



**LEAD-BASED PAINT  
OPERATIONS AND MAINTENANCE PLAN  
(O&M)**

**Type of Structures:** Multi-Family

*PREPARED FOR*

Jordan Ritter, Esq.  
Essex Property Trust  
925 E. Meadow Avenue  
Palo Alto, Ca

*PREPARED BY*

Benchmark Environmental Engineering  
3732-A Charter Park Drive  
San Jose, CA 95136  
1-800-988-7424

This page is intentionally blank

# Table of Contents

1.0	INTRODUCTION.....	2
1.1	Policy Statement.....	2
1.2	Lead-Based Paint - General Information .....	2
1.3	Building Components Identified As Having Lead.....	3
1.4	Paint Inspection Survey.....	3
1.5	Definition of Terms.....	3
2.0	DELINEATION OF RESPONSIBILITIES.....	8
2.1	The Regional Manager (hereby Lead-Based Paint Program Manager).....	8
2.1.1	Training .....	8
2.1.2	The Program Manger's Responsibilities.....	8
3.0	MAINTENANCE PERSONNEL .....	9
3.1	Maintenance Personnel .....	9
3.2	Training of the Maintenance Personnel .....	9
3.3	Duties of the Maintenance Personnel.....	10
4.0	SERVICE CONTRACTORS AN VENDORS .....	11
4.1	Rules for Contractors .....	11
5.0	THE CONSULTANT .....	12
5.1	O&M Plan Consultant Services .....	12
6.0	LEAD-BASED PAINT RULES AND RESPONSIBILITES.....	13
6.1	Instruction for Notifications.....	13
7.0	ABATEMENT NOTIFICATION .....	14
7.1	Notifications.....	15
8.0	LEAD-BASED PAINT WARNING SIGNS .....	15
9.0	SERVICE REQUEST PERMIT SYSTEM.....	15
10.0	Maintenance Staff Equipment.....	17
10.1	The Maintenance Staff Procedures .....	17
10.2	After Work Is Completed.....	17
11.0	AIR MONITORING .....	18
12.0	MEDICAL SURVEILLANCE .....	18
13.0	WORKER PROTECTION.....	18
14.0	EXPOSURE MONITORING .....	18
15.0	SPECIAL CLEANING PROCEDURES .....	19
15.1	Vacuuming Lead-Based Paint.....	19
15.2	Changing Filters on HEPA-Vacuums .....	19
15.3	Disposal of Lead-Based Paint Waste .....	19
15.4	LEAD-BASED PAINT DUST RELEASE RESPONSE ACTIONS.....	20
15.5	LEAD-BASED PAINT DEBRIS FOUND .....	20
16.0	HYGIENE PRACTICES.....	21
17.0	RECORDKEEPING.....	21
18.0	PROGRAM PARTICIPANTS.....	21
19.0	VISUAL MONITORING .....	21
20.0	PERIODIC INSPECTIONS.....	22
21.0	WORKER TRAINING .....	22
	APPENDIX A.....	24
	APPENDIX B .....	25
	APPENDIX C .....	27

## 1.0 INTRODUCTION

The principal objective of this Operations and Maintenance Plan ("O&M Plan" or "Plan") is to minimize the airborne lead paint exposure all building occupants by reducing the potential for uncontrolled and/or unintentional disturbance of lead base paint (LBP). The degree to which the various provisions come into play will be determined largely by the degree of activity potentially affecting LBP (e.g., renovation or maintenance activity).

Some of the Essex Properties which are owned and managed by Essex Property Trust, Inc. and its affiliates ("Essex") do contain lead-based paint. Lead-based paint which is intact, and which remains undisturbed, presents minimal airborne lead exposure hazard. When, however, lead-based paint is disturbed, the lead can be inhaled and /or ingested resulting in an elevated blood lead (EBL) level, which may present a health hazard.

The principal objective of this is to reduce the potential for uncontrolled and/or unintentional disturbance of or damage to building components that may contain lead-based paint.

This Plan is prepared in such a way that it may be easily referred to and applied to various levels of activity and can be revised as required. It is intended for use by the Lead-Based Paint Program Administrators, maintenance personnel and/or outside contractors.

Lead based paint which is in good condition does not present a health exposure hazard. Damaged, deteriorating, (caulking, chipping or peeling) may release micro-grams of lead into the air or settle upon surfaces, creating a potential health hazard.

### 1.1 Policy Statement

This O&M Plan is intended to be a working document that will serve as a guide to program administrators and maintenance personnel in minimizing the risk of exposure to lead-based paint dust to occupants, employees, visitors, vendors, and contractors.

This Plan sets forth the recommended procedures for dealing with the lead-based paint present on Essex properties.

### 1.2 Lead-Based Paint - General Information

Lead is a heavy, gray metal that is soft and pliable. The chemical symbol for lead is Pb. Though lead is naturally-occurring and eating foods containing lead is part of a healthy diet, lead is a dangerous poison when excess amounts of lead are consumed. You can't see or feel the lead that can make you sick. Lead is most dangerous when it is in the form of dust or fumes. Lead dust particles can be very small. They are easy to breathe if they are in the air. They are easy to swallow if they are on anything you put in your mouth. Lead dust settles on flat surfaces. If you touch surfaces that contain lead with your hands and then put your hands to your mouth, you may swallow lead dust. Children have a great

deal of hand to mouth contact. Thus, they are at a high risk for lead poisoning. The symptoms of lead poison can appear within 72 hours after initial exposure. Several professions involve a risk of exposure to lead, including lead abatement workers and custodial workers or other employees who perform housekeeping, and cleaning of waste and debris.

