APPLICATION

NYU Langone Health

PURPOSE

To protect staff, patients, students, tenants, visitors, vendors, and members of the community from exposure to lead that is present in building materials.

To comply with Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), and New York City Department of Health and Mental Hygiene (NYC DOHMH) regulations.

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POLICY AND GENERAL INFORMATION

1.0 Background

Exposure to lead has long been recognized as a serious health hazard. OSHA has two standards (29 CFR 1910.1025 and 29 CFR 1926.62) to protect workers and their families from lead. The EPA and the NYC DOHMH have passed legislation to protect children from exposure to lead paint, and the EPA also regulates lead in drinking water.

2.0 Application

NYU Langone Health (NYULH) refers to the NYU Langone Health System, NYU Langone Hospitals, NYU Grossman School of Medicine, NYU Long Island School of Medicine, the Family Health Centers at NYU Langone, and all entities controlled by any of them.

This policy applies to:

- All NYULH owned and leased facilities
- All employees, contractors, and consultants of NYULH

The primary departments and divisions impacted by the policy are:

- Facilities (Facilities Management, Facilities Operations, Engineering)
- Housekeeping (Building Services, Environmental Services, NYULH-LI Hospitality Services)
- IT
- Real Estate
- RED+F Design and Construction

3.0 Scope

This policy applies to all work that has the potential to disturb lead-containing building materials. It includes, but is not limited to:

- alteration, renovation, demolition, or salvage of structures
- scraping, sanding, abrasive blasting, welding, cutting, or torch burning
- installation, encapsulation, or removal of lead-containing building materials (e.g., lead shielding)
- emergency clean-up of lead-containing building materials
- management and disposal of waste

4.0 Definitions

Certified refers to certification under the EPA's Lead Renovation, Repair, and Painting Rule (RRP).

Child Occupied Facility (COF) means a building, or portion of a building, constructed prior to 1978, that is visited regularly by the same child, 6 years or younger, on at least two different days within any week, with each day's visit lasting at least 3 hours, and the combined annual visits lasting at least 60 hours. Examples include day care centers, preschools or kindergarten classrooms, inpatient pediatric units, and common areas that are routinely used by children 6 or younger, such as restrooms and cafeterias. Hallways, stairways, and garages are not included. For buildings that contain a COF, the COF includes the exterior sides of the building immediately adjacent to it.

Health and Safety Plan (HASP) refers to a document that describes the hazards involved in a project, and the processes and equipment that will be used to mitigate them.

Lead abatement refers to activities undertaken in a child occupied facility to eliminate lead based paint hazards.

Lead based paint (LBP) refers to paint or other surface coating which has a lead content greater than or equal to 1.0 milligram per square centimeter (mg/cm^2), or is greater than or equal to 0.5% lead by weight (5,000 ppm).

Lead containing paint (LCP) refers to paint or other surface coating which contains any measurable concentration of lead.

OSHA action level is an 8-hour time-weighted average exposure of 30 micrograms of lead per cubic meter of air ($\mu g/m^3$).

OSHA permissible exposure limit (PEL) is an 8-hour time-weighted average exposure of 50 $\mu g/m^3$.

PPE refers to personal protective equipment**.**

5.0 Responsibilities

5.1 **NYU Langone Hospital – Long Island (NYULH-LI) Engineering** is responsible for the program to manage lead in building materials (the Program) at NYULH-LI main campus and Research and Academic Center (RAC)**.**

5.2 **Environmental Health and Safety (EH&S)** is responsible for other locations. Their responsibilities include:

- developing the Program and collaborating with others to implement it
- coordinating lead investigations
- coordinating employee exposure assessments
- coordinating awareness training for employees whose work could disturb lead-containing building materials
- reviewing HASPs for contractor work involving lead-containing building materials
- coordinating the response to spills of lead-containing building materials
- maintaining documentation for lead investigations and employee exposure assessments
- periodically evaluating the Program and updating it as needed

At locations other than NYULH-LI main campus and RAC, **EH&S** is also responsible for:

