

**Lead Paint  
&  
Vermont's  
Essential  
Maintenance  
Practices**

**Course Manual**



**VHCB**

**VERMONT HOUSING AND CONSERVATION BOARD  
58 EAST STATE STREET  
MONTPELIER, VT 05602**

Revised in 2013

# Acknowledgments

## **Lead Paint & Vermont's Essential Maintenance Practices Course Manual**

**June 2013 Revision**

This manual was prepared by the Vermont Housing & Conservation Board to present the Essential Maintenance Practices (EMP) training curriculum and has been updated to reflect the most recent changes to the law. It incorporates information from previous versions of the EMP manual together with additional materials from the U.S. Environmental Protection Agency's (EPA) Lead Safe Renovation course and up-to-date information from the U.S. Department of Housing & Urban Development (HUD), the U.S. Centers for Disease Control and Prevention (CDC), and other sources.

The Vermont Department of Health developed the original course curriculum in 1996 with assistance provided by:

Alliance for Healthy Homes  
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## White Lead Wins Against Time

When Charles Carroll, who had just signed the Declaration of Independence, was told that though others might come to grief for that day's doings, he stood a chance of going free because there were so many other Charles Carrolls in Maryland, he at once added to his signature the words "of Carrollton."

The picture shows his home, built by his grandfather in 1717. This finely preserved old mansion is protected by weather-defying coats of

## Dutch Boy White Lead

and pure linseed oil. Your house, too, is worth preserving and beautifying. Direct your painter to use Dutch Boy White Lead and Dutch Boy Linseed Oil. They can be mixed to suit the kind of wood in your house and can be tinted any color you desire. They wear long, cost little, and protect against decay.

Would you like to make a simple test which will help make you paint wise? We will send you materials and directions for such a test, together with booklet of practical suggestions and color schemes. Address our nearest office. Ask for Painting Helps No. 66.

## NATIONAL LEAD COMPANY

New York  
Buffalo  
(John T. Lewis & Bros. Co., Philadelphia)

Boston  
Chicago



Cincinnati  
San Francisco  
(National Lead & Oil Co., Pittsburgh)

Cleveland  
St. Louis

When you are in New York make it a point to visit the Home Builders' Permanent Exposition in the Craftsman Building, 6 East 39th Street. National Lead Company's exhibit is in charge of an experienced decorator whom you may consult free of charge.

## Introduction to Essential Maintenance Practices (EMPs)

### Purpose

The Vermont State Legislature passed the Essential Maintenance Practices Law in 1996. The purpose of the law is to prevent young children from getting lead poisoned in rental housing and childcare facilities. It requires the use of safe work practices when renovating or maintaining pre-1978 properties to reduce the likelihood of creating lead contaminated dust and debris. The law creates a 'standard of care' with respect to lead paint and provides some liability protection to property owners who comply with its provisions.

### What does the Vermont Lead Paint Law Require?

- Complete a training course approved by the Vermont Department of Health (VDH), or have a representative of the owner's maintenance staff complete the course;
- Provide written information on lead paint hazards to tenants;
- Post a notice in the building asking occupants to report deteriorated paint to the owner or agent;
- Perform Essential Maintenance Practices (EMPs)
- Sign a Compliance Statement indicating that EMPs have been completed and file a copy every 365 days with their insurance carrier, tenant, and the VDH<sup>1</sup>. Childcare providers must also file a copy with the Vermont Dept. for Children and Families.



### Vermont's Essential Maintenance Practices (EMPs) are:

- Perform a visual on-site inspection of interior and exterior surfaces to identify deteriorated paint;
- Install window well inserts in all pre-1978 wooden windows;
- Stabilize paint if more than one square foot of deteriorated paint is found on any interior surface within 30 days of identification or report by the tenant;
- Stabilize paint or restrict access if more than one square foot of deteriorated paint is found on any exterior surface within 30 days of identification or report by tenant;
- Utilize lead safe work practices when disturbing paint as described by the VDH, which includes not using prohibited practices;
- Remove all visible paint chips from the ground on the property;
- Perform specialized cleaning at the conclusion of any work, annually in common areas, and when the unit turns over.

### When does the EMP law apply?

- The law applies to all residential rental units and childcare facilities in buildings built before 1978.
- The law applies to all rental property whether or not children live there.

<sup>1</sup> Note: Compliance Statements can be filed electronically with VDH at the Essential Maintenance Practice Compliance Statement Service website at <https://secure.vermont.gov/VDH/emp/>

## What types of properties or situations are exempt?

- The law does not apply to units in a hotel, motel, or other lodging, including condominiums that are rented for transient occupancy for 30 days or less.
- The law does not apply to a rented single room within a dwelling in which the owner of the dwelling resides unless a child six years of age or younger resides in or is expected to reside in that dwelling.
- The law does not apply to any property that has been tested by a Vermont licensed lead inspector and has been found to be free of lead-based paint on all interior and exterior surfaces. To receive this exemption from filing a Compliance Statement, the property owner must send the test results to the Vermont Department of Health.
- Efficiency or studio (0 bedroom) apartments unless a child six years of age or younger resides in or is expected to reside in that dwelling.
- Housing intended solely for the elderly or the disabled, unless a child six years of age or younger resides in or is expected to reside in that dwelling.

## Why should property owners comply with the EMP Law?

- It is required by Vermont law, just like providing water, heat, lighting and other essential services in rental properties.
- Completing Essential Maintenance Practices substantially reduces the chance that children will become lead poisoned.
- Compliance with the law may reduce the risk of losing insurance coverage.
- It substantially reduces the risk of being sued for damages (compensatory and possibly punitive) by the family of a lead poisoned child.

## Limitations of This Course

- **Taking this course does not allow you to perform lead abatement.** Lead abatement is the permanent removal of lead-based paint or its components (requires special training, certification costs, refresher courses, special insurance, etc).
- **Taking this course will not qualify you to be a lead inspector** who is certified to test and identify lead-based paint. The EMP visual inspection requirement is not a lead inspection but visual examination to identify if there is deteriorated paint.
- **This course does not cover workplace health and safety requirements for employee-employer relationships.** The EMP course teaches basic precautions regarding lead. A full

listing of occupational safety requirements regarding employees can be found in the OSHA<sup>2</sup> regulation 29 CFR 1926.62 (lead in construction rule).

- **Taking this course will not satisfy any requirements for the EPA Renovation, Repair, and Painting (RRP) rule.** The RRP rule requires workers to be certified and trained in the use of lead-safe work practices, and requires renovation, repair, and painting firms to be EPA-certified. These requirements became fully effective April 22, 2010. For more information on the Federal renovator rule see the EPA website at: <http://www2.epa.gov/lead/renovation-repair-and-painting-program>

## Benefits of This Course

- Taking this course will give you the basic knowledge of the Vermont EMP law and how to work safely with lead. This course fulfills the training requirement described in the EMP law and is necessary prior to performing visual inspection, paint stabilization and maintenance on rental units and daycare facilities that were built before 1978.
- Completing this course also satisfies the requirement for lead safe work practices training in the HUD Lead Safe Housing Rule (24 CFR part 35) that applies to any property assisted with Federal Housing funds. This includes any unit where tenants receive Section 8 vouchers.
- **Please note that there are specific differences between what the HUD Lead Safe Housing Rule requires and Vermont's EMP law.**

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<sup>2</sup> Occupational Safety and Health Administration



## Health Effects of Lead

### What is Lead?

Lead is a metallic element with a chemical symbol of Pb which comes from the Latin word Plumbum (lead poisoning is also referred to as plumbism). Because lead is an element, it does not break down or decay over time. Once lead ore has been mined and refined and lead is put into the environment, it can be a potential problem forever. To this day, sites of ancient Roman lead smelters are still heavily contaminated. Lead has been used for thousands of years, but widespread use of lead and lead products did not become prevalent until the mid 1800's. Lead was widely used as an additive to paints in the US and was not banned from residential paints until 1978. Commercial paints, including those used on bridges, ships, and autos may still legally contain lead.

### What is Blood Lead Level?

The blood lead level (BLL) is the amount of lead in a person's blood, usually measured as micrograms of lead per deciliter of whole blood ( $\mu\text{g}/\text{dl}$ ). The US Centers for Disease Control and Prevention (CDC) has stated that "No amount of lead is considered completely safe". Until recently the CDC's 'level of concern' was 10  $\mu\text{g}/\text{dl}$  for children 6 months –15 years old. In 2007, the Vermont Department of Health lowered the level of concern for young children to 5  $\mu\text{g}/\text{dl}$ .

As of 2012, the CDC is no longer using the term "level of concern" and is now using 5  $\mu\text{g}/\text{dl}$  as a reference value to identify children with blood lead levels that are higher than most children's levels. The new level of 5  $\mu\text{g}/\text{dl}$  is based on the US population of children aged 1-5 years who are in the highest 2.5% of children when tested for lead. The new lower value means that more children will likely be identified as having lead exposure which will allow parents, doctors, public health officials, and communities to take action earlier to reduce children's exposure to lead.

### Who is most affected by Lead?

Anyone can become poisoned by lead, but children are more sensitive than adults to the health effects of lead. The CDC states "Exposure to lead should be avoided. Lead is highly toxic to humans, especially young children. It has no known physiologic value to the human body. Nearly half a million children living in the United States have blood lead levels high enough to cause irreversible damage to their health." Even blood lead levels less than 10  $\mu\text{g}/\text{dl}$  have been linked to developmental and neurological problems in children. One and two year-olds are especially at risk because they tend to have a much higher level of exposure from crawling and putting things in their mouths. Most children get poisoned by ingesting lead dust from their hands, toys and other things they put in their mouths.

**Children are at risk because:**

Hand to Mouth Behavior	Increased Absorption	Brain Development
<ul style="list-style-type: none"> <li>• Lead dust from deteriorating lead paint accumulates on flat surfaces and clings to hands and toys</li> <li>• It is normal for children to put things in their mouths</li> <li>• Frequent hand-to-mouth activity makes a child more likely to ingest lead, especially lead dust and soil</li> <li>• Ingested lead dust can quickly cause a rise in blood lead levels</li> </ul> 	<ul style="list-style-type: none"> <li>• The body mistakes lead for calcium and iron</li> <li>• The body may absorb more lead if it does not get enough calcium and iron</li> <li>• Growing children have a greater need for calcium and iron than adults do</li> <li>• Children may absorb as much as 50% of the lead they ingest while adults may only absorb 5%</li> <li>• The body absorbs lead quickly removes it slowly so lead builds up in bones and tissues</li> <li>• Ingesting amounts of lead as small as a few grains of sugar can be harmful to a child</li> </ul>	<ul style="list-style-type: none"> <li>• Lead affects brain development and has been shown to reduce IQ</li> <li>• Most brain development occurs before birth through age 3 and is over by about age 6</li> <li>• Young children are especially at risk for IQ and behavioral problems.</li> <li>• The long-term health effects of lead can be severe. They also include decreased growth, hyperactivity, impaired hearing.</li> </ul>

**Remember: Lead poisoning is preventable! All children should be tested for lead at ages 1 and 2**

## What are the health effects of lead exposure?

The body mistakes lead for calcium and iron. As a result, if the body does not contain enough calcium and iron, it is more likely to absorb lead. Children who get enough calcium and iron absorb less lead than children not taking enough calcium and iron do. Also, more lead is absorbed on an empty stomach. **Ingestion and inhalation are recognized as the major routes of exposure for both children and adults.**

Unlike other chemicals that leave the body quickly, lead can stay for years. Ingested or inhaled lead is absorbed into the blood. Blood then distributes it throughout the body. Many tissues, especially bones, kidney and liver take lead from the blood and store it. The greatest amount of stored lead is in the bones where it replaces calcium. Lead is excreted from the blood very slowly. Stored lead that remains in the bones may be released when the body needs more calcium such as during pregnancy.

Although lead is stored in the bones, it is particularly toxic to the reproductive and nervous systems, the blood, and the kidneys. It can take 25-40 days for one half of the stored lead to leave the blood, 40 days for half to leave the organs, and up to 25 years for half to leave the bones. Long after exposure has ended, an illness or pregnancy may release stored lead from the bones causing negative health effects.

## What are the symptoms of lead poisoning in children?

Often, children with lead poisoning do not look or act sick. They may have no symptoms or have symptoms that are easily mistaken for other illnesses. This is why testing children's blood lead level is so important. In general, the higher the blood lead level, the more likely a child will show symptoms. These symptoms may include:

- Irritability
- Aggressive behavior
- Lack of appetite
- Colic
- Low energy
- Difficulty sleeping
- Joint pain
- Loss of recently acquired developmental skills
- Anemia
- Headaches
- Reduced sensations
- Constipation
- Abdominal pain and cramping (usually the first sign of a high, toxic dose of lead poison)
- Very high levels may cause vomiting, staggering gait, muscle weakness, seizures, or coma

The possible health problems get worse as the level of lead in the blood gets higher. Complications of lead poisoning in children may include:

- Reduced IQ
- Slowed body growth
- Hearing problems
- Behavior or attention problems
- Failure at school
- Kidney damage

## **What are the Symptoms of Adult Lead Poisoning?**

As with children, adults may not have symptoms of lead poisoning until their blood lead levels are quite high. Generally adults begin to show signs of poisoning when their blood lead levels are between 60 and 120 micrograms per deciliter. Nerve, blood, and reproductive effects, may however be detected at much lower levels.

The symptoms of adult lead poisoning may include:

- Abdominal discomfort
- Anemia
- Constipation
- Excessive tiredness
- Fine tremors
- Headache
- High blood pressure
- Irritability or anxiety
- Loss of appetite
- Muscle and joint pain
- Pallor
- Pigmentation on the gums (“lead line”)
- Sexual impotence
- Weakness
- Inability to keep the hand and arm fully extended (“wrist drop”)

## **Reproductive Damage in Adults**

Adult men and women may experience different health effects when poisoned.

### **Male Specific Damage**

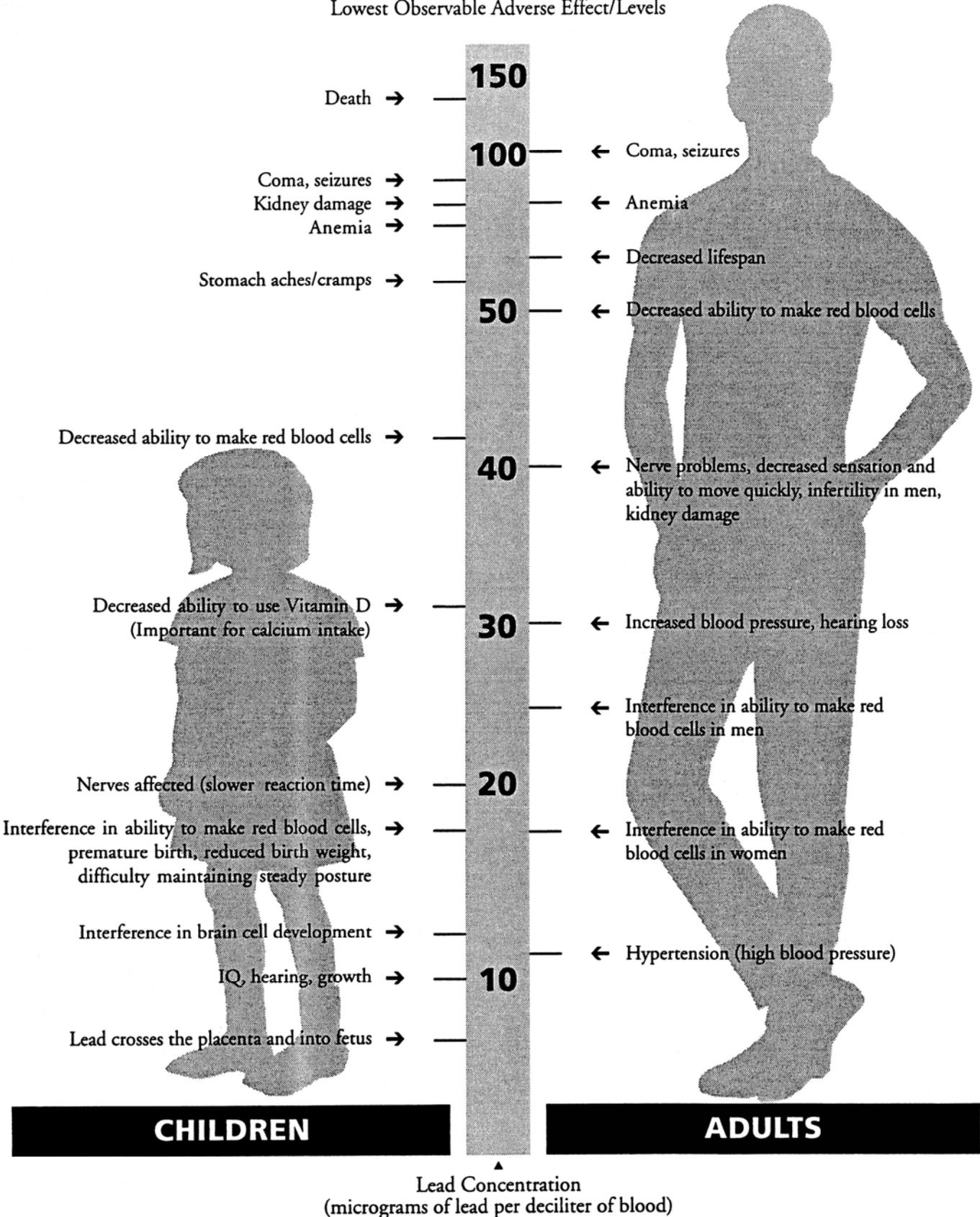
In men, blood lead levels as low as 40 $\mu\text{g}$  /dl are associated with decreased fertility, low sperm count, low sperm motility, and abnormal sperm shape.

### **Female Specific Damage**

In women, exposure to lead (as low as 10 to 15  $\mu\text{g}$  /dl) before and during pregnancy is associated with pre-term delivery, low birth weight, an increased frequency of miscarriage and stillbirth, and problems in early mental development of the fetus.

# Health Effects of Lead on Children and Adults

Lowest Observable Adverse Effect/Levels



Text of an Article from the Brattleboro Reformer on March 13, 1997:

## ***Painter hospitalized With lead poisoning***

***Doctor: Highest level ever seen***

*By Annette Larson Reformer Staff*

**BELLOWS FALLS**— Gregory Blodgett knew the intense pain in his bones and skin wasn't the flu when it took him 15 minutes to climb the stairs to his second floor apartment March 3. "I'd never ached like that and cried over it", Blodgett said Wednesday, his first full day home after a week at Cambridge (Mass.) Hospital's Poison Control Center. Although he suspected that it had something to do with the paint he'd been scraping for the last 4 ½ days, he had a hard time convincing his doctor it was lead poisoning. That was, until his blood test came back. The level in Blodgett's blood was 148 micrograms per deciliter, six times the upper limit of acceptable lead in the body, said Dr. Walter Griffiths, Blodgett's physician in Bellows Falls. "Not only was it high, but Boston told me it was the highest they can recall," Griffiths said. According to a Vermont Department of Health publication, nerve damage can occur with as little as 50 micrograms per deciliter in the blood, and severe brain damage at 100. Lead poisoning in adults is extremely rare.

Blodgett, 50, a lifetime Bellows Falls resident, had been helping a friend scrape paint at an old house in Westminster. Not a painter, it was the first time he had ever done anything like that, he said. "I never really gave it any thought that it would do damage to me," he said. Wearing a thin paper mask and gloves, he said, there was no way to avoid breathing the dust, which covered his skin as well. On the fifth day, he started feeling ill. "We took a lunch break and I got a cheeseburger and chocolate milk" Blodgett said. "It was all I could do to lift my hand to eat that cheeseburger." After lunch, he told his friend he needed to go home. The memory of the pain still haunts him. "It was so unbelievably unbearable. Even to touch myself it hurt," he said.

Once Griffiths got the blood test back, he spent almost all morning March 4<sup>th</sup> making phone calls to find someone who knew anything about acute adult lead poisoning, having never seen a case himself. He called all the state hospitals, he called the state health department, he called pharmacies, all with no luck. "It was discouraging, to say the least to call the State of Vermont and get no information. They didn't know what to do," Griffiths recalled.

"I started calling the authors of chapters in textbooks. I'm sure there's someone in the State that has the expertise and medication to treat this, but I was running out of time," he said. Griffiths knew the effects from that much lead could be fatal. "It poisons the nerves", he said. "It can cause paralysis and will kill you if it is high enough."

Finally, Blodgett was transported by ambulance on March 6<sup>th</sup> from Grace Cottage Hospital to Cambridge where doctors were amazed that he was alive. "The doctor couldn't believe it. He hadn't seen that much lead in a human," Blodgett said. "It was the highest ever". In the hospital, he was given massive doses of a medicine that binds with the lead so the body can flush it out. By the time he left the hospital Tuesday, the lead count in his blood was down to 100.

"But he is not out of danger yet," said Blodgett's wife, Rita. When he got home, he discovered that none of the pharmacies in the area was prepared to fill his prescription. He expected a shipment of the medication to arrive at his pharmacy by 10am Thursday morning. Blodgett needs to continue his medication for 14 days, at a cost of \$400, with blood tests twice a week, and then make another trip back to the hospital for a checkup.

"They really don't know if I'll have any recurrence of the symptoms," Blodgett said. "But the doctors are pretty concerned." A grandfather who had been pretty healthy up until this incident, Blodgett said he is thankful that he was eligible for the Vermont Health Access Plan health insurance.

"My hands still ache and sometimes walking is still painful," he said. What worries Blodgett the most about this incident, is how little people know about lead poisoning, and how easy it was for him to get it, he said. His advice to others who may be scraping paint in old houses is to ask a lot of questions and to make sure to wear the proper protective masks. "It could happen to someone without them even knowing," he said.

*Epilogue: Gregory Blodgett continued to struggle with lingering health problems related to this lead poisoning event for another 10 years. Gregory died on May 6, 2007 at age 60.*

## Sources of Lead

### Lead in Dust

Lead dust is the largest cause of childhood lead poisoning. Lead dust is easily ingested by children because dust clings to fingers and toys and it is normal for children to put things in their mouths. Because of this, the Federal Government has established hazard levels for lead dust in occupied housing and clearance levels for lead dust after lead abatement work. Lead dust in housing is usually a result of:

- Deteriorated Lead Paint
- Friction or Impact of Painted Surfaces
- Dust that is tracked in from contaminated soil

### Lead in Paint

Lead was widely used as a paint and varnish additive in the US until 1978 when the Consumer Product Safety Commission (CPSC) set the maximum amount of lead in paint at 0.06% or 600 parts per million. The same year the Department of Housing and Urban Development (HUD) established the definition of lead-based paint as any coating containing more than 1 milligram of lead per square centimeter (1.0 mg/cm<sup>2</sup>). Beginning in 2008, new lower standards were phased in for lead in children's products and paint coatings. The amount of lead permissible in paint is now 0.009% or 90 parts per million and no children's products may contain lead in accessible parts higher than 100 parts per million.

Lead was primarily used in paints to make the paint more weather resistant and to inhibit the growth of mold and mildew. Lead was also added to varnish to make it dry faster (Japan driers). Lead paint can be found on any painted surface – inside or outside. Due to its resistance to mold and mildew, lead paint was often used in places where moisture is found, like kitchens, bathrooms, windows, and doors. Lead paint is considered hazardous when it is chipping, peeling, chalking, or flaking. Any home built before 1978 may contain lead-based paint.

**It's the Law: All paint in pre-1978 target housing and child care facilities in Vermont is presumed to be lead-based paint unless a certified lead inspector or risk assessor determines otherwise.** No one may use unsafe work practices<sup>3</sup> if disturbing more than one square foot of lead-based paint

### How Widespread Is Lead Paint in Housing?

By the 1940's, paint manufacturers began voluntarily to reduce the amount of lead they added to their paints. As a result, painted surfaces in homes built before 1940 are likely to have higher levels of lead. Because of the age of our housing in Vermont, approximately 65% of all homes in the State contain lead-based paint

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<sup>3</sup> See appendix page 100 for a complete list of unsafe work practices described in §1760 of the EMP law.

**Year House Was Built****Percentage with Lead-Based Paint**

Before 1940	87%
1940-1959	69%
1960-1978	24%
All US Housing	40%

**Lead in Soil**

Traces of lead can be found in most soils. High levels of lead in soil can come from deteriorated lead paint around homes, leaded gas exhaust, and industrial releases. Soil can become quickly contaminated if lead paint is scraped and the chips and dust are allowed to fall on ground that has not been covered with plastic. Power washing also can spread contamination, chips, and particles of paint into the soil. Children who play in these areas have an increased risk of exposure to lead.