The OSHA standard 1926.62(a) (3), CCR Title 8, Section 1532.1 "Lead in construction" standards, and Title 40 CFR Part 745.80 Lead; Renovation, Repair, and Painting Program requires building owners and contractors to take steps to identify lead-based paint in their buildings. In addition, an Owner must keep records about the presence of lead paint and to notify employees, contractors, and other employers of the presence of lead-based paint. In addition the employer needs to instruct their employee's on good hygiene practices i.e. washing hands and face prior to eating, drinking or leaving the building at the end of the day.

### 1.3 Building Components Identified As Having Lead

Building components which have been identified as having lead in the paint at above the EPA and DHS level of 1.0 mg/cm<sup>2</sup> or 5000 PPM. Some municipalities and Counties such as Los Angeles, San Francisco and San Diego have lower DHS levels and will be identified in the survey documents.

### 1.4 Paint Inspection Survey

Many of the Essex Properties have had inspections conducted of both interior and exterior of the buildings.

HUD and EPA have provided specific definitions for the terms *deteriorated paint*, *intact paint*, and *de minimis (small) levels* when these terms are used to describe surface coating conditions and areas. *Deteriorated paint* is defined as "any interior or exterior paint or other coating that is peeling, chipping, chalking, or cracking or any paint or coating located on an interior or exterior surface or fixture that is otherwise damaged or separated from the substrate." This definition is most typically associated with surface conditions only.

### 1.5 Definition of Terms

*Title 8 CCR 1532. 1. Land Title 40 CFR Part 745.83:*

"*Abatement*" means any measure or set of measures designed to permanently eliminate lead-based paint hazards. Abatement includes, but is not limited to:

The removal of paint and dust, the permanent enclosure or encapsulation of lead-based paint, the replacement of painted surfaces or fixtures, or the removal or permanent covering of soil, when lead-based paint hazards are present in such paint, dust or ; all preparation, cleanup, disposal, and post-abatement clearance testing activities associated with such measures; abatement includes, but is not limited to:

Projects for which there is a written contract or other documentation, which provides that an individual or firm will be conducting activities in or to a residential dwelling or child-occupied facility that:

Shall result in the permanent elimination of lead-based paint hazards and are designed to permanently eliminate lead-based paint. Projects resulting in the permanent elimination of lead-based paint hazards, conducted by firms or individuals who, through their company name or, represent, advertise, or hold themselves out to be in the business of performing activities as identified and defined by this section, unless such projects are covered by paragraph (4) of this definition;

Projects resulting in the permanent elimination of lead-based paint hazards that are conducted in response to State or local abatement orders. Abatement does not include renovation, remodeling, landscaping or other activities, when such activities are not designed to permanently eliminate lead-based paint hazards, but, instead, are designed to repair, restore, or remodel a given structure or dwelling, even though these activities may incidentally result in a reduction or elimination of lead-based paint hazards. Furthermore, abatement does not include interim controls, operations and maintenance activities, or other measures and activities designed to temporarily, but not permanently, reduce lead-based paint hazards.

Some municipalities and Counties have lower clearance criteria's and should be acknowledged in the Scope of Work for each project.

*"Action level"* means employee exposure, without regard to the use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air (30  $\mu\text{g}/\text{m}^3$ ) calculated as an 8-hour time-weighted average (TWA).

*"Cal/OSHA"* means the California Occupational Safety and Health Administration

*"Competent person"* means one who is capable of identifying existing and predictable lead hazards in the surroundings or working conditions and who has authorization to take prompt corrective measures to eliminate them.

*"De minimis"* levels are the amounts of painted surfaces to be disturbed during rehabilitation, maintenance, paint stabilization or hazard reduction activity, below which safe work practices and clearance are not required.

---

*"Decontamination Unit or DU"* means an enclosed area consisting of an equipment room, shower area, and clean room, which is used for the decontamination of workers, materials, and equipment contaminated with lead dust.

*"Enclosure"* means the construction of air restrictive walls and ceilings between the lead-based paint and the building environment, or around surfaces coated with lead materials, or any other appropriate scientific procedure as determined which prevents the release of micrograms of lead.

*"EPA"* means the Environmental Protection Agency, 401 M Street, S. W., Washington, DC 20460.

*"HEPA-vacuum"* means vacuuming equipment with a high-efficiency particulate air filter system, or to use such equipment.

*"High-efficiency particulate air (HEPA) filter"* means a filter capable of trapping and retaining at least 99.97 percent of all non-dispersed particles of 0.3 micrometers in diameter or larger.

*"Lead"* means metallic lead, all inorganic lead compounds, and organic lead soaps. Excluded from this definition are all other organic lead compounds.

*"Lead-Based Paint"* means any paint, varnish, shellac, or other coating that contains lead equal to or greater than 1.0 mg/cm<sup>2</sup> as measured by XRF or laboratory analysis, or 0.5 percent by weight (5,000 PPM, or 5,000 mg/kg) as measured by laboratory analysis.

*"Lead-based paint hazard"* means a condition in which exposure to lead from lead-contaminated dust, lead-contaminated soil, or deteriorated lead-based paint would have an adverse effect on human health. Lead-based paint hazards include for example, deteriorated lead-based paint, leaded dust levels above applicable standards, and bare leaded soil above applicable standards.

*"Lead-based paint inspection"* means a surface by surface investigation in order to determine if a building or a building component interior or exterior has lead-based paint.

*"Lead-Based Paint Program Manger"* means and individual designated as the Building Management's representative and responsible for the building's operations and maintenance plan

*"Ledizolv™"* is a scientifically formulated lead-specific detergent intended for use in the clean-up and control of lead-contaminated dust (LCD) hazards during post abatement cleaning and in-place management activities.

