour time weighted average. Each set of samples taken will include 10% field blanks or a minimum of 2 field blanks. Area samples will be taken prior to job startup, during work and after final cleanup. Area samples will be of 4-hour duration, minimum volume 480 liters. Regulated areas will not be dismantled until an air level of .01 fibers/cc has been achieved. Air sampling will be performed using Gillian Model D-800 air-sampling pumps or equivalent using open-faced cassettes. Sampling and analysis will be in accordance with Appendix A to 29 CFR 1926.1101. Testing of air samples shall be performed by an independent testing laboratory that, as a minimum, participates in the EPA PAT and NYS ELAP program for asbestos testing. Air clearance samples must be obtained by an independent laboratory.

The following information will be recorded for all monitoring:

- The date of measurement.
- The operation involving exposure to asbestos.
- Sampling and analytical methods used and evidence of their accuracy

- Number, duration and results of samples taken.
- Type of protective devices worn, if any.
- Name, social security number and exposure of the employees whose exposures are represented.

Reporting Requirement

All planned asbestos work shall be reported to the Industrial Hygienist at least 20 days prior to commencement of work except when emergency renovation operations preclude prior notice. The industrial hygienist, owner, or Infinity shall submit all required state and federal notification forms 10 days prior to the scheduled removal.

Exposure Notifications & TWA For Asbestos Removal Projects

The Asbestos Safety Technician shall perform all air sampling on a project and be thoroughly familiar with requirements for asbestos abatement projects.

The Asbestos Safety Technician shall direct the actions of the contractor verbally and in writing to assure compliance. The Asbestos Safety Technician shall require that all workers present a valid work permit before entering the work area. The Asbestos Safety Technician shall have the authority to test the seal of the respirator of each person who enters the work area to ensure a proper fit. In matters of gross negligence and/or flagrant disregard for the safety of others, including the possibility of contaminating the building environment and the appearance of an emergency unsafe condition at the work area, the Asbestos Safety Technician shall direct corrective action. The Asbestos Safety Technician shall notify the administrative authority having jurisdiction who shall issue a Stop Work Order and have the work area secured until all violations are abated.

Upon receipt of testing results indicating that concentrations above the accepted criteria have occurred outside the containment barriers during the abatement project, the Asbestos Safety Technician shall immediately direct corrective action and verbally report these results within twenty-four hours to the contractor, the owner and the abatement project designer. Such verbal notification shall be followed by written notification to the contractor, the owner and the abatement project designer. A copy shall be sent to the administrative authority having jurisdiction and the department within three business days from receipt of the results.

The Asbestos Safety Technician shall keep an up-to-date and comprehensive daily log of on-site activities. One section of the log shall contain observations concerning contractor compliance with activities required under this subchapter listing all deficiencies encountered.

In addition, the log shall list the names of each person entering the work area. The log shall be kept at the job site and shall be made available upon request at all times to the owner, the abatement project designer and to the appropriate local and state agencies.

The Asbestos Project Monitor shall prepare a comprehensive final report to include daily logs, required inspection reports, observations and air monitoring results. This report shall be made part of the official project records maintained by *NSC Abatement Services*.

During the removal phase, the duties of the Asbestos Safety Technician shall be as follows:

- Air monitoring outside the work area shall be provided throughout removal operations to ensure that no outside contamination is occurring.

- If barriers or other control methods are observed to malfunction, and corrective action is not immediately taken upon notification, the Air Sampling Technician shall inform the administrative authority having jurisdiction who shall take immediate measures needed to ensure corrective action. In such a situation, sampling of a minimum of three additional samples per day shall be performed by the Air Sampling Technician.

Employee Notification & Availability

NSC Abatement Services shall notify affected employees of the monitoring results that represent that employee's exposure as soon as possible following receipt of monitoring results by posting at a centrally located area.

NSC Abatement Services, upon request, shall make employee medical records required available for examination and copying to the subject employee, anyone having the specific written consent of the subject employee, and the OSHA Assistant Secretary, in accordance with 29 CFR 1910.20.

Exposure Determination & Measurement

In conjunction with the excursion level concept, the exposure determination and measurement sections of the OSHA asbestos standard is designed in a step-by-step fashion to make compliance easier for those workplaces where only low concentrations of asbestos are present.

There are four steps in the measurement process:

- An initial determination of workplace conditions must be taken. This determination is an evaluation involving air sampling, bulk sample identification of asbestos, and the suggested method of abatement.

- When the initial exposure determination indicates that any employee may be exposed above the PEL, the exposure to the employee most likely to have the highest exposure

is monitored. If the monitoring results indicate that the employee is exposed to concentrations in excess of the PEL (0.1 f/cc), the IHSL must measure the exposures of all employees who possibly could be exposed above the PEL.

- Exposure measurement of concentrations above the excursion level, but below the permissible exposure level, must be made every shift.

- If measurements show that an employee is exposed to concentrations above the permissible limit, the employee must be notified no later than 5 days after exposure.

Establishment of TWA/Exposure Monitoring

General

NSC Abatement Services shall perform monitoring to determine accurately the airborne concentrations of asbestos or any presumed asbestos-containing materials (PACM).

Determinations of employee exposure shall be made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee.

Representative 8-hour TWA employee exposure shall be determined on the basis of one or more samples representing full-shift exposure for employees in each work area. Representative 30-minute short-term employee exposures shall be determined on the basis of one or more samples representing 30-minute exposures associated with operations that are most likely to produce exposures above the excursion limit for employees in each work area.

Initial Monitoring

NSC Abatement Services shall perform initial monitoring at the initiation of each asbestos job to accurately determine the airborne concentrations of asbestos to which employees may be exposed.

NSC Abatement Services may demonstrate that employee exposure is below the PEL and/or excursion limit by means of objective data demonstrating that the product or material containing asbestos or a combination of minerals cannot release airborne fibers in concentrations exceeding the PEL and/or excursion limit under those work conditions having the greatest potential for releasing asbestos.

Periodic Monitoring Within Regulated Areas

NSC Abatement Services shall conduct daily monitoring that is representative of the exposure of each employee who is assigned to work within a regulated area. Exception: When all employees within a regulated area are equipped with supplied-air respirators operated in the positive-pressure mode, the employer may dispense with the daily monitoring required by this paragraph.

Method of Monitoring

All samples taken to satisfy the monitoring requirements shall be personal samples collected following the procedures specified in Appendix A, to 29 CFR 1926.1101 OSHA.

All samples taken to satisfy the monitoring requirements shall be evaluated using the OSHA Reference Method (ORM) or an equivalent counting method.

If an equivalent method to the ORM is used, the employer shall ensure that the method meets the following criteria:

- Replicate exposure data used to establish equivalency are collected in side-by-side field and laboratory comparisons.

- The comparison indicates that 90 percent of the samples collected in the range 0.5 to 2.0 times the permissible limit have an accuracy range of plus or minus 25 percent of the ORM results with a 95 percent confidence level as demonstrated by a statistically valid protocol.

- The equivalent method is documented and the results of the comparison testing are maintained.

- To satisfy the monitoring requirements of paragraph (f), employers shall rely on the results of monitoring analysis performed by laboratories that have instituted quality assurance programs that include the elements prescribed in Appendix A, to 29 CFR 1926.1101.