**Occupational Exposure**

Occupational lead poisoning has been a health hazard for more than 2000 years. In fact the first described cases of lead poisoning were by Hippocrates (460-370 BC) where he accurately described the characteristic features of lead toxicity, including anemia, colic, neuropathy, and many other currently recognized symptoms of lead poisoning. The Occupational Safety and Health Administration (OSHA) estimates that over 3 million workers are occupationally exposed to lead in the workplace.

**Some of the major trades and occupations associated with exposure to lead are:**

<b>Construction</b>	<b>General Industry</b>
<ul style="list-style-type: none"> <li>• Bridge Repair &amp; Maintenance</li> <li>• Construction workers</li> <li>• Demolition workers</li> <li>• HVAC Repair</li> <li>• Painters</li> <li>• Plumbers and Pipe fitters</li> <li>• Remodelers</li> <li>• Welders</li> </ul>	<ul style="list-style-type: none"> <li>• Battery manufacturing</li> <li>• Chemical industry</li> <li>• Firing-range instructors</li> <li>• Foundry workers</li> <li>• Jewelers</li> <li>• Lead miners</li> <li>• Lead smelters</li> <li>• Pigment manufacturing</li> <li>• Plastics industry</li> <li>• Printers</li> <li>• Radiator repair</li> <li>• Rubber industry</li> <li>• Stained-glass makers</li> </ul>

## Inhalation

The mere presence of lead in the workplace does not necessarily signify a risk of poisoning. Lead becomes a hazard in the workplace primarily depending on the generation of breathable lead dust and to a lesser degree on ingestion of lead. Inhalation of small particles, dusts, or fumes containing lead can occur as a result of abrasive or heating action on lead or lead containing compounds.

**Examples of tasks that cause inhalation exposure are: Grinding, Sanding, Burning or Torching, Power Washing, Welding, Sandblasting, Soldering, or using a Heat Gun.**

## Ingestion

Adults may ingest lead by smoking, eating, or drinking in a contaminated area or by not exercising good hygiene practices when working with lead. Eating in a non-contaminated area away from the work area is not any safer if you still have lead dust on your hands and face. **It is always important to wash your hands and face if you have been working anywhere you could be exposed to lead.**

## Spreading Lead Contamination

Because small particles of lead dust can cling to clothes, skin, and hair it is especially important to practice good personal hygiene to reduce the risk of contaminating other areas or to unknowingly expose children to lead. Medical journals have documented many cases of workers unknowingly bringing lead dust home from workplaces that ended up poisoning their children. To avoid cross contamination, workers that are occupationally exposed to lead should follow these basic safety guidelines:

- (a) Keep and use separate street clothes and work clothes.
- (b) Do not eat food, drinks, gum, or use tobacco products in any work area.
- (c) Before leaving the work area remove as much visible contamination from clothing as possible.
- (d) Any surface dust on clothing should be HEPA vacuumed off.
- (e) Thoroughly wash hands, face, forearms, and any other exposed skin surfaces or shower if available on site.
- (f) Change into street clothes.

**Important Safety Reminder: Failure to follow the above procedures may cause the spread of lead contamination and may cause exposure to lead in workers and their families.**

## Hobbies

Hobbies involving lead may also create lead dust particles or fumes. These can include making or using fishing sinkers / weights, reloading ammunition and shooting at firing ranges, working with stained glass and ceramics. To reduce the risk to children, you should find a work area with good ventilation that is away from major traffic areas of the home. Special cleaning of the work area together with good personal hygiene is essential to prevent the spread of contamination.

## Other Sources of Lead

### Industrial

Industries that release lead into the air are not much of a problem in Vermont but in other states there are huge smelting operations that release massive amounts of lead into the air. Waste incinerators can be another source of airborne industrial release.

### Gasoline

Lead started being put into gasoline around the 1920's in the US and was not phased out until the mid 1980's. Prior to the phase out of lead in gasoline in the 1980's, an estimated **5.5 million metric tons** of lead used in gasoline was emitted by cars that remains in dust and soil around inner cities and near busy highways. Lead in gasoline is still allowed for use in piston aviation engines (Over 186 million gallons were used in the US in 2008) and leaded fuel was used by NASCAR racers until 2008.



**Fact: A Vintage 1970 auto with a V8 engine spewed about a nickel's weight of lead into the air for every mile it drove.**

**Fact: Since 2011, wheel weights made of lead are not allowed to be sold on new vehicles in Vermont**

### Food

Historically, the biggest source of lead in food has been from lead solder used in tin cans. Lead solder was banned from use in food storage containers in the US by 1991. Today lead solder is still sometimes found on imported canned food. Another source of lead in food can be from pewter ware, lead crystal, lead glazes in ceramics, and in paints used on some china. As general rule, the more acidic the food or the longer it is in contact with the surface that contains lead, the more likely lead will leach into the food. The Food and Drug Association (FDA) requires high-lead-leaching decorative ceramic ware to be permanently labeled that it's not for food use and may poison food. Items bought outside the United States may not be so labeled, potentially posing serious risk if used for food. The FDA also banned the use of lead foil on wine bottle tops in 1996 after it was found that wine could be contaminated by lead in bottles where lead foil was used. Pre-1996 vintages may still contain lead foil.

## Water

Certain drinking water systems can also pose a lead risk. Under EPA rules, if lead exceeds 15 parts per billion (ppb) in more than 10 percent of public water taps sampled, the system must undergo a series of corrosion control treatments. The main sources of lead in water are corroded lead plumbing, lead solder on copper plumbing, and brass faucets and fittings. The US Safe Drinking Water Act was amended in 1986 to prevent the use of lead in public water systems. Vermont banned the use of lead solder in drinking water plumbing in the late 1980's. Until recently, brass in plumbing fixtures could contain up to 8 percent lead. In 2010 Vermont lowered the amount of lead allowed in new plumbing fixtures to be no more than 0.25 percent.

**Fact: Lead is highest in water left in pipes for a long time--for example, when the faucet isn't used overnight. To flush water that has been sitting in pipes for a long time, let the water run until it is as cold as it will get. Always use cold water for drinking, cooking, and mixing baby formula or cereal. Hot water dissolves more lead.**

**Tip: Some water and pitcher filters can remove lead from drinking water, however the US Environmental Protection Agency recommends that any filter used should be certified to remove lead by the NSF International organization (National Sanitation Federation).**

**Fact: Boiling water will not get rid of lead in water.**

**Fact: Contrary to popular belief, pencils do not contain lead. Pencil "lead" is a mixture of graphite and clay formed and baked into the shape used in pencils.**

Note: Please see the appendix for a longer list of products that contain lead

# The Drop of Solder...



that puts a Cow  in your Kitchen Cupboard

What's the final step in protecting the purity of the condensed or evaporated milk that you find on hand?

It's a little drop of solder... that seals the tiny hole through which the air is killed.

Solder, too, is the vital trick that helps keep the condenser from "leaking at the seams"... its unique strength is bringing the fat to your kitchen, the oil fields to your car.

In fact, much of the modern world as you know it today would "fall apart" had for this man-made metal joined. Electric power, from the largest to the smallest generator, would be no more. Planes, trains and ships would stop. Household appliances would not work. Automobile fire sprinkler systems would fail. All communication by radio, telegraph and telephone would be stifled.

As an example, when you dial a phone number over an automatic exchange, your personal mes-

sage passes through as many as 4000 soldered connections joining the maze of wires to intricate equipment. And they must be "good connections". That's why they're soldered... and why good solder must be used.

For, while man has found no convenient substitute for solder since its first recorded use in Roman days, he has learned that not only are many different solders needed to do today's countless jobs, but the indispensable feature of each are their absolute purity and fitness for the work at hand.

Thus, such widely differing uses as holding together car radiators and joining radio tube sockets demand special, highly refined solders. And methods of application range all the way from the familiar hand soldering iron to automatic, electrical heat induction.

Equally important and varied are the special "bases" needed to help clean the surfaces to be joined and make the solder cling.

That's why National Lead's extensive experience with solders and fluxes for every use in such great assurance to industry of well-soldered jobs. It has resulted in a broad line, including Dutch Boy Solders and "Dakos" Fluxes, as well as specialty products such as "Fluxite", described at the lower left.

Whenever your industrial soldering needs, National Lead invites your inquiry. This one organization can supply not only the proper solder in the most efficient form and size - as well as the ideal flux to go with it - but also expert advice on the method to be used. Address National Lead Company, 111 Broadway, New York 6, N. Y.



**ASK FOR THIS SOLDER BRAND**

First name. Dutch Solder has been known for the right price in quality for the best. That's why "Fluxite" has won in the numerous tests from such fine and better known brands. That the legitimate way the tin is contained in process right at the surface of the solder, so it will reach its work and seal in exactly the right amount. Just one of National Lead's many contributions to better soldering.



## NATIONAL LEAD Company

a great name in SOLDER and many other products

Mixers, smelters, and refiners of Lead, zinc and other ores. Manufacturers of Lead, tin, bismuth, barium and cadmium pigments; fluxes and casting alloys; brass, bronze and babbitt bearings; sheet lead, lead pipe, solder, resistance metals and other lead products; non-ferrous alloys; oil and drilling mud materials; acid reclaiming equipment.

1946 National Lead ad touting lead solder for children's canned milk

## Essential Maintenance Practices Techniques

### Interior Visual Inspection

#### 1. Tool List

- Visual Inspection Form (see note at the end of this section)
- Tape Measure
- Pocket Calculator

#### 2. What is an Interior Visual Inspection?

- (a) The purpose of the visual inspection is to look for deteriorated paint and to document where and how much is found.
- (b) Because deteriorated paint is the primary source of lead in household dust, identifying and repairing deteriorated paint helps reduce the risk that lead poses to children.
- (c) Deteriorated paint is identified 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.
- (d) The EMP law requires that a visual inspection needs to be conducted at least once a year and anytime the unit changes tenants. The results of the visual inspection must be noted on the Compliance Statement filed at least every 365 days.
- (e) If more than 1 square foot (144 inches) of deteriorated paint is found in a room, then all deteriorated paint in the room must be stabilized within 30 days of the inspection.

#### 3. How to Conduct an Interior Visual Inspection

- (a) All rooms in each dwelling and common areas must be inspected.
- (b) Start with a room and write down the name on the visual inspection form (an example is included in the next section).
- (c) Look for deteriorated paint on all painted building components such as walls, floors, ceilings, doors, windows, baseboards, casings, and other trim.
- (d) Measure and add up areas of deteriorated paint.
- (e) Record the amount of deterioration on the visual inspection form.
- (f) If less than one square foot of deterioration is found the EMP law requires no further action.

- (g) If more than one square foot of deterioration is found, the EMP law requires that the deterioration must be repaired within 30 days and the repairs must be made using lead safe work practices that are described in this course.
- (h) Areas that are repaired should be noted (date and description) on the visual inspection form so that you have a record of what was done in each area.
- (i) Keep a record of the date of repairs and EMP certificate number of the person who completed the work to use when you are filing your Compliance Statement.

**Note: Although repair of deteriorated paint is not required if there is less than one square foot, any deterioration of lead paint can contribute to elevated lead dust in a home. For the highest level of safety, repair any deterioration you find.**

**Note: Forms provided in the following section are provided as an example of how to keep track of your inspections. You may use this form or any other system of record keeping you wish when performing your inspection.**

## EMP Interior Visual Inspection Example Form

Date of Visual Inspection: \_\_\_\_\_

Inspected by: \_\_\_\_\_ Cert# \_\_\_\_\_

Owner: \_\_\_\_\_

Address: \_\_\_\_\_

Town: \_\_\_\_\_ Apt# or Common Area \_\_\_\_\_

Room _____ [ ] None [ ] < 1sq.ft [ ] > 1sq. ft. (needs repair) Date Repaired _____ List components repaired _____ _____
Room _____ [ ] None [ ] < 1sq.ft [ ] > 1sq. ft. (needs repair) Date Repaired _____ List components repaired _____ _____
Room _____ [ ] None [ ] < 1sq.ft [ ] > 1sq. ft. (needs repair) Date repaired _____ List components repaired _____ _____
Room _____ [ ] None [ ] < 1sq.ft [ ] > 1sq. ft. (needs repair) Date repaired _____ List components repaired _____ _____
Room _____ [ ] None [ ] < 1sq.ft [ ] > 1sq. ft. (needs repair) Date repaired _____ List components repaired _____ _____
Room _____ [ ] None [ ] < 1sq.ft [ ] > 1sq. ft. (needs repair) Date repaired _____ List components repaired _____ _____
Room _____ [ ] None [ ] < 1sq.ft [ ] > 1sq. ft. (needs repair) Date repaired _____ List components repaired _____ _____

Work performed by: \_\_\_\_\_ Cert# \_\_\_\_\_



### EMP Interior Visual Inspection Example

Date of Visual Inspection: 08/29/01.

Inspected by: Jason Jones Cert # 9998.

Owner: Jason Jones.

Address: 123 Main Street.

Town: Anytown, VT . Apt# or Common Area # 2 .

Room <u>Hallway</u> [ ] None [x] < 1sq.ft [ ] > 1sq. ft. (needs repair) Date Repaired _____ List components repaired _____ <u>Approximately 8 sq inches on baseboard noted</u>
Room <u>Living Room</u> [ ] None [ ] < 1sq.ft [x] > 1sq. ft. (needs repair) Date Repaired <u>8/30/01</u> .List components repaired <u>Stabilized 3</u> <u>Window sashes, all baseboard and 1 door jamb to kitchen</u>
Room <u>Kitchen</u> [x] None [ ] < 1sq.ft [ ] > 1sq. ft. (needs repair) Date repaired _____ List components repaired _____ _____
Room <u>Bathroom</u> [ ] None [ ] < 1sq.ft [x] > 1sq. ft. (needs repair) Date repaired <u>8/30/01</u> . List components repaired <u>Stabilized all</u> <u>deteriorated walls and ceiling. Baseboard and door trim OK</u>
Room <u>Master Bedroom</u> [x] None [ ] < 1sq.ft [ ] > 1sq. ft. (needs repair) Date repaired _____ List components repaired _____ _____
Room <u>Child Bedroom</u> [ ] None [ ] < 1sq.ft [x] > 1sq. ft. (needs repair) Date Repaired <u>8/30/01</u> . List components Repaired <u>Stabilized Window</u> <u>trim and sash, Base board and door trim OK</u>
Room _____ [ ] None [ ] < 1sq.ft [ ] > 1sq. ft. (needs repair) Date repaired _____ List components repaired _____ _____

Work performed by: Joe Workman (EMP Cert. #9999).



## Essential Maintenance Practices Techniques

### Exterior Visual Inspection

#### 1. Tool List

- Visual Inspection Form (see next section)
- Tape Measure
- Pocket Calculator

#### 2. What is an Exterior Visual Inspection?

- (a) The purpose of the exterior visual inspection is to look for deteriorated exterior paint and visible paint chips on the ground and to record the conditions found.
- (b) Because deteriorated paint is the primary source of lead in soil around the home, identifying and repairing deteriorated paint helps reduce the risk that lead poses to children.
- (c) Deteriorated paint is identified 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.
- (d) The EMP law requires that a visual inspection needs to be conducted after each change of tenant or annually in rental units. The results of the visual inspection must be noted on the Compliance Statement filed at least every 365 days.
- (e) If more than 1 square foot (144 inches) of deteriorated paint is found on an exterior surface, then all deteriorated exterior paint must be stabilized or have access blocked to children by physical barriers within 30 days of the inspection. This includes all outbuildings or other painted features (ex. fences).
- (f) Because of Vermont's weather, if the deteriorated paint is reported or identified after November 1, the law allows repairs to be completed by the next May 31<sup>st</sup>. Access must be restricted to deteriorated areas until they are repaired.

#### 3. How to Conduct an Exterior Visual Inspection

- (a) All exterior painted components including outbuildings must be inspected unless the area is restricted to tenants by physical barrier.
- (b) Draw an outline of the building footprint on the exterior visual inspection form that includes relevant details like outbuildings and other structures.
- (c) Start with a wall and write down the name or area description on the exterior visual inspection form. An example is included in the next section. Notice that the map grid contains letters to help in labeling which side of the building is which.

- (d) Look for deteriorated paint on all painted building components such as clapboards, corner boards, door and window trim, and roof trim.
- (e) Measure and add up areas of deteriorated paint.
- (f) Record the amount of deterioration on the exterior visual inspection form.
- (g) If less than one square foot of deterioration is found the EMP law requires no further action.
- (h) If more than one square foot of deterioration is found, the EMP law requires that the deterioration must be repaired or have access blocked by physical barriers within 30 days. Paint repairs must be made using lead safe work practices that are described in this course.
- (i) Areas where there are repairs or barriers are installed should be noted (date and description) on the exterior visual inspection form so that you have a record of what was done in each area.
- (j) Keep a record of the date of repairs and EMP certificate number of the person who completed the work to use when you are filing your Compliance Statement.

**Note: Vermont law requires the removal of all visible paint chips from the ground on the property. More detail is provided later in the manual.**

## EMP Exterior Visual Inspection Summary

Date of Visual Inspection: \_\_\_\_\_

Inspected by: \_\_\_\_\_ Cert# \_\_\_\_\_

Owner: \_\_\_\_\_

Address: \_\_\_\_\_

Town: \_\_\_\_\_ Apt# or Common Area \_\_\_\_\_

Area or Side _____ [ ] None [ ] < 1sq.ft [ ] > 1sq. ft. (needs repair) Note areas and actions taken _____ _____ Date action taken _____
Area or Side _____ [ ] None [ ] < 1sq.ft [ ] > 1sq. ft. (needs repair) Note areas and actions taken _____ _____ Date action taken _____
Area or Side _____ [ ] None [ ] < 1sq.ft [ ] > 1sq. ft. (needs repair) Note areas and actions taken _____ _____ Date action taken _____
Area or Side _____ [ ] None [ ] < 1sq.ft [ ] > 1sq. ft. (needs repair) Note areas and actions taken _____ _____ Date action taken _____

↓ SITE SKETCH ↓

C

B		D
A		

S T R E E T

Work performed by: \_\_\_\_\_ Cert# \_\_\_\_\_



## EMP Exterior Visual Inspection Summary

Date of Visual Inspection: 11/01/07

Inspected by: Jason Jones (EMP Cert. 9998)

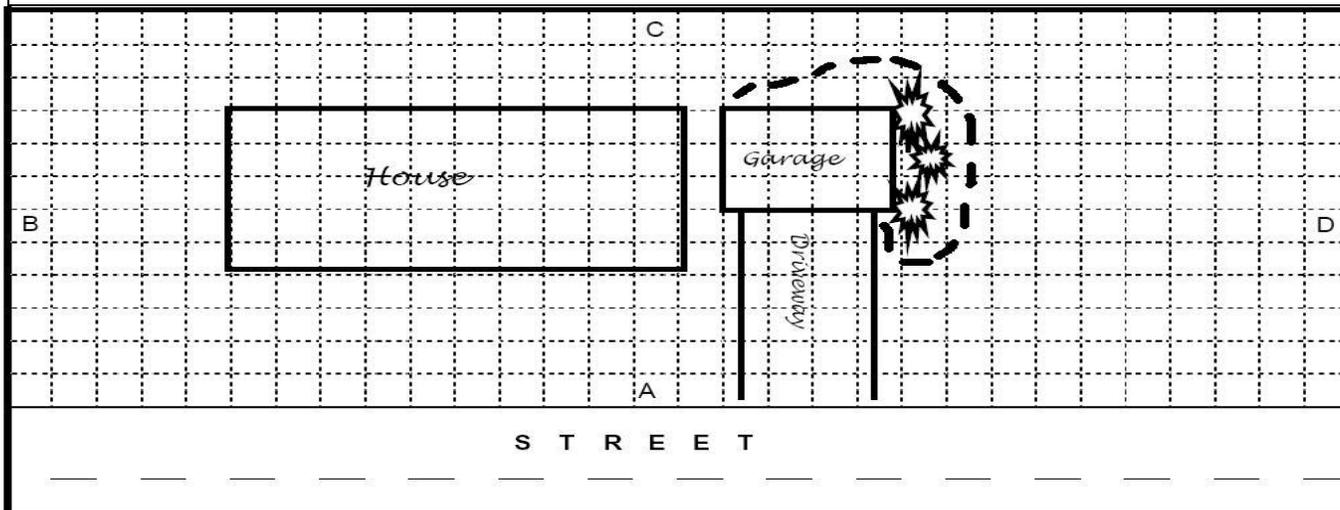
Owner: Jason Jones

Address: 123 Main Street

Town: Anytown, VT Apt# or Common Area Single Family Rental

Area or Side <u>House sides A,B,C,D</u> <input checked="" type="checkbox"/> None <input type="checkbox"/> < 1sq.ft <input type="checkbox"/> > 1sq. ft. (needs repair)
Note areas and actions taken _____ _____ Date action taken _____
Area or Side <u>Garage sides A,B</u> <input checked="" type="checkbox"/> None <input type="checkbox"/> < 1sq.ft <input type="checkbox"/> > 1sq. ft. (needs repair)
Note areas and actions taken _____ _____ Date action taken _____
Area or Side <u>Garage sides C, D</u> <input type="checkbox"/> None <input type="checkbox"/> < 1sq.ft <input checked="" type="checkbox"/> > 1sq. ft. (needs repair)
Note areas and actions taken <u>Installed snow fence to limit Access (See Sketch)</u> . <u>Repair scheduled for spring</u> Date action taken <u>11/15/07</u>
Area or Side _____ <input type="checkbox"/> None <input type="checkbox"/> < 1sq.ft <input type="checkbox"/> > 1sq. ft. (needs repair)
Note areas and actions taken _____ _____ Date action taken _____

↓ SITE SKETCH ↓



Work performed by: Jason Jones EMP Cert. 9998



## Essential Maintenance Practices Recommended Tools, Supplies, and Equipment

### Tools

Tin Snips  
Caulking Gun  
Tape Measure  
Utility Knife  
Paint Scraper(s)  
Misting Bottle (filled with water)  
Putty Knife  
Misting Bottle (filled with General All-purpose Cleaner or Lead Specific Cleaning Solution)  
Mop Buckets  
String Mop  
Paint Brushes



### Materials

Coil Stock  
Aluminum Nails  
Caulk  
6 mil Polyethylene Sheeting (poly)  
Wet/ Dry Sandpaper or Sanding Sponge  
Paper Towels or Disposable Rags  
Painter's Tape  
Garbage Bags  
Spackling Compound  
General All-purpose Cleaner or Lead Specific Cleaning Solution  
Primer & Paint



### Equipment

HEPA Vacuum

### Safety

Disposable Coveralls  
Safety Glasses  
Disposable Gloves (non-cloth)  
Protective Shoe Covers or work shoes  
Caution Tape



**Note: Other tools, supplies, equipment, or safety items may be needed depending on individual job circumstances.**

## Basic Safety Tips When Working With Lead

### Prohibited Practices

1. Open Flame Burning or Torching
2. Heat Guns hotter than 1100° F
3. Uncontained Hydro-Blasting or High-Pressure Washing
4. Dry scraping / Dry Sanding
5. Machine Grinding or Sanding
6. Abrasive Blasting or Sandblasting without containment and HEPA exhaust controls
7. Chemical Stripping using Methylene Chloride Products

### Required Lead Safe Work Practices

1. Limiting access to interior and exterior work areas
2. Enclosing interior work areas with plastic sheeting or other effective dust barrier
3. Using protective clothing.
4. Misting painted surfaces before disturbing paint
5. Wetting paint debris before sweeping to limit dust creation
6. Other measures required by the Vermont Department of Health

### Safety Tips

- Use caution with sharp tools.
- Be aware of slip, trip and fall hazards. Plastic sheeting can be very slippery.
- Be aware of electrical and water hazards especially when working near outlets.
- Don't cover appliances like gas kitchen stoves (or gas dryers)
- Wear protective clothing including protective shoe covers or work shoes, safety glasses, coveralls, head cover and gloves.
- A HEPA vacuum can be used to clean your work clothes before changing.
- Clean washable work clothing separately from other clothing. Run the rinse cycle once before using the washer again.
- Take off protective shoe covers or work shoes before leaving the work area.
- Shower and wash hair immediately after completing the work.
- Protect yourself from eating or breathing in lead. Do not smoke, eat or drink on the job.
- Wash your hands well before smoking, eating, or drinking.
- Keep people and pets out of the work area until clean up is complete.
- Never leave plastic sheeting out at the end of the workday. Plastic sheeting is a suffocation danger especially for children. Plastic covering baseboard heaters and radiators can cause fire.