- coordinating testing to determine if waste is regulated under the Resource Conservation and Recovery Act (RCRA)
- managing the disposal of RCRA-regulated lead-containing building materials, and maintaining documentation for waste disposal

5.3 **NYULH-LI Hospitality Services** is responsible for disposal of RCRA-regulated lead-containing waste from NYULH-LI main campus and RAC**.** Their responsibilities include:

- coordinating testing, managing disposal, and maintaining records.
- coordinating the response to spills of lead-containing building materials

5.4 **Facilities**, **Housekeeping**, **Information Technology** (IT), **Real Estate**, and **RED+F Design and Construction** are responsible for compliance within their departments and divisions. Their responsibilities include, but are not limited to:

- coordinating lead awareness training (annual recommended) for their staff
- ensuring their employees and vendors who could disturb lead-containing building materials are familiar and comply with this policy
- ensuring NYULH-LI Engineering or EH&S is notified of any activities that could disturb lead-containing building materials

Note: NYULH has not identified any employees who are exposed to lead levels above OSHA's action level. However, if that were to happen, their departments

would be responsible for compliance with all additional regulatory requirements, including training and medical surveillance.

5.5 **Managers** and **Project Managers (PMs)** (e.g., design, construction, renovation, operations, maintenance, and real estate) are responsible for implementing and managing the program on their projects. Their responsibilities include, but are not limited to:

- ensuring that any personnel (e.g., employees, contractors, other vendors) working on their projects whose work could disturb lead-containing building materials are familiar and comply with this policy
- contacting NYULH-LI Engineering or EH&S in writing and requesting an investigation for work that could disturb lead-containing building materials
- sharing the results of lead investigations with contractors
- ensuring work in child-occupied facilities complies with Local Law 1 of 2004
- incorporating appropriate specifications (for examples, see Appendices A and B) into bid documents if contracted work could disturb lead-containing building materials
- ensuring contractors comply with the OSHA lead in construction standard and NYULH requirements for controlling air contaminants on construction sites
- forwarding the contractor's HASP to EH&S or NYULH-LI Engineering for review, at least one week prior to scheduled work; ensuring contractors implement their HASPs
- arranging a secure location for collection of lead-containing waste from their projects
- contacting EH&S or NYULH-LI Hospitality Services to determine the appropriate method for disposing of lead-containing waste

Real Estate managers are also responsible for:

- complying with all requirements for disclosure of LBP hazards in pre-1978 housing

5.6 **Occupational Health Services (OHS)** is responsible for:

- providing medical surveillance as needed to address employee concerns about exposure to lead, and maintaining medical records

5.7 **Employees** who have the potential to disturb lead-containing building materials are responsible for:

- completing lead awareness training, and other lead training as needed

- following departmental procedures for minimizing lead exposures during routine work
- requesting a lead investigation prior to any non-routine work that could impact lead-containing building materials
- notifying supervisors of potential lead exposures or other pertinent problems

5.8 **Contractors** who have the potential to disturb lead-containing building materials are responsible for:

- complying with the relevant OSHA standard
- complying with NYULH requirements for controlling air contaminants on construction sites
- developing, submitting for review, and implementing a written HASP, as needed
- complying with Local Law 1 of 2004 when working in child-occupied facilities
- properly managing lead-containing waste, and coordinating removal with EH&S or NYULH-LI Hospitality Services, as needed

6.0 Lead Control Program

6.1 Prohibited activities

NYULH prohibits the following methods on surfaces coated with LCP

- dry sanding (unless the sander is equipped with HEPA vacuum)
- hot work (e.g. torch cutting or open flame)
- methylene chloride paint removal in indoor locations
- open abrasive blasting

In rare instances where there is no feasible alternative, personnel shall submit a written HASP to EH&S for review and comment, and implement the HASP.

6.2 Lead investigations

- Managers and PMs shall request lead investigations in preparation for demolition, construction, renovation, or maintenance work:
  - in buildings built in or prior to 1978
  - impacting painted metal surfaces (e.g., structural steel, tanks, fire escapes)

  - involving lead shielding
  - where it is reasonable to anticipate the disturbance of lead-containing building materials
- All surveys shall be conducted by EPA certified inspectors.