Methods of Compliance

Standards require the use of engineering or work-practice controls to reduce exposures equal to or less than the permissible exposure limit. However, if such controls cannot reduce exposure to the permissible limit, they must be used regardless, to reduce the exposure to the lowest level possible. At this point, the controls can be supplemented by respirators.

Asbestos Abatement Medical Surveillance

General

NSC Abatement Services shall institute a medical surveillance program for all employees engaged in Class 1,11,111 and IV asbestos work.

Examination by a Physician

- *NSC Abatement Services* shall ensure that all medical examinations and procedures are performed by or under the supervision of a licensed physician and are provided at no cost to the employee and at a reasonable time and place.

- Persons, other than such licensed physicians who administer the pulmonary function testing required by this section, shall complete a training course in spirometry sponsored by an appropriate academic or professional institution.

Medical Examinations & Consultations

Frequency

NSC Abatement Services shall make available medical examinations and consultations to each employee on the following scheduled:

- Prior to assignment of the employee to an area where negative-pressure respirators are worn.

- When the employee is assigned to an area where exposure to Class 1,11,111, and IV work or above the Permissible Exposure Limit (PEL) or excursion limit for 30 or more days per year, a medical examination must be given within 10 working days following the thirtieth day of exposure.

- At least annually thereafter.

- If the examining physician determines that any of the examinations should be provided more frequently than specified, the employer shall provide such examinations to affected employees in the frequencies specified by the physician.

Exception

No medical examination is required of any employee if adequate records show that the employee has been examined in accordance with this paragraph within the past 1-year period.

Content

A medical and work history with special emphasis directed to the pulmonary, cardiovascular and gastrointestinal systems.

Medical examinations shall include:

- On initial examination, a standardized questionnaire and on annual examination, the abbreviated standardized questionnaire as prescribed in 29 CFR 1926.1101, Appendix D.

- A physical examination directed to the pulmonary and gastrointestinal systems, including a chest roentgenogram to be administered at the discretion of the physician

and pulmonary function tests of forced vital capacity (FVC) and forced expiratory volume at one second (FEV). Interpretation and classification of chest roentgenogram shall be conducted in accordance with 29 CFR 1926.1101.

- Any other examinations or tests deemed necessary by the examining physician.

Information Provided to the Physician

NSC Abatement Services shall provide the following information to the examining physician:

- A copy of OSHA 29 CFR 1926.1101 standard and Appendices D, E, G, and I.
- A description of the affected employee's duties as they relate to the employees exposure.
- The employee's representative exposure level of anticipated exposure level.
- A description of any personal protective and respiratory equipment used or to be used.
- Information from previous medical examinations, if available, of the affected employee that is not otherwise available to the examining physician.

Physician's Written Opinion

NSC Abatement Services shall obtain a written opinion from the examining physician. This written opinion shall contain the results of the medical examination and shall include:

- The physician's opinion as to whether the employee has any detected medical conditions that would place the employee at an increased risk of material health impairment from exposure to asbestos.
- Any recommended limitations on the employee or on the use of personal protective equipment such as respirators.
- A statement that the employee has been informed by the physician of the results of the medical examination and of any medical conditions that may result from asbestos exposure.
- A statement that the employee has been informed by the physician of the increased risk of lung cancer attributable to the combined effect of smoking and asbestos exposure.

NSC Abatement Services shall instruct the physician not to reveal in the written opinion to the employer specific findings or diagnoses unrelated to occupational exposure to asbestos.

NSC Abatement Services, upon request, shall provide a copy of the physician's written opinion to the affected employee within 30 days from its receipt.

Medical Surveillance

Prehire and periodic/update medical examinations, consistent with the requirements of the OSHA standards (as defined in 29 CFR 1910.1001 and 29 CFR 1926.1101), shall be performed for those employees subject to asbestos exposures. The medical monitoring shall include chest x-rays (2 views), spectrum cytology, pulmonary lung function test and a pulmonary history. Records will be maintained for 30 years post employment.

Emergency Procedures

All *NSC Abatement Services* employees are well informed and trained for emergency procedures needed to be performed in any emergency situation that may require medical attention.

Posting of emergency numbers in areas where phones are located. All supervisors are trained in Standard First Aid (SEA) and Cardio-Pulmonary Resuscitation (CPR). The nearest emergency facility or hospital is posted. If the accident involves chemical spill, then a Material Safety Data Sheet goes along to the facility.

Medical Surveillance Record Retention

All medical surveillance records, required under 29 CFR 1926.110, will be maintained in accordance with 29 CFR 1926.1101.

Emergency Action Plan

This plan will outline contingency actions to be performed for the following emergencies:

Fire

1. Notification of the project will be given to the local Fire Chief.

2. Tailgate Safety

Tailgate Safety Meetings are held every day before operations begin. These meetings describe the hazards, safety and evacuation protocol. In case of emergency, a placard (copy attached) has been placed with emergency numbers in case of fire, injury, etc. *NSC Abatement Services* uses the buddy system when working in containment.

3. During the project, hand-held walkie-talkies will be used by *NSC Abatement Services* employees inside containment as well as outside containment. In case of an emergency, walkie-talkies, fire extinguishers and first aid stations are placed in various locations throughout the work zone.

4. Emergency escape routes and exits will be clearly identified.

5. Fire extinguishers will be placed in designated areas throughout work area.

Accident

1. Tailgate

   Tailgate Safety Meetings are held every day before operations begin. These meetings describe the hazards, safety and evacuation protocol. In case of an emergency, a placard has been placed with emergency numbers in case of fire, injury, etc. *NSC Abatement Services* uses the buddy system when working in containment.

2. In the event of an emergency, worker decontamination will take low priority where bodily injury or life-threatening situations exist.

3. First aid kits will be available in a designated area near decontamination unit.

Power Failure

1. *NSC Abatement Services* workers will be instructed to cease all work operations.

2. Notify building security and consultant that power has been interrupted

3. Take necessary steps to evaluate situation and restore power in a timely manner.

Unexpected Site Contamination and/or Asbestos Spill

1. *NSC Abatement Services* workers will be instructed to cease all work operations.
2. Notify consultant and owner
3. Demarcate affected area and proceed with clean up as instructed by on-site consultant.
4. Determine source or cause of unexpected site contamination.

General

1. *NSC Abatement Services* uses the buddy system to account for all employees after evacuation has occurred.
2. The Site Safety Coordinator will be the responsible individual for compliance with the Emergency Action Plan.
3. The Plan will be posted and easily accessible to all parties involved.

Emergency & Fire Prevention Plan

Emergency & Fire Prevention Plan

Because of the variation of conditions encountered on each job site, an individually tailored emergency and fire protection plan will be developed for each project.
Development of the plan and communication to all employees is the responsibility of the Project Superintendent. At a minimum, the plan will contain:

- Emergency escape procedures and routes.
    - Exits and routes to those exits will be clearly identified.
- Procedures to account for all employees after evacuation has occurred (i.e. “buddy system”).
- Manner and means for notifying appropriate authorities of fires and other emergencies.
- Rescue and medical duties for those employees who are to perform them

- In the event of an emergency, worker decontamination will take lower priority where bodily injury or life-threatening situations exist. Fire prevention in the work area is a function of good housekeeping, employee training and education in fire hazards and prevention. The Project Superintendent is responsible for assuring the above and for maintenance of proper fire suppression equipment.