*"Negative Air Pressure Equipment"* means a portable local exhaust system equipped with HEPA-filtration. The system should be capable of maintaining a constant, low velocity airflow of filtered air from contaminated areas into adjacent uncontaminated areas,

creating a negative pressure differential between the outside and inside of the Work Area.



This negative pressure differential assures that air from the containment area will not migrate to uncontaminated areas.

*"Permissible exposure limit"* means the employer shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air (50 mg/m<sup>3</sup>) averaged over an 8-hour period.

*"Renovation"* means the modifying of any existing structure, or portion thereof, where exposure to airborne lead dust may result.

*"Repair"* means overhauling, rebuilding, reconstruction, or reconditioning of structures or substrates where lead-based paint is present.

*"Wet sanding or wet scraping"* means a process of removing loose paint in which the painted surface to be sanded or scraped is kept wet to minimize the dispersal of paint chips and airborne dust.

*"Wet cleaning"* means the process of eliminating lead contamination from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with water and Ledizolv and by afterward disposing of these cleaning tools as lead-based paint contaminated waste.

### **Glossary of Symbols, Units of Measure, and Abbreviations:**

- symbol meaning "greater than"

x - symbol meaning "times," as in 50 x PEL (50 times the PEL).

**Ppm** - parts per million - The units used to specify the concentration of lead in a material such as a paint chip sample. 1% is equivalent to **10,000** ppm.

**µg/dl** - micrograms per deciliter - The units used to specify the amount of lead in a person's blood sample, i.e., the weight of lead in a deciliter of whole blood.

**µg/m<sup>3</sup>** - micrograms per cubic meter - The units used to specify the concentration of lead dust or fume in air. These units are used to express the results of personal air monitoring.

**AL** - Action Level - A concentration of lead in air of 30 µg/m<sup>3</sup> averaged over an 8-hour shift.

**BLL** - blood lead level - A measurement of how much lead is in a person's blood.

**HEPA** - high efficiency particulate air - A type of filter that efficiently captures verysmall particles and is used in respirators, vacuums, and ventilation systems for toxic dusts such as lead.

**PAPR** - powered air-purifying respirator - A respirator equipped with a battery-powered blower which draws air through filters and into the face piece.

**PEL** - Permissible Exposure Limit - A concentration of lead in air of 50 p.g/m<sup>3</sup> averaged over an 8-hour shift.

**SCBA** - self-contained breathing apparatus — Respirator with clean air tank worn on the wearer's back.

**ZPP** - zinc protoporphyrin - A blood test that can indicate an effect of lead on the blood-forming system. This test is required whenever a BLL is done, and is analyzed from the same blood sample.

## 2.0 DELINEATION OF RESPONSIBILITIES

The O&M Plan is designed for trained and qualified maintenance personnel to conduct the removal of small amounts of building components in accordance with procedures outlined within the O&M Plan, and consistent with applicable laws. All other lead based paint related work will be contracted to one of the lead contractors on-call and under a master service agreement with Essex Property Trust, Inc. and shall be overseen by a consultant with expertise in the abatement and hazards of lead-based paint.

The prevention of lead dust exposure to building occupants requires commitment and proper implementation of the O&M Plan. Thus, the success of this Plan relies on the joint efforts and responsibilities shared by everyone involved: The Regional Managers, the Property Manager, maintenance personnel and outside contractors.

### 2.1 The Regional Manager (hereby Lead-Based Paint Program Manager)

The Lead-Based Paint Program Manger is responsible for implementing and overseeing the Lead-based Paint Operations and Maintenance Plan. The designated maintenance staff will assist the Lead-Based Paint Program Manger in the day-to-day maintenance of the Operation & Maintenance Plan.

#### 2.1.1 Training

The Program Manager, will be trained at the general lead hazard awareness training required by Cal OSHA Sec. 1532.1 working with lead below the PEL and Hazardous Communication Sec. 5194 requirements for working with hazardous materials (lead). In addition the Program Manager will attend the EPA Title 40 CFR Part 745.80 course in order to become familiar with the regulations applicable to the company's responsibility when dealing with the New Renovation, Repair and Painting Program (RRP).

#### 2.1.2 The Program Manger's Responsibilities

The Lead-Based Paint Program Manger will:

- 2.1.2.1 Have the authority to oversee all lead-based paint -related activities in the building.
- 2.1.2.2 Review This O&M Plan annually or semi-annually to determine whether it should be updated.

- 2.1.2.3 Maintenance of all record-keeping documentation of records and forms, such as training. Ensure that the Work Permit System is initiated and complied when lead-based paint is disturbed.
- 2.1.2.4 Ensure that the Notification and Warning Program is initiated and continued,
- 2.1.2.5 Ensure that the Monitoring Program is initiated and continued,
- 2.1.2.6 Ensure that the management, maintenance and custodial staff is properly trained,
- 2.1.2.7 Ensure that affected workers are subject to a surveillance program, and that they follow proper hygiene practices,
- 2.1.2.8 Ensure that the maintenance personnel are complying with procedures Identified in the Action Plan,
- 2.1.2.9 Ensure that the emergency procedures are complied with,
- 2.1.2.10 Ensure that records of lead-based paint -related activities are kept properly.

The Lead-Based Paint Program Manger may delegate these tasks to others that have completed Cal/OSHA title 8 CCR 1532.1 awareness Course (8-hours) and the Title 40 CFR Part 745.80 (8-hours). However, the Lead-Based Paint Program Manger should maintain responsibility for overall compliance with This O&M Plan.