6.3 General work practices and controls for work involving lead

- Employees shall incorporate appropriate measures to control lead-containing dust, debris, fume, and waste during routine in-house operations and maintenance activities. NYU Langone's Standard Safety Precautions for In-house Operations and Maintenance Activities (see Safety Policy 145: Interim Life Safety Program) incorporates appropriate controls for many common building maintenance activities involving presumed LCP, as long as the paint is in good condition. For example, the standard safety precautions are generally adequate for activities such as opening wall cavities, and preparing interior walls, ceilings, doors, door frames, windows, window frames and similar surfaces for painting.
- Prior to initiating non-routine work that will disturb lead-containing building materials, personnel shall submit to EH&S for approval a HASP outlining proposed work practices.
- Workers performing lead abatement, or renovation, repair, or painting projects that will disturb LBP in a child-occupied facility shall possess current EPA certification under the Lead Renovation, Repair and Painting Rule (RRP).
- Workers shall use engineering and administrative controls and appropriate work practices to minimize exposure to lead, to the extent that such controls are feasible. Recommended controls include:
  - local exhaust ventilation, with an adequate number of exhaust units to maintain negative pressure
  - plastic sheeting or hard barriers to isolate the work area from adjoining areas
  - sticky mats at entrances/exits to work sites
  - sealing penetrations and capping diffusers
  - wet methods for removing peeling paint
  - HEPA vacuums and/or wet methods for cleanup of dust, ensuring no accumulation of dust
  - access to handwashing facilities for workers; showers, where feasible
  - clean changing areas for workers

- When engineering and administrative controls are not sufficient to reduce worker exposure below OSHA's PEL, controls shall be supplemented by use of respiratory protection. Workers shall use respirators in accordance with Safety Policy 109: Respiratory Protection.

- Workers shall use other PPE (e.g., disposable full body suits with hoods and shoes; goggles; gloves) as needed, consistent with Safety Policy 119: Personal Protective Equipment.

6.4 Additional requirements for employees

- **Exposure assessment**

  If employees must perform non-routine work that could disturb lead-containing building materials, their manager shall request that EH&S evaluate potential exposures.

  – EH&S shall coordinate personal air monitoring on employees performing the work, using OSHA methods of sampling and analysis.

  – Managers shall notify employees of the results.

- **Medical surveillance**

  OHS shall provide medical consultations to employees:

  – who are, or may be, exposed at or above the OSHA action level for more than 30 days per year

  – who report signs or symptoms associated with lead poisoning

  – who request medical advice about exposures to lead

  If employee exposure exceeds the OSHA action level, OHS shall implement a medical surveillance program in accordance with OSHA 1910.1025 (j)(3).

- **Information and training**

  Employees whose work may disturb lead-containing building materials shall receive lead awareness training. At a minimum, awareness training shall include information on the health hazards of and controls for lead exposure (Appendices A and B of OSHA 1910.1025).

  Employees who are subject to lead exposure at or above the action level, or for whom the possibility of skin or eye irritation exists, shall receive annual training as per OSHA 1910.1025 (l).

6.5 **Additional requirements for contractors**

- When performing work that may disturb LCP, contractors shall comply with OSHA's standard for lead in construction (29 CFR 1926.62) and NYULH requirements for controlling air contaminants on construction sites (see Safety Policy 120: Construction Safety Requirements).
- Sample specifications for repainting surfaces coated with LCP are included as Appendix A.
- Contractors shall develop a written HASP for any high risk activity (e.g. hot work or abrasive blasting), work involving elemental lead (e.g. removal or installation of lead shielding), work impacting child occupied facilities, or upon request from EH&S (e.g., for tasks that may generate fume, or work in sensitive areas).
- The written HASP shall include:
  - a description of each activity that will disturb lead-containing materials (i.e., type of activity, equipment used, material involved, crew size, location of the work, operating procedures and maintenance practices)
  - specific measures that will be implemented to control airborne lead (e.g. engineering controls, rotation schedules, housekeeping activities)
  - types of PPE that personnel shall use
  - a description of hygiene facilities and work practices that will be implemented to minimize potential exposure (e.g., change areas, eating facilities, hand washing)
  - an emergency action plan
  - any arrangements made among contractors on multi-contractor sites with respect to informing affected employees of potential exposure to lead and responsibility for compliance with OSHA's standard for lead in construction
  - procedures for collecting and discarding waste
  - other relevant information
- Contractors shall submit HASPs for EH&S review and approval prior to commencing work.