Security, Fire & Emergency Evacuation

A controlled access to the regulated area(s) shall be established. Only authorized personnel shall be permitted to enter the regulated area(s). Regulatory personnel, media, etc., shall not enter the site without appropriate authorization.

All persons entering the regulated area(s) shall be equipped with appropriate personal protective equipment and devices. All persons entering the regulated area(s) shall be subject to the Health and Safety requirements set forth by *NSC Abatement Services*, Inc. All *NSC Abatement Services* employees have been trained in OSHA Hazard Communication CFR 191 0.1200 / 29 CFR 1926.59.

During the project, hand-held walkie-talkies will be used by *NSC Abatement Services* employees inside containment as well as outside containment. In case of emergency, walkie-talkies, fire extinguishers, and first aid stations are available in various locations throughout the work zone.

Tailgate Safety Meetings are held every day before operations being. These meetings describe the hazards, safety and evacuations protocol. In case of any emergency, a placard will be placed with emergency numbers in case of fire, injury, etc. Infinity uses the buddy system when working in containment.

Warning signs shall be posted, as per OSHA regulations, to alert any unauthorized personnel from entering the work site. Exits will be clearly marked inside the work area using high-visibility yellow tape. Arrows indicating exit routes will also be marked on the walls to aid personnel in evacuation.

In the event of an emergency, worker decontamination will take a lower priority, where bodily injury or life-threatening situations exist. All employees will be alerted to the nearest telephone locations where fire, police, ambulance and nearest hospital emergency telephone numbers will be posted.

The Project Superintendent is responsible for implementing and assuring the above procedures.

Emergency Medical Procedures

NSC Abatement Services employees are well informed and trained for emergency procedures required to be performed in emergency situations that may require medical attention. Posting of

emergency numbers is done in areas where phones are located. All supervisors are trained in Standard First Aid (SFA) and Cardio-Pulmonary Resuscitation (CPR). A map showing routes to be taken to nearest emergency facility or hospital is also placed on walls to insure that the most feasible route to the hospital is used. Telephone calls are then made to that facility telling them of the arrival of an injured employee, so they can prepare for his arrival. If the accident involved chemical spill, then a Material Safety Data Sheet goes along to the facility.

Our safety officer visits sites regularly to insure a safe work place. On-going training in Hazard Communications is an OSHA regulation that is present on site as well in a classroom. Tailgate Safety Meetings are held at the beginning of each shift or whenever a new employee comes on site.

Emergency Response Program

Scope

NSC Abatement Services will have in place an emergency response system that would include all the necessary manpower, tools, equipment and hygiene services necessary to:

- Contain
- Decontaminate.
- Remove or repair.
- Transport and dispose of all contaminated waste at an EPA-approved landfill.

Plan

Emergency response activation is performed in accordance with procedures mandated by OSHA, EPA, DER, DOT and local regulations when applicable.

All data and reports developed during the course of an emergency response will be collected and summarized into a final detailed report, which is submitted at the conclusion of the project. Additionally, during the course of the project, written progress reports can be submitted on a regular basis, if requested. These reports typically describe the technical aspects of the project and include costs status and estimate information relative to the project. All technical, analytical and cost data is retained for possible use in litigation that may arise out of the incident.

After obtaining basic information about the incident, a dispatcher will then arrange for mobilization of personnel and equipment. *NSC Abatement Services* response team personnel carry pagers enabling them to be reached 24 hours a day. The Client's designated representative will then be notified regarding the estimated time of arrival and other applicable information. It

is imperative to respond quickly with trained personnel and appropriate equipment in order to limit to the greatest extent possible the time between the onset of the contamination and the initiation of control procedures.

In the event of a significant or potentially large contamination, *NSC Abatement Services* response will be commitment of personnel and equipment of a magnitude adequate to assure that sufficient resources are available to handle the situation.

Tailgate meetings will be conducted at the beginning of each project shift, or whenever employees arrive on the jobsite. These meetings should discuss the problem and health and safety considerations for the particular activity including the protective equipment and other materials necessary to perform the work.

Work Zones

The work areas can be categorized as an exclusion ("hot") zone, a contamination-reduction zone and a support zone.

Exclusion Zone

The exclusion zone consists of the entire area of suspected contamination. The exclusion zone will be a defined area where there is a possible respiratory and/or contact health hazard. The location of the exclusion zone will be demarcated by warning signs and barrier tape.

Contamination-Reduction Zone

The decontamination of all personnel will be performed on-site adjacent to the exclusion zone. Personnel protective outer garments and respiratory protection will be removed in the contamination-reduction zone.

Support Zone

The support zone consists of an area outside the contamination-reduction zone. The support zone will be located to prevent employees from being exposed to any physical or health hazards above environmental levels.

Respiratory Protective Equipment & Protocol

A comprehensive, respiratory-protection program has been established. This program will be required in all locations where use of such equipment could lessen the potential for adverse health effects to any employee.

The type of respiratory equipment will be continuously re-evaluated based upon the current level of exposure. The only persons able to modify the level of respiratory protection are the site supervisor and regional OSHA representative.

As part of the respiratory training program, each employee is instructed in the following elements:

- Nature of the respiratory hazard on the work site and the appraisal of what may happen if the respiratory protection is not utilized.
- Cleaning, disinfecting, inspecting, maintaining and storing of the respirator.
- Proper selection, capabilities and limitations.

General Information

The health hazards of prolonged exposure to airborne asbestos are well documented.

Equally well known are the liabilities that manufacturers of asbestos products face, and the potential liabilities of building owners and facility managers whom do not eliminate asbestos hazards.

In removing asbestos, there can be no allowance for anything but expert, well planned, professionally executed and thoroughly documented work at every phase.

NSC Abatement Services was formed specifically to meet the need for professionalism in the asbestos abatement industry.

NSC Abatement Services, based in New York has successfully completed asbestos abatement projects in commercial buildings, government buildings, hospitals, schools and industrial facilities.

The Company has enjoyed steady and significant growth since its beginning.

Asbestos project scopes range from small mechanical insulation removal to large-scale projects.

NSC Abatement Services commitment to doing every job precisely right assures clients of quality work performed safely, within budget and on-schedule.

Scope of Services

NSC Abatement Services has expertise in all types of asbestos abatement.

- Removal and disposal

- Enclosure (constructing structures around asbestos-containing areas)
- Encapsulation (spraying asbestos-containing materials with an approved sealant)
- Budget assessments
- Program design
- Planning and scheduling
- Asbestos removal, disposal, enclosure or encapsulation
- Re-insulation
- Re-fireproofing

Health & Safety Training

Employee Training & Information

- Training Program

    - All employees, who are subject to exposure to asbestos, shall complete a formal training program, accredited by the EPA, that will be repeated annually which shall include, at a minimum, the following:

    - Methods of recognizing asbestos and presumed asbestos-containing material.

    - The health effects associated with asbestos and asbestos-containing material exposure.

    - The relationship between smoking and asbestos in producing lung cancer.

    - The nature of operations that could result in exposure to asbestos or asbestos-containing material.