## 3.0 MAINTENANCE PERSONNEL

### 3.1 Maintenance Personnel

This O&M Plan is designed for trained and qualified maintenance personnel to conduct lead based paint work operations in accordance with procedures outlined within the Plan. All other lead-based paint related work will be contracted to one of the lead abatement contractor's on-call and under a master service agreement with Essex Property Trust, Inc. and shall be overseen by the Essex Property Trust, Inc. Consultant.

### 3.2 Training of the Maintenance Personnel

Maintenance personnel who will be conducting limited disturbance of lead-based paint shall have successfully completed the Cal/OSHA) title 8 CCR 1532.1 Awareness Course (8-hours) and the EPA title 40 CFR Part 745.80 (8-hours) course Renovation, Repair, and Painting (RRP). In addition, all maintenance personnel must comply with the repair and cleaning procedures specified in the EPA course and this Plan.

---

### 3.3 Duties of the Maintenance Personnel

For purposes of this Lead-based Paint Operations and Maintenance Plan, maintenance staff shall be defined as personnel responsible for the maintenance of the building. Maintenance personnel are required to comply with all rules outlined below:

- 3.3.1 Maintenance staff personnel may engage in repair and maintenance operations, where a “de minimis” amount of lead-based paint stabilization will take place so long as the maintenance person complies with all sections of CCR Title 8, Section 1532 and Title 40 CFR Part 745.80 (RRP) and all other applicable sections of both regulations in order to minimize the exposure to the employee performing paint stabilization and to by-stander employees.
- 3.3.2 Maintenance staff shall comply with these requirements, in addition to any other directions given by the Lead-Based Paint Program Manager that affect safety.
- 3.3.3 Immediately report any evidence of disturbance or damage of lead-based paint to the Program Manager, such as any unauthorized activities involving the disturbance of any lead-based paint and any and paint debris so that the Program Manager can respond as appropriate.
- 3.3.4 All maintenance personnel shall take precautions to store items far enough away from surfaces which are known to have lead-based paint such that the stored items will not touch or hard impact the painted surfaces
- 3.3.5 Maintenance personnel shall observe and comply with any signage posted within the building pertaining to lead-based paint warnings, notifications or restricted areas.
- 3.3.6 Do not dry sweep or dust any debris suspected to contain lead-based paint. Only uses a HEPA vacuum to clean up dust or debris if possible wet down the material and restrict access to or isolate the area.
- 3.3.7 Comply with all Health and Safety Procedures established under Awareness Training.
- 3.3.8 An unplanned lead-based paint emergency may be the result of earthquake, fire, water leaks, direct or indirect physical disturbance, or other unforeseen incidences and activities causing (or likely to cause) increased levels of airborne lead based paint dust within the building. All paint known to have lead at the regulatory levels and sudden releases or potential releases of lead-based paint dust shall be contained and cleaned up as soon as possible under the direction of the Lead-Based Paint Program Manager. The primary goal to achieve after a lead-based emergency is to prevent the impending or further lead dust contamination of building air space.
- 3.3.9 Maintenance Staff personnel shall follow these procedures in the event of a Lead-

---

Based Paint incident or emergency:

- 3.3.9.1 All contaminated or potentially contaminated areas shall be isolated and access restricted to the extent feasible.
- 3.3.9.2 Post lead warning signs/tap and notify the Lead-Based Paint Program Manger.
- 3.3.9.3 Appropriately adjust and/or isolate the ventilation system in the contaminated area.
- 3.3.9.4 Access to the contaminated area shall be controlled and authorized only to personnel who are properly trained and protected with appropriate clothing. Personnel working in the contaminated area should wear personal air monitors as appropriate for their specific work duties inside the work area. Perform work as directed by the Lead-Based Paint Program Manger.

BENCHMARK Environmental Engineering (Essex Property Trust Inc. Representative hereby referred to as the Consultant) shall determine whether there is a potential for lead paint exposure in the contaminated area to reach or exceed the "Permissible exposure limits (PEL) greater than fifty micrograms per cubic meter of air (50 mg/m<sup>3</sup>) averaged over an 8-hour period.

Emergency response actions to Lead-Based Paint dust emergencies in excess of the PEL (as deteimined by Lead-Based Paint Program Manger or the Consultant) shall be performed by outside abatement contractor services.

## 4.0 SERVICE CONTRACTORS AN VENDORS

### 4.1 Rules for Contractors

For purposes of this Lead-based Paint Operations and Maintenance Plan, the term "Contractors" is defined as any person contracted to provide or perform services on behalf of the Essex Property Trust, Inc. The term contractors includes but is not limited to personnel such as, general contractors, subcontractors, telephone installers, utility workers, etc. Contracts with service trades and vendors should include the following provisions to ensure that the Contractor's workers can and will follow appropriate work practices:

- 4.1.1 Contractors and Vendors will be notified prior to accepting a job that they must comply with all regulations pertaining to the EPA title 40 CFR Part 745 RRP lead based paint rules. These regulations requires only a certified renovator and or a licensed lead abatement firm to conduct work and their companies must be certified prior to disturbing lead based paint on Essex property.