6.6 **Disposal of lead waste**

- Managers, PMs and employees shall contact EH&S or NYULH-LI Hospitality Services, as applicable, to determine appropriate disposal methods for lead waste.

- Managers and PMs shall provide relevant information (i.e. location, types of waste, on-site contact person name and number) as early as possible, at least one week prior to scheduled work.
- Contractors shall manage lead-containing waste as per Safety Policy 108a: Hazardous Waste from Contractors.
- EH&S or NYULH-LI Hospitality Services, as applicable, shall coordinate:
  - recycling of metals coated with LCP, lead shielding, and vests/aprons that contain lead
  - disposal of lead containing glass (e.g. from shielding)
  - testing to determine if lead-containing waste is RCRA-regulated
  - disposal of RCRA-regulated lead waste
- EH&S or NYULH-LI Hospitality Services, as applicable, shall comply with hazardous waste requirements.

7.0 Recordkeeping

7.1 Exposure monitoring and medical surveillance records shall be maintained for 40 years, or 20 years plus the duration of employment, whichever is longer.

- EH&S or NYULH-LI Engineering, as applicable, shall maintain records of exposure monitoring.
- OHS shall maintain medical surveillance records.

7.2 EH&S or NYULH-LI Engineering, as applicable, shall maintain documentation of lead investigations.

7.3 Real Estate shall maintain records for disclosure of LBP hazards in pre-1978 housing.

7.4 Managers shall maintain training records for a minimum of one year following the last day of employment.

7.5 Employee training records and personal exposure monitoring records shall be available to the employee, employee representatives, and OSHA, in accordance with 29 CFR 1910.20.

8.0 Program evaluation

EH&S shall evaluate the Program as part of the annual evaluation of NYU Langone's Hazardous Materials and Wastes Management Plan.

Related Safety Policies

108a: Hazardous Waste from Construction and Building Maintenance
109: Respiratory Protection Program
119: Personal Protective Equipment
120: Construction Safety Requirements
121: Hazard Communication Program
143: Hot Work Program
145: Interim Life Safety Program

Appendix A	Sample Specifications for Clean-up of Lead Containing Paint
Appendix B	Sample Specifications for Lead Based Paint Abatement

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Summary of Revisions

Revision date	Section	Changes
March 2021	Policy Name	Changes from “Lead Management Program” to “Lead Management Program for Building Materials”
	Throughout	Edits for clarity Changes “create lead-containing dust, debris, fume, or waste” to “disturb lead-containing building materials”
	2.0	Incorporates NYU Langone Hospital-LI and NYU Long Island School of Medicine and Housekeeping departments Removes “Radiation Oncology” as a primary impacted department

	(3.0)	Moves information to more appropriate sections of the policy
	3.0	Clarifies that the policy applies to building construction and maintenance work Removes reference to mold casting in Radiation Oncology
	4.0	-Updates definition of "certified" -Expands definition of "Child Occupied Facility" -Adds definitions of "Health and Safety Plan", "lead containing paint", and "PPE" -Updates definition of "lead abatement" to reference "child occupied facility"
	5.1 and 5.2	Adds responsibilities of **NYULH-LI** Engineering and Hospitality Services
	5.3	Changes "Vice Presidents and Directors" to "Facilities, Housekeeping, Information Technology (IT), Real Estate, and RED+F Design and Construction" Notes that NYULH has not identified any exposures above OSHA's action level
	5.4	Adds Real Estate managers Adds responsibility for sharing lead investigations with contractors
	5.5	Eliminates reference to OSHA-mandated medical surveillance program
	6.1	Sharpens language on prohibited activities
	Appendix A	New
September 2017	Throughout	Updates logo and organizational references
February 2017	Application	Changes NYULMC to NYU Langone
	2.0	Moves Application from Section 4.0 to Section 2.0 Defines NYU Langone
	3.0	Becomes Policy
	4.0	Becomes Scope
	Review by	Adds review from HJD, NYU Lutheran, and LFHC Environment of Care Committees
May 2016	1.0	Moves Background from Section 4.0 to Section 1.0
	4.0	Adds NYU Langone Health Systems and Lutheran Facilities
	Summary of Revisions	Adds Summary of Revisions