## Essential Maintenance Practices Techniques

### Interior Paint Stabilization

#### 1. Tool List

- Warning Sign or Barrier Tape
- Disposable gloves
- Painter's Tape / Duct Tape
- 6 mil polyethylene sheeting (poly)
- Safety Glasses
- Protective shoe covers or work shoes
- Wet/dry sandpaper or sanding sponge
- Paint Scrapers, steel blade, carbide blade (or detail blade as necessary)
- Misting Bottle or small garden sprayer filled with water
- Non Shrinking spackling compound / Putty knife
- General All-purpose Cleaner or Lead Specific Cleaning Solution
- For Hard Floors (Wood, Vinyl, etc.) : 3 Buckets and String Mop
- Paper Towels / Disposable Rags
- HEPA Vacuum
- Garbage Bags (doubled)

#### 2. Set up Work Area

- (a) Work in only 1 room at a time. Post a warning sign at entrance to the room or put up barrier tape. Notify occupants that they are not allowed in the work area until after all work is complete and the area has been cleaned.
- (b) Move furniture at least five feet away from work area. Use judgement in deciding what to move. If the work performed will put contamination farther away than 5 feet, set up a larger area. Heavy items that cannot be easily moved may be covered with poly. Window curtains, shades, blinds, etc should be removed if the window is part of the work area.
- (c) Turn off heating, air conditioning, and ventilation systems and tape poly or cardboard over air vents and baseboard heaters.

**Important Safety Tip: Plastic should never be taped over electric baseboard heaters, electric and gas stoves, or any other high temperature heat source.**

- (d) Tape poly to floor and extend five feet out from work area (all directions). Avoid using large amounts of tape on floors and avoid firmly pressing tape to painted surfaces because the tape can pull off more paint when removed. Avoid walking on tape applied to floors as this will increase the tape adhesion and will increase the chance for damage to the floor finish when removed.
- (e) For worker protection, wear disposable coveralls, safety glasses, disposable gloves, and protective shoe covers or work shoes.

### 3. Paint Stabilization

- (a) Remember to minimize dust and other debris to protect you, your family and the tenants. If you observe visible airborne dust during any work activity **stop what you are doing** and assess what is needed to prevent dust from being produced.
- (b) If paint chips or debris is noticed outside of the set up poly, increase the area to be covered or use a different method or technique.
- (c) Once work begins try to complete all work in the set up area before moving to another area. If you need to leave the set up area, remove shoe covers before leaving the poly.
- (d) Do not smoke or eat in the work area. After work has been completed, wash hands and face before eating or smoking.
- (e) Remove contaminated work clothes before leaving the job site. Work clothing should be laundered separately.
- (f) Mist surface lightly with water before scraping & scrape loose paint (deteriorated/ peeling/ chipping/ flaking/ chalking). Draping a damp cloth over the paint scraper while scraping also helps to contain paint debris.
- (g) Use only sharp scrapers. Metal scrapers should be sharpened prior to use and will need to be re-sharpened several times during a typical workday. Carbide scrapers should be replaced if dull and will last much longer than steel blades before becoming dull.
- (h) Areas stabilized with sharp scrapers generally do not need as much additional feathering or sanding as areas that are stabilized by dull scrapers. Specialized detail scrapers with different shaped blades may be necessary on ornate woodwork details.
- (i) Use wet sandpaper to smooth edges.
- (j) Fill deep gaps and large paint layer transitions with suitable filler material.
- (k) Use wet sandpaper (or sponge if water-based) to smooth filler material.
- (l) Use General All-purpose Cleaner or Lead Specific Cleaning solution to clean surface before applying paint. Do not soak surfaces to be painted with the cleaning solution as this would significantly increase the drying time needed in order to start painting.
- (m) Put your first coat of primer or paint on.
- (n) Apply second coat when first coat of primer is dry. Finish painting may be performed after final clean up.

### 4. Clean Up

- (a) Pick up larger debris with wet paper towels and dispose in doubled garbage bag.

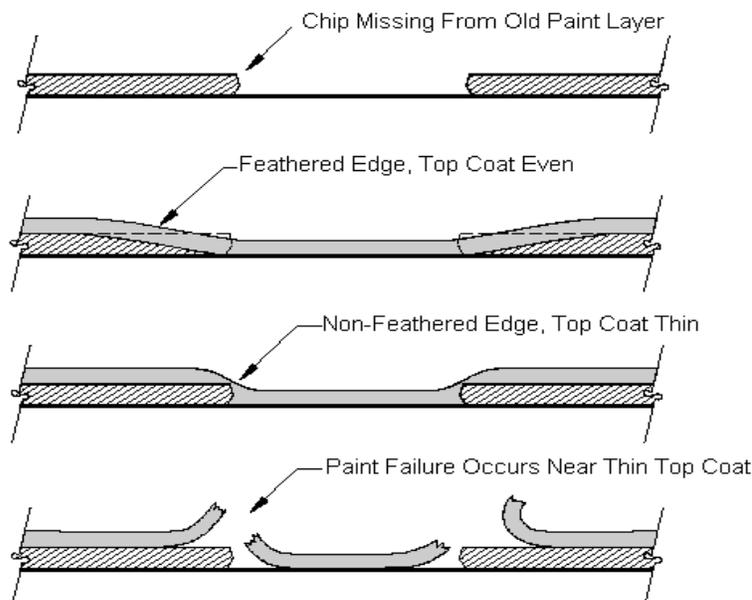
(Clean Up Continued)

- (b) HEPA vac all surfaces including poly in the work area.
- (c) HEPA vac clothes, work shoes or remove protective shoe covers and place on poly.
- (d) Fold up poly from all corners and place in doubled garbage bags.
- (e) Mist surfaces in work area with general all-purpose cleaner or lead specific cleaning solution. It is always preferable to apply cleaning solution with a sprayer to eliminate possible contamination of a bucket of solution. If a sprayer is not available, only dip clean disposable rags/paper towels in cleaning solution once.

**After a towel has touched a contaminated surface, do not dip into the cleaning solution a second time, as this will put lead into the cleaning solution.**

- (f) Wipe surfaces with paper towels and dispose of in doubled garbage bags.
- (g) HEPA vac surfaces again.
- (h) Mop hard floors as outlined in the cleaning section of this manual.
- (i) Take gloves off and place in doubled garbage bag.
- (j) Change out of work clothes and wash up.

**Work Tip: Feathering Edges of Missing Paint Reduces Paint Failure**



**Failure of newly applied paint is reduced if the following steps are taken:**

1. The area around the missing paint chips is wet scraped to remove all loose and flaking paint.
2. The existing layer edges are wet sanded to a smooth transition.
3. The area to be painted is cleaned of dust, dirt or grease and is dry.

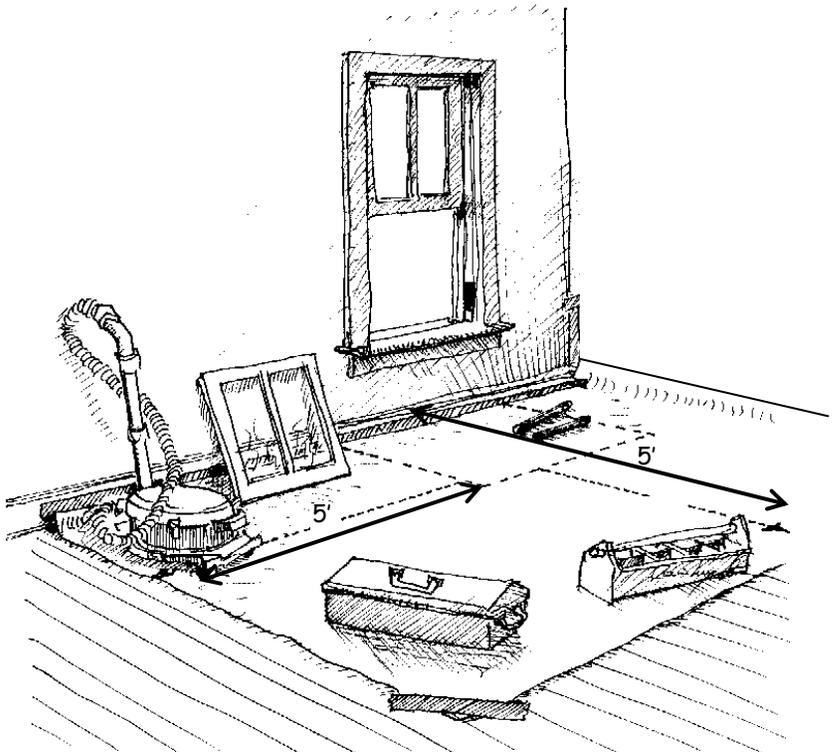
## Bad Interior Preparation and Set-Up



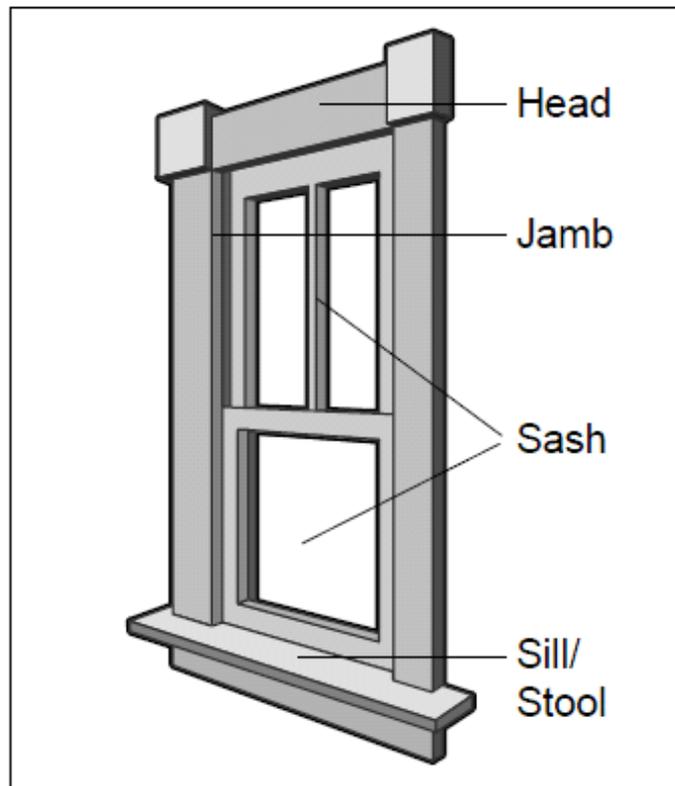
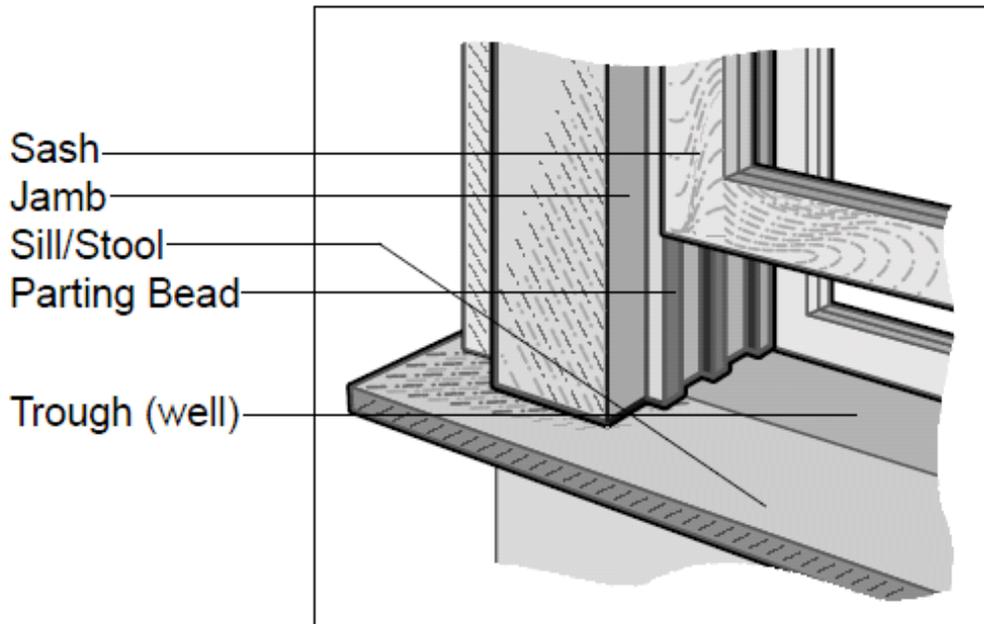
- Furniture and belongings in work area
- Toys in work area
- Not enough plastic to catch debris and chips
- Plastic is not taped down (slipping hazard)
- Improper cleaning supplies (Broom and waste can)

## Good Interior Preparation and Set-Up

- Furniture, toys, and belongings removed from work area or are covered with plastic if too large to move
- Minimum 5' of plastic around work area
- All tools collected and kept on plastic
- Plastic is taped to floor not trim
- Heat vents and registers are covered
- **Warning!** Never cover stoves, space heaters, electric baseboard or other high temperature sources with plastic sheeting!



## Typical Window and Trim Details





## Essential Maintenance Practices Techniques Exterior Paint Stabilization

### 1. Tool List

- Warning Sign(s) or Barrier Tape
- Disposable gloves
- Filler Material/ Putty knife
- Painter's Tape
- 6 mil polyethylene sheeting (poly)
- Wet / dry sandpaper
- Paint Scrapers
- Misting Bottle
- Safety Glasses
- Protective shoe covers or work shoes
- Garbage Bags (doubled)
- General All-purpose Cleaner or Lead Specific Cleaning Solution
- Ladder(s)
- Rope to secure ladder(s) if necessary
- Weights or wire wickets ("U" shaped pieces of stiff wire) to hold down poly
- Broom (wet sweep only)
- HEPA Vacuum

### 2. Set up the Work Area

- (a) Tape or staple poly to underside of clapboard and extend at least ten feet out. When working, check where chips are falling, to determine if additional poly is required. Slight breezes can carry chips much further than ten feet especially when working at upper levels.
- (b) Place weights or wire wickets to hold poly in place. Never use toys or items that you would not want to get contaminated for weights. Overlapping areas on poly sheets should be taped together.
- (c) Be aware that on sunny days, grass can be killed in a few hours of being covered by poly. A cloth tarp underneath the poly will minimize grass damage, but remember a **cloth tarp should never be used by itself to collect chips.** Cloth is hard to decontaminate and allows fine lead dust to pass through to the ground.
- (d) If necessary to prevent ladder slipping, cut slits in poly and place ladder footings through slits and tape poly to ladder.
- (e) Close all windows and tell tenants to keep them closed and to stay out of the work area. If another building is in close proximity to the work area, warn the occupants of that building to keep windows closed and stay out of work area also. Post warning signs on inside of doors that exit into the work area. High traffic areas should have warning tape, rope, or some other barrier to limit access to the work area.
- (f) Move children's toys and cover sandboxes.

- (g) Cover vegetable gardens, shrubs, etc with poly. A tent may be constructed by putting stakes in the ground and stretching a rope between them this will keep the poly from crushing the plants. If this makes the work area hard to reach, saw horses with planks may be used. Use caution, however, as the poly can be very slippery on the planks.
- (h) If it is necessary to work from a lower roof to reach an upper level, do not put poly on a sloped roof take other measures to control debris.
- (i) Delay the work if it is a windy or rainy day. Any time chips are observed falling outside the set up area, either wait for calmer conditions to work, or put more poly on the ground.
- (j) All work should cease before rain occurs with enough time to clean up contamination from flat surfaces and ground poly. Heavy rain will wash chips and contamination from the poly very quickly. If rain occurs before the poly is cleaned, carefully fold the poly on itself and discard. Do not roll poly up for reuse. The action of rolling the poly will put the moist back side of the poly in contact with the contaminated front side resulting in both surfaces of the poly being contaminated. When unrolled, contamination will be spread to the ground.
- (k) Always use all proper ladder and scaffolding safety rules as they apply to the type of set up used.

### 3. Exterior Paint Stabilization

**It's the Law! Absolutely no power-washing, no power-sanding or grinding, no dry scraping, no burning, and no sandblasting of lead-based paint. All of these can cause dangerous amounts of lead contamination.**

- (a) Remember to minimize dust and other debris to protect you, your family and the tenants. If you observe visible airborne dust during any work activity **stop what you are doing** and assess what is needed to prevent dust from being produced.
- (b) If paint chips or debris is noticed outside of the set up poly, increase the area to be covered or use a different method or technique.
- (c) Once work begins try to complete all work in the set up area before moving to another area.
- (d) Do not smoke or eat in the work area. After work has been completed, wash hands and face before eating or smoking.
- (e) Remove contaminated work clothes before leaving the job site. Work clothing should be laundered separately.
- (f) Mist surface with water before scraping and scrape loose paint (deteriorated/ peeling/ chipping/ flaking/ chalking). Draping a damp cloth over the scraper will further help contain paint debris.

- (g) Use only sharp scrapers. Metal scrapers should be sharpened prior to use and will need to be re-sharpened several times during a typical workday.
- (h) Carbide scrapers should be replaced if dull and will last much longer than steel blades before becoming dull.
- (i) Areas stabilized with sharp scrapers generally do not need as much additional feathering or sanding as areas that are stabilized by dull scrapers.
- (j) Specialized detail scrapers with different shaped blades may be necessary on ornate woodwork details.
- (k) Fill deep gaps with suitable filler material for exterior use. Caulk cracks in siding (does not include lower edge of clapboards).
- (l) Use wet sandpaper to smooth edges.
- (m) Put your first coat of primer or paint on before inclement weather. Do not scrape more surface than can be covered in the same workday. Rain will cause paint on previously scraped unprimed edges to lift and will require additional stabilization before priming.
- (n) Paint or primer should never be applied to wet wood. (Ideal moisture content for painting is 12% or less.)
- (o) Apply second coat when first is dry. Primer should be covered with additional paint within 30 days. The sun will start to break down the surface of the primer and may result in poor adhesion if too much time passes before the next coat of paint is applied.

#### 4. Clean Up

**Safety Reminder: Remember to clean the work area at the end of each job or the end of each workday.**

- (a) Pick up larger debris with wet paper towels and dispose in doubled garbage bag.
- (b) Wet sweep.
- (c) HEPA vacuum flat surfaces where paint chips are likely to have collected. This includes window wells, exterior sills, tops of window and door trim or other flat surfaces in the work area.
- (d) Remove protective shoe covers and place on poly.
- (e) Fold up poly from all corners and place in doubled garbage bags.
- (f) Check work area for any visible paint chips and remove using methods discussed in the next section.
- (g) Change out of work clothes and wash up.

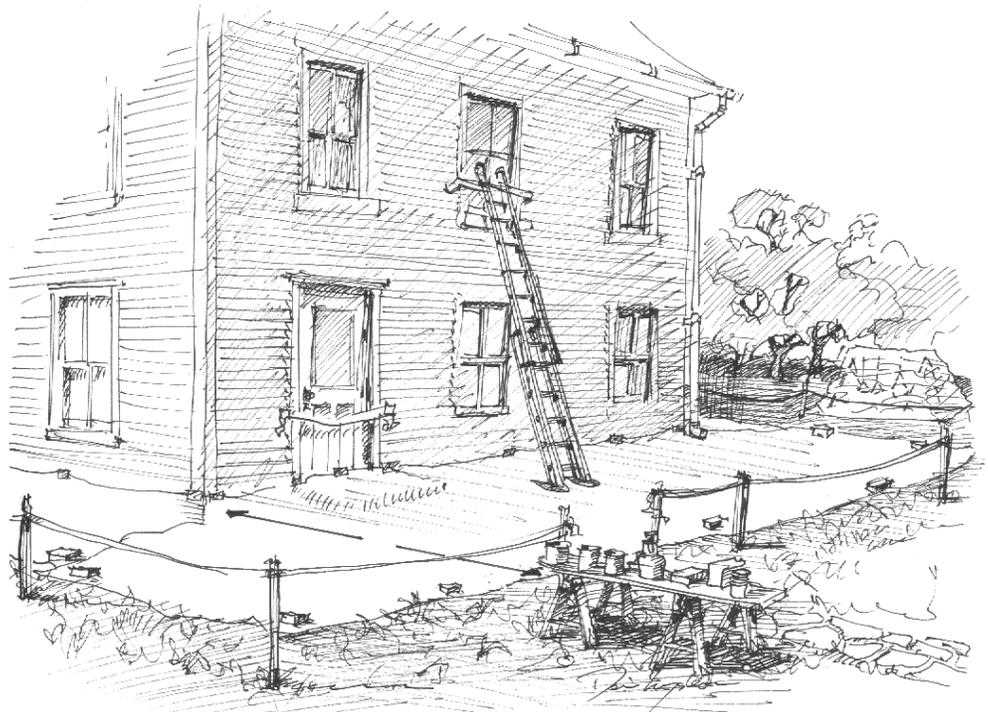
## Bad Exterior Preparation and Set-Up



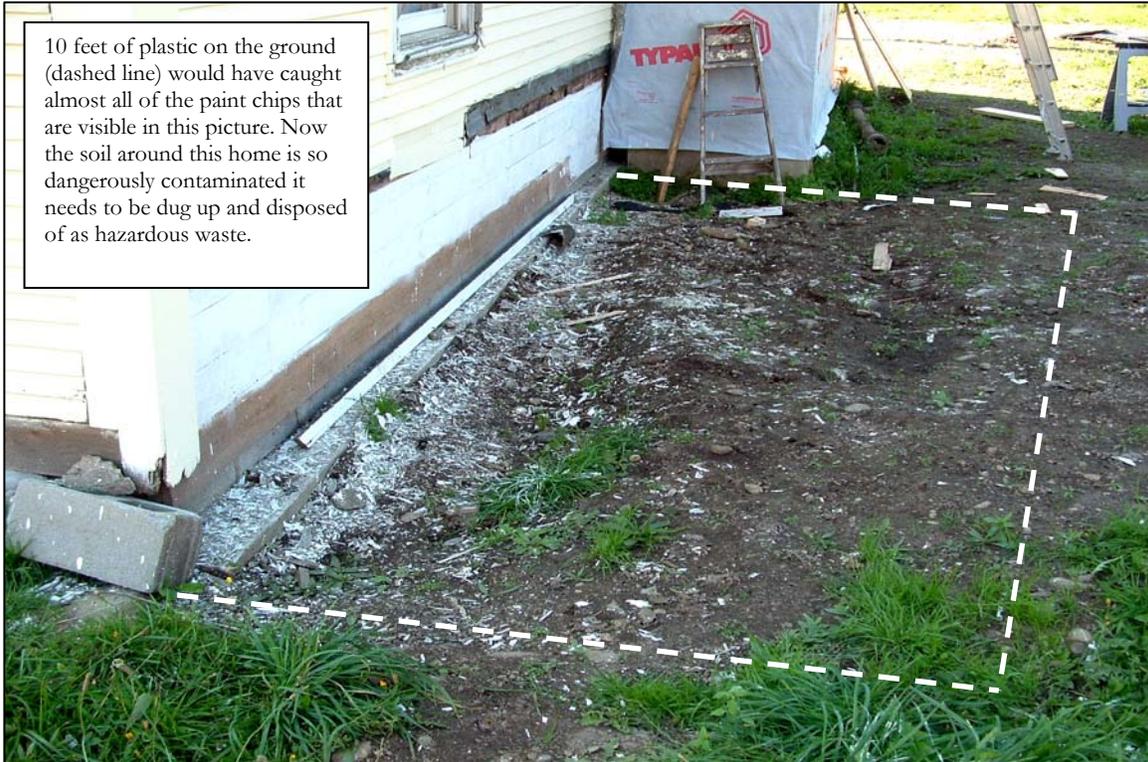
- No Barriers to prevent access
- No warning signs
- Open door and window allows contamination to fall in occupied area
- Not enough plastic to collect chips
- No weights to prevent plastic from being blown by the wind
- Plastic not attached to house allows chips to fall next to foundation
- Ladder on plastic (slipping hazard)

## Good Exterior Preparation and Set-Up

- Barriers to prevent access on doors and at the outer edge of plastic
- Warning signs on doors
- Windows and doors are closed
- All items are removed from work area
- A minimum of 10' of plastic is on the ground attached by tape or staples to the foundation or bottom edge of the siding
- Slits are cut into plastic for ladder feet
- Plastic is weighted down



### Poor Setup and Work Practices can Cause Significant Soil Contamination



## Removal of Visible Paint Chips

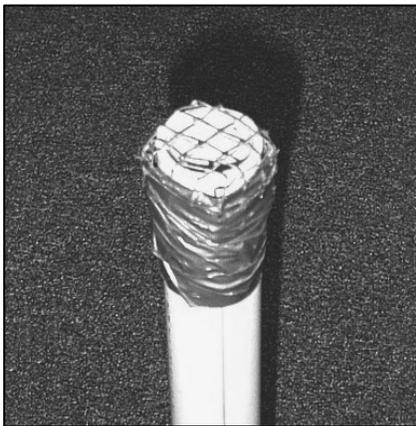
Vermont law requires that all visible paint chips be removed from the ground on properties where Essential Maintenance Practices are required.