    - The importance of necessary protective controls to minimize exposure including, as applicable: engineering controls, work practices, respirators, housekeeping practices, hygiene facilities, protective clothing, decontamination procedures, emergency procedures and waste disposal procedures and any necessary instruction in the use of these controls and

    - The purpose, proper use, fining instructions and limitations of respirators, as required by 29 CFR 1910.134.

    - The appropriate work practices for performing the asbestos job.

    - The medical surveillance program requirements.

- Tailgate Safety Meetings

Job site Tailgate Safety Meetings, in accordance with OSHA regulations, shall be conducted at the beginning of each job, whenever new employees arrive at the job site and at additional times as required by job conditions or duration.

- In House Training
- Hazard Communication Training as per 29 CFR 1926.59 and 29 CFR 1910.1200.
- All employees are trained in the understanding of material safety data sheets (MSDS).
- All employees are trained in reading material safety data sheets (MSDS).
- Recognizing hazardous materials and their potential for creating health problems.
- Proper methods of handling hazardous products.
- Proper labeling and identification.

Respiration Protection & Personal Protection Program

Respiratory protection is the heart of *NSC Abatement Services* health and safety program. *NSC Abatement Services* requires respiratory protection regardless of available engineering controls. Infinity follows the standard set forth by OSHA 29 CFR 191 0.134 and 29 CFR 1926.103.

NSC Abatement Services respirator program ensures that:

- Respirators are regularly inspected and properly maintained.
- Employees are thoroughly trained in the use and care of respirators.
- Records are maintained regarding respirator use, maintenance and training.
- Specific responsibilities are assigned to both management and laborers with respect to respirator use and maintenance.

Respirator Selection

NSC Abatement Services requires its employees to wear respirators at all times when working inside the containment or when there is a potential asbestos exposure.

Efficient respiratory protection is available to protect against the many respiratory hazards encountered. Therefore, it is vital that employees familiarize and be trained with the proper operating procedures and with limitations of this equipment.

Proper respiratory protective equipment must be used whenever the atmosphere in which the employee must work is contaminated with harmful dust, gases, fumes, vapors or mists. The table below shows the OSHA standard for wearing the different types of protection. This table is found in 29 CFR 1926.1101, Table 1.

The types of cartridges used are high-efficiency cartridges with 99.97% efficiency against non-dispersed particles of 0.3 micrometers in diameter or larger.

Dual cartridges are used where chemicals or danger of chemicals are used as well as the danger of dust, gases, vapors or mist.

NSC Abatement Services employs the following types of respirators according to various exposure levels:

TABLE 1
RESPIRATORY PROTECTION
FOR
ASBESTOS FIBERS

Not in excess of 1 f/cc	Half-mask air purifying respirator, other than a disposable respirator, equipped with high-efficiency filters.
Not in excess of 5 f/cc	Full face air-purifying respirator equipped with high efficiency filters.
Not in excess of 10 f/cc	Any powered air-purifying respirator equipped with high efficiency filters.
Not in excess of 100 f/cc	Full-face supplied-air respirator operated in pressure demand mode.
Greater than 100 f/cc	Full-face supplied-air respirator operated in pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus.

The capabilities of the various respirators are determined from governmental approvals, manufacturers' tests and *NSC Abatement Services* experience.

Respirators are selected by the safety director and the industrial hygienist based upon the following criteria:

- Physical, chemical, and physiological properties of the airborne contamination.
- Concentrations of contamination.
- Nature of the work being performed.
- Quality of respirator fit.

Each employee is issued a respirator. Each respirator is identified in a manner which does not interfere with its performance, and individual fit testing is conducted for each employee.

Inspection & Maintenance

Respirators and related equipment are systematically inspected and maintained to retain their original effectiveness. Users routinely inspect their respirators before and after each use and after each cleaning. Respirators are kept on hand for emergency use.

The following components of the respirators are examined:

- Face piece.
- Head bands.
- Valves.
- Hoses.
- Filter cartridge.
- Battery pack (if PAPR).

Respirators with any signs of deterioration, wear, damage or other conditions that could prevent an airtight fit, do not pass inspection and are repaired or replaced immediately.

Cleaning

Employees clean their respirators at the end of the work shift. Employees are trained in this procedure, which includes:

- Removing cartridges in half-face and full-face, negative-pressure respirators. These cartridges are treated as asbestos waste and are discarded at the end of their work shift or when resistance to breathing occurs.

- Plugging cartridges in PAPR units, which may be re-used until their rated effective life is expired.

- Wearing face pieces into the decontamination shower and thoroughly rinsing under running water to remove all accumulation of debris. Employees thoroughly rub all contours of the face piece with their fingers to dislodge any debris.

- Rinsing in the shower, removing face pieces, washing them in a detergent-disinfectant solution and rinsing in clean water in a clean area. If necessary, using a brush to scrub the face piece.

- Drying face pieces using either portable dryers or drying racks.

- Storing respirators in plastic bags to protect them against dust, sunlight, extreme heat, extreme cold, excessive moisture or damaging chemicals.

Training

In addition to the health and safety training program, all *NSC Abatement Services* employees are trained in the use and care of respirator equipment. Training is repeated as often as necessary to ensure that all employees remain familiar and competent in the proper use of respirators.

All employees receive training in:

- Identifying the physical characteristics of the various kinds of asbestos contamination generated by asbestos abatement work.

- Understanding the health implications of exposure to asbestos contamination.

- Determining which types of respirator systems are effective against the various types of airborne asbestos contamination.

- Recognizing the intended use and limitations of each type of respirator system.

- Properly wearing, adjusting, and testing respirators for an airtight fit.

- Cleaning and storing the various components of the respirator systems.

- Step-by-step, hands-on instruction for performing routine respirator inspections.

Additionally, job site Toolbox Safety Meetings, in accordance with OSHA regulations, are conducted at the beginning of each project, whenever new employees arrive at the job site and at additional times as required by job conditions or duration.

Records

NSC Abatement Services maintains thorough and accurate records of respirator use, as follows:

- The number and types of respirators in use.
- Employee training, including the name of the individual, length of time of training, nature of the training and date of training.
- *NSC Abatement Services* shall ensure that the respirator issued to the employee exhibits the least possible face piece leakage and that the respirator is fitted properly.
- *NSC Abatement Services* performs qualitative face fit tests at the time of initial fitting and at least every 12 months thereafter for each employee wearing a respirator.

Fit test procedure is as follows:

1. Respirator selection.
2. Each respirator shall be equipped with a high-efficiency cartridge.
3. Introduce test subject to a weak smell of irritant smoke to familiarize the subject with the characteristic odor.
4. Employee should then don the respirator selected and wear it at least 10 minutes before starting the fit test.
5. Positive and negative pressure fit checks.
6. Test subject should close eyes while the test is performed.
7. Test subject shall then do exercise according to fit test sheet. Each exercise will be performed for one minute.

Health & Safety Responsibilities

NSC Abatement Services ensures adherence to its respirator program by assigning specific responsibilities to both management personnel and laborers. On most projects, a superintendent is designated as the safety director and is responsible for overall coordination of the health and safety program.