- 
- 4.1.2 Employees of Contractors and Vendors must also be either a Certified Renovator or has been training by a Certified Renovator to participate in work which disturbs lead based paint.
  - 4.1.3 Assurance that the Contractor's workers have the necessary documentation on the job site prior to starting the disturbance of lead based paint.
  - 4.1.4 Written work practices must be submitted by the Contractor for approval or Modification by the Lead-Based Paint Program Manger when lead-based paint is to be impacted By the Contractor.
  - 4.1.5 Any other information deemed necessary by Essex Property Trust, Inc. legal Counsel.
  - 4.1.6 Lead-Based Paint Program Manger or their designated person should obtain copies of respiratory protection, medical surveillance, and worker training documentation. The Lead-Based Paint Program Manger should also secure the signature of the worker on a comprehensive release form, which states the following:
    - 4.1.6.1 That the worker has been informed that designated areas lead-based paint,
    - 4.1.6.2 That the worker understands that OSHA has identified several activates that pose varying levels of potential lead exposure to laborers and children disturbing lead-containing paint.
    - 4.1.6.3 That the worker assumes full responsibility for his/her own protection and welfare when entering property owned or operated by Essex and that he/she will hold the building management and its agents harmless from any injury claim related to lead paint exposure, and
    - 4.1.6.4 The name of the worker, the company employing him/her, the nature of the work, and the date.

## 5.0 THE CONSULTANT

### 5.1 O&M Plan Consultant Services

- 5.1.1 The consultant, from BENCHMARK, shall provide lead-based paint management services and shall act in an advisory role to The Essex Property Trust, Inc.
- 5.1.2 Will be available by phone for lead-based paint related emergencies; a 24/7 access line is available at 866.274.2708 or [www.benchmarkenvironmental.com](http://www.benchmarkenvironmental.com).
- 5.1.3 Monitoring of This O&M Plan to maintain compliance with the latest local, state

- and federal lead-based paint related regulations.
- 5.1.4 Design and develop lead work plans, drawings and specifications for emergency and abatement activities.
  - 5.1.5 Project management and air monitoring for lead work activities by outside abatement contractors.
  - 5.1.6 Periodic clearance sampling to document a lead safe environment.
  - 5.1.7 BENCHMARK shall provide lead-based training for the management and maintenance staff workers upon request.
  - 5.1.8 BENCHMARK shall report to the Lead-Based Paint Program Manger

This document does not and is not intended to cover each and every lead-based paint management responsibility of the parties referenced herein, but is intended to serve as a guide to those parties.

## 6.0 LEAD-BASED PAINT RULES AND RESPONSIBILITES

### 6.1 Instruction for Notifications

Under the California Labor code section, Section 6716 and 6717 "and Cal/OSHA's Lead in Construction Standard, Title 8 CCR Section 1532.1 and Title 40 CFR Part 745

The Employer is required to provide information to their employee and venders about lead hazards. For all employees who disturb a small amount of lead-based paint or who perform any of the specified trigger tasks, must be trained in the health effects of lead exposure, engineering controls and work practices relevant to the employee's job

Worker Protection: The Federal Occupational Safety and Health Administration (OSHA) have enacted an interim lead standard, which was adopted by the Cal/OSHA as 8 CCR 1532.1. The purpose of both standards is to protect construction workers from exposure to lead. OSHA is primarily concerned with activities that disturb lead-containing paints.

The standard requires contractors and employers who perform paint removal activities to monitor their employees to determine whether they are being exposed in excess of the Action Level (AL) of 30 micrograms per cubic meter of air ( $\text{ug}/\text{m}^3$ ) over an eight-hour time weighted average (TWA) or the Permissible Exposure Limit (PEL) of 50  $\text{ug}/\text{m}^3$  TWA. Monitoring is performed by personal exposure air sampling in controlled conditions.

Even when concentrations are below the AL, an employer must provide employees with High Efficiency Particulate Air (HEPA) filtered vacuums, wetting agents and hand-washing facilities. If the exposure exceeds the AL or the PEL, other procedures such as containing the area, decontamination facilities and medical monitoring are required.

OSHA has identified several activities that pose varying levels of potential lead exposure to laborers disturbing lead-containing paint. Estimated exposure levels of lead are

founded on the activity itself, rather than the concentrations of lead present in paint.

Therefore, as an example, paints that contain 0.5% versus 15% of lead by weight or 0.8 mg/cm<sup>2</sup> versus 3.5 mg/cm of lead in paint could present the same levels of potential exposure to workers depending on the activities that cause the disturbance and the administrative and engineering controls that are followed.

DOSH 8 CCR 1532.1 requires that an initial exposure assessment be performed if workers will be performing any of the trigger tasks found in 1532.1(d) (2).

The following is a summary of work activities that disturb paint, the expected exposures and the respiratory protection requirements as outlined in the OSHA standards:

#### Class I Activities:

Class I activities include: Manual demolition, manual scraping, manual sanding, heat gun application, general cleanup, power tool cleaning with dust collection systems and spray painting.

Potential Exposure: 50 µg/m<sup>3</sup> to 500 µg/m<sup>3</sup>

Minimum Respiratory Protection: Half mask air purifying respirator equipped with HEPA filters having a protection factor of 10.

#### Class II Activities:

Class II activities include: Using lead-containing mortars, lead burning, lead Riveting, rivet busting, power tool cleaning without Dust collection systems, cleanup of dry expendable Abrasives and abrasive blasting.

Potential Exposure: 500 µg/m<sup>3</sup> to 2,500 µg/m<sup>3</sup>

Minimum Respiratory Protection: Full face powered air-purifying respirators Equipped with HEPA filters having a protection Factor of 100.

#### Class III Activities:

Class III activities include: Abrasive blasting, welding, cutting and torch Burning on steel structures.

Potential Exposure: Greater than 2,500 µg/m<sup>3</sup>.

Minimum Respiratory Protection: Full face supplied air respirator operated in pressure. Demand mode or other positive pressure mode.