Paint chips are often found around the perimeter of old buildings and other painted features like fences. Children may become lead poisoned by ingesting paint chips, and they are the primary cause of residential soil contamination. Lead contaminated soil is easily tracked or blown into homes where children can be further exposed.

Removing paint chips from the ground can be difficult, particularly if there are many small chips. In some cases it may be necessary to remove a few inches of top soil that is highly contaminated in order to remove all the chips. Big paint chips can be picked up by hand (wear gloves). Raking chips from grassy areas is not advised, as this could further contaminate the soil by breaking the chips into smaller pieces. Instead use a vacuum with a homemade attachment like that shown below. Paint chips on driveways or other flat, hard surfaces can be misted and carefully swept up.



All visible paint chips should be removed as soon as possible after they have been identified, and must be removed within 30 days. At least once a year property owners should inspect all outdoor areas of the property for visible paint chips, focusing on areas that might not be plainly visible under normal circumstances.



### Useful Cleaning Tip:

A plastic pipe with 1/4" wire mesh wrapped around the end attached to the HEPA vacuum hose is an effective way to clean up paint chips that end up in the grass. It is best to wear a rubber glove to remove leaves and debris that frequently will stick to the mesh.

**Remember to change vacuum bags that may contain damp soil at the end of the day to prevent rusting or mold growth on the inside of the vacuum.**

## Lead Hazards in Soil

### Soil Hazards and the EMP Law

The Vermont EMP law requires the removal of visible paint chips but does not specifically require any other treatments to deal with soil contaminated with lead. While it is possible that children could be exposed to lead by ingesting paint chips from deteriorated exterior paint, it is much more likely that a child will become poisoned by ingesting contaminated dirt while playing near the foundation of an older home.

Following the EMP requirements by **keeping the exterior paint intact does not mean that there are no soil lead hazards at a property; it means that you have taken steps to keep them from occurring.**

### Historic Hazards

Lead paint for exteriors was designed to chalk so that rain would wash the surface clean. As a result, most old homes in Vermont have elevated levels of lead in the soil around the foundation drip lines. Historic care and maintenance of a building also can contribute to elevated soil lead levels. Paint chips from unsafe exterior scraping jobs done decades ago can still exist in the soil around the home.

A study of soil lead levels around Vermont homes built before 1978 found that the average level of lead in the soil around the foundation drip lines was 1071 parts per million. What does that level mean? For comparison, EPA has established that any bare soil that has levels of lead higher than 400 parts per million is considered hazardous for contact by children. This type of soil contamination is generally limited to the first few feet of soil nearest the foundation, although historic use of the property could alter the size of a contamination area significantly.

If for instance, a painter had scraped the house 20 years ago on a windy day and let paint chips blow around the yard, the entire yard could be contaminated. Other contamination hot spots could be associated with other historic uses of the property such as previous structures that no longer exist or the burning of lead painted debris, automotive repairs, spills of leaded gasoline, previous industrial pollution, and other activities including shooting ranges and even previous agricultural property use. (lead arsenate was a commonly used agricultural pesticide)

**Safety Recommendation: For the highest level of safety for children, owners should take steps to reduce the risk of all soil lead hazards. Typical treatments to reduce the risk are simple and easy to implement in most cases.**

## Easy Treatments to Control Lead Hazards in Soil

To minimize the risk, a variety of options are available. Some are described below but remember that any type of treatment that either lowers the level of lead or minimizes the contact by children will generally help minimize the risk.

### Temporary Treatments (interim controls)

- Cover bare soil areas with bark mulch, gravel, or additional top soil
- Roto-till soil to lower surface concentration of lead (dampen to minimize dust)
- Plant grass or groundcover to eliminate bare soil spots

### Permanent Treatments (abatement)

- Soil Removal (note: soil removed must be disposed of according to VT hazardous waste rules)
- Durable coverings such as concrete, asphalt or paving stones

### Usage Controls

- Establish safe play areas away from contamination
- Install fences to limit access to contamination
- Plant bushes, shrubs, flower beds to limit access to contamination
- Install sidewalks or paving stones if walkways must cross contaminated areas

### Gardens

- Never plant edible vegetables in areas of contamination (flowers and ornamentals are OK)

### Children

- Never allow children to play in bare soil areas contaminated by lead
- Wash children's hands frequently

### Pets

- Do not place pet pens or tie-outs in areas of contamination
- Do not let pets dig near foundations

### Your Home

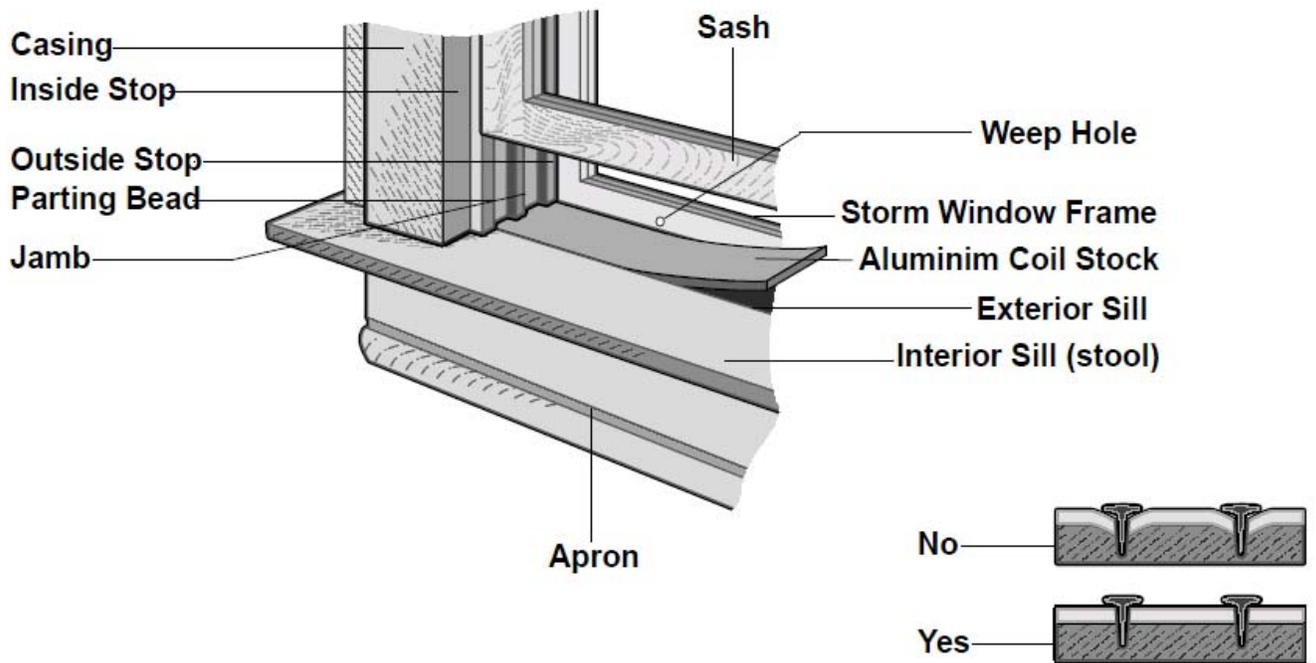
- Remove shoes at the door
- Regularly clean your floors to remove dust tracked in from outside
- Place walk-off type door mats or tack mats near entrances

## Window Well Liners (Inserts)

**Question:** What is a window well liner or insert?

**Answer:** A piece of thin sheet metal (usually aluminum coil stock) cut to fit the shape of a window well that is installed in the window well with caulking and aluminum nails for the purpose of making it smooth and cleanable. Smooth vinyl flashing without an embossed or stamped texture or pattern, or other types of sheet metal may be used such as aluminum flashing or sheet copper. Any vinyl flashing used for window well inserts must be suitable for exterior use and be resistant to degradation from exposure to ultraviolet light or made from “UV stabilized” vinyl. Steel or other ferrous or galvanized sheet metals are not suitable for window well inserts (they will rust or corrode). Vinyl siding, aluminum foil, or plastic sheeting is not appropriate either.

### Typical Window Details



**Avoid driving nails too hard to make dimples in the metal, which would provide a collection point for dirt and lead dust.**



## Essential Maintenance Practices Techniques

### Lining Window Wells (Inserts)

#### 1. Tools Required

- Coil Stock
- Ruler / Tape Measure / straight edge guide
- Tin Snips or Tin Shears / Utility Knife
- HEPA Vacuum
- Caulk / Caulking gun
- Putty knife
- Scraper
- Aluminum Nails
- Safety Glasses
- Garbage Bags (doubled)
- Paper Towels/ Disposable rags
- 6 mil Polyethylene sheeting (poly)
- General All-purpose Cleaner or Misting Bottle with Lead Specific Cleaning Solution
- OPTIONAL - drill/ bit smaller than nails
- OPTIONAL – pry bar / screw driver / pliers to remove nails or other hardware in well
- OPTIONAL – Wood Chisel to remove paint build up in corners, notching bottoms of parting beads to receive coil stock

#### 2. Set up Work Area

- (a) Work in only 1 room at a time. Post a warning sign at entrance to the room or put up barrier tape. Notify occupants that they are not allowed in the work area until after all work is complete and the area has been cleaned.
- (b) Move furniture at least five feet away from work area. Use judgement in deciding what to move. If the work performed will put contamination farther away than 5 feet, set up a larger area. Heavy items that cannot be easily moved may be covered with poly. Window curtains, shades, blinds, etc should be removed.
- (c) Turn off heating, air conditioning, and ventilation systems and tape poly or cardboard over air vents and baseboard heaters. Plastic should never be taped over electric baseboard heaters, electric and gas stoves, or any other high temperature heat source.
- (d) Tape poly to floor and extend five feet out from work area (all directions). Avoid using large amounts of tape on floors and avoid taping to painted surfaces because tape will remove more paint. Avoid walking on tape applied to floors as this will increase the tape adhesion and will increase the chance for damage to the floor finish when removed.
- (e) For worker protection, wear disposable coveralls, safety glasses, disposable gloves, and protective shoe covers or work shoes.
- (f) HEPA vacuum the window well to remove loose dust, paint chips, and debris.

- (g) Prepare the window well. All protruding nails, eyebolts, hooks or other hardware should be removed from the well. Excessive paint buildup in corners and old caulking should be removed. (score with knife or use chisel) Loose and flaking paint should be wet scraped. Well is properly prepped if new coil stock can be installed without buckling.
- (h) Additional work may be required as necessary depending on the type of window. If the window has vinyl or metal jamb liners, try to insert a putty knife under and move the jamb liner up enough to slide the new coil stock under. For windows with wood parting beads, either cut or chisel a notch in the parting bead to slide coil under, or optionally cut corresponding notch in new coil stock. Occasionally, unpainted wood parting beads may be moved up enough to allow coil stock to slide underneath.
- (i) HEPA vacuum again to remove all preparation work debris from the window well. Large debris that could clog the vacuum hose should be picked up with wet paper towels first
- (j) Wash with General All-purpose Cleaner or Lead Specific Cleaning Solution.
- (k) Measure the width and length of the well. Coil stock should fit tightly against existing storm windows. If no storm window is in place, measure to extend coil stock to within 1/8" to 1/4" of the lower edge of the well / sill area.

### **3. Coil Stock Installation**

- (a) Using tin snips or utility knife, cut coil stock to size.
- (b) Dry fit the coil stock to check for binding and flat fit, trim and adjust as necessary.
- (c) Apply a bead of caulking around the edges of the window well, then fill in the center of the window well with several additional beads of caulking. Always place caulking beads in the window well itself, never on the coil stock to be installed. (Caulking on the coil stock can be very messy to install.)
- (d) Place in well; inserting square edges under window stops or jamb liners.
- (e) Nail coil stock into place without dimpling metal. (Do not set nails). Nails set deeply in dimples result in places for dirt and dust to collect and are harder to clean. Use nails that are compatible with the material used to line the well. Aluminum nails should be used with aluminum coil stock. White paneling nails are made of steel and will rust and corrode very quickly in the presence of aluminum.
- (f) Caulk around the edges. Optional: You may not caulk on the edge closest to the storm so that the weep holes are not blocked. If there is no storm, caulk lower edge of coil stock to cover sharp edges.
- (g) If there are weep holes in the storm window, check to see that they are open. If blocked, drill to re-open.

**Important Reminder: Caulking the lower edge of the storm across the entire window or blocked weep holes in the storm will cause a water dam that could allow rain water to back up and leak into the wall or house and could cause rotting of the sill and well area.**

#### 4. Clean Up

- (a) Pick up larger debris with wet paper towels and dispose in doubled garbage bag.
- (b) HEPA vac all surfaces including poly in the work area.
- (c) HEPA vac clothes, work shoes or remove protective shoe covers and place on poly.
- (d) Fold up poly from all corners and place in doubled garbage bags.
- (e) Mist surfaces in work area with General All-purpose Cleaner or Lead Specific Cleaning solution. It is always preferable to apply cleaning solution with a sprayer to eliminate possible contamination of a bucket of solution. If a sprayer is not available, only dip clean disposable rags/paper towels in cleaning solution once. After a towel has touched a contaminated surface, do not dip into the cleaning solution a second time, as this will put lead into the cleaning solution.
- (f) Wipe surfaces with paper towels and dispose of in doubled garbage bags.
- (g) HEPA vac surfaces again.
- (h) Mop hard floors as outlined in the cleaning section of this manual.
- (i) Take gloves off and place in doubled garbage bag.
- (j) Change out of work clothes and wash up.



Remove all furniture and other items from the work area.



Lay plastic sheeting.



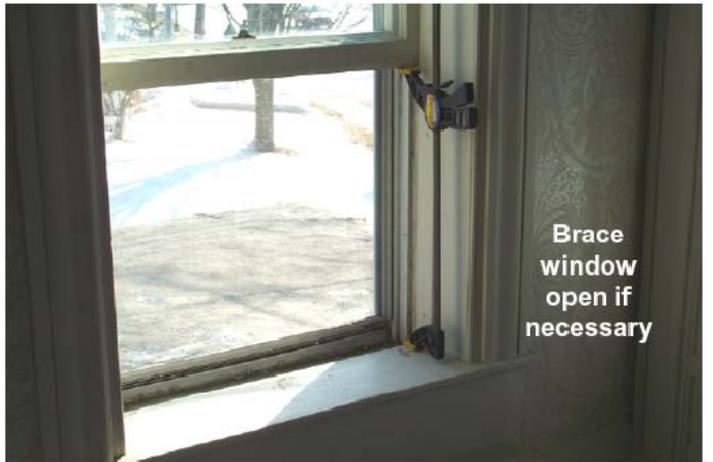
Restrict Access to Work Area.



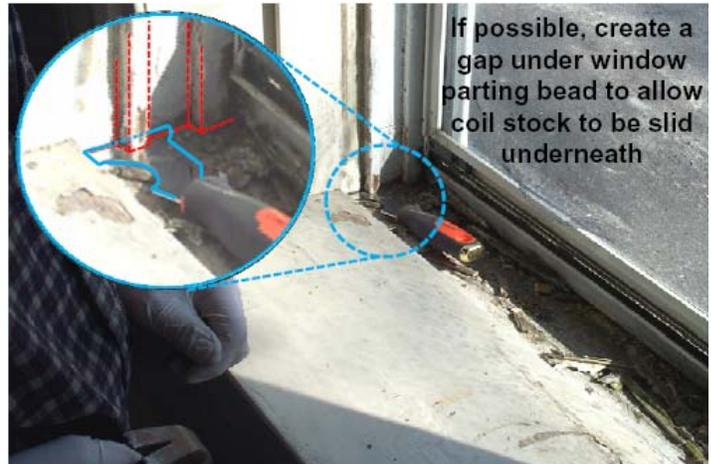
WARNING  
Do Not Enter  
EMP WORK AREA



Gather all supplies in work area.



Brace window open if necessary





Wipe up debris with wet disposable towel



Pick-up larger debris with wet disposable towel



Vacuum remaining debris



Measure well length and width

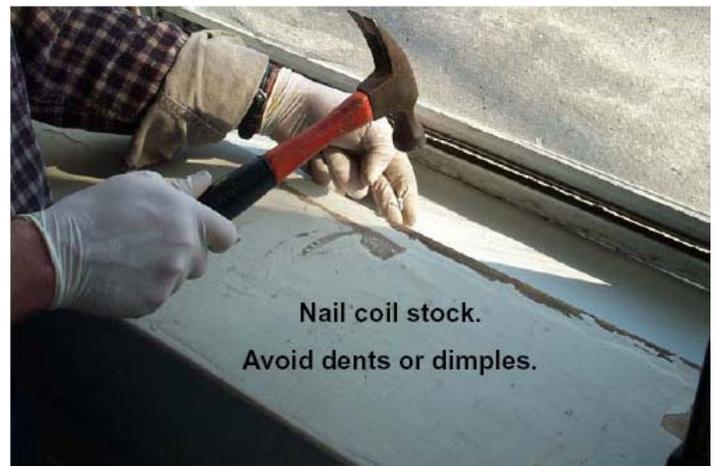


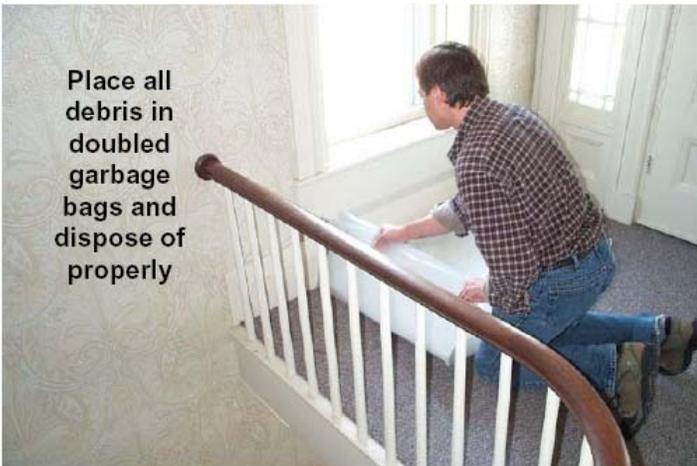
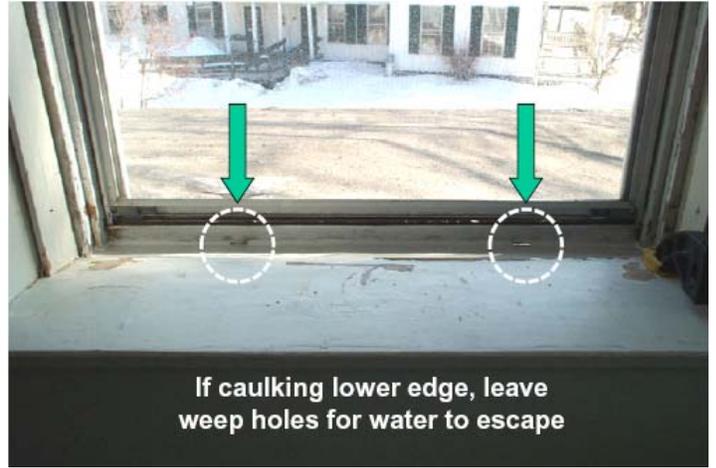
Measure coil stock



Coil stock may be cut by scoring with a utility knife, using a straight edge as a guide.  
**BE CAREFUL!**









## Essential Maintenance Practices Cleaning

Vermont’s EMP law requires that “specialized cleaning” be conducted after EMP work has been completed. The law also requires specialized cleaning of all horizontal surfaces except ceilings be completed at change-of-tenant and at least annually in interior common areas of multi-family buildings.

### What is “specialized” cleaning?

Specialized cleaning is using methods, products, and devices that have been shown to be effective at removing lead-contaminated dust. When done properly, specialized cleaning removes visible debris and dust particles too small to be seen by the naked eye.

### Why is specialized cleaning necessary?

Lead dust and chips cause lead poisoning. Over time lead dust is created by deteriorated or chalking lead based paint. Any work that disturbs lead-based paint also can produce dangerous quantities of leaded dust. Unless this dust is properly removed, a dwelling may be more hazardous after the work is completed than it was originally.

Stabilizing lead-based paint hazards in a dwelling will not make it safe unless excessive levels of leaded dust are also removed. This is true whether the dust was present before or generated by the work itself. Once deposited, lead dust is difficult to clean effectively. Ongoing and daily cleaning of lead dust during projects is an important lead-safe work practice. Ongoing and daily cleaning is also necessary to minimize worker exposures.

### Cleaning Requirements under Vermont’s Lead Law

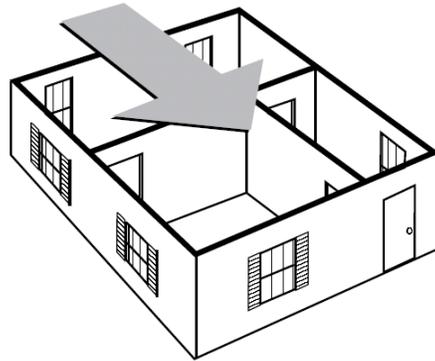
Activity	Cleaning Required
<b>Change of Tenant</b>	Floors, window wells, sills and all horizontal surfaces in unit (except ceilings)
<b>Annual Cleaning of Common Areas</b>	Floors, window wells, sills and all horizontal surfaces in unit (except ceilings)
<b>Work that disturbs interior paint</b>	All surfaces in work areas cleaned at least daily. Includes traffic areas used for access to work areas
<b>Work that disturbs exterior paint</b>	All surfaces in work areas cleaned at least daily. Visually inspect beyond work area for chips and debris

## Cleaning Techniques

Lead dust can stick tightly to surfaces, making it difficult to get off. Special cleaning techniques are needed to remove it. Rough or porous surfaces like concrete or worn wood can be particularly difficult to clean, so it is best to try to prevent them from getting contaminated when doing paint stabilization work.

**The key elements of cleaning to remove lead dust are:**

- Wet wiping or washing
- HEPA vacuuming
- Cleaning in one direction to avoid cross-contamination
- Visually checking for dust and debris



**Cleaning Tip: Cleaning rooms furthest from the entrance first and working your way towards the entrance helps prevent re-contaminating rooms that were just cleaned**

**To avoid spreading contamination you should never:**

- Dry sweep
- Use a shop vacuum or a vacuum without a HEPA filter
- Change vacuum cleaner bags inside.
- Use a bucket and sponge or reusable rags for cleaning

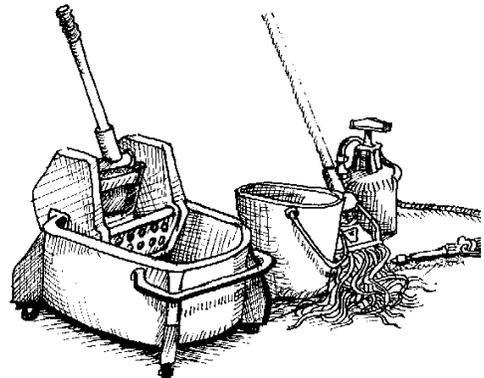
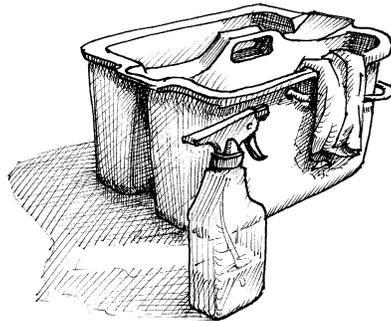


**Don't Dry Sweep**

**What supplies are needed for specialized cleaning?**

Different surfaces require different cleaning methods, but most cleaning jobs can be accomplished with combinations of the following:

- Cleaning Solution
- HEPA Vacuum
- Misting Bottle
- Disposable Gloves
- Mop Buckets
- String Mops
- Paper Towels
- Garbage Bags



### Is tri-sodium phosphate (TSP) necessary for my cleaning solution?

TSP is no longer recommended as the best product to remove lead dust. **Newer research suggests that any detergent that is effective at dissolving dirt is also effective in cleaning lead dust, which makes the use of TSP cleaning solutions less necessary.** TSP has been determined to be a toxic substance and contributes to water pollution. Instead of TSP use a general all-purpose cleaning solution. As of 2010, Vermont along with 15 other States banned the sale of any detergent containing more than a trace amount of phosphorus.