Safety Director

The superintendent appointed to be the project safety director is responsible for:

- Communicating to company employees in a clear and accurate manner the biological dangers posed by exposure to airborne asbestos contamination.
- Providing employees with respiratory protection appropriate to the project environment.
- Organizing and implementing instruction programs and hands-on training in the use and maintenance of respirators and associated equipment.
- Administering the overall program, including record keeping.

Foreman

Each foreman is responsible for:

- Ensuring that employees are knowledgeable about the dangers of asbestos contamination and the need for adequate respirator protection.
- Ensuring that employees have an adequate supply of respirators and all required parts and supplies for maintaining the systems.
- Ensuring that employees wear respirators whenever they are inside the containment area.
- Regularly inspecting respirators and related equipment and supplies to ensure that they are in proper operating condition.
- Maintaining, repairing, disinfecting and cleaning all respiratory equipment prior to its issue to employees.

Laborers

Laborers are responsible for:

- Understanding the basic characteristics of asbestos materials and their capacity for releasing invisible asbestos contamination.
- Recognizing the medical consequences of not being protected from breathing asbestos contamination.
- Using an assigned respirator in accordance with instruction and training.
- Daily cleaning, disinfecting and storing the respirator.

- Exercising care with the respirator and related equipment and supplies to avoid causing any damage.

- Wearing a respirator at all times in environments where airborne asbestos contamination is known or expected to be present.

Industrial Hygienist

When applicable, the industrial hygienist is responsible for:

- Providing competent technical assistance in determining which type of respirator is appropriate for the situation.

- Providing periodic surveillance of conditions in the work areas where respirators are in use.

- Periodically evaluating *NSC Abatement Services* respirator program.

- Providing educational materials for educating employees about asbestos dangers as well as state-of-the-art respiratory protection.

Personal Protective Equipment

29 CFR 1910.132—1910.38

General Requirements

Protective equipment, including personal protective equipment for eyes, face, head and extremities, protective clothing, respiratory devices, protective shields and barriers, shall be provided, used and maintained in a sanitary and reliable condition wherever it is necessary due to hazards of processes, environment, chemical hazards, radiological hazards or mechanical irritants encountered capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

1910.132(d) (1) Hazard Assessment & Equipment Selection

NSC Abatement Services shall assess the workplace to determine if hazards are present or are likely to be present which necessitates the use of personal protective equipment. If hazards are present, *NSC Abatement Services* will:

- Select and have each affected employee use the types of PPE that will protect the affected employee from the hazards identified in the hazard assessment.

- Communicate PPE selection decisions to each affected employee.
- Select PPE that properly fits each affected employee

NSC Abatement Services shall verify that the required workplace hazard assessment has been performed through:

- A written site assessment checklist for workplace evaluated.
- The person certifying that the evaluation has been performed.
- The dates of the hazard assessment.

Work Practices

Preliminary preparations in the work area shall be conducted as follows:

- Work Area Preparation.

  NSC Abatement Services shall provide and post in clearly visible locations, caution signs indicating that asbestos work is being conducted and unauthorized/unprotected persons should not enter.

  Employees of *NSC Abatement Services* or persons employed by the building owner, who have successfully completed a maintenance/custodial/worker approved training course, unless the room and objects within are shown to be uncontaminated by asbestos in which case other employees of the building owner or contractor may be used, shall clean with wet cloths and/or with HEPA vacuums as appropriate all items that can be removed from the work area without disrupting the asbestos material. This shall include furniture, equipment, drapes and curtains. The cloths used for cleaning shall be disposed of as asbestos-contaminated waste.

  NSC Abatement Services shall install or build an approved decontamination facility. (Described later in this section.)

  NSC Abatement Services shall arrange for the shut down, lock-out and seal off of all lighting, heating, cooling, ventilating or other air-handling systems and an alternative system shall be utilized.

- Emergency Procedures

  Warning signs shall be posted, as per regulations, to alert any unauthorized personnel from entering the work site.

Exits will be clearly marked inside the work area using high-visibility tape. Arrows indicating exit routes will also be marked on the walls to aid personnel

In the event of an emergency, worker decontamination will take low priority where bodily injury or life-threatening situations exist. Fire prevention in the work area is a function of good housekeeping, employee training and education in fire hazards and prevention. *NSC Abatement Services* shall have a list of emergency telephone numbers at the job site which shall include the Asbestos Safety Control Monitor Firm employed by the building owner and telephone numbers for fire, police, emergency squad, local hospital and health officer.

First aid supplies shall be easily accessible and kept in a weatherproof container with individually sealed packages for each type of item. The contents of the first aid kit shall be checked by the superintendent before being sent to the job site and inspected weekly thereafter.

- Personal Decontamination Enclosure System

NSC Abatement Services shall provide an adequate decontamination unit consisting of a serial arrangement of rooms or spaces adjoining the work area or a decontamination trailer. Each airlock shall be clearly identified and separated from the other by plastic crossover sheet doors designed to minimize fiber and air transfer as people pass between areas. A minimum of two layers of 6-mil plastic sheeting shall be required for floors, walls and the ceiling for on-site constructed decontamination units. Plastic crossover sheet doors shall have at least three layers of 6-mil plastic sheeting and be weighted so as to fall into place when people pass through the areas. Decontamination chamber doors shall be of sufficient height and width to enable replacement of equipment that may fail and to safely stretcher or carry an injured worker from the site without destruction of the chamber or unnecessary risk to the integrity of the work area. Such doors will be at least 3 feet wide, and the distance between sets of flaps must be at least 3 feet.

The decontamination areas shall consist of the following:

- Clean room: In this room, persons remove and leave all street clothes and put on clean disposable coveralls. Approved respiratory protection equipment is also picked up in this area. No asbestos contaminated items are permitted in this room.

- Shower room: This is a separate room used for transit by cleanly dressed people entering the job site from the clean room and for showering by them after they have undressed in the equipment room. This is a contaminated area.

- Equipment room: Work equipment, footwear and all other contaminated work clothing shall be stored here. This is also a change and transit room for people. All areas between the shower room and work area shall be considered part of the equipment room. This is a contaminated area.

- Waste Decontamination Enclosure System

    - *NSC Abatement Services* shall provide and post in clearly visible locations, caution signs indicating that asbestos work is being conducted and unauthorized/unprotected persons should not enter.

    - *NSC Abatement Services* shall install or build an approved decontamination facility.

    - *NSC Abatement Services* shall arrange for the shut down and seal off of all lighting, heating, cooling, ventilating or other air-handling systems.

    - *NSC Abatement Services* shall establish written emergency procedures to be available on site within each work area. These procedures shall include plans for medical emergencies, fire evacuations, temporary loss of electrical power or water and procedures for repair and clean-up following temporary breach of containment barriers.

- Work Area Entry and Exit Procedures

    - *NSC Abatement Services*, in order to prevent contamination of the environment, shall be responsible for controlling access at the work site and shall maintain a daily log of personnel entering the work area. A list of names of workers shall be posted with their start and stop times for each day. In addition, *NSC Abatement Services* shall assure that all who enter the work area shall observe the following work area entry and exit procedures:

    - Person enters clean room and removes street clothing, puts on a respirator and Tyvek protective clothing and passes through shower room into the equipment room.

    - Any additional required clothing and equipment previously deposited in the equipment room is put on.

    - Person proceeds to work area.