## 7.0 ABATEMENT NOTIFICATION

Employees, and all subcontracted employees at Essex will be notified in writing prior to abatement and notified upon completion of the abatement project as to include the following.



## 7.1 Notifications

- 7.1.1 Material scheduled for abatement and location,
- 7.1.2 Time schedule for abatement project,
- 7.1.3 Clearance results upon abatement completion.

## 8.0 LEAD-BASED PAINT WARNING SIGNS

In regulated areas (work areas where employee exposure is above the PEL and/or trigger tasks are performed), the employer shall post a warning sign with the words:

<p>WARNING: LEAD WORK AREA — DO NOT ENTER POISON/TOXIN! NO SMOKING OR EATING ALLOWED</p>
--

## 9.0 SERVICE REQUEST PERMIT SYSTEM

Initiating a work permit system is an effective method of controlling maintenance, and renovation activities, which could result in the disturbance of Lead-based Paint. Under this permit system, all requests for maintenance or renovation activities must be reviewed by the Lead-Based Paint Program Manger or their designated competent person prior to the issuance of a work order (i.e. the Program Manager must be aware of the building components and the locations of the lead-based paint which will be impacted). All disturbance of lead-based paint which is greater than 6sq ft per room interior or 20 sq ft on the exterior of any building must be conduct by a Certified Renovator.

Persons requesting work must submit a Request/Authorization Form, which gives the location, date, and nature of the proposed work. Upon receipt of a maintenance request the Program Manager or their designated person should complete a work Request/Authorization Form and the following steps should be taken:

- 9.1 The Program Manager should refer to any Lead-Based Paint Inspection Report under FINDINGS, to determine if lead-based paint is present in the area of the proposed work. If no lead-based paint inspection has been pre-formed on the property all pre-1978 paint must be considered to be at the federal standards which define lead-based paint as hazardous.
- 9.2 If lead based paint is not present in the area of the proposed work, the Program Manager may authorize the work to proceed by checking the box-indicating LBP not present in area of the proposed work, and sign his/her name.
- 9.3 If lead-based paint is present in the area of the proposed work, the Program Manager should categorize the proposed work as one of the following:

- 9.3.1 Work which is unlikely to cause disturbance of lead-based paint,
- 9.3.2 Work which may cause disturbance of lead-based paint,
- 9.3.3 Work which will cause disturbance to any painted surface which has been identified as having lead on that type of building component.
- 9.4 If the proposed work is unlikely to cause disturbance of suspect LBP, the Program Manager may authorize the work to proceed by checking the box indicating LBP is present but unlikely to be disturbed, indicate the type and location of LBP present, and sign his/her name to the Work Request/Authorization Form.
- 9.5 Prior to starting to work the Renovation firm (Essex) is to provide the Renovate Right pamphlet to owners/residents prior to renovation activities in pre-1978 housing and child-occupied facilities. In addition the firm must get a confirmation of receipt of the Renovate Right pamphlet from the tenants/residents. Strict attention must be given to the methods used in the following maintenance scenarios.

It must be understood that the use of a respirator is not a choice made without a backup program which involves training, medical clearance, individual fit testing, documentation and record keeping. The use of respirators and other protective equipment is triggered when the workman's activity creates an environment that exceeds OSHA'S PEL of lead at concentrations greater than fifty micrograms per cubic meter of air (50 mg/m<sup>3</sup>) averaged over an 8-hour period.

Simply stated, you cannot disturb lead-containing paint in a way that will cause dust or impact the paint so as to create peel, chipping or caulking. There are several ways that this can be accomplished. By misting the air with water from a spray bottle {as taught in the 8 hour awareness worker course) which will allow the worker to accomplish the preventive maintenance, task without creating a hazard?

An attempt is made to list tasks and control methods that are likely to come up on a daily basis. However, the first and most important control method is in keeping the task that will disturb lead-containing paint to a small enough size so dust emissions can be adequately controlled.

Secondly, the use of water or wet methods that will act as a dust deterrent. This method must be limited to areas that are not electrical in nature.

Thirdly, the use of a HEPA filtered vacuum used in conjunction with wet methods to eliminate lead dust before it can be dispersed.

## 10.0 Maintenance Staff Equipment

The staff should have certain equipment and follow specialized procedures, as follows: A vacuum cleaner to remove debris on the floor; the tape and a 10' x 10' 6-mil piece of polyethylene sheeting to protect the ground landscape and any equipment immediately adjacent to the work area; construction tape and warning signs to discourage intruders near the area; Six-mil polyethylene labeled bags for containing waste; spray bottle, water and paper towels.

### 10.1 The Maintenance Staff Procedures

- 10.1.1 Whenever possible, make use of existing doors to barricade the work location. If doors cannot barricade the area, use 6-mil polyethylene sheeting and signs for at least 6 feet in all directions interior and 10 feet in all directions for exterior. When possible at 20 feet perimeter will be set up with the appropriate signage.
- 10.1.2 Remove any equipment, furniture or any movable objects away from the containment area where lead-based paint has to be disturbed or removed.
- 10.1.3 Tape a piece of 10<sup>1</sup> (10' 6-mil polyethylene sheeting below the spot where the material has to be disturbed. Cover all surfaces.
- 10.1.4 Using amended water in a Hudson sprayer, lightly mist the area where the paint is to be removed.
- 10.1.5 Gently remove small sections of the wet material. A HEPA vacuum should be running in the immediate vicinity of the work to remove airborne micrograms of lead which may be released during the operation.
- 10.1.6 Immediately place wet building material waste into a 6-mil pre-labeled Lead-based paint disposal bag. Vacuum collapse the bag, twist the neck of the bag, tape with duct tape, fold the twisted portion over onto itself and tape again. Wipe the outside of the bag with clean damp cloths and place the bag into a second pre-labeled disposable bag. Tape shut the second bag.
- 10.1.7 HEPA vacuum should be continuously running during the final cleaning. Always HEPA vacuum 2ft beyond the containment area.