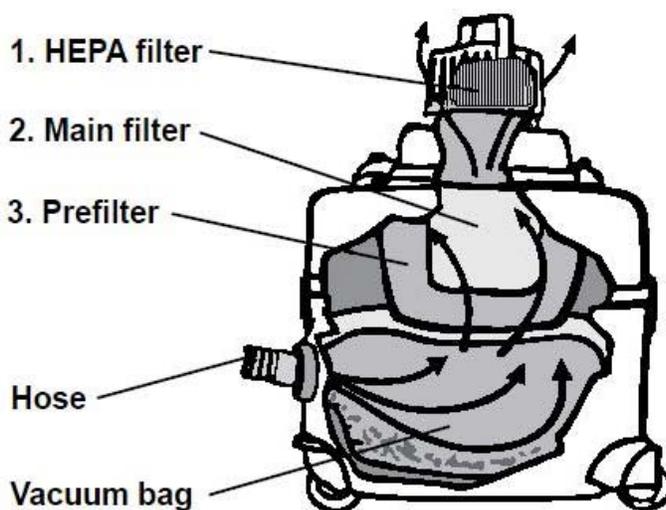
### What is a HEPA vacuum?

HEPA (High-Efficiency Particulate Air) vacuums differ from conventional vacuums in that they contain high-efficiency filters that are capable of trapping extremely small, micron-sized particles. These filters can remove particles of 0.3 microns or greater from air at 99.97 percent efficiency or greater. Use of a HEPA vacuum is required if you are going to vacuum any lead-containing dust and debris.

Normal household vacuums will release small particles of lead into the air. A contaminated household vacuum will continue to spew small particles of lead every time it is used. Users should also be careful of cheaper vacuums that have HEPA filter add-ons. A good HEPA vacuum must filter 100% of the exhaust air.

As a rule of thumb, if you feel air leaks from the vacuum while it is running that are not associated with the exhaust, it could be releasing lead particles into the air. Better-quality HEPA vacuums usually will have housing parts with gaskets or soft rubber seals to prevent air leakage and multiple pre-filters. Pre-filters in a vacuum will help prevent dirt from directly impacting and clogging the HEPA filter, which are usually expensive to replace. You should also remember to never get a HEPA filter wet because it destroys the filter's ability to screen the smallest particles.

**Note: A fact sheet with additional information on HEPA vacuums is included in the appendix**



### Parts of a HEPA-vacuum

Most HEPA-vacuums have three filters: HEPA filter, main filter, and pre-filter. Debris gets sucked in through the hose into the vacuum bag. The air and dust get filtered through the pre-filter, the main filter, and the HEPA filter. The HEPA filter captures the lead dust before the air is released into the work area again.

## Cleaning Floors- Carpet

1. HEPA vacuum floors using corner tool in corners, cracks of trim, and edges of carpet. Use a vacuum with a carpet tool or a vibrating or power carpet head.
2. Important: Vacuum carpets **very slowly**. Allow the vacuum time to bring dust from the deepest parts of the carpet.
3. Vacuum the room in one direction for the first pass, then vacuum the room in a direction that is 90 degrees from the original direction for the second pass.

## Cleaning Floors – Hard Surfaces

1. HEPA vacuum floors using corner tool in corners, cracks of trim, and between floor boards.
2. Use three buckets, one for cleaning solution, one for rinsing, and one for wringing.
3. Put mop into bucket of cleaning solution. Wring excess into empty bucket.
4. Scrub a small section of floor with mop and then put mop into rinse bucket. Wring excess into empty bucket.
5. Repeat items 3 and 4 until entire floor is clean
6. If cleaning after interior work, wipe the floor dry with paper towels.
7. Repeat above process using clean water rather than detergent. When cleaning up a work site, use a new mop head for rinse stage.
8. Dump mop water down the toilet. Putting mop water down the toilet avoids potential contamination of sinks, food preparation areas, surfaces around sinks, or soil.



Wet mop floors using separate soap and rinse buckets  
Alternately, spray cleaning solution onto floor and use  
a rinse bucket or wipe dry with paper towels

### **Change of Tenant Cleaning / Annual Cleaning of Interior Common Areas**

This cleaning is for all horizontal surfaces (except the ceiling), working from top to bottom and ending with the hard floor or carpet. Before doing this cleaning, perform a visual inspection and stabilize paint where necessary.

#### **Supplies**

- All-purpose Cleaner
- HEPA Vacuum
- Disposable Gloves
- Mop Buckets
- String Mops
- Paper Towels
- Garbage Bags (doubled)

1. HEPA vacuum all horizontal surfaces **very slowly**. Vacuum all ledges, sills, stools, molding tops, or other surfaces where dust collects. Work from top to bottom.
2. Mist surface with all-purpose cleaner. Scrub surface with paper towel. Lead needs scrubbing, not just wiping. Work from top to bottom.
3. Repeat process until there is no visible dirt on paper towels. Do not re-dip dirty towels into detergent, you will contaminate the solution.
4. Wipe one last time with damp paper towel and clean rinse water.
5. Throw dirty towels away in doubled plastic garbage bags.

The last horizontal surface to clean is the carpet or floor, using the methods described in the previous section. Please note that more frequent cleaning of common areas is recommended.

## **Cleaning After Interior Work**

Whenever lead paint is disturbed inside, special cleaning techniques must be used to keep the interior lead safe. Because lead dust is difficult to remove, it is important to avoid creating and spreading dust while working on a project. Poor containment of lead (for example, not using poly sheeting) or poor work practices (for example, dry scraping of paint) can result in more difficult cleaning jobs.

### **Supplies**

- All-purpose Cleaner
- HEPA Vacuum
- Disposable Gloves
- Mop Buckets
- String Mops
- Paper Towels
- Garbage Bags (doubled)

1. For heavy contamination, pick up any large paint chips with damp paper towel. Mist then push dust and debris into dustpan.
2. Mist sheeting before folding. Fold dirty side inward.
3. Tape shut to seal in dirty side.
4. Dispose of protective sheeting in doubled plastic bag.
5. HEPA vac work area from high to low.
6. Start with walls, tops of doors, window troughs. Remember to do all surfaces and horizontal ledges, for example, tops of window frames and molding.
7. HEPA vac at least two feet beyond contained area.
8. Wet clean from high to low. Mist surface with all-purpose cleaner or dampen paper towel in detergent solution. Scrub surface with paper towel.
9. Repeat process until there is no visible dirt on paper towels. Do not re-dip dirty towels into detergent, you will contaminate the solution.
10. Wipe one last time with damp paper towel and clean rinse water.
11. Clean the floor last.
12. Check your work visually.

### Interior Checking Your Work

Always conduct a visual inspection after cleaning. Look for paint chips, dust, debris, and deteriorated paint. Focus on child access areas such as floors, window troughs, window sills, but remember to check other horizontal surfaces such as tops of baseboards and door and window frames.



## **Cleaning After Exterior Work**

Whenever lead paint is disturbed outside, special cleaning techniques must be used to keep the work area lead safe.

### **Supplies**

- All-purpose Cleaner
  - HEPA Vacuum
  - Disposable Gloves
  - Paper Towels
  - Garbage Bags (doubled)
1. Visually inspect work area. Look for dust, debris, and paint chips.
  2. Pick up large debris with wet paper towels or wet sweep and dispose in doubled garbage bags.
  3. HEPA vacuum flat surfaces. Focus on child accessible areas such as: window sills, bare soil and ground, and play areas. (See information on page 46 for information on how to vacuum soil or grassy areas.)
  4. Inspect and clean porches, decks, and patios.
  5. Don't forget to check any roofs and gutters where paint chips could have fallen.
  6. Mist poly and fold up from all corners so that the dirty side is folded on itself.
  7. Dispose of debris in doubled plastic garbage bags and make sure they are sealed and stored in an area where they are inaccessible to children.

### **Exterior Checking your Work**

Always conduct a visual inspection after any cleaning. Focus on child accessible areas such as bare soil or ground, window sills, exterior porches, and play areas. Collect and dispose all paint chips, dust, debris, and deteriorated paint. Inspect beyond work area and repeat clean-up steps if necessary.

## EMP's and Child Care Facilities

The law states that Essential Maintenance Practices shall be performed at child care facilities prior to initial licensure and at least annually thereafter in the space defined as licensed space. There is also a separate Compliance Statement for child care facilities to submit at least every 365 days to the Vermont Department of Health.

Although not required by the law, it is highly recommended that child care facilities implement more extensive cleaning practices and take steps to minimize risk like those described below. Because children are more likely to ingest lead dust that may be produced from deteriorated paint, and from friction or impact of painted surfaces, regular daily cleaning of surfaces where children play and where dust collects should be part of every child care center's routine.

### Minimizing Risk

In addition to Essential Maintenance practices, other steps can be taken to reduce the risk to children and should include most or all the following:

#### Play areas

Play areas should be established on less porous or easier to clean surfaces. As an example, establishing a play area on a vinyl floor that is easy to clean is much safer than having a play area on an unsealed porous wood floor that is very difficult to clean. Putting an area rug over a lead painted floor immediately makes that surface safer.

#### Interior hazards

Limiting access to areas that are likely to contain lead dust (such as child accessible window wells) also reduces the chance that children might ingest lead. This can be as simple as keeping a window closed, or arranging furniture in a room so children can't easily touch the window(s).

#### Exterior hazards

Limit exterior dust tracked in by removing shoes, wiping feet, etc. When children are outside, do not let them play in any area where there is bare soil, especially in areas next to the building foundation, or in any area where paint chips are visible on the ground. The law requires all visible paint chips are to be picked up.

#### Hand Washing

Frequent hand and face washing and cleaning of toys is another way to reduce the risk to children by removing lead dust before it can be ingested. Since children tend to put their hands and toys in their mouth and often eat with their hands ("finger foods"), swallowing lead dust is the most common exposure route. Wash children's hands and face frequently, especially before meals, snacks, and bedtime. Also wash toys and pacifiers frequently.



#### Toys

Recently, everyone has become aware of lead paint problems with many imported toys. New recalls are being announced almost daily. It is a good practice to check the Consumer Product Safety Commission website for the most up to date recall notices. At the same time, please remember that in Vermont, most children are poisoned by lead-based paint in housing, not by lead in toys.

## **Diet and Nutrition**

It is also important to remember that studies have shown that children's absorption of lead decreases when they are fed a healthy diet with foods containing calcium and iron.

**Remember: Anything that limits a child's access to a lead hazard lowers their risk of ingesting lead. This allows you to be creative in your methods, but the method of limiting access should take into account children's normal behavior. Children are inquisitive by nature and do not understand the risk. A barrier that is easily overcome by a child or an instruction that is age inappropriate (like a warning sign) will not lower the risk.**

## **Cleaning**

The Vermont EMP law requires cleaning of window wells and sills and cleaning after paint is disturbed, but the primary focus of these requirements was to keep children safe that occupy rental housing. A child care provider frequently experiences an environment with more children at the most susceptible ages for extended periods of time than what is typical for most rental housing. For the highest level of safety, a more aggressive approach to cleaning is recommended for child care providers. This should include regular frequent cleaning of other surfaces where lead dust is likely to collect and where children play. While the amount of cleaning required can vary from building to building, the following techniques and schedules should offer a much higher level of safety for children by eliminating lead dust as it collects on various surfaces:

### **General Cleaning Techniques for Childcare Facilities**

Lead dust may be cleaned by HEPA vacuuming, mopping, or wet-wiping floors and other surfaces where dust may collect in child occupied areas. (Non-HEPA vacuum cleaners and brooms may spread dust to other areas.) Any all-purpose cleaning product will work and is best used in a spray bottle for misting surfaces. Using paper towels to wipe surfaces after misting with the cleaning solution will put the contamination on something that is thrown away. A sponge or rag and a bucket of cleaning solution will just spread contamination around. Remember to keep the cleaning solution out of the reach of children and that some cleaning agents (especially bleach or ammonia) can cause asthmatic reactions in some children. For detailed cleaning techniques, refer to pages 61-68 of this manual.

### **Immediate Cleaning**

Always clean any visible paint chips in a child-occupied area immediately. Wash dropped pacifiers and teething rings before allowing children to use them again.

### **Daily Cleaning**

Play area floors, toys, toy boxes, pacifiers, tables, and food preparation areas.

### **Weekly Cleaning**

Windows, window wells (warm weather), tops of baseboards, non-play area floors, any other trim detail or furniture where dust collects.

**Reminder: All children should be tested for blood lead levels at ages 1 and 2 regardless of whether they live in pre-1978 housing or not.**

### **Disposal of Lead-Containing Paint Waste and Debris**

The Vermont Department of Environmental Conservation (DEC) regulates all Lead-Containing Paint (LCP) wastes in the State of Vermont as either solid or hazardous type waste. The EPA has issued policy guidance that exempted household LCP waste from hazardous waste regulations and the Vermont DEC has also adopted a similar policy. Essentially, any LCP waste generated in households (including apartments) by either homeowners or contractors (including EMP contractors and abatement contractors) is classified as “household waste” which means it may be disposed of without hazardous waste restrictions and requirements.

Although LCP from households is not regulated as hazardous waste, other types of LCP waste generated as a result of business activity may be regulated. For additional information, a DEC fact sheet is included in the following section.

Because LCP waste still can cause the spread of lead contamination, all LCP waste should be handled using the following guidelines:

- Always store LCP waste away from children and animals.
- Always collect LCP waste in heavy plastic bags (double bagged) or wrap in plastic.
- When possible, store larger architectural LCP components in covered containers such as roll-off dumpsters until ready for disposal.
- When moving LCP components to dumpsters, lay a pathway of plastic to collect paint chips that may fall off the components while being moved.
- Transport LCP waste from work site in covered containers to approved solid waste facilities.
- Use of LCP waste as mulch is prohibited.
- Burning of LCP waste is prohibited.

**Contact your local Solid Waste Management District for more information about where and how to dispose of LCP waste.**

## Managing Lead-Containing Paint Waste

### Background

Lead poisoning in children is one of the most common and preventable pediatric environmental health problems in the United States today, and lead-containing paint (LCP) has proven to be a primary source of exposure. Many buildings (both public and private), especially those built before 1978, contain LCP on interior and exterior walls, window sills, and other surfaces accessible to children. Although lead is found in other materials commonly used in and around households and businesses (e.g., flashing, pipes, and lead-acid batteries), the primary focus of this fact sheet is LCP and how to properly manage LCP waste.

### How are LCP activities and LCP wastes regulated?

The Vermont Department of Health (DoH), which is the state's lead agency for public health policy and advocacy, maintains a Lead Surveillance Program that can be reached at (802) 865-7786 (or toll-free within Vermont at 1-800-439-8550) for information about the health effects of lead, or to report high lead levels. A "Lead Resource Guide" is also available on-line at:

<http://healthvermont.gov/enviro/lead/lead.aspx>

The Vermont DoH maintains Lead Control Regulations which cover LCP activities such as LCP removal or "abatement."

The Vermont Department of Environmental Conservation (DEC) regulates the disposal of LCP wastes as either solid or hazardous wastes. LCP waste can be generated when a building undergoes routine maintenance, remodeling, lead abatement activity, or demolition. Examples of LCP wastes include painted architectural components (e.g., painted doors, window frames, and woodwork), chips, dust, and sludge. The regulatory requirements that apply to LCP wastes are determined based on the source of the waste, and the quantity of lead in the paint. As discussed below, LCP wastes from households and residences are only subject to limited requirements while LCP wastes from businesses, or that are removed from public and commercial buildings are potentially subject to regulation as hazardous waste.

Painted architectural components that are salvaged and reused are not considered waste and therefore are not regulated as solid or hazardous waste. Nonetheless, anyone handling these items should determine if the paint contains lead, take appropriate safety precautions, and notify any subsequent purchaser of the presence of LCP.

Continued ►

Section III EMP Practices and Techniques - Waste Disposal  
**Environmental Fact Sheet: Managing Lead-Containing Paint Waste**

### How is LCP waste from households regulated?

Any LCP waste generated by a homeowner or contractor working at a household (e.g., general, painting, or lead abatement contractors) is classified as "household waste" and therefore is exempt from regulation under the Vermont Hazardous Waste Management Regulations (VHWMR). By definition, household waste is any waste material derived from a household (e.g., single and multiple residences, apartment buildings, college dormitories, hotels and motels, and public housing units) provided the waste is not generated through a business activity conducted within the household. Although LCP waste from a household is excluded from regulation as hazardous waste, it still must be disposed of properly.

### How can LCP waste from households be managed and disposed?

The DEC encourages homeowners and contractors alike to use the following Best Management Practices when managing LCP wastes:

- ✓ Store LCP waste in a safe place away from children.
- ✓ Collect LCP waste in heavy plastic trash bags for disposal.
- ✓ Any processing of LCP waste (e.g., chipping, grinding, shredding) in the work area should be conducted in an enclosure, and with appropriate worker safety protection, to contain any fugitive lead dust emissions.
- ✓ Use of LCP waste as mulch is not allowed.
- ✓ Contact your local municipality or Solid Waste Management District for information about where LCP waste can be disposed.

In general, there are two ways to dispose of household LCP waste:

1. LCP wastes that fall in the category of painted architectural components can be disposed of at a certified municipal solid waste or construction and demolition waste landfill. Contact the DEC's Solid Waste Program at (802) 241-3888 for information about solid waste landfills that can accept LCP waste (and for potential reuse opportunities).
2. Although LCP waste such as chips, dust, caustic paste waste, and other sludges (i.e., lead abatement wastes) can also be disposed of in a permitted solid waste landfill, the DEC recommends that these wastes be collected in secure containers like empty paint cans or heavy plastic bags, and disposed of through a local household hazardous waste collection event. To find out when a collection event will be held near you, contact your municipality or Solid Waste Management District. A list of Vermont Solid Waste Districts is provided on-line at:

<http://www.anr.state.vt.us/dec/wastediv/solid/swmdlist.htm>

Continued ►

## Environmental Fact Sheet: Managing Lead-Containing Paint Waste

### How can LCP waste from businesses be managed and disposed?

Some LCP wastes generated as a result of business activity, or that are removed from non-residential public or commercial buildings, are subject to regulation under the VHWMR (i.e., they are not excluded as a "household waste"). A public building is any building used by the general public, such as a school, store, or hospital. A commercial building is any building not intended for occupancy by the public, such as an office complex, industrial building, or factory.

Since most painted architectural components (not paint chips and dust from abatement activities) do not contain enough lead to be regulated as hazardous waste, it is both the U.S. Environmental Protection Agency's and Vermont DEC's policy to allow these wastes to be disposed of at a certified municipal solid waste or construction and demolition waste landfill even if they are generated by a business.

If a business that generates lead abatement waste (such as dust, paint chips, and sludges) cannot, based on knowledge of the waste, rule out the possibility that lead is present in the waste above regulatory limits, then the business must test a representative sample of the waste for lead using the Toxicity Characteristic Leaching Procedure (TCLP). If the concentration of lead is found to exceed the 5.0 milligrams/liter TCLP limit, the waste exhibits the hazardous waste characteristic of toxicity for lead and is subject to regulation as hazardous waste.

LCP wastes generated from the routine maintenance, renovation, construction, or demolition of non-residential structures, such as bridges, water towers, or tanks (e.g., sandblast grit) also must be evaluated to determine if they are subject to regulation as hazardous waste. Depending on the makeup of the structure, other metals, such as chromium, cadmium, and arsenic, may need to be included in the TCLP analysis.

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### ***For more information contact:***

VTDEC-Waste Management Division  
103 South Main Street, West Bldg.  
Waterbury VT 05671-0404  
802-241-3888

VTDEC-Environmental Assistance Office  
103 South Main Street, Cannery Bldg.  
Waterbury VT 05671-4911  
1-800-974-9559

## **Record Keeping, Compliance Statements, and Notification**

Keeping detailed records of activities regarding lead paint is more than just a good idea, it is required by law. Performing EMPs is considered a reasonable standard of care for lead paint in a property, but there must be proof that EMPs were in fact completed. This is why the EMP law requires owners to attest to their activities by submitting a “Compliance Statement”. In essence, the owner is establishing a formal record of what EMP activities have taken place at a property. This record can be used as evidence should legal proceedings occur because of lead poisoning.

Although the EMP law requires that only the Compliance Statement be submitted, it is a good idea to keep records of any activity regarding lead paint. This would include (but is not limited to) visual inspection forms, receipts for materials and contractors, copies of inspection reports, copies of notifications, etc. This can be best accomplished by establishing a 3-ring binder for each property and adding information as it is collected.

The Federal disclosure rule also applies to records of lead-based paint activities. The Federal disclosure rule requires all records of lead-based paint activities be disclosed to buyers of property or current or prospective tenants.

### **EMP Compliance Statement**

The Compliance Statement must be filed every 365 days with the Vermont Department of Health unless the property is found to be lead free by a Vermont-licensed lead paint inspector or lead risk assessor who has conducted a comprehensive paint inspection. This inspection must be done using an X-Ray Fluorescence (XRF) lead-based paint analyzer or paint chip analysis. Vermont law does not recognize the use of swab test kits for paint testing.

The Compliance Statement allows the owner of a residential rental property or child care facility to attest that they have completed the requirements of the EMP law. Compliance Statements are completed and filed online.

In the online system, property owners and property managers have separate personal user accounts but only property owners can enter or establish their rental properties or child care facilities in the system.

Once an owner has entered a particular property into the system and assigned a property manager to the property, the property manager has access to file a Compliance Statement for that property. Please note: The property manager must have created his or her own personal user account in the system before a property owner can assign him or her to file Compliance Statements for the property.

The law requires that copies of Compliance Statements must be given to tenants and to the property insurance carrier. The online system provides a way to either email the completed Compliance Statement to tenants and the insurance carrier or to print copies for tenants and the insurance carrier. For child care facilities a copy of the Compliance Statement must also be filed with the Department for Children and Families.

In the appendix, you can see screenshots of sample Compliance Statements from the online system for both an imaginary rental property and a child care facility.

## Establishing Your Personal User Account on the Online EMP Service

After you go to the online EMP Compliance Statement Service website, there are five easy steps to establish your personal user account. The five steps are listed below. You can also find screen shots of these steps in the appendix of this manual.

Go to: <https://secure.vermont.gov/VDH/emp/>

### Create your personal user account

1. Click on **“Sign Up for an Account Today”**
2. Choose **“Property Owner”** or **“Property Manager”**
3. Fill in required information, write down your password, and click submit.
4. Your username will be sent to your email address.
5. Log in to the Compliance Service within 48 hours to confirm your account.

Once you have established your personal user account, the next step for property owners is to establish their property or properties in their personal account. Please note that **only property owners can establish properties.**

To establish a property, the property owner clicks “Your Properties” on the left navigation bar and then follows the instructions provided on the screen.

A property owner can add a property manager(s) to his or her property(s). However, a property manager must have his or her own personal user account on the online system in order to be assigned as a manager.

**Questions? [EmpCompliance@state.vt.us](mailto:EmpCompliance@state.vt.us) or 802-865-7786**

## Notice to Occupants – Poster

The EMP law requires owners of rental property or buildings containing child care facilities to post, in a prominent location, a notice to occupants emphasizing the importance of promptly reporting deteriorated paint to the owner or owner’s agent. Contact information for the owner or owner’s agent must be included also. This notice must be posted in each apartment, or placed prominently in a common area used by all tenants. A copy of this poster is included in the appendix of this manual.



## Poster Placement Tip: Inside Kitchen Cabinet Doors

### Information to Tenants and Owners of Childcare Facilities

The EMP law requires that written lead-based paint hazard information be given to current and prospective tenants and current and prospective owners of child-care facilities. This information must be approved by the Vermont Department of Health (VDH). VDH has approved the EPA pamphlet “Protect Your Family From Lead in Your Home” for this purpose. (EPA document 747-K-99-001). A copy of this pamphlet is included in the appendix of this manual. In addition to this pamphlet, copies of each compliance statement must be given to tenants.

### Federal Disclosure

All information generated as a result of doing EMPs is considered a significant and relevant record of lead-based paint activities at your property. Federal law requires all owners of pre-1978 properties to disclose all information regarding lead-based paint under the following circumstances:

- Owners selling their properties must provide all records to buyers.
- Owners leasing or renting their properties must provide all records to tenants.
- Owners leasing or renting their properties must also make all records available to prospective tenants which means you must disclose these records to all parties that look at the property even if you do not sign a lease with them.
  - Owners must keep records of who received disclosure information for at least 3 years.

### Disclosure Lead Warning Statement – Leases of Target Housing

Each contract to lease target housing shall include, as an attachment or within the contract, in the language of the contract (e.g., English, Spanish) a lead warning statement with the following language:

“Housing built before 1978 may contain lead-based paint. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. Lead exposure is especially harmful to young children and pregnant women. Before renting pre-1978 housing, lessors must disclose the presence of lead-based paint and/or lead-based paint hazards in the dwelling. Lessees must also receive a federally approved pamphlet on lead poisoning prevention.”

**Note: Disclosure forms are included in the appendix of this manual to assist you in complying with the federal law. A copy of the EPA pamphlet “Protect Your Family From Lead in Your Home” is also included as the “federally approved pamphlet”.**



## **Real Estate Transactions and the Vermont Lead Law**

The Vermont Lead Law was passed in 1996 and updated in 2008 (18 VSA Chapter 38). New provisions of the law, 18 V.S.A. § 1767, effective July 1, 2008, require sellers to provide lead disclosure information and educational materials approved by the Vermont Department of Health during real estate transactions for all pre-1978 housing, whether owner-occupied or rental.