    - Before leaving the work area, the person shall remove all gross contamination and debris from the overalls using a vacuum with a High-Efficiency Particulate Absolute (HEPA) filter.

    - The person then proceeds to equipment room and removes all clothing except approved respirators. Extra clothing may be stored in contaminated end of the unit. Disposable coveralls are placed in a bag for disposal with other materials.

    - The person then proceeds directly into the shower room. Respirators shall be taken off last to prevent inhalation of fibers during removal of contaminated clothing and shall not be removed until they have been washed free of dust.

- After showering, the person moves to the clean room and dresses in street clothing prior to exiting.

- Respirators are picked up, washed thoroughly and disinfected as required, wrapped and stored in the clean room.

- Maintenance of Decontamination Enclosure System and Work Area Barriers

Isolation and barrier construction in the work area shall be conducted as follows:

- Before removing any asbestos from the work area, *NSC Abatement Services* shall ensure that the outer perimeters of the work area have been securely sealed off from the rest of the building.

- All vertical and horizontal surfaces, except those of asbestos-containing materials, shall be sealed with watertight polyethylene plastic sheeting except as provided below:

- An entrance airlock including showers and decontamination chamber.

- A debris removal airlock to permit cleaning and rehoving asbestos waste.

- Staircases.

- Barriers used to isolate contaminated areas from uncontaminated areas shall be constructed of plastic polyethylene sheeting. This plastic sheeting shall be replaced or repaired immediately if torn or damaged. The minimum acceptable thickness for covering walls shall be 6-mil plastic sheeting. A double layer of 6-mil plastic sheeting shall be used to seal open space between work areas and non-contaminated areas and for all floors except stairs.

- Encapsulation Procedures

  - Encapsulation constitutes spraying friable asbestos-containing material with a liquid sealant (not including paint) that helps bind the asbestos together with other material components to adhere it firmly to the building structure.

  - *NSC Abatement Services* will comply with the following to prevent the contamination of the building environment:

  - Encapsulation shall not be performed where:

    - Asbestos-containing material is friable, damaged, or deteriorating.

    - Effective long-term inspection of the encapsulated site cannot be assured.

- The source of asbestos is highly accessible to building occupants and damage to material is possible.
- The asbestos-containing material does not adhere well to the substrate.
- There is existing or potential water damage to asbestos-containing material.
- The asbestos-containing material is more than one inch thick and is used to cover ceilings, walls, beams or other structural members.
- The asbestos-containing material is subject to high vibration.

- Encapsulation may be performed where:
    - Damage to the material is improbable.
    - The asbestos-containing materials are granular or cementitious.
    - The encapsulation material is known to bond asbestos to the subsurface and the asbestos-containing material still retains its bonding integrity.
    - Asbestos-containing material has been removed and loose fibers remain which should be bonded.
    - If encapsulation is used as a method of asbestos abatement, Infinity will inform the owner that a maintenance procedure shall be employed by the owner as follows:
    - A periodic monitoring and maintenance program consisting of inspection at least annually to check for damage to all encapsulated surfaces.
    - Maintenance of records by the building owner on the locations and condition of the encapsulated material.
    - The removal of encapsulated asbestos when conditions change, making encapsulation no longer an appropriate method of abatement.

- Sealant considered for use in encapsulation shall first be tested to ensure that the sealant is adequate for its intended use. A section of the asbestos-containing material shall be evaluated following this initial test application of the sealant to quantitatively determine the sealant's effectiveness in terms of penetrating and hardening the asbestos-containing material, its toxicity, its flammability, its tolerance to disturbance or abuse, its solubility (dissolvability)

in water, its effects on the acoustical properties of the asbestos-containing material, and its tolerance to top-covering paints. The United States Environmental Protection Agency, Office of Toxic Substances, has developed guidelines for the use of encapsulant on asbestos-containing materials which discuss advantages and disadvantages of encapsulation.

The American Society of Testing and Materials (ASTM) Committee E06.21 .06E on Encapsulation of Building Materials has developed a guidance document to assist in the selection of an encapsulant once a decision to encapsulate has been made. When a choice of an encapsulant has been made, written jurisdiction of this choice (based on the characteristics of the encapsulant, the asbestos-containing material to be encapsulated and the substrate surface underneath the asbestos-containing material) shall be included in the job specifications, and a copy of this justification shall be available for review at the job site.

- Before encapsulation is performed, all loose and hanging asbestos containing material shall be removed while damp and disposed of in accordance with this subchapter.

- Filler material, used to repair damage and missing areas of asbestos-containing material, shall contain no asbestos, shall adhere well to the substrate and shall provide an adequate base for the encapsulating agent.

- Encapsulated asbestos-containing material shall be identified by signs, labels, color coding or some other mechanism to warn persons who may be required to disturb the material that asbestos is present.

Where encapsulants are sprayed on asbestos-containing materials:

- Low-pressure airless spray shall be used. The airless spray gun shall have an appropriately sized tip which shall be tested by briefly spraying the encapsulant onto a surface from approximately twelve inches away. An appropriately sized tip will spray the encapsulant in a fan approximately eight inches wide; it will also distribute the encapsulant uniformly within the fan, giving even coverage.

- A suitable quality of HEPA filtration units shall be used during the encapsulation process which shall have sufficient capacity to cause one complete air exchange every 30 minutes.

- At least three coats of the encapsulant shall be applied to the surface of the asbestos-containing material. Each coat shall be applied in a two-step procedure. The first step is to apply a light mist coat to moisten and seal any loose fibers and keep them from breaking away from the surface. This mist coat should be applied in three or four quick passes with the gun held 18 to 24 inches from the surface.

- After an area of 16 to 20 square feet has been given the mist coat, a heavier coating is applied, using 8 to 10 passes with the gun held 10 to 12 inches from the material. The gun should be kept in constant motion to create a smooth and even coat. This two-step application shall be considered one coat of the encapsulant. Each subsequent coat shall be

applied at a 90-degree angle to the direction of the preceding coat application to ensure complete coverage of the asbestos-containing material. When questions arise regarding drying time, curing time, dilution or use under different weather conditions, the manufacturer's recommendations and instructions shall be consulted.

- Sealant used in encapsulation shall be flame resistant and meet the flame spread and smoke generation requirements.

- Removal of Non-Friable Asbestos-Containing Material

  This section applies to all interior building, non-friable, miscellaneous asbestos-containing material.

  - When the removal method will cause the building environment to become contaminated with airborne fibers caused by a combination of mechanical and manual tasks, such as grinding the surface of vinyl floor tiles, then complete separation of the worksite from the rest of the building shall be required, and the precautions and procedures during an asbestos hazard abatement project shall be followed.

  - When the removal method will not contaminate the building environment with airborne fibers, such as when an electric heating appliance is used to loosen vinyl floor tiles, then general isolation of the work area from the surrounding environment, safe work practices and proper clean-up procedures, including having access to shower facilities after performing the asbestos-related work shall be required. A construction permit shall be required.

  - The disposal of non-friable asbestos-containing waste shall conform to specific applicable requirements.

  - The removal of non-friable asbestos-containing material found on the exterior of a building such as asbestos siding, transite and cement board, asbestos roof shingles, felts and built up roofing material shall be removed using a two-step procedure.