### 10.2 After Work Is Completed

- 10.2.1 All cleaning procedures and inspection protocol will be followed on each job

which is taught in the Renovation, Repair and Painting (RRP) course to include, HEPA vacuuming, washing and HEPA vacuuming all horizontal surfaces in the containment area. Post-renovation cleaning will be conducted using the Cleaning verification card (CV).

- 10.2.2 HEPA vacuum ladder while climbing down.
- 10.2.3 While standing in plastic sheet, thoroughly HEPA vacuum any ladder and pass it to person standing out side of protected area.
- 10.2.4 Remove the protective clothing, gloves, etc. and follow "Dry Decontamination Procedures.
- 10.2.5 Mist the plastic sheeting; carefully roll up the sheeting with the rags or cloth used.
- 10.2.6 Remove barricades, tape, signs, and replace items that were moved out of the way.

## 11.0 AIR MONITORING

Air monitoring is done for the purposes of determining if airborne lead based paint micro-grams exceed the OSHA action level of Permissible Exposure Level (PEL). Any projects that may cause lead paint disturbances beyond OSHA action levels will be reported to the Lead-Based Paint Program Manger and turned over to the Consultant.

## 12.0 MEDICAL SURVEILLANCE

The requirements for medical surveillance are based upon exposure of workers to airborne lead micrograms at the OSHA "Action Level". Any project that may cause lead-based paint disturbances beyond OSHA Action Levels or that may approach the "Permissible Exposure Limit" will be reported to the Lead-Based Paint Program Manger and turned over to the Consultant prior to starting of the work.

## 13.0 WORKER PROTECTION

This section covers the personal protection equipment. It is the policy of the Essex Property Trust, Inc. to prevent their employees, and subcontractors to be exposed to any amount of lead-Base Paint dust. Therefore, the need for respirator program requirements is not applicable at this time. For it is the policy to out source all disturbance of lead containing paint to an outside abatement contractor.

## 14.0 EXPOSURE MONITORING

When an activity or work requirement is beyond the de minimiss level (see Section 1.6 of

This O&M Plan) and may exceed the OSHA Action Level and/or PEL the management or the competent person will notify the Lead-Based Paint Program Manger. The Lead-Based Paint Program Manger will notify the consultant who will set up a negative exposure assessment to establish if exposure is probable.

## 15.0 SPECIAL CLEANING PROCEDURES

### 15.1 Vacuuming Lead-Based Paint

Where vacuuming methods are necessary, HEPA filtered vacuuming equipment must be used and emptied in a manner that minimizes the reentry of micrograms of lead into the workplace.

### 15.2 Changing Filters on HEPA-Vacuums

Change filters of HEPA-vacuums on a 6-mil polyethylene drop sheet using the following procedures:

- 15.2.1 Select an out of the way area in a routine maintenance area,
- 15.2.2 Wet the filter with a fine mist of water,
- 15.2.3 Remove filter from vacuum and place immediately into a properly labeled 6-mil polyethylene bag, and
- 15.2.4 Seal the bag and place within a second properly labeled bag.

### 15.3 Disposal of Lead-Based Paint Waste

Once the lead-containing paint waste material has been removed from the areas of concern, there are certain precautions that must be taken before disposal operating begins. The first and probably most important is to ensure that all of the waste material has been thoroughly treated with water. By ensuring this, the chances of airborne micrograms generation are significantly reduced. The waste material is now suitable for containerizing. The following are important points to remember in bagging lead-containing paint waste for disposal.

- 15.3.1 Lead containing waste must be handled in a careful manner to keep airborne micrograms of lead generation minimal.
- 15.3.2 Waste-containing bags should be sealed with duct tape. All excess air is squeezed out of bags before they are sealed. Use HEPA vacuum system to collapse the bags.
- 15.3.3 Make sure the Lead warning label on each bag is legible, so that no bags will be disposed of mistakenly.
- 15.3.4 Wet wipe or HEPA vacuum clean.

- 15.3.5 Store bags in designated location for removal to a qualified land fill or house hold waste recycling center.

## 15.4 LEAD-BASED PAINT DUST RELEASE RESPONSE ACTIONS

The following emergency plan of action is to be followed in the case of an accidental release of lead-containing paint dust into the air. The plan of action is designed to allow trained and aware personnel to contact the proper individuals and to perform proper tasks with little or no time lost between discovery of the incident and remediation:

- 15.4.1 Isolate the area to the extent feasible in an orderly and calm fashion.
- 15.4.2 Contact the Lead-Based Paint Program Manger immediately.
- 15.4.3 The Lead-Based Paint Program Manger will determine if Consultant will need to be contacted.
- 15.4.4 The Lead-Based Paint Program Manger will assign trained maintenance personal to isolate the area per procedures and will determine if the incident is major or minor.
- 15.4.5 If the incident is assessed as a "**Major Incident**", the Consultant will dispatch a project manager who will respond in person to assess the situation and make recommendations for further action.
- 15.4.6 If the incident is assessed as a "**Minor Incident**", the Lead-Based Paint Program Manger will assign trained maintenance personnel to perform cleanup procedures.
- 15.4.7 The Consultant will perform clearance air monitoring.