Sellers of rental properties must disclose whether the property is in compliance with the lead law and whether a current EMP Compliance Statement has been filed with the Vermont Department of Health. In addition, sellers of rental properties must disclose if the property is subject to any Assurance of Discontinuance, Administrative Order or Court Order and whether the terms of such Assurance or Order have been completed.

Along with these disclosures, sellers of rental properties must also provide buyers with certain lead educational information, including a fact sheet that summarizes EMP requirements for the buyers. A buyer of a rental property that is not currently in compliance with the EMP requirements has 60 days after closing to bring the property into compliance, unless an extension of time is granted by the Commissioner of Health. Failure to comply with this requirement will result in a mandatory civil penalty.

All materials required to be provided by sellers during real estate transactions are available for download from the Department of Health website at:

<http://healthvermont.gov/enviro/lead/RealEstateTransactions.aspx#leadlaw>

# **Essential Maintenance Practices**

## **Appendix Materials**



## Regulatory Levels for Lead

(Not a Complete Listing of all Regulatory Levels)

Type	Agency	Standard or Level
<b>Lead Paint</b>	<b>HUD</b>	1.0 milligrams of lead per square centimeter or higher, or if it is greater than .5% lead by weight, or if it contains greater than 5,000 Parts Per Million of lead.
	<b>CPSC</b>	Lead-free Paint Definition: (Consumer Product Safety Act, CPSA 15 USC 2057-8, 1978) <0.06% lead by weight or less than 600 PPM <b>now lowered to 0.009% or &lt;90 PPM</b>
<b>Dust</b>	<b>HUD EPA</b>	Clearance Levels:( $\mu\text{g}/\text{ft}^2$ = micrograms per square foot)  40 $\mu\text{g}/\text{ft}^2$ floors 250 $\mu\text{g}/\text{ft}^2$ window sills 400 $\mu\text{g}/\text{ft}^2$ window wells
<b>Soil</b>	<b>HUD EPA</b>	<u>Bare</u> Soil Hazard Levels (ppm = parts per million): < 400 ppm – Not hazardous 400 – 1200 ppm – Hazardous for contact by children 1200-5000 ppm – Hazardous > 5000 ppm – Extremely Hazardous (Requires Abatement)
<b>Water</b>	<b>EPA</b>	Public Water Supply Action Level: 15 parts per billion
<b>Occupational Exposure</b>	<b>OSHA</b>	Action Level (AL) Airborne Dust: 30 $\mu\text{g}$ /cubic meter per 8hr workday (Time Weighted Average )  Permissible Exposure Limit (PEL) Airborne Dust: 50 $\mu\text{g}$ / cubic meter per 8hr workday (Time Weighted Average)
<b>Blood</b>	<b>CDC</b>	5 micrograms / deciliter or greater
	<b>VT</b>	5 micrograms / deciliter or greater
<b>Waste</b>	<b>HUD EPA</b>	Toxicity Characteristic Leachate Procedure (TCLP) > 5 parts per million considered hazardous waste

## Comparison of Vermont's EMP law and EPA Renovation, Repair, & Painting Rule

Vermont EMP Law	<b>Bold items are more restrictive</b>	EPA Renovation, Repair, & Painting Rule
<ul style="list-style-type: none"> <li>* Pre-1978 rental housing and child care facilities must complete EMP's</li> <li>* LSWP required in pre-1978 owner occupied</li> </ul>	Applicability	<b>Pre-1978 housing and child occupied facilities, including schools, etc.</b>
<b>LSWP required if more than 1 SF of paint to be disturbed, either interior or exterior</b>	Threshold/ Trigger	LSWP required if more than 6 SF disturbed interior; 20 SF disturbed exterior
EMP certification only (no cost)	License	<b>Renovation Firms licensed by EPA (\$300)</b>
<ul style="list-style-type: none"> <li>* 4-hour EMP Training - one time (<i>generally free</i>)</li> <li>* 1 trained supervisor per job site</li> </ul>	Training	<ul style="list-style-type: none"> <li>* <b>8-hour EPA initial training</b></li> <li>* <b>4-hour EPA refresher every 5 yrs.</b></li> <li>* <b>1 trained supervisor per job site</b></li> </ul>
Not required	Pre-Work Notification	<ul style="list-style-type: none"> <li>* <b>Provide owners/occupants with Renovate Right pamphlet, info about work to be completed.</b></li> <li>* <b>Keep records of notification</b></li> <li>* <b>Requirement in place since 1998</b></li> </ul>
<ul style="list-style-type: none"> <li>* Copies of EMP Compliance Statements provided to tenants when submitted to VDH</li> <li>* Protect Your Family pamphlet provided to tenants at lease-up and with compliance statements annually</li> <li>* State specific requirements for sale or transfer of pre-1978 residential property</li> </ul>	Disclosure	<ul style="list-style-type: none"> <li>* Since 1996, owners required to disclose all records of LBP activities to potential buyers and/or tenants.</li> <li>* Standard form, pamphlet provided to buyers/tenants.</li> <li>* Keep all records of disclosure activities.</li> </ul>
<ul style="list-style-type: none"> <li>* <b>Visual inspections for paint deterioration</b></li> <li>* <b>Prompt repairs using LSWP</b></li> <li>* <b>Window well inserts</b></li> <li>* <b>Poster to report problems</b></li> <li>* <b>Specialized cleaning at turnover</b></li> <li>* <b>Specialized cleaning after work</b></li> <li>* <b>Removal of exterior paint chips</b></li> </ul>	Property Maintenance	Not required  LSWP by licensed renovator only when paint is disturbed or repaired over threshold amount. ( <i>see threshold above</i> )
<p style="text-align: center;"><i>In addition to EPA prohibited practices:</i></p> <ul style="list-style-type: none"> <li>* <b>dry scraping / dry sanding</b></li> <li>* <b>all machine sanding or grinding</b></li> <li>* <b>uncontained power washing</b></li> <li>* <b>strippers containing methylene chloride</b></li> </ul>	Prohibited Practices	<ul style="list-style-type: none"> <li>* open flame burning/torching</li> <li>* power sanding or grinding without HEPA exhaust controls</li> <li>* heat guns over 1100 degrees</li> </ul>
<ul style="list-style-type: none"> <li>* Visual check after all cleaning</li> <li>* No visible dust and debris</li> </ul>	Clearance	<ul style="list-style-type: none"> <li>* <b>EPA cleaning verification procedure</b></li> <li>* <b>3rd party dust clearance &amp; lab analysis in some situations</b></li> </ul>
<ul style="list-style-type: none"> <li>* Completed EMP Compliance Statements provided to residents when submitted</li> </ul>	Post-Work Notification	<ul style="list-style-type: none"> <li>* <b>Provide records of activities &amp; cleaning verification to owner and occupants</b></li> </ul>
<ul style="list-style-type: none"> <li>* Compliance Statements</li> <li>* Records of providing Compliance Statements and pamphlets to tenants, others.</li> <li>* Records of inspections/work done</li> </ul>	Recordkeeping	<ul style="list-style-type: none"> <li>* Renovation firms must maintain all records, sign-offs, etc. for 3 years after project completion.</li> <li>* Property owners must keep all records and disclose them to appropriate parties as noted above.</li> </ul>

## Comparison of Vermont’s EMP Law and HUD Lead-Safe Housing Regulation

Pre-1978 Residential Rental	Vermont Lead Paint Law <sup>4</sup>	Federal Lead Safe Housing Regulation <sup>5</sup>
Visual Inspection for deteriorated paint	Annually, and at unit turnover	Same
Distribute Pamphlet “Protect Your Family From Lead in Your Home” to occupants	Required	Required if more than 2 square feet of paint disturbed
Repairs to paint must be completed by properly trained workers using lead safe practices	Workers may be supervised by someone who has taken this EMP class	All Workers must be trained (Federal law is more restrictive)
Maximum amount of deterioration allowed before required to fix	1 square foot interior 1 square foot exterior	2 square feet interior 20 square feet exterior (VT law is more restrictive)
Window Wells must be lined	Required	Not Required
Specialized Cleaning <sup>3</sup>	At the conclusion of any work that disturbs paint	Required if more than 2 square feet interior 20 square feet exterior paint is repaired or disturbed (VT law is more restrictive)
Annual Cleaning <sup>3</sup>	Common Areas	Not Required
Turnover Cleaning <sup>3</sup>	Required	Required
Dust Clearance Testing	Not Required	Required if more than 2 square feet interior 20 square feet exterior paint is repaired or disturbed
Notice posted in common areas telling tenants who to contact to report deteriorated paint	Required	Not Required
Submit EMP Compliance Statement	Required	Not Required
Inspect for and pick up exterior paint chips	Required	Not Required

<sup>4</sup> Applies to all target housing which is any residential rental constructed before 1978 (VSA Title 18, Chapter 38, § 1759 Essential Maintenance Practices)

<sup>5</sup> Applies to all target housing which is any residential rental constructed before 1978 and where federal housing assistance is received. This includes section 8 vouchers. (24 CFR Part 35 Requirements for Notification, Evaluation and Reduction of Lead-Based Paint Hazards in Federally Owned Residential Property and Housing Receiving Federal Assistance; Final Rule)

<sup>3</sup> Utilizing cleaning methods that are effective at removing lead dust which includes wet wiping and HEPA vacuuming

## Lead Dust Testing

### What is lead dust testing?

Lead dust testing is the collection of dust samples by wiping surfaces with moist towelettes or baby wipes that are then submitted to a certified laboratory for analysis to determine the amount of lead present. Analysis results are then reported by the laboratory as lead loading or micrograms of lead per square foot of area sampled ( $\mu\text{g}/\text{ft}^2$ ). Lead dust testing is used to verify proper cleaning after abatement activities or in some cases after renovation work. It is also used to evaluate a property for the presence of lead-based paint hazards.

### When is lead dust testing required?

Vermont's Essential Maintenance Practice (EMP) law does not require anyone completing EMPs to conduct dust testing. Clearance lead dust testing is only required by the State of Vermont on lead abatement projects; and must be completed by licensed lead inspectors or risk assessors. Federal regulations, however, do require dust clearance testing after certain activities that disturb paint in housing that receives federal assistance. Generally, any work that disturbs more than 2 square feet of paint must be completed by personnel trained in lead safe work practices (this course satisfies the HUD training requirement). After any such work, including renovations, remodeling, maintenance, etc., dust clearance testing must be completed to insure that the unit was adequately cleaned.

### What level of lead dust is considered hazardous?

A dust lead hazard exists if samples show levels that exceed the following:

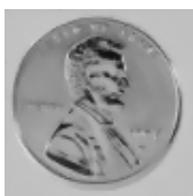
- 40  $\mu\text{g}/\text{ft}^2$  on bare or carpeted floors
- 250  $\mu\text{g}/\text{ft}^2$  on interior window sills
- 400  $\mu\text{g}/\text{ft}^2$  in window wells (clearance only)

## Lead Contamination Facts

### Regulated clearance levels for lead dust on surfaces are:

- 40 micrograms per square foot on floors
- 250 micrograms per square foot on interior window sills
- 400 micrograms per square foot in window troughs or wells

### To illustrate how small an amount of lead this really is, consider this:



A penny weighs 2.8 grams or 2,800 milligrams or 2,800,000 (2.8 **million**) micrograms. If that penny was converted to pure lead dust, there would be enough lead to contaminate **70,000 square feet** of floor space or **700 rooms measuring 10' x 10'** at the 40 microgram clearance level for floors.

The OSHA permissible exposure limit (PEL) for any worker occupationally exposed to lead in air is 50 micrograms of lead per 8-hour (time-weighted average) work day. The same penny converted to lead dust would be enough to occupationally expose a worker at the PEL for **56,000 work days** or over 153 years of 8 hour work days.

Any paint is considered lead-based paint at a level of 1.0 milligrams of lead per square centimeter or higher, or if it is greater than .5% lead by weight, or if it contains greater than 5,000 Parts Per Million of lead. Prior to 1950, lead-based paint contained as much as 50% lead by weight. Paint in good condition poses little risk, however paint that is peeling or deteriorated is especially hazardous. Dust created from remodeling an older home can also be a significant source of lead. Anyone performing an activity that disturbs lead paint and creates dust should first think about how little lead can cause a large amount of contamination especially when you consider the following:

An average 2 story home with approximately 3000 sq. ft. of exterior paint with a lead content of 20.0 milligrams per square centimeter would have about 122 pounds of lead in the paint or more than a half ounce of lead per square foot. (Equivalent to almost 7 pennies of weight per square foot)

## Other Sources of Lead

**Note: New lead containing products are discovered every year. This list is not meant to be a complete list of products that may contain lead but should serve to illustrate how widely lead is used.**

- Vitreous enamel used to coat bath tubs and sinks
- Plumbing fixtures (**VT limit of 0.25% as of 1/1/2010**)
- Car and house keys (**never give keys to children to play with**)
- Metallic candle wicks (especially China and Mexico imports)
- Painted or varnished pre-1978 antique furniture
- Pre-1978 or imported toys, wooden and metal playground equipment
- Artist's paints
- Automotive and boat paints (**VT banned after 1/1/2011**)
- Painted china (also can contain cadmium and chromates)
- Aviation fuel
- Lead-acid batteries
- Wheel balancing lead weights (**VT banned for new vehicles 9/1/2011**)
- Radiator and auto body solder
- Cable sheathing on marine vessel cables
- Lead keels and weights for boat or ship ballast
- Ammunition including lead shot and bullets for hunting
- Fishing sinkers (**VT banned lead sinkers ½ ounce or less as of 1/1/2007**)
- Lead arsenate (a banned agricultural pesticide)
- Lead pigmented colored glass
- Ceramic tile and ceramic glazing compounds (including bathtubs)
- Inks and dyes used in: fabrics, packaging, news print, leather tanning compounds

### **Lead compounds in plastic resins, as:**

- PVC plastic in vehicle engines, interiors and exteriors such as mats, flexible bumper strip, body side molding and mudflaps, etc
- PVC piping and trunking, electrical cable, mini-blinds, flooring (old vinyl tiles can also contain asbestos)

### **Building materials such as:**

- Sheet lead flashings and bathroom or shower floors
- Lead head roof nails and lead washers for galvanized screws used on roofing
- Lead anchor-bolt shields
- Old water and septic pipes
- Lead solder for plumbing and heating
- Lead in bronze or brass alloys for plumbing valves or fixtures

- Cable sheathing for telephone and power cables
- Red lead as a sealant on the back of old linoleum
- Old glazing putty, white lead and linseed oil based putty
- Old caulking
- Salvaged building materials (**VT requires point of sale lead warnings**)

### **Food / drink preparation / containers**

- Lead glazed pottery & ceramics
- Lead crystal
- Pewter mugs or plates
- Some foil tops covering the corks of wine bottles (mostly older and imported types)
- Calcium supplements made with lead-contaminated bone meal
- Soldered canned food seams – mostly imported foods
- Old water coolers (from soldered cooling coils)

### **Other Consumer Products**

- Antique toy soldiers and other models
- Hair dye treatments
- Imported cultural, ethnic or traditional remedies and products such as: alarcon, azarkon, alkohl, bala goli, coral, ghasard, greta, kandu, luiga, maria luisa, pay-loo-ah, rueda, surma, kohl eye / lip pencil
- Ayurvedic medicines
- Some imported crayons and chalk
- Lead or pewter jewelry (See VT Attorney General web link below)
- T-shirt transfers
- Galena mineral specimens (Galena is lead ore)
- Leaded glass for radiation shielding such as in TV tubes, computer monitors
- Electronic lead solder in appliances and computers
- Fishing weights in "sleep eyes" (eyes which close when dolls are laid down) in Modern replicas and antique dolls
- Pool cue chalk
- Diving weights
- Sheet lead for radiation shielding such as: lead vests for dentists, radiologists
- X-ray film storage boxes
- Antique paper weights

Vermont has established several limits, phase outs, and bans of lead in consumer and children's products over the last several years including Act 193 of 2008 which addressed lead in 5 types of non-children's products.

1. **Adult jewelry** that is small enough to be swallowed and contains more than the state/federal limit on lead must be (a) prominently advertised as adult jewelry, and (b) accompanied by a prescribed point-of-sale disclosure about lead.

2. ***Wheel weights on new motor vehicles*** sold on or after September 1, 2011, or on state fleet vehicles on or after January 1, 2010, may not contain more than the state/federal limit on lead.
3. ***Plumbing supplies*** may not be sold or installed if they contain more than a “weighted average” of 0.25 percent for fixtures and 0.20 percent for solder or flux for plumbing. Plumbing fixtures include pipes, fittings and fixtures used to convey or dispense water for human consumption.
4. ***Non-residential paints and primers*** sold on or after January 1, 2011, or used on or after January 1, 2012, may not contain more than the state/federal limit on lead. Until 2012, if these products exceed that limit, they may not be sold in Vermont unless there are disclosures posted and handouts made available on the risks of lead exposure.
5. ***Salvage building materials*** that were manufactured prior to 1978 may not be sold without the required posted disclosures and handouts on the risks of lead exposure.

For summary visit the VT. Attorney General’s website or see the link below:

<http://www.atg.state.vt.us/issues/consumer-protection/product-safety/lead.php>

## Facts about HEPA Vacuums

### **What is a “HEPA” Vacuum?**

HEPA (High-Efficiency Particulate Air) vacuums differ from conventional vacuums in that they contain filters that are capable of trapping extremely small, micron-sized particles. A true HEPA filter can trap 99.97 percent of all airborne particles larger than 0.3 microns. To illustrate how small this is, a human red blood cell is usually between 6 and 8 microns wide.

### **Why do HEPA vacuums need to be used for lead dust cleaning?**

Airborne lead dust particles are around 2 or 3 microns in size and settled dust can be anything larger than this all the way up to full size paint chips. While any household vacuum could pick up paint chips, the average household vacuum releases particles smaller than 50 microns which means that the vast majority of the smallest and most easily spread particles are being blown back into the air.

### **If I use a HEPA vacuum to clean a surface, does that mean it is free of lead dust?**

A HEPA vacuum will pick up loose dust from surfaces, however a residue of adhered lead dust will likely remain on the surface which should be cleaned by wet wiping or cleaning.

### **Are all HEPA vacuums the same?**

Vacuum manufacturers are not required to test their vacuums for particle emissions so the quality and filtration capability of HEPA vacuums can vary greatly.

### **What are some things to consider when purchasing a HEPA vacuum?**

1. Consider what type of cleaning you are using the vacuum for. Generally a good canister style vacuum will suffice for most household cleaning jobs while a more industrial style vacuum may be needed for cleaning up after renovation work. Consider a power head for the canister vacuum if cleaning carpets.
2. Upright vacuums tend to be less well built, leak more exhaust air, and are harder to use for cleaning vertical surfaces.
3. Look for a vacuum with pre filter stages before the main HEPA filter. Pre-filters in a vacuum will help prevent dirt from directly impacting and clogging the HEPA filter, which is usually expensive to replace.
4. Check for gaskets in the vacuum housing that prevents air leakage that can bypass the filters. While many manufacturers will talk about how good their HEPA filtration is, a vacuum that lets air leak out before it gets to the filter is not very effective.
5. Look for a vacuum with the HEPA filter after the motor. If the motor is after the filter, the motor will emit carbon particles from the brushes in the motor
6. Look for a vacuum with bags that have built in dust flaps or a tab that pulls over the bag opening to minimize the release of dust when changing bags.
7. Avoid a “bag less” vacuum or a vacuum that collects dust in a cup or container. These tend to not seal very tightly and release lots of dust when emptied.
8. HEPA filters should not be allowed to get wet and as such should not be used for vacuuming water or wet debris.
9. Make sure vacuum wands have a suction control or air vent to control the strength of suction. This is very useful when vacuuming polyethylene sheeting.
10. Avoid vacuums with “water filtration” as they are not a replacement for HEPA filtration.
11. When using a good quality HEPA vacuum, you should not be able to see or smell dust although most odors will not be stopped by a HEPA filter.

## Useful Lead Resources

**Lead Safe Vermont Website** – Information for property owners, homeowners, renters, contractors. <http://www.leadSAFEvermont.org>

**EMP Training Schedule** – Listing of EMP trainings offered throughout Vermont.  
<http://www.leadSAFEvermont.org/html/contractors.html>

### **Vermont Department of Health, Healthy Homes Lead Poisoning Prevention Program**

Information on screening children for lead, case management for lead poisoned children, licensing of lead professionals, EMP affidavits on file, information on lead paint and other household hazards.

**VT Lead Hotline: (800) 439-8550 or (802) 652-0358**

<http://healthvermont.gov/enviro/lead/lead.aspx>

Lead Abatement Companies and Consultants –

[http://healthvermont.gov/enviro/lead/documents/lead\\_consult\\_contractor\\_list.pdf](http://healthvermont.gov/enviro/lead/documents/lead_consult_contractor_list.pdf)

EMP-Certified Businesses –

[http://healthvermont.gov/enviro/lead/emp\\_contractor.aspx](http://healthvermont.gov/enviro/lead/emp_contractor.aspx)

**Vermont Lead Safety Project** – Non-profit advocacy and resource group.  
(802) 247-5920

## Financial Assistance

### **Vermont Housing & Conservation Board – Lead Hazard Reduction Program -**

Provides funds and technical assistance to reduce lead-based paint hazards in eligible homes throughout Vermont, excluding Burlington.

(800) 290-0527 or (802) 828-5064

<http://www.vhcb.org>

**Burlington Lead Program** – Dedicated to the prevention of childhood lead poisoning in the city of Burlington. Provides funds and technical assistance to reduce lead-based paint hazards in eligible homes in Burlington.

(802) 865-LEAD (5323)

<http://www.burlingtonvt.gov/CEDO/LeadPaint/Dangers-of-Lead/>

## Federal Agencies

### **Environmental Protection Agency (EPA) –**

(888) 372-7341 [http://www.epa.gov/ne/eco/ne\\_lead/index.html](http://www.epa.gov/ne/eco/ne_lead/index.html)

**National Information Center on Lead (NLIC)** - Provides the general public and professionals with information about lead hazards and their prevention.

(800) 424-LEAD [5323] <http://www.epa.gov/lead/pubs/nlic.htm>

**U.S. Department of Housing and Urban Development (HUD) – Office of Healthy Homes and Lead Control Hazard**

(202) 755-1785- Lead Hazard Control Office

<http://www.hud.gov/offices/lead/index.cfm>

**Centers for Disease Control and Prevention (CDC)** – CDC’s compiled information on lead. <http://www.cdc.gov/lead/>

**Consumer Product Safety Commission** – Consumer product recalls and standards.

<http://www.cpsc.gov/>

**Occupational Safety and Health Administration (OSHA)** – Lead safety standards.

(800) 321-OSHA (6742) <http://www.osha.gov/SLTC/lead/index.html>

## National Non-Profit Groups

**Alliance for Healthy Homes** – Advocates for safe and healthy homes for all

Americans. (202) 543-1147 <http://www.afhh.org/>

**National Center for Healthy Homes (NCHH)** – Formerly Center for Lead Safe

Housing. Develops and promotes practical methods to protect children from environmental health hazards in their homes.

(877) 312-3046 <http://www.centerforhealthyhousing.org/html/leap.html>

**NCHH Lead Resources**

[http://www.centerforhealthyhousing.org/html/lead\\_resources.html](http://www.centerforhealthyhousing.org/html/lead_resources.html)

**Vermont Statute**  
**Title 18: Health**  
**Chapter 38: Lead Poisoning**

**§ 1751. Definitions**

(a) Words and phrases used in this chapter have the same definitions as provided in the Federal Residential Lead-Based Paint Hazard Reduction Act of 1992 unless there is an inconsistency, in which case any definition provided in this section that narrows, limits, or restricts shall control.

(b) For the purposes of this chapter:

(1) "Abatement" means any set of measures designed to permanently eliminate lead-based paint hazards in accordance with standards established by appropriate state and federal agencies. The term includes:

(A) Removal of lead-based paint and lead-contaminated dust, permanent containment or encapsulation of lead-based paint, replacement of lead-painted surfaces or fixtures, and removal or covering of lead-contaminated soil.

(B) All preparation, cleanup, disposal, and post-abatement clearance testing activities associated with such measures.

(2) "Child" or "children" means an individual or individuals under the age of 18 years, except where specified as a child or children six years of age or younger.

(3) "Child care facility" means a child care facility or family child care home as defined in 33 V.S.A. § 4902 that was constructed prior to 1978.