  - The initial step shall include the construction of a mini-enclosure around a representative sample of the material. If the non-friable status of the material remains unchanged during removal and representative air sampling indicates acceptable levels, the remainder of the material can be removed accordingly. Otherwise, safe work practices shall be employed to minimize asbestos fiber exposure during the tear-off period and, in particular, for asbestos shingle roofs, work precautions described in the National Institute of Occupational Safety and Hearth (NIOSH) Health Hazard Evaluation Report No. HETH 84-321 shall be followed.

- Asbestos Material Enclosure Procedures

    - *NSC Abatement Services* will insure construction of an airtight barrier to isolate a surface coated with asbestos-containing material. The barrier for an enclosure job shall be in accordance with EPA and state or local regulations. It is not necessary to have an airtight barrier for piping if the insulation has first been covered with an appropriate sealant or tape.

    - The following procedures shall be adhered to by *NSC Abatement Services* to prevent the contamination of a building:

        - The surface of the asbestos-containing material, which will be disturbed during the installation of hangers, brackets or other enclosure supports shall first be sprayed with amended water or an encapsulant using a low-pressure airless spray.

        - Power drills used to install anchors or other tools, which may disturb asbestos-containing materials, shall be equipped with or used in conjunction with HEPA vacuum filters.

        - Loose and hanging asbestos-containing materials shall be removed while damp and disposed of in accordance with the disposal requirements discussed in the disposal section of this manual.

        - After the installation of hangers, brackets or other supports and before the asbestos-containing material is enclosed, asbestos-containing materials shall be repaired using materials which do not contain asbestos.

        - Enclosures for asbestos-containing material shall be identified by signs, labels, color-coding or some other mechanism to warn persons, who may be required to disturb the enclosure, that asbestos is present.

        - *NSC Abatement Services* shall inform the Owner that the enclosure should be inspected at least annually (by the Owner) to ensure the integrity of the enclosure system.

- Removal of Friable Asbestos-Containing Material

  Engineering methods and controls for the removal of friable asbestos-containing materials is as follows:

    - Filters from all heating, ventilating and air conditioning systems shall be removed and placed in 6-mil plastic bags. The bags will be double bagged with visible labels for disposal as asbestos-containing waste. Excess air will be squeezed out of the bag before sealing with high-quality tape. The bags will be handled in the same manner as removed asbestos.

- *NSC Abatement Services* shall wet clean and/or HEPA vacuum all non-removable, non-asbestos items including built in equipment and cover with two layers of 6-mil poly, taped securely in place.

- *NSC Abatement Services* shall detach and wet-clean removable electrical, heating and ventilating equipment and other items which may be attached/connected to asbestos surfaces. These items shall be removed from the work area and returned to their proper place after decontamination and final air testing provide satisfactory results.

- All openings between the work area and uncontaminated areas such as windows, doorways, elevator openings, roof penetrations, floor and sink penetrations, grilles, diffusers, etc. shall be sealed with two layers of 6-mil plastic sheeting fastened securely in place with tape, adhesive, glue or equivalent. Floor drains shall be sealed individually and covered, as all floors, with two layers of 6-mil plastic. If necessary, temporary walls may be built as barriers.

- Floors shall be covered with two layers of 6-mil plastic sheeting. The first layer shall extend up walls a minimum of 12 inches. The second layer shall extend up sidewalls a minimum of 24 inches. Sheeting shall be sized to minimize the number of seams. No seams shall be located at the points between walls and floors.

- Wall sheeting shall consist of one layer of 6-mil plastic sheeting that will be installed to minimize joints and have no seams located at the corners. Wall sheeting shall overlap floor sheeting a minimum of 18 inches. Wall plastic shall be taped first to the uppermost edge of the wall and shall hang straight down.

- Since all existing ventilation systems in the work area are sealed, an approved HEPA filtration unit, with filters in place, shall be utilized. HEPA filtration units shall be of sufficient number and capacity to assure that the total air volume is exchanged once every 15 minutes, and that a negative-pressure (.02 inches of water) is maintained inside the containment as monitored by a manometer. Each HEPA filtration unit shall be UL-listed for air capacity and shall be capable of filtering asbestos fibers to 0.3 microns at 99.97% efficiency.

- Prior to removal, the asbestos-containing material shall be sprayed with water containing an additive to enhance penetration. The additive or wetting agent will be 50% polyethylene ether and 50% polyoxyethylene ether at a concentration of one ounce per five gallons of water. A fine spray of this solution shall be applied to prevent fiber disturbance preceding the removal of asbestos material. The asbestos will be sufficiently saturated to prevent emission of airborne fibers in excess of the exposure limits prescribed in the OSHA Standard 29 CFR 1926.1101.

- Waste Handling and Removal Procedures for Friable Asbestos-Containing Materials.

  Waste handling and removal procedures for friable asbestos-containing materials are as follows:

  - The asbestos-containing material shall be sprayed with water containing an additive to enhance penetration (amended water) or removal encapsulant. All wetting agents shall be tested on a small area before use to ensure effectiveness. A fine low-pressure spray of this solution shall be applied to prevent fiber disturbance preceding removal. The removal encapsulant or amended water shall be sprayed on as many times and as often as necessary to ensure that the asbestos material is adequately wetted throughout (especially that asbestos nearest the substrate) to prevent dust emission. No dry removal of asbestos is allowed.

  - As a method of organizing the asbestos removal work, workers shall begin working on the areas nearest to the decontamination unit and work towards the HEPA filtration units.

  - Asbestos-containing material located more than 15 feet above the floor shall be dropped into inclined chutes, or dropped onto scaffolding or containerized at that height for eventual disposal. Asbestos-containing materials shall not be dropped or thrown to the floor from 15 feet or greater. For materials located at heights greater than 40 feet above the floor, a dust-tight, enclosed chute shall be constructed to transport removed material directly to containers located on the floor.

  - The wet material from each section shall be packed and sealed into labeled 6-mil plastic bags, double bagged with visible labels, prior to starting the next section. Water-soaked fallen material shall be picked up while wet to prevent water loss due to evaporation.

  - Contaminated material containing sharp edged items shall be bagged or singly bagged and then placed in temporary fiber drums.

40 CFR 61.152 prescribes a leak-tight container, the integrity of which is the responsibility of Infinity.

  - Bags and drums shall be marked with the label prescribed by Section 40 CFR 61.152 of the EPA regulations. The outside of all containers shall be wet-cleaned or HEPA vacuumed before leaving the work area.

- After completion of this removal phase (stripping), all surfaces from which asbestos has been removed shall be scrubbed using nylon or bristle brushes and wet sponged or cleaned by an equivalent method to remove visible asbestos-containing material. During this work, the surfaces being cleaned shall be kept wet using amended water or a removal encapsulant. All disposable equipment shall be packaged for disposal. Containers shall be washed with amended water or a removal encapsulant and shall have all exterior particulate matter removed prior to removal from the contaminated area.

- All accessory equipment shall be moved to the equipment room in sealed polyethylene (6-mil minimum) and decontaminated for removal.

- All free water (in contaminated areas) shall be retrieved and added to asbestos-contaminated waste and/or placed in plastic lined leak-tight drums and/or solidified with an acceptable polymer.

- Final clean up of the work area may commence as outlined in the final clean-up section of this manual.