## 15.5 LEAD-BASED PAINT DEBRIS FOUND

- 15.5.1 Perform all work of decontaminating objects ever possible, on a 6-mil drop sheet.
- 15.5.2 Pick up the object, if possible and HEPA vacuum all surfaces. If not HEPA vacuum in place.
- 15.5.3 Hand object to worker who will wet debris and place in to 6-mil bag.
- 15.5.4 Decontaminate area where debris was found by HEPA vacuum.
- 15.5.5 Isolate and restrict entry into the area and post warning signs to prevent access into

the area by persons other than those necessary to perform the response action.

- 15.5.6 Shut-off or temporarily modify the ventilation system to prevent the flow of air into or out of the area.

## 16.0 HYGIENE PRACTICES

Hygiene practices for this Lead Action Plan prohibit smoking in areas where workers may be occupationally exposed to micrograms of lead due to activities in the area.

Additional hygiene practices are mandatory for all other work (not prescribed in this O&M Plan) and must be implemented for maintenance workers if they are to perform any type of “De minimis” work.

## 17.0 RECORDKEEPING

The Lead-Based Paint Program Manger should maintain records described in this section indefinitely if not specified otherwise. The Lead-Based Paint Program Manger may utilize the services of the consultant to maintain the records required by this section. The Lead-Based Program Manager should maintain a record of each proposed renovation or maintenance project set forth in Title 40 CFR 745.86 of the RRP plan including:

- 1) A copy of the Request Form
- 2) Any additional records required in this section if lead-based paint is disturbed.

## 18.0 PROGRAM PARTICIPANTS

The Lead-Based Paint Program Manger should maintain a record of each participant in the O&M Program including:

- 1) Name,
- 2) Position,
- 3) Dates of service

Notification Program: The Lead-Based Paint Program Manger should maintain a record of steps taken under the Notification Program including:

- 1) Copies of any notices set to employees,
- 2) Dates and attendees of any informational seminars, and
- 3) Dates and general locations of any warning labels applied.

## 19.0 VISUAL MONITORING

The Lead-Based Paint Program Manger should maintain a record of each surveillance including:

- 19.1 Documentation of any changes in the condition of paint,
- 19.2 Notation of any response actions undertaken since the initial inspection or the most recent periodic surveillance,
- 19.3 Date of the surveillance, and
- 19.4 Name of individual conducting the surveillance.
- 19.5 The Lead-Based Paint Program Manger should maintain a record of each re-inspection including:
  - 19.5.1 Location of lead-based paint remaining in the building,
  - 19.5.2 A hazard assessment of the condition of the paint remaining in the building,
  - 19.5.3 Recommendations and timetable for response actions which should be scheduled within the next three years,
  - 19.5.4 Date of the re-inspection, and
  - 19.5.5 Name of individuals conducting the re-inspection.

## 20.0 PERIODIC INSPECTIONS

The Lead-Based Paint Program Manger should maintain a record of each periodic inspection including:

- 1) Informing the tenants in advance the need to inspect and conduct inspections of dwellings.
- 2) Inspections should be done every 6 months or at tenant turnover, whichever is less.
- 3) Inspections should include condition and/or changes in the painted surfaces.
- 4) Inspections should be recorded in a general ledger as part of this plan.

## 21.0 WORKER TRAINING

The Lead-Based Paint Program Manger should maintain a record of each individual who receives training including:

- 1) Individuals name and job title,
- 2) Completion date and location of training,
- 3) Type of training and training provider,



This Operation and Maintenance Plan was written by BENCHMARK Environmental Engineering for the purpose of in-place management of all painted surfaces that contain Lead Based Paint.

---

# APPENDIX A

APPENDIX A, Form I. A sample application form for vendors and contractors maintenance work approval.

## Job Request Form for Maintenance Work

Name:

Date:

Telephone No.:

Name and Telephone No. of Supervisor:

Requested Starting Date:

Anticipated Finish Date:

Description of area where work is to be performed:

Description of Work:

Description of asbestos-containing material present, if known (location and type):

Submit this application to:

Lead-Based Paint Program Manger

An application must be submitted for all vendor/contractor work where Lead-Based Paint is present and whether or not it may be disturbed. An authorization must then be received before any work can proceed.

Do Not Write Below This Line

Job Request No.

Granted

Denied

---

## APPENDIX B

APPENDIX B, Form 1. A sample release form for outside tradesmen and vendors.

Asbestos Release Form

Name: Company: Address:

Scope of Services:

Lead-Based Paint is present in the area where work is to be performed. Lead containing paint which is in good condition and is left undisturbed presents minimal exposure hazard. When Lead-Based Paint is disturbed or damaged, lead based paint micro-grams may be released into the air creating a health hazard.

Inhaling lead based paint micro-grams has been linked with various types of health issues.

By signing section 1 of this form, I hereby verify that I have been made aware of the presence and hazard of lead-based paint.

I will avoid damaging any painted surface in any way. If I do damage the paint in any way, I will immediately report such occurrence to the Lead Program Manager or to the most senior staff member on duty.

Section 1: Name:

Title:

Signature:

Date.

\_\_\_\_\_  
Its

\_\_\_\_\_

---

## Employee Notification

### Form 1, Part 2

By signing Part 2 of this form, I am further stating that I have agreed to the following:

1. I have informed my employees of the potential risk and health effects of lead-based paint,
2. I have informed my employees of the locations and types of lead-containing paint which need to have proper work practice conducted by my self or my employees.

Signature:

Date:

---

---

---

## APPENDIX C

APPENDIX C, Point 2, Part 2: (sample form for recording training information)

Training Record:

Name/Title:

Training type Hours Dates:

Location:

Provider:

Attach if a certificate was issued (or number):