Sample Specifications for Clean-up of Lead Containing Paint (LCP)

The following are sample specifications for cleanup of lead-containing paint or LCP (e.g. when there is a noteworthy amount of peeling paint). Contractors shall conduct cleanup in a way that limits the potential for exposure to workers and building occupants in accordance with NYULH requirements and the OSHA standard for Lead in Construction (29 CFR 1926.62).

Prior to the start of the work, the Project Manager or other responsible party shall coordinate:

- Access to areas with LCP scheduled for cleanup.
- MEP disconnects.

The contractor shall ensure:

- Their company has a written lead control program, which includes maintaining records.
- Workers have appropriate lead training.
- The work site is separated from adjacent spaces with appropriate barriers (e.g. plastic sheeting, hard barrier), which includes sealing HVAC registers and openings.
- Workers pre-clean the work area using HEPA-vacuums and/or wet methods.
- The site is under negative pressure throughout the duration of the cleanup.
- Workers have access to handwashing facilities for the duration of the work.
- They conduct an exposure assessment as required by OSHA.
- Workers use only HEPA-equipped tools (including vacuums) and wet methods (e.g. water mist sprayer).
- Pre-filters on HEPA-filtered equipment are changed frequently.
- Workers clean site frequently to ensure there is no dust mitigation to adjacent areas..
- Following LCP removal/cleanup, workers conduct a final cleanup (e.g. using HEPA vacuum, wiping down surfaces with a neutralizing agent/detergent such as Ledizolv) to ensure all dust and debris are removed from surfaces.
- Appropriate methods are used to prevent additional peeling, where applicable (e.g. painting surfaces with a latex primer).
- The work area is secured/locked during off hours.

Sample Specifications for Clean-up of Lead Containing Paint (LCP)

- Cleanup materials (e.g. tools, used PPE, waste) are not stored outside of the work area (e.g. adjacent corridors, offices, stairwells).

- Paint waste is collected for TCLP testing. PPE and containment materials may need to be collected separately. Waste collection and disposal shall be coordinated with the PM and/or EH&S.

Sample Specifications for Lead Based Paint (LBP) Abatement

Qualifications

Trained and certified lead-abatement contractors and workers shall be used to perform the project. Each supervisor and worker assigned to the project must have EPA certification available at the project site. Contractors must possess an EPA Contractor Certification Number.

Training

a) The workers who remove paint shall be trained as required under the OSHA Lead in Construction standard 1926.62 and shall be certified by EPA as lead abatement workers as per EPA/HUD lead paint regulations.

b) The work shall be supervised by a trained competent person who is an EPA certified lead paint supervisor and is fully knowledgeable of general renovation techniques, including LBP abatement.

c) The supervisor shall be trained on engineering controls and good work practices relating to lead paint abatement and on the importance of adherence to these controls and practices.