- Final Clean Up and Restoration of the Work Area for Asbestos Removal Projects.

  - *NSC Abatement Services* shall first clean all surfaces in the work area using a fine spray or mist of amended water or removal encapsulant applied to all surfaces followed by the wet-wiping procedure using disposable cloths. These cloths shall be disposed of or rinsed thoroughly on a frequency sufficient to eliminate visible accumulation of debris. Allow all surfaces to dry before re-entering the work area and proceeding with cleaning process.

  - Notify the asbestos safety technician in writing that a pre-sealant inspection is requested.

  - After completion of cleaning all surfaces in the work area and upon receiving a satisfactory pre-sealant inspection, *NSC Abatement Services* shall spray coat all dried exposed surfaces with a sealant. The color of this coat shall be separate and distinct from the underlying substrate.

  - The surfaces to be coated shall include surfaces from which asbestos-containing materials have been removed (such as ceilings) and polyethylene which has been used to cover walls, floors and non-removable fixtures and equipment.

  - The plastic sheeting used to protect floors, walls, fixtures and equipment shall be carefully removed and rolled up, with the contaminated portion on the inside, and packaged for disposal. Tape and any other debris shall also be disposed of in sealed plastic bags labeled as asbestos-contaminated waste.

- Wet clean, with amended water or a removal encapsulant, all walls, floors, woodwork, ceilings, electric light fixtures and other surfaces. Allow all surfaces to dry and repeat procedure. Cloths or sponges used in the cleaning operation shall be disposed of as contaminated waste.

- Plastic used to maintain critical barriers between work areas and clean areas such as those in doorways, windows and air vents shall be sprayed with encapsulant, but not removed until air monitoring is completed and satisfactory results have been obtained.

- After completion of the cleaning operations, *NSC Abatement Services* shall notify the asbestos safety control monitor that a clean-up inspection can be performed to ensure all visible asbestos has been removed and the area is dust free.

- Upon receiving a satisfactory post-cleaning inspection, *NSC Abatement Services* shall request air sampling of the work area.

- Air monitoring results must indicate asbestos concentrations of no more than .010 f/cc. These results must be achieved before critical barrier removal and restoration activities may begin. If the test results show asbestos fiber concentrations above the acceptance criteria, then clean-up shall be repeated until compliance is achieved by re-cleaning all surfaces using wet methods and operating all HEPA air filtration units to filter the air.

- After the work area is found to be in compliance with the acceptance criteria, *NSC Abatement Services* shall unseal all critical barriers, wash the inside of windows and repair any walls, floors, trim, doors, furniture or other items damaged during the work.

- Notice for a final inspection shall be made by the Owner or *NSC Abatement Services* to the asbestos project monitor.

- Shower Decontamination

    - Water that has been used to clean personnel or equipment shall either be filtered or be collected and discarded as asbestos waste. Shower units shall be wet wiped down and cleaned with water and a HEPA vacuum. All surfaces of the shower unit shall be covered with 2 layers of plastic sheeting. The sheeting shall be secured with duct tape or an equivalent method to provide a tight seal around the object before removing from the area. This procedure would apply to all equipment to be removed off site.

- Bagging Waste

    - All waste being discarded as asbestos-containing material waste shall be thoroughly wetted with amended water and gathered in a 6-mil poly bag. The bag shall be wiped

and placed into another 6-mil poly bag with appropriate labels, wiped again, then goosenecked and duct taped so that no fiber emissions escape.

- When using drums or if drums are required as a means of removal, only one 6-mil poly bag would be appropriate. The bag shall then be placed inside of drums. The drum shall be sealed around the lid and labeled appropriately. Wipe the drum before transporting to waste trailer.

- Disposal of Asbestos Waste and Off-Site Waste Handling for Asbestos Removal Projects.

  Disposal of asbestos waste for asbestos removal projects:

  - All asbestos waste material destined for disposal shall be wetted and packaged in impermeable sealed leak-tight containers (such as 6-mil plastic bags, double bagged with visible labels), in accordance with 40 CFR 61.152, before it can be legally transported and disposed of. No haulage of loose asbestos is permitted. a

  - A detached, secure locked container shall be provided if asbestos waste is to be stored outside unattended.

  - Asbestos waste, which is properly packaged, shall be disposed of at a landfill that is permitted to accept asbestos waste. The asbestos waste container shall be taken to the landfill by a vehicle that is permitted to transport asbestos waste. The landfill used must be permitted and licensed (if applicable) to accept asbestos waste.

  - The waste hauler must possess a valid solid waste transporter registration. A licensed solid waste transporter shall be a commercial collector/hauler or shall be the removal company if they are so registered.

  - Asbestos waste can be hauled in trucks or in dumpster containers provided the load is comprised only of asbestos in bags and does not contain any other waste or asbestos-containing wastes which could compromise the integrity of the permanent containers. In addition, asbestos waste shall not be loaded into or hauled with vehicles containing a compaction device.

  - If rough surfaces or other materials are present in the load, which could potentially puncture the containers, then those containers shall be enclosed in temporary fiber or steel drums during loading, transport and unloading operations.

- Off-Site Waste Handling Procedures

  - *NSC Abatement Services* does not have authority to regulate landfills. However, Infinity will assure that landfills are EPA and state approved to accept and legally dispose of asbestos-containing material.

- Waste haulers must be registered with the Environmental Protection Agency. The hauler, having a permit, must inform proper authorities at least 10 days prior of his intent to dispose of asbestos-containing waste, the volume of waste and anticipated date.

- All vehicles used for the collection and haulage of such waste are to be of a design to preclude any spillage or leakage on road. Collector and haulers of such wastes shall not transport drummed hazardous wastes in damaged, rusted, leaking drums or drums with improperly fitted covers or lids.

- The landfill operator must develop a separate area of landfill, apart from other waste disposal areas. No person may enter an asbestos disposal area at a landfill during the unloading and covering of asbestos and asbestos-containing waste without wearing a respirator. No visible air emissions during or after acceptance and disposal shall be permitted.

- Asbestos waste shall have been sufficiently mixed or coated with water or an aqueous solution and sealed into leak-tight containers.

- Waste sites maintain a daily record of asbestos and asbestos-containing waste received.

Section VI
Material Used During Asbestos Abatement Projects.

Proper Environmental Controls are the key factor in assuring the safety of building personnel, our labor force, the building environment, and the outdoor environment. Certain materials and the proper placement and use of these materials help to assure that airborne asbestos fibers are kept to a minimum inside the work area and do not migrate to adjacent areas outside of the active asbestos abatement work area.
Key Materials that will be used on asbestos abatement projects are:

- 6 mil Fire Retardant Poly Sheeting
- HEPA Filtration Machines
- HEPA Equipped Vacuum Cleaners
- Surfactant
- Encapsulant
- HEPA Filtration Machine Pre Filters (Pad Filters)
- HEPA Filtration Machine Secondary Filters (Ring Filters)
- HEPA Vacuum Dust Collection Bags
- HEPA Vacuum Prefilters (Bonnets)
- Disposable Tyvek Suits (With Hood and Boot)
- Disposable Work Gloves
- Body Shampoo
- Disposable Body Shower Towels

- Spray Adhesive
- Duct Tape/Poly Tape
- P100 Respirator Filters