(4) "Deteriorated paint" means any interior or exterior lead-based paint or other coating that is peeling, chipping, chalking, or cracking or any paint or other coating located on an interior or exterior surface or fixture that is otherwise damaged or separated from the substrate.

(5) "Due date" means the date by which an owner of rental target housing or a child care facility shall file with the department the EMP compliance statement required by section 1759 of this title. The due date shall be one of the following:

(A) No later than 366 days after the most recent EMP compliance statement or EMP affidavit was received by the department.

(B) Within 60 days after the closing of the purchase of the property if no EMP compliance statement was filed with the department within the past 12 months.

(C) Any other date agreed to by the owner and the department.

(D) Any other date set by the department.

(6) "Dwelling" means

(A) Any residential unit, including attached structures such as porches and stoops, used as the home or residence of one or more persons.

(7) "Elevated blood lead level" means having a blood lead level of at least five micrograms per deciliter of human blood, or a lower threshold as determined by the commissioner.

(8) "EMP" means essential maintenance practices required by section 1759 of this title.

(9) "Independent dust clearance" means a visual examination and collection of dust samples, by a lead inspector or lead risk assessor who has no financial interest in either the work being performed or the property to be inspected, and is independent of both the persons performing the work and the owner of the property. The lead inspector or lead risk assessor shall use methods specified by the department and analysis by an accredited laboratory to determine that lead exposures do not exceed limits set by the department utilizing current information from the U.S. Environmental Protection Agency or the U.S. Department of Housing and Urban Development.

(10) "Inspection" means a surface-by-surface investigation to determine the presence of lead-based paint and other lead hazards and the provision of a report explaining the results of the investigation.

(11) "Interim controls" means a set of measures designed to temporarily reduce human exposure to lead-based paint hazards, including specialized cleaning, repairs, maintenance, painting, temporary containment, ongoing monitoring of lead-based paint hazards or potential hazards, and the establishment of management and resident education programs.

(12) "Lead-based paint" means paint or other surface coatings that contain lead in excess of limits established under section 302(c) of the Federal Lead-Based Paint Poisoning Prevention Act.

(13) "Lead contractor" means any person employing one or more individuals licensed by the department under this chapter.

(14) "Lead abatement worker" means any individual who has satisfactorily completed an accredited training program approved by the department and has a current license issued by the department to perform abatements.

(15) "Lead designer" means any individual who has satisfactorily completed an accredited training program approved by the department and has a current license issued by the department to prepare lead abatement project designs, occupant protection plans, and abatement reports.

(16) "Lead hazard" means any condition that causes exposure to lead inside and in the immediate vicinity of target housing from water, dust, soil, paint, or building materials that would result in adverse human health effects as defined by the department using current information from the U.S. Environmental Protection Agency or the U.S. Department of Housing and Urban Development.

(17) "Lead inspector" means any individual who has satisfactorily completed an accredited training program approved by the department and has a current license issued by the department to conduct inspections.

(18) "Lead risk assessor" means any individual who has satisfactorily completed an accredited training program approved by the department and has a current license issued by the department to conduct risk assessments.

(19) "Lead-safe renovator" means any person who has completed a lead-safe training program approved by the department and has a current registration issued by the department to perform renovations in target housing or child care facilities in which interior or exterior lead-based paint will be disturbed.

(20) "Lead supervisor" means any individual who has satisfactorily completed an accredited training program approved by the department and has a current license issued by the department to supervise and conduct abatement projects and prepare occupant protection plans and abatement reports.

(21) "Occupant" means any person who resides in, or regularly uses, a dwelling, mobile dwelling, or structure.

(22) "Owner" means any person who, alone or jointly or severally with others:

(A) Has legal title to any dwelling or child care facility with or without actual possession of the property.

(B) Has charge, care, or control of any dwelling or child care facility as agent of the guardian of the estate of the owner.

(C) Has charge, care, or control of any dwelling or child care facility as property manager for the owner if the property management contract includes responsibility for any maintenance services, unless the property management contract explicitly states that the property manager will not be responsible for compliance with section 1759 of this title.

(D) Is the chief executive officer of the municipal or state agency that owns, leases, or controls the use of publicly owned target housing or a child care facility.

(E) Is a person who has taken full legal title of a dwelling or child care facility through foreclosure, deed in lieu of foreclosure, or otherwise. "Owner" does not include a person who holds indicia of ownership given by the person in lawful possession for the primary purpose of assuring repayment of a financial obligation. Indicia of ownership includes interests in real or personal property held as security or collateral for repayment of a financial obligation such as a mortgage, lien, security interest, assignment, pledge, surety bond, or guarantee and includes participation rights of a financial institution used for legitimate commercial purposes in making or servicing the loan.

(23) "Rental target housing" means target housing offered for lease or rental under a rental agreement as defined in 9 V.S.A. § 4451. "Rental target housing" does not include a rented single room located within a dwelling in which the owner of the dwelling resides unless a child six years of age or younger resides in or is expected to reside in that dwelling.

(24) "Risk assessment" means an on-site investigation by a lead risk assessor to determine and report the existence, nature, severity, and location of lead hazards, including information gathering about the age and history of the property and occupancy by children six years of age or younger, visual inspection, limited wipe sampling, or other environmental sampling techniques, other appropriate risk assessment activities and a report on the results of the investigation.

(25) "Screen," "screened," or "screening" relating to blood lead levels, means the initial blood test to determine the presence of lead in a human.

(26) "Target housing" means any dwelling constructed prior to 1978, except any 0-bedroom dwelling or any dwelling located in multiple-unit buildings or projects reserved for the exclusive use of the elderly or persons with disabilities, unless a child six years of age or younger resides in or is expected to reside in that dwelling. "Target housing" does not include units in a hotel, motel, or other lodging, including condominiums that are rented for transient occupancy for 30 days or less. (Added 1993, No. 94, § 3; amended 1995, No. 165 (Adj. Sess.), § 2; 1997, No. 37, § 1; 2007, No. 172 (Adj. Sess.), § 4; No. 176 (Adj. Sess.), § 26, eff. July 1, 2008.)

**§ 1752. Accreditation of training programs; certification and licensure of environmental lead inspectors and lead contractors, supervisors and workers**

(a) No later than six months after promulgation of final federal regulations under section 402 of the Federal Toxic Substances Control Act (15 U.S.C. § 2601 et seq.), the department shall develop a program to administer and enforce the lead-based paint activities training and certification standards, regulations, or other requirements established by the administrator of the federal Environmental Protection Agency for persons engaged in lead-based paint activities.

(b) The secretary shall adopt emergency rules, and not later than January 1, 1994, the secretary shall adopt permanent rules, establishing standards and specifications for the accreditation of training programs both within and outside Vermont, including the mandatory topics of instruction, the knowledge and performance standards that must be demonstrated by graduates in order to be certified, and required qualifications for training programs and instructors. Such standards shall be designed to protect children, their families, and workers from improperly-conducted lead-based paint activities, and shall be at least as protective of human health and the environment as the federal program. Hands-on instruction and instruction for identification and proper handling of historic fabric and materials shall be components of the required training.

(c) The commissioner shall certify risk assessors, designers, laboratories, inspectors, lead-safe renovation contractors, lead contractors, supervisors, abatement workers, and other persons engaged in lead-based paint activities when such persons have successfully completed an accredited training program and met such other requirements as the secretary may, by rule, impose.

(d) After the adoption of rules pursuant to subsection (b) of this section, no person shall perform lead-based paint activities without first obtaining a license from the commissioner. The commissioner may grant a license to a person who holds a valid license from another state.

(e) Nothing in this chapter shall be construed to limit the authority of the secretary, the commissioner of health, the commissioner of labor, or the commissioner of environmental conservation under the provisions of any other law. (Added 1993, No. 94, § 3; amended 2005, No. 103 (Adj. Sess.), § 3, eff. April 5, 2006; 2007, No. 76, § 11a.)

### **§ 1753. Accreditation, registration, certification, and license fees**

(a) The commissioner shall assess fees for accrediting training programs and for certifications, registrations, licenses, and license renewals issued in accordance with this chapter. Fees shall not be imposed on any state or local government or nonprofit training program and may be waived for the purpose of training state employees.

(b) Each accredited training program, registrant, and licensee shall be subject to the following fees:

Training courses \$480.00 per year

Lead contractors \$600.00 per year

Lead workers \$60.00 per year

Lead supervisors \$120.00 per year

Lead inspectors \$180.00 per year

Lead risk assessors \$180.00 per year

Lead designers \$180.00 per year

Laboratories \$600.00 per year

Lead-safe renovators \$50.00 per year

(c) Each lead abatement project shall be subject to the following permit fees:

(1) Lead abatement project permit fee \$50.00.

(2) Lead abatement project permit revision fee \$25.00.

(d) Fees imposed by this section shall be deposited into the lead paint abatement accreditation and licensing special fund. Monies in the fund may be used by the commissioner only to support departmental accreditation, registration, certification, and licensing activities related to this chapter. The fund shall be subject to the provisions of subchapter 5 of chapter 7 of Title 32. (Added 1993, No. 94, § 3; amended 1997, No. 155 (Adj. Sess.), § 59, eff. April 29, 1998; 1999, No. 49, § 189; 2001, No. 65, § 6; 2007, No. 76, § 11b; 2007, No. 176 (Adj. Sess.), § 27.)

### **§ 1754. Public education**

(a) Beginning January 1, 1994, the commissioner of health shall prepare and distribute clear and simple printed materials describing the dangers of lead poisoning, the need for parents to have their child screened, how to have a child tested, and recommended nutrition and housekeeping practices. The commissioner shall work with persons

and organizations involved in occupations that may involve lead-based paint hazards or childhood lead poisoning to distribute the materials to their clients, patients, students, or customers, such as realtors, subcontractors, apartment owners, public housing authorities, pediatricians, family practitioners, nurse clinics, child clinics, other health care providers, child care and preschool operators and kindergarten teachers. The commissioner shall also identify those points in time or specific occasions when members of the public are in contact with public agencies and lead might be an issue, such as building permits, home renovations, and the ANFC and WIC programs, and make the materials available on these occasions.

(b) The commissioner shall prepare an appropriate media campaign to educate the public on lead poisoning prevention. The commissioner shall encourage professional property managers, rehab and weatherization contractors, minimum housing inspectors, social workers, and visiting nurses to attend education and awareness workshops.

(c) The commissioner shall develop a program or approve a program, or both, to train owners and managers of rental target housing and child care facilities and their employees to perform essential maintenance practices. The names and addresses of all persons who attend the approved training program shall be maintained as a public record that the commissioner shall provide to the department of housing and community affairs. (Added 1993, No. 94, § 3; amended 1995, No. 165 (Adj. Sess.), § 3.)

#### **§ 1755. Universal screening**

(a) The commissioner shall publish guidelines that establish the methods by which and the intervals at which children should be screened and given a confirmation test for elevated blood lead levels, according to the age of the children and their probability of exposure to lead. The guidelines shall take into account the recommendations of the U.S. Centers for Disease Control and the American Academy of Pediatrics and shall be updated as those recommendations are changed. The commissioner shall recommend screening for lead in other high risk groups. The commissioner shall ensure that all health care providers who provide primary medical care to children six years of age or younger are informed of the guidelines. Once the department has implemented lead screening reports within the immunization registry, the department shall use the information in the registry to inform health care providers of their screening rates and to take, within available resources, other measures necessary to optimize screening rates, such as mailings to parents and guardians of children ages one and two, outreach to day care facilities and other community locations, screening at district offices, and educating parents and guardians of children being served.

(b) Annually, the commissioner shall determine the percentage of children six years of age or younger who are being screened in accordance with the guidelines and shall, unless a final report is available, provide interim information on screening to the legislature annually on April 15. If fewer than 85 percent of one-year-olds and fewer than 75 percent of two-year-olds as specified in the guidelines are receiving screening, the secretary shall adopt rules to require that all health care providers who provide primary medical care to young children shall ensure that their patients are screened and tested according to the guidelines, beginning January 1, 2011.

(c) All health care providers who provide primary medical care shall ensure that parents and guardians of children six years of age or younger are advised of the availability and advisability of screening and testing their children for lead in accordance with the commissioner's guidelines. No health care provider shall be liable for not performing a screening or confirmation test for blood lead level when a parent or guardian has refused to consent or has failed to follow through in response to a referral for a screening or confirmation test. No later than 120 days after the department has notified health care providers that it has implemented lead screening reports within the immunization registry, a health care provider shall report to the department regarding lead screening of children ages one and two pursuant to the guidelines in subsection (a) of this section in a form and as required by the department.

(d) Any laboratory that analyzes blood samples of Vermont residents for lead levels shall report to the department all information required by the department. All health care providers who analyze blood samples for lead levels or who use laboratories outside Vermont to analyze blood samples for lead levels shall report all information

required by the department to the department immediately by telephone if the result of any analysis is 45 micrograms or more of lead per deciliter of blood, or by electronic means within 14 days of analysis if the result of the analysis is less than 45 micrograms of lead per deciliter of blood. All blood lead data reports to the department shall include the name, date of birth, date of blood test, and address of the individual whose blood is analyzed and, if known, the owner of the residence of the individual.

(e) No later than 120 days after the department has notified laboratories that it has implemented lead screening reports within the immunization registry, a laboratory shall report to the department regarding lead screening of children ages one and two pursuant to the guidelines in subsection (a) of this section in a form and as required by the department. (Added 1993, No. 94, § 3; amended 1995, No. 180 (Adj. Sess.), § 38(a); 2007, No. 176 (Adj. Sess.), § 28.)

#### **§ 1756. Annual report**

(a) The commissioner shall, at least annually, analyze and summarize all aggregate lead screening and testing information provided by physicians, health care facilities and laboratories and provide this information to all other local and state agencies involved with case management and lead hazard reduction.

(b) The commissioner shall also at least annually provide to the general assembly, the health community, and the general public an analysis and summary of such data and a progress report on the commissioner's efforts to prevent lead poisoning in young children in a format that is easily understandable to nontechnical readers. The report shall include:

(1) The number and percentage of children under the age of six who have been screened and tested for lead poisoning, and the number found to have lead poisoning at various levels.

(2) Estimates of the public and private costs incurred since July 1, 1993 to prevent, correct, or treat lead poisoning.

(3) An analysis of barriers to universal blood screening of children under the age of six years.

(4) The commissioner's recommendations for action. (Added 1993, No. 94, § 3.)

#### **§ 1757. Children with elevated blood lead levels**

(a) Upon receiving a report that a child has a screening test result of ten or more micrograms of lead per deciliter of blood, or a lower level as determined by the commissioner, the commissioner shall take prompt action to ensure that the child obtains a confirmation test.

(b) If the child has an elevated blood lead level, the commissioner shall provide information on lead hazards to the parents or guardians of the child.

(c) If a child six years of age or younger has a confirmed blood lead level at or above ten micrograms of lead per deciliter of blood, and if resources permit, the commissioner:

(1) Shall, with the consent of the parent or guardian, provide an inspection of the dwelling occupied by the child or the child care facility the child attends by a state or private lead risk assessor, and develop a plan in consultation with the parents, owner, physician, and others involved with the child to minimize the exposure of the child to lead. The plan developed under this subdivision shall require that any lead hazards identified through the inspection be addressed. The owner of rental target housing or a child care facility shall address those lead hazards within the owner's control, and shall not be required to abate lead hazards if interim controls are effective.

(2) May inspect and evaluate other dwelling units in the building in which the child is living if it is reasonable to believe that a child six years of age or younger occupies, receives care, or otherwise regularly frequents the other dwellings in that building.

(d) Nothing in this section shall be construed to limit the commissioner's authority under any other provision of Vermont law. (Added 1993, No. 94, § 3; amended 1995, No. 165 (Adj. Sess.), § 4; 2007, No. 176 (Adj. Sess.), § 29.)

#### **§ 1758. Housing registry**

(a) The department shall issue certificates to all persons who satisfactorily complete a training program on performing essential maintenance practices for lead-based hazard control and shall compile a list of those persons' names.

(b) If additional funds are appropriated to the department in fiscal year 1998, on or before October 1, 1997, the department of housing and community affairs shall establish and maintain a list of housing units which (1) are lead free or (2) have undergone lead hazard control measures and passed independent dust clearance tests. The registry shall be maintained as a public record.

(c) The department of social and rehabilitation services shall identify all child care facilities in which the owners have completed essential maintenance practices or lead hazard control measures and provide the findings to the department annually. (Added 1995, No. 165 (Adj. Sess.), § 5.)

#### **§ 1759. Essential maintenance practices**

(a) Essential maintenance practices (EMP) in rental target housing and child care facilities shall be performed only by a person who has successfully completed an EMP training program approved by the commissioner or a person who works under the direct, on-site supervision of a person who has successfully completed such training. That person shall comply with section 1760 of this title and shall take all reasonable precautions to avoid creating lead hazards during any renovations, remodeling, maintenance, or repair project that disturbs more than one square foot of lead-based paint, pursuant to guidelines issued by the department. The following essential maintenance practices shall be performed in all rental target housing and child care facilities, unless a lead inspector or a lead risk assessor has certified that the property is lead-free:

(1) Install window well inserts in all windows or protect window wells by another method approved by the department.

(2) At least once a year, with the consent of the tenant, and at each change of tenant, perform visual on-site inspection of all interior and exterior painted surfaces and components at the property to identify deteriorated paint.

(3) Promptly and safely remove or stabilize lead-based paint if more than one square foot of deteriorated lead-based paint is found on any interior or exterior surface located within any area of the dwelling to which access by tenants is not restricted. An owner shall assure that all surfaces are free of deteriorated lead-based paint within 30 days after deteriorated lead-based paint has been visually identified or within 30 days after receipt of a written or oral report of deteriorated lead-based paint from any person including the department, a tenant, or an owner of a child care facility. Because exterior paint repairs cannot be completed in cold weather, any exterior repair work identified after November 1 shall be completed no later than the following May 31 provided that access to surfaces and components with lead hazards and areas directly below the deteriorated surfaces is clearly restricted.

(4) If more than one square foot of deteriorated paint is found on any exterior wall surface or fixture not covered by subdivision (3) of this subsection, the owner shall:

(A) Promptly and safely repair and stabilize the paint and restore the surface; or

(B) Prohibit access to the area, surface, or fixture to assure that children will not come into contact with the deteriorated lead-based paint.

(5) For any outdoor area, annually remove all visible paint chips from the ground on the property.

(6) At least once a year, using methods recommended by the department, thoroughly clean all interior horizontal surfaces, except ceilings, in common areas accessible to tenants.

(7) At each change of tenant, thoroughly clean all interior horizontal surfaces of the dwelling, except ceilings, using methods recommended by the department.

(8) Post, in a prominent place in buildings containing rental target housing units or a child care facility, a notice to occupants emphasizing the importance of promptly reporting deteriorated paint to the owner or to the owner's agent. The notice shall include the name, address, and telephone number of the owner or the owner's agent.

(b) The owner of rental target housing shall perform all the following:

(1) File with the department by the due date an EMP compliance statement certifying that the essential maintenance practices have been performed, including all the following:

(A) The addresses of the dwellings in which EMP were performed.

(B) The dates of completion.

(C) The name of the person who performed the EMP.

(D) A certification of compliance with subdivision (4) of this subsection.

(E) A certification that subdivisions (2) and (3) of this subsection have been or will be complied with within ten days.

(2) File the statement required in subdivision (1) of this subsection with the owners' liability insurance carrier and the department.

(3) Provide a copy of the statement to all tenants with written materials regarding lead hazards approved by the department.

(4) Prior to entering into a lease agreement, provide approved tenants with written materials regarding lead hazards approved by the department, along with a copy of the owner's most recent EMP compliance statement. The written materials approved by the department pursuant to this subdivision shall include information indicating that lead is highly toxic to humans, particularly young children, and may even cause permanent neurological damage.

(c) The owner of the premises of a child care facility shall perform all of the following:

(1) File with the department by the due date an EMP compliance statement certifying that the essential maintenance practices have been performed, including all the following:

(A) The address of the child care facility.

(B) The date of completion of the EMP.

(C) The name of the person who performed the EMP.

(D) A certification that subdivision (2) of this subsection has been or will be complied with within ten days.

(2) File the statement required in subdivision (1) of this subsection with the owner's liability insurance carrier; the department for children and families; and with the tenant of the facility, if any.

(d) An owner who desires an extension of time for filing the EMP compliance statement shall file a written request for an extension from the department no later than ten days before the due date. The department may grant or

deny an extension. (Added 1995, No. 165 (Adj. Sess.), § 6; amended 1997, No. 37, §§ 2-4; 2007, No. 176 (Adj. Sess.), § 30.)

**§ 1760. Unsafe work practices**

(a) All paint in target housing and child care facilities is presumed to be lead-based unless a lead inspector or lead risk assessor has determined that it is not lead-based. Unsafe work practices include the following, unless specifically authorized by permit by the department:

(1) Removing lead-based paint by:

(A) Open flame burning or torching.

(B) Use of heat guns operated above 1,100 degrees Fahrenheit.

(C) Dry scraping.

(D) Machine sanding or grinding.

(E) Uncontained hydro-blasting or high-pressure washing.

(F) Abrasive blasting or sandblasting without containment and high-efficiency particulate exhaust controls.

(G) Chemical stripping using methylene chloride products.

(2) Failing to employ one or more of the following lead-safe work practices:

(A) Limiting access to interior and exterior work areas.

(B) Enclosing interior work areas with plastic sheathing or other effective lead dust barrier.

(C) Using protective clothing.

(D) Misting painted surfaces before disturbing paint.

(E) Wetting paint debris before sweeping to limit dust creation.

(F) Any other measure required by the department.

(b) No person shall disturb more than one square foot of lead-based paint using unsafe work practices in target housing or in child care facilities. (Added 1995, No. 165 (Adj. Sess.), § 7; amended 2007, No. 176 (Adj. Sess.), § 31.)

**§ 1760a. Enforcement; administrative order; penalties**

(a) A person who violates section 1759 of this title commits a civil violation and shall be subject to a civil penalty as set forth in this subsection which shall be enforceable by the commissioner in the judicial bureau pursuant to the provisions of chapter 29 of Title 4.

(1) An owner of rental target housing who fails to comply with subdivisions 1759(b)(1), (2), and (3) of this title by the due date or an owner of a child care facility who fails to comply with subsection 1759(c) of this title by the due date shall pay a civil penalty of not more than \$50.00 if the owner comes into compliance within 30 days after the due date; otherwise the owner shall pay a civil penalty of not more than \$150.00.

(2) An owner who cannot demonstrate by a preponderance of the evidence that essential maintenance practices were performed by the due date shall pay an additional penalty of not more than \$250.00.

(b) Nothing in this section shall limit the commissioner's authority under any other provisions of law. (Added 2007, No. 176 (Adj. Sess.), § 32, eff. Jan. 1, 2010.)

**§ 1761. Duty of reasonable care; negligence; liability**

(a) Owners of target housing and owners of child care facilities shall take reasonable care to prevent exposure to, and the creation of, lead hazards. In an action brought under this section, evidence of actions taken or not taken to satisfy the requirements of this chapter, including performing EMP, may be admissible evidence of reasonable care or negligence.

(b) Any person who suffers an injury proximately caused by an owner's breach of this duty of reasonable care shall have a cause of action to recover damages and for all other appropriate relief.

(c) The owner of target housing or a child care shall not be liable to a tenant of the housing or facility in an individual action for habitability under common law or pursuant to chapter 63 of Title 9, chapter 137 of Title 9, chapter 153 of Title 10, or chapter 169 of Title 12 for injury or other relief claimed to be caused by exposure to lead if, during the relevant time period, the owner is in compliance with section 1759 of this title and any of the following, should they exist:

(1) The conditions of a lead risk assessor's certification, pursuant to Vermont regulations for lead control, that all identified lead hazards have been controlled and the housing or facility has passed an independent dust clearance test.

(2) Any plan issued pursuant to section 1757 of this title.

(3) Any assurance of discontinuance, order of the commissioner, or court order regarding lead hazards.

(d) The immunity under subsection (c) of this section shall not be available if:

(1) There was fraud in the certification process; or

(2) The owner violated conditions of the certification; or

(3) The owner created lead hazards during renovation, remodeling, maintenance, or repair after the certification; or

(4) The owner failed to respond in a timely fashion to notification that lead hazards may have recurred on the premises.

(e) A defendant in an action brought under this section or at common law has a right to seek contribution from any other person who may be responsible, in whole or in part, for the child's blood lead level.

(f) Nothing in this section shall be construed to limit the right of the commissioner or any agency or instrumentality of the state of Vermont to seek remedies available under any other provision of Vermont statutory law. (Added 1995, No. 165 (Adj. Sess.), § 8; amended 2007, No. 176 (Adj. Sess.), § 33.)