Personnel protection

Any work that may produce lead airborne dust or fumes shall be conducted by trained workers using engineering controls and work practice controls to prevent exposure to lead dust and fumes and wearing appropriate personal protective equipment (PPE).

a) Respiratory protection shall be worn at all times during lead abatement activities by all individuals performing the work or those in the work area who may be exposed to lead dust or fumes.

b) Hand scraping of paint shall require half mask tight fitting respirators with N100 cartridges.

c) The contractor shall perform personal monitoring for lead exposure. The following are the minimum respiratory protection requirements based on air sample results:

   i. Air lead levels of 500 $\mu g/m^3$ or less: Half-mask air purifying (protection 10X) respirator with high efficiency filters; or half-mask supplied air respirator operated in demand (negative-pressure) mode.

   ii. Air lead levels between 500 $\mu g/m^3$ and 1,250 $\mu g/m^3$: Loose fitting hood or helmet (protection 25X) powered air purifying respirator with high efficiency filters; or hood or helmet supplied air respirator operated in continuous-flow mode (e.g., type CE abrasive blasting respirators operated in a continuous flow mode).

   iii. Air lead levels between 1250 $\mu g/m^3$ and $\mu g/m^3$: Full facepiece air purifying (protection 50X) respirator with high efficiency filters; tight fitting powered air purifying respirator with high efficiency filters; full facepiece supplied air respirator operated in demand mode; half-mask or full facepiece supplied air respirator operated

in a continuous-flow mode; or full facepiece self-contained breathing apparatus (SCBA) operated in demand mode.

iv. Air lead levels between 2500 µg/m^3 and 50,000 µg/m^3: Half-mask supplied air (protection 1,000X) respirator operated in pressure-demand or other positive pressure mode.

v. Air lead levels between 50,000 µg/m^3 and 100,000 µg/m^3: Full facepiece supplied air (protection 2,000X) respirator operated in pressure demand or other positive pressure mode (e.g., type CE abrasive blasting respirators operated in a positive pressure mode).

vi. Greater than 100,000 µg/m^3, unknown concentration or firefighting: Full facepiece SCBA operated in pressure-demand or other positive pressure mode (protection over 2000X).

d) Only approved National Institute of Occupational Safety and Health (NIOSH) respirators shall be used. Respirators shall be properly fitted for all persons working at the site.

e) The manufacturer's instructions shall be followed for maintenance, proper fit, use of appropriate cartridges, cleaning, repair, and replacement of defective parts, appropriate storage, and frequency of cartridge replacement for the specific respirator in use.

f) Respirators shall not be removed while in the work site or work area.

g) Additional respiratory protection by supplemental filters, such as organic vapor cartridges, may be needed when handling some coating or chemical stripping products. Consult the Safety Data Sheets (SDS) or the manufacturer and obtain the proper filters as necessary.

h) Individuals at the work site shall wear full body suits with hoods and shoe covers, as well as gloves. A TYVEK or similar type of disposable suit may be worn. Disposable suits shall be used once, and properly discarded. Protective clothing, as described above, and other PPE shall be put on prior to entering the work site or work area. Protective clothing shall be worn in the work site or work area until it has been thoroughly cleaned as described in clean-up activities. Protective clothing shall be changed before leaving the work site or work area and non-disposable suits shall be laundered separately. An area other than the work site or work area shall be provided for persons to put on suits and other PPE and to store their street clothes.

i) Goggles with side shields shall be worn when working with a material that may splash or fragment, or if protective eye wear is specified on the Safety Data Sheet (SDS) for the product.

Paint removal methods

Abatement of lead paint shall not employ the following methods:

- open flame burning

- dry-sanding
- open abrasive blasting
- uncontained hydro-blasting
- methylene chloride for interior use

Removal of lead paint shall employ only the following methods:

- nonflammable chemical strippers which do not contain methylene chloride, except that chemical strippers containing methylene chloride may be used for localized touch-up (for further requirements refer to Safety Policy 120: Construction Safety Requirements)
- Manual scraping using a HEPA vacuum cleaner to collect dust
- Sander equipped with HEPA vacuum

Warning signs

a) Warning signs shall be posted at all approaches to the work area. The warning sign shall indicate a warning that the area is a lead work area. Lettering shall be at least 1" high and bold.

b) The work area shall be vacated of non-abatement personnel.

c) Tenant Notification: At least 3 days before removing, enclosing, or encapsulating lead paint, post caution signs immediately outside all entrances and exits to the work site. In emergency situations posting shall be done as soon as possible. Keep the caution signs posted until the lead abatement is completed. The caution signs shall meet the following specifications:

   i. the sign shall be at least 20" by 14", and state the date and place of the lead abatement project; and

   ii. the sign shall include the phrase "Caution, Lead Hazard, Keep Out" or "Warning, Lead Work Area, Keep Out" in bold lettering, at least two inches high.

Hygiene practices

a) Eating, drinking, smoking, and applying of cosmetics are not allowed in the work site or work area. Any person leaving the work site or work area shall rinse his or her mouth with potable water and wash hands and face thoroughly before eating, drinking or smoking.

b) Decontamination enclosure systems shall be installed/constructed outside the work area and/or at the entrance to the work area. The personal decontamination enclosure system shall be of sufficient size and dimensions to accommodate the largest anticipated work shift and shall be maintained to ensure all workers can properly use the system. A waste storage area shall be established. Decontamination enclosures shall be equipped with curtained doorways (air locks) and shall have lockable doors for off hours.

Sample Specifications for Lead Based Paint (LBP) Abatement

c) All individuals shall wash or shower before leaving the work site or work area for the day.

d) A lavatory facility or potable water supply or a portable decontamination unit shall be provided and located at the work site or work area for the washing of hands and face and for clean-up activities.

Work procedures (exterior paint removal)

Before beginning to abate the lead paint:

a) Seal all windows on the level of work and all levels below the work.

b) For all sealing and covering of windows and interior and exterior abatement work, use the following:

   i. Plastic sheeting, at least 6 mils thick or equivalent;

   ii. Polyethylene sheeting shall be sufficiently overlapped and all joints shall be fully sealed. Polyethylene sheeting shall be fire retardant and have a minimum thickness of 6-mil. Floor surfaces shall be contained with two (2) layers of reinforced, fire retardant 6-mil polyethylene sheeting.

   iii. Duct tape or equivalent waterproof tape spray adhesives; or other additional appropriate work practices to contain particulate lead or lead-containing liquids.

c) For removal of the lead paint by manual scraping the following precautions shall be followed:

   i. When water/liquid waste is produced by any abatement technique used, plastic sheeting at least 6 mils thick shall be placed on the ground, as close as possible to the building foundation, or on the floor when applicable. Sheeting placed on the ground or floor shall be raised at its edge and extended a sufficient distance to contain the liquid waste.

   ii. When non-liquid waste is produced by any abatement technique used, plastic sheeting at least 6 mils thick shall be placed on the ground, as close as possible to the building foundation, or on the floor when applicable. Sheeting placed on the ground or floor shall extend out from the foundation 3 feet per story being abated, with a minimum of 5 feet and a maximum of 20 feet.

   iii. Sheeting shall be secured at the foundations and along all edges and seams.

   iv. If the wind speed causes visible dust during an exterior abatement project producing dry waste, abatement shall not be continued or performed unless vertical shrouds are erected.

Cleanup of work site

Sample Specifications for Lead Based Paint (LBP) Abatement

After completion of each day's work the site shall be completely cleaned by removing plastic sheeting and HEPA vacuuming surfaces:

Daily cleaning at end of shift

a) The dust and debris collection method shall be selected in conjunction with the paint removal method to assure the methods are compatible and can be integrated.

b) Dust and debris may be collected from the surface at the point of removal or from the general work area.

c) Debris shall be collected on a regular basis and shall not be left to accumulate in the work area during the course of removal. Collection of debris from ground covers and horizontal surfaces shall occur while the material is wet using acceptable means that are not destructive to the containment materials.

d) Deposit all lead waste, including sealing tape and plastic sheeting, in double plastic bags at least 4 mils thick or single bags 6 mils thick or equivalent, and seal the bags.

e) Before washing, vacuum-clean all surfaces in the work site including, walls, windows, window wells, and fire escape and scaffolding with a HEPA vacuum.

f) After vacuum-cleaning, wet wash all surfaces in the work site including walls, windows, window wells, scaffolding floors and the fire escape with a solution containing a phosphate-free detergent.

g) If visible residue remains after washing and allowing all surfaces to dry, vacuum all surfaces with HEPA vacuum.

h) Deposit all lead waste from clean-up, including mop heads, sponges, filters, and disposable clothing, in double plastic bags at least 4 mils thick or single bags 6 mils thick, and seal the bags. Used/dirty PPE and disposable clothing should be kept separate from all other lead waste.

Final clean-up

a) After removal of the paint, all surfaces shall be wet wiped and HEPA vacuumed.

b) A visual inspection shall be performed by the contractor lead abatement supervisor to confirm the absence of dust and/or debris and that abated surfaces are clean of residual paint.

c) The polyethylene sheeting shall be removed by folding inward so that residual dust and/or debris are within the polyethylene sheeting.

d) A second visual inspection shall be performed by the contractor lead abatement supervisor to confirm the absence of dust and/or debris.

Sample Specifications for Lead Based Paint (LBP) Abatement

e) As a prerequisite to commencement of clearance air monitoring, a thorough visual inspection by the NYU Langone Project Manager or his/her designee shall verify the absence of residual paint and dust/debris from the work area.

Air Monitoring/Sampling

a) Daily area air samples shall be collected on representative workers performing the work as well as in the vicinity, but outside the work area containment barriers to assure the action level is not exceeded outside containment.

b) Personal samples and area monitoring air samples shall be collected and analyzed in accordance with NIOSH method 7082 Lead by Flame Atomic Absorption Spectrophotometry (AAS) with 24-hour turnaround time by an ELAP certified laboratory (or other validated NIOSH method). The results of area air samples shall be posted daily at the beginning of the work shift.

Waste Disposal

a) Make arrangements, 1 month in advance of project start date, with NYU Langone Environmental Health and Safety for waste disposal.

b) Place LBP chips, debris, and lead dust in double 4-mil or single 6-mil polyethylene bags or equivalent that are air-tight and puncture-resistant. Pieces of wood or other large items that do not fit into plastic bags shall be wrapped with double 4-mil or single 6-mil plastic sheeting and sealed.

c) Place all disposable cleaning materials, such as sponges, mop heads, filters, disposable clothing, and brooms in double 4-mil or single 6-mil plastic bags, or equivalent, and seal.

d) Remove plastic sheeting and tape from covered surfaces. Prior to removing the plastic sheeting, the sheeting shall be lightly misted in order to keep dust down and folded inward to form tight small bundles to bag for disposal. All plastic sheeting shall be placed in double 4-mil or single 6-mil thick plastic bags, or equivalent, and shall be sealed.

e) Bag and seal vacuum cleaner bags and filters in double 4-mil or single 6-mil thick plastic bags or equivalent.

f) Place all contaminated clothing or clothing covers used during abatement and cleanup in plastic bags for disposal prior to leaving equipment room, work site or work area.

g) Place solvent residues and residues from strippers in drums made from materials that cannot be dissolved or corroded by chemicals contained in those solvents and strippers. Solvents shall be tested to determine if they are hazardous. Solvents and caustic and acid waste shall not be stored in the same containers.

h) Contain and properly dispose of all liquid waste, including lead dust contaminated wash water.

Sample Specifications for Lead Based Paint (LBP) Abatement

i) HEPA vacuum the exterior of all waste containers prior to removing the waste containers from the work site or area and wet wipe the containers to ensure that there is no residual contamination. Containers that have been cleaned shall be moved out of the work site or area into a designated storage area.

j) Carefully place the containers into the truck or dumpster used for disposal.

k) Ensure that all waste is transported in covered vehicles to an approved landfill.

Records

Contractor shall maintain accurate and complete records of items listed below for a minimum six years.

- Inspections and work reports.
- Complete description of the abatement work area and abatement surfaces.
- Complete records of any changes in work procedures.
- List of all trained and certified workers on the project.
- List of PPE used throughout the entire project.
- Activities by regulating agencies.
- Air monitoring and test results.
- Disposal, test results and disposition of waste.