**§ 1762. Secured lenders and fiduciaries; liability**

(a) A person who holds indicia of ownership in rental target housing or a child care facility furnished by the owner or person in lawful possession, for the primary purpose of assuring repayment of a financial obligation and takes full legal title through foreclosure or deed in lieu of foreclosure or otherwise shall not be liable as an owner of the property for injury or loss claimed to be caused by exposure to lead of a child on the premises, provided that, on or before the 120th day after the date of possession, the person:

(1) Performs essential maintenance practices as required by section 1759 of this title; and

(2) fully discloses to all potential purchasers, operators or tenants of the property any information in the possession of such person or the person's agents, regarding the presence of lead-based paint hazards or a lead-poisoned child on the property and, upon request, provides copies of all written reports on lead-based paint hazards to potential purchasers, operators or tenants.

(b) The immunity provided in subsection (a) of this section shall expire 365 days after the secured lender or fiduciary takes full legal title.

(c) A person who holds legal title to rental target housing or a child care facility as an executor, administrator, trustee or the guardian of the estate of the owner and demonstrates that in that fiduciary capacity does not have either the legal authority or the financial resources to fund capital or major property rehabilitation necessary to conduct essential maintenance practices shall not be personally liable as an owner for injury or loss caused by exposure to lead by a child on the premises. However, nothing in this section shall limit the liability of the trust estate for such claims and those claims may be asserted against the trustee as a fiduciary of the trust estate. (Added 1995, No. 165 (Adj. Sess.), § 9.)

#### **§ 1763. Public financial assistance; rental target housing and child care facilities**

Every state agency or instrumentality that makes a commitment to provide public financial assistance for the purchase or rehabilitation of rental target housing or child care facilities shall give priority to projects in which the property is lead free, or lead-based paint hazards have been or will be identified and controlled and have passed or will pass an independent dust clearance test that determines that the property contains no lead-contaminated dust prior to occupancy or use. Priority rental target housing projects may include units occupied by severely lead-poisoned children and units in a building that are likely to contain lead-based paint hazards. For purposes of this section, "public financial assistance" means any grant, loan or allocation of tax credits funded by the state or the federal government, or any of their agencies or instrumentalities. (Added 1995, No. 165 (Adj. Sess.), § 10.)

#### **§ 1764. Lead inspectors; financial responsibility**

The commissioner may require that a licensee or an applicant for a license under section 1752(d) of this title provide evidence of ability to properly indemnify a person who suffers damage from lead-based paint activities such as proof of effective liability insurance coverage or a surety bond in an amount to be determined by the commissioner which shall not be less than \$300,000.00. This section shall not restrict or enlarge the liability of any person under any applicable law. (Added 1995, No. 165 (Adj. Sess.), § 11.)

#### **§ 1765. Liability insurance**

(a) If the commissioner of banking, insurance, securities, and health care administration determines that lead-based paint hazards have substantially diminished the availability of liability insurance for owners of rental property or child care facilities and that a voluntary market assistance plan will not adequately restore availability, the commissioner shall order liability insurers to provide or continue to provide liability coverage or to participate in any other appropriate remedial program as determined by the commissioner, provided the prospective insured is otherwise in compliance with the provisions of this chapter.

(b) A determination pursuant to subsection (a) of this section shall be made by the commissioner after a hearing held in accordance with 3 V.S.A. chapter 25. Upon a finding that emergency action is required to protect the public health, safety or welfare, the commissioner shall issue an appropriate summary order pending completion of administrative proceedings. No order issued under this section may be stayed pending appeal. (Added 1995, No. 165 (Adj. Sess.), § 12; amended 1995, No. 180 (Adj. Sess.), § 38(a).)

#### **§ 1767. Transfer of ownership of target housing; risk assessment; EMP compliance**

(a) Prior to the time a purchase and sale agreement for target housing is executed, the seller shall provide the buyer with materials approved by the commissioner, including a lead paint hazard brochure and materials on other lead hazards in housing. The seller shall also provide a disclosure form that shall include any assurance of

discontinuance, administrative order, or court order the terms of which are not completed and, if the property is rental target housing, verification that the EMP have been completed and that a current EMP compliance statement has been filed with the department.

(b) At the time of sale of target housing, sellers and other transferors shall provide the buyer or transferee with any materials delineated in subsection (a) of this section not previously disclosed and a lead-safe renovation practices packet approved by the commissioner and shall disclose any assurance of discontinuance, administrative order, or court order not disclosed pursuant to subsection (a) of this section the terms of which are not completed.

(c) No sale of rental target housing, building, or unit may occur if the building or unit is currently the subject of an assurance of discontinuance, administrative order, or court order unless the assurance or order is amended in writing to transfer to the buyer or other transferee all remaining obligations under the assurance or order.

(d) Prior to the time of sale of rental target housing, the real estate agents, sellers, and other transferors of title shall provide the buyer or transferee with information approved by the commissioner explaining EMP obligations.

(e) A buyer or other transferee of title to rental target housing who has purchased or received a building or unit that is not in full compliance with section 1759 of this title shall bring the target housing into compliance with section 1759 of this title within 60 days after the closing. Within the 60-day period, the buyer or transferee may submit a written request for an extension of time for compliance, which the commissioner may grant in writing for a stated period of time for good cause only. Failure to comply with this subsection shall result in a mandatory civil penalty.

(f) This section shall not apply to target housing that has been certified lead-free.

(g) Noncompliance with this section shall not affect marketability of title. (Added 2007, No. 176 (Adj. Sess.), § 34.)





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# Protect Your Family From Lead in Your Home

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United States  
Environmental  
Protection Agency



United States  
Consumer Product  
Safety Commission



United States  
Department of Housing  
and Urban Development



## Are You Planning to Buy or Rent a Home Built Before 1978?

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Did you know that many homes built before 1978 have **lead-based paint**? Lead from paint, chips, and dust can pose serious health hazards.

### **Read this entire brochure to learn:**

- How lead gets into the body
- About health effects of lead
- What you can do to protect your family
- Where to go for more information

### **Before renting or buying a pre-1978 home or apartment, federal law requires:**

- Sellers must disclose known information on lead-based paint or lead-based paint hazards before selling a house.
- Real estate sales contracts must include a specific warning statement about lead-based paint. Buyers have up to 10 days to check for lead.
- Landlords must disclose known information on lead-based paint and lead-based paint hazards before leases take effect. Leases must include a specific warning statement about lead-based paint.

### **If undertaking renovations, repairs, or painting (RRP) projects in your pre-1978 home or apartment:**

- Read EPA's pamphlet, *The Lead-Safe Certified Guide to Renovate Right*, to learn about the lead-safe work practices that contractors are required to follow when working in your home (see page 12).



## Simple Steps to Protect Your Family from Lead Hazards

### **If you think your home has lead-based paint:**

- Don't try to remove lead-based paint yourself.
- Always keep painted surfaces in good condition to minimize deterioration.
- Get your home checked for lead hazards. Find a certified inspector or risk assessor at [epa.gov/lead](http://epa.gov/lead).
- Talk to your landlord about fixing surfaces with peeling or chipping paint.
- Regularly clean floors, window sills, and other surfaces.
- Take precautions to avoid exposure to lead dust when remodeling.
- When renovating, repairing, or painting, hire only EPA- or state-approved Lead-Safe certified renovation firms.
- Before buying, renting, or renovating your home, have it checked for lead-based paint.
- Consult your health care provider about testing your children for lead. Your pediatrician can check for lead with a simple blood test.
- Wash children's hands, bottles, pacifiers, and toys often.
- Make sure children eat healthy, low-fat foods high in iron, calcium, and vitamin C.
- Remove shoes or wipe soil off shoes before entering your house.

# Lead Gets into the Body in Many Ways

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## Adults and children can get lead into their bodies if they:

- Breathe in lead dust (especially during activities such as renovations, repairs, or painting that disturb painted surfaces).
- Swallow lead dust that has settled on food, food preparation surfaces, and other places.
- Eat paint chips or soil that contains lead.

## Lead is especially dangerous to children under the age of 6.

- At this age, children's brains and nervous systems are more sensitive to the damaging effects of lead.
- Children's growing bodies absorb more lead.
- Babies and young children often put their hands and other objects in their mouths. These objects can have lead dust on them.



## Women of childbearing age should know that lead is dangerous to a developing fetus.

- Women with a high lead level in their system before or during pregnancy risk exposing the fetus to lead through the placenta during fetal development.

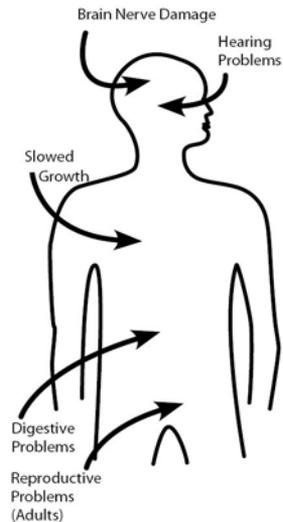
# Health Effects of Lead

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**Lead affects the body in many ways.** It is important to know that even exposure to low levels of lead can severely harm children.

## **In children, exposure to lead can cause:**

- Nervous system and kidney damage
- Learning disabilities, attention deficit disorder, and decreased intelligence
- Speech, language, and behavior problems
- Poor muscle coordination
- Decreased muscle and bone growth
- Hearing damage



While low-lead exposure is most common, exposure to high amounts of lead can have devastating effects on children, including seizures, unconsciousness, and, in some cases, death.

Although children are especially susceptible to lead exposure, lead can be dangerous for adults, too.

## **In adults, exposure to lead can cause:**

- Harm to a developing fetus
- Increased chance of high blood pressure during pregnancy
- Fertility problems (in men and women)
- High blood pressure
- Digestive problems
- Nerve disorders
- Memory and concentration problems
- Muscle and joint pain

## Check Your Family for Lead

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**Get your children and home tested if you think your home has lead.**

Children's blood lead levels tend to increase rapidly from 6 to 12 months of age, and tend to peak at 18 to 24 months of age.

Consult your doctor for advice on testing your children. A simple blood test can detect lead. Blood lead tests are usually recommended for:

- Children at ages 1 and 2
- Children or other family members who have been exposed to high levels of lead
- Children who should be tested under your state or local health screening plan

**Your doctor can explain what the test results mean and if more testing will be needed.**

# Where Lead-Based Paint Is Found

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In general, the older your home or childcare facility, the more likely it has lead-based paint.<sup>1</sup>

**Many homes, including private, federally-assisted, federally-owned housing, and childcare facilities built before 1978 have lead-based paint.** In 1978, the federal government banned consumer uses of lead-containing paint.<sup>2</sup>

Learn how to determine if paint is lead-based paint on page 7.

## **Lead can be found:**

- In homes and childcare facilities in the city, country, or suburbs,
- In private and public single-family homes and apartments,
- On surfaces inside and outside of the house, and
- In soil around a home. (Soil can pick up lead from exterior paint or other sources, such as past use of leaded gas in cars.)

Learn more about where lead is found at [epa.gov/lead](http://epa.gov/lead).

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<sup>1</sup> "Lead-based paint" is currently defined by the federal government as paint with lead levels greater than or equal to 1.0 milligram per square centimeter (mg/cm), or more than 0.5% by weight.

<sup>2</sup> "Lead-containing paint" is currently defined by the federal government as lead in new dried paint in excess of 90 parts per million (ppm) by weight.

## Identifying Lead-Based Paint and Lead-Based Paint Hazards

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**Deteriorating lead-based paint (peeling, chipping, chalking, cracking, or damaged paint)** is a hazard and needs immediate attention. **Lead-based paint** may also be a hazard when found on surfaces that children can chew or that get a lot of wear and tear, such as:

- On windows and window sills
- Doors and door frames
- Stairs, railings, banisters, and porches

**Lead-based paint is usually not a hazard if it is in good condition** and if it is not on an impact or friction surface like a window.

**Lead dust** can form when lead-based paint is scraped, sanded, or heated. Lead dust also forms when painted surfaces containing lead bump or rub together. Lead paint chips and dust can get on surfaces and objects that people touch. Settled lead dust can reenter the air when the home is vacuumed or swept, or when people walk through it. EPA currently defines the following levels of lead in dust as hazardous:

- 40 micrograms per square foot ( $\mu\text{g}/\text{ft}^2$ ) and higher for floors, including carpeted floors
- 250  $\mu\text{g}/\text{ft}^2$  and higher for interior window sills

**Lead in soil** can be a hazard when children play in bare soil or when people bring soil into the house on their shoes. EPA currently defines the following levels of lead in soil as hazardous:

- 400 parts per million (ppm) and higher in play areas of bare soil
- 1,200 ppm (average) and higher in bare soil in the remainder of the yard

**Remember, lead from paint chips—which you can see—and lead dust—which you may not be able to see—both can be hazards.**

The only way to find out if paint, dust, or soil lead hazards exist is to test for them. The next page describes how to do this.

# Checking Your Home for Lead

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You can get your home tested for lead in several different ways:

- A lead-based paint **inspection** tells you if your home has lead-based paint and where it is located. It won't tell you whether your home currently has lead hazards. A trained and certified testing professional, called a lead-based paint inspector, will conduct a paint inspection using methods, such as:
  - Portable x-ray fluorescence (XRF) machine
  - Lab tests of paint samples
- A **risk assessment** tells you if your home currently has any lead hazards from lead in paint, dust, or soil. It also tells you what actions to take to address any hazards. A trained and certified testing professional, called a risk assessor, will:
  - Sample paint that is deteriorated on doors, windows, floors, stairs, and walls
  - Sample dust near painted surfaces and sample bare soil in the yard
  - Get lab tests of paint, dust, and soil samples
- A combination inspection and risk assessment tells you if your home has any lead-based paint and if your home has any lead hazards, and where both are located.



Be sure to read the report provided to you after your inspection or risk assessment is completed, and ask questions about anything you do not understand.

## Checking Your Home for Lead, continued

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In preparing for renovation, repair, or painting work in a pre-1978 home, Lead-Safe Certified renovators (see page 12) may:

- Take paint chip samples to determine if lead-based paint is present in the area planned for renovation and send them to an EPA-recognized lead lab for analysis. In housing receiving federal assistance, the person collecting these samples must be a certified lead-based paint inspector or risk assessor
- Use EPA-recognized tests kits to determine if lead-based paint is absent (but not in housing receiving federal assistance)
- Presume that lead-based paint is present and use lead-safe work practices

There are state and federal programs in place to ensure that testing is done safely, reliably, and effectively. Contact your state or local agency for more information, visit [epa.gov/lead](http://epa.gov/lead), or call **1-800-424-LEAD (5323)** for a list of contacts in your area.<sup>3</sup>

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<sup>3</sup> Hearing- or speech-challenged individuals may access this number through TTY by calling the Federal Relay Service at 1-800-877-8399.

## What You Can Do Now to Protect Your Family

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**If you suspect that your house has lead-based paint hazards, you can take some immediate steps to reduce your family's risk:**

- If you rent, notify your landlord of peeling or chipping paint.
- Keep painted surfaces clean and free of dust. Clean floors, window frames, window sills, and other surfaces weekly. Use a mop or sponge with warm water and a general all-purpose cleaner. (Remember: never mix ammonia and bleach products together because they can form a dangerous gas.)
- Carefully clean up paint chips immediately without creating dust.
- Thoroughly rinse sponges and mop heads often during cleaning of dirty or dusty areas, and again afterward.
- Wash your hands and your children's hands often, especially before they eat and before nap time and bed time.
- Keep play areas clean. Wash bottles, pacifiers, toys, and stuffed animals regularly.
- Keep children from chewing window sills or other painted surfaces, or eating soil.
- When renovating, repairing, or painting, hire only EPA- or state-approved Lead-Safe Certified renovation firms (see page 12).
- Clean or remove shoes before entering your home to avoid tracking in lead from soil.
- Make sure children eat nutritious, low-fat meals high in iron, and calcium, such as spinach and dairy products. Children with good diets absorb less lead.

## Reducing Lead Hazards

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**Disturbing lead-based paint or removing lead improperly can increase the hazard to your family by spreading even more lead dust around the house.**

- In addition to day-to-day cleaning and good nutrition, you can **temporarily** reduce lead-based paint hazards by taking actions, such as repairing damaged painted surfaces and planting grass to cover lead-contaminated soil. These actions are not permanent solutions and will need ongoing attention.



- You can minimize exposure to lead when renovating, repairing, or painting by hiring an EPA- or state-certified renovator who is trained in the use of lead-safe work practices. If you are a do-it-yourselfer, learn how to use lead-safe work practices in your home.
- To remove lead hazards permanently, you should hire a certified lead abatement contractor. Abatement (or permanent hazard elimination) methods include removing, sealing, or enclosing lead-based paint with special materials. Just painting over the hazard with regular paint is not permanent control.

**Always use a certified contractor who is trained to address lead hazards safely.**

- Hire a Lead-Safe Certified firm (see page 12) to perform renovation, repair, or painting (RRP) projects that disturb painted surfaces.
- To correct lead hazards permanently, hire a certified lead abatement professional. This will ensure your contractor knows how to work safely and has the proper equipment to clean up thoroughly.

Certified contractors will employ qualified workers and follow strict safety rules as set by their state or by the federal government.

## Reducing Lead Hazards, continued

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**If your home has had lead abatement work done** or if the housing is receiving federal assistance, once the work is completed, dust cleanup activities must be conducted until clearance testing indicates that lead dust levels are below the following levels:

- 40 micrograms per square foot ( $\mu\text{g}/\text{ft}^2$ ) for floors, including carpeted floors
- 250  $\mu\text{g}/\text{ft}^2$  for interior windows sills
- 400  $\mu\text{g}/\text{ft}^2$  for window troughs

For help in locating certified lead abatement professionals in your area, call your state or local agency (see pages 14 and 15), or visit [epa.gov/lead](http://epa.gov/lead), or call 1-800-424-LEAD.

# Renovating, Remodeling, or Repairing (RRP) a Home with Lead-Based Paint

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**If you hire a contractor to conduct renovation, repair, or painting (RRP) projects in your pre-1978 home or childcare facility (such as pre-school and kindergarten), your contractor must:**

- Be a Lead-Safe Certified firm approved by EPA or an EPA-authorized state program
- Use qualified trained individuals (Lead-Safe Certified renovators) who follow specific lead-safe work practices to prevent lead contamination
- Provide a copy of EPA's lead hazard information document, *The Lead-Safe Certified Guide to Renovate Right*



**RRP contractors working in pre-1978 homes and childcare facilities must follow lead-safe work practices that:**

- **Contain the work area.** The area must be contained so that dust and debris do not escape from the work area. Warning signs must be put up, and plastic or other impermeable material and tape must be used.
- **Avoid renovation methods that generate large amounts of lead-contaminated dust.** Some methods generate so much lead-contaminated dust that their use is prohibited. They are:
  - Open-flame burning or torching
  - Sanding, grinding, planing, needle gunning, or blasting with power tools and equipment not equipped with a shroud and HEPA vacuum attachment and
  - Using a heat gun at temperatures greater than 1100°F
- **Clean up thoroughly.** The work area should be cleaned up daily. When all the work is done, the area must be cleaned up using special cleaning methods.
- **Dispose of waste properly.** Collect and seal waste in a heavy duty bag or sheeting. When transported, ensure that waste is contained to prevent release of dust and debris.

To learn more about EPA's requirements for RRP projects visit [epa.gov/getleadsafe](http://epa.gov/getleadsafe), or read *The Lead-Safe Certified Guide to Renovate Right*.

## Other Sources of Lead

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**While paint, dust, and soil are the most common sources of lead, other lead sources also exist:**

- **Drinking water.** Your home might have plumbing with lead or lead solder. You cannot see, smell, or taste lead, and boiling your water will not get rid of lead. If you think your plumbing might contain lead:

- Use only cold water for drinking and cooking.
- Run water for 15 to 30 seconds before drinking it, especially if you have not used your water for a few hours.

Call your local health department or water supplier to find out about testing your water, or visit [epa.gov/lead](http://epa.gov/lead) for EPA's lead in drinking water information.

- **Lead smelters** or other industries that release lead into the air.
- **Your job.** If you work with lead, you could bring it home on your body or clothes. Shower and change clothes before coming home. Launder your work clothes separately from the rest of your family's clothes.
- **Hobbies** that use lead, such as making pottery or stained glass, or refinishing furniture. Call your local health department for information about hobbies that may use lead.
- Old **toys** and **furniture** may have been painted with lead-containing paint. Older toys and other children's products may have parts that contain lead.<sup>4</sup>
- Food and liquids cooked or stored in **lead crystal** or **lead-glazed pottery or porcelain** may contain lead.
- Folk remedies, such as "**greta**" and "**azarcon,**" used to treat an upset stomach.

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<sup>4</sup> In 1978, the federal government banned toys, other children's products, and furniture with lead-containing paint (16 CFR 1303). In 2008, the federal government banned lead in most children's products. The federal government currently bans lead in excess of 100 ppm by weight in most children's products (76 FR 44463).

## For More Information

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### **The National Lead Information Center**

Learn how to protect children from lead poisoning and get other information about lead hazards on the Web at [epa.gov/lead](http://epa.gov/lead) and [hud.gov/lead](http://hud.gov/lead), or call **1-800-424-LEAD (5323)**.

### **EPA's Safe Drinking Water Hotline**

For information about lead in drinking water, call **1-800-426-4791**, or visit [epa.gov/lead](http://epa.gov/lead) for information about lead in drinking water.

### **Consumer Product Safety Commission (CPSC) Hotline**

For information on lead in toys and other consumer products, or to report an unsafe consumer product or a product-related injury, call **1-800-638-2772**, or visit CPSC's website at [cpsc.gov](http://cpsc.gov) or [saferproducts.gov](http://saferproducts.gov).

### **State and Local Health and Environmental Agencies**

Some states, tribes, and cities have their own rules related to lead-based paint. Check with your local agency to see which laws apply to you. Most agencies can also provide information on finding a lead abatement firm in your area, and on possible sources of financial aid for reducing lead hazards. Receive up-to-date address and phone information for your state or local contacts on the Web at [epa.gov/lead](http://epa.gov/lead), or contact the National Lead Information Center at **1-800-424-LEAD**.

Hearing- or speech-challenged individuals may access any of the phone numbers in this brochure through TTY by calling the toll-free Federal Relay Service at **1-800-877-8339**.

# U. S. Environmental Protection Agency (EPA)

## Regional Offices

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The mission of EPA is to protect human health and the environment. Your Regional EPA Office can provide further information regarding regulations and lead protection programs.

**Region 1** (Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont)

Regional Lead Contact  
U.S. EPA Region 1  
5 Post Office Square, Suite 100, OES 05-4  
Boston, MA 02109-3912  
(888) 372-7341

**Region 2** (New Jersey, New York, Puerto Rico, Virgin Islands)

Regional Lead Contact  
U.S. EPA Region 2  
2890 Woodbridge Avenue  
Building 205, Mail Stop 225  
Edison, NJ 08837-3679  
(732) 321-6671

**Region 3** (Delaware, Maryland, Pennsylvania, Virginia, DC, West Virginia)

Regional Lead Contact  
U.S. EPA Region 3  
1650 Arch Street  
Philadelphia, PA 19103  
(215) 814-2088

**Region 4** (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee)

Regional Lead Contact  
U.S. EPA Region 4  
AFC Tower, 12th Floor, Air, Pesticides & Toxics  
61 Forsyth Street, SW  
Atlanta, GA 30303  
(404) 562-8998

**Region 5** (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin)

Regional Lead Contact  
U.S. EPA Region 5 (DT-8J)  
77 West Jackson Boulevard  
Chicago, IL 60604-3666  
(312) 886-7836

**Region 6** (Arkansas, Louisiana, New Mexico, Oklahoma, Texas, and 66 Tribes)

Regional Lead Contact  
U.S. EPA Region 6  
1445 Ross Avenue, 12th Floor  
Dallas, TX 75202-2733  
(214) 665-2704

**Region 7** (Iowa, Kansas, Missouri, Nebraska)

Regional Lead Contact  
U.S. EPA Region 7  
11201 Renner Blvd.  
WWPD/TOPE  
Lenexa, KS 66219  
(800) 223-0425

**Region 8** (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming)

Regional Lead Contact  
U.S. EPA Region 8  
1595 Wynkoop St.  
Denver, CO 80202  
(303) 312-6966

**Region 9** (Arizona, California, Hawaii, Nevada)

Regional Lead Contact  
U.S. EPA Region 9 (CMD-4-2)  
75 Hawthorne Street  
San Francisco, CA 94105  
(415) 947-4280

**Region 10** (Alaska, Idaho, Oregon, Washington)

Regional Lead Contact  
U.S. EPA Region 10  
Solid Waste & Toxics Unit (WCM-128)  
1200 Sixth Avenue, Suite 900  
Seattle, WA 98101  
(206) 553-1200

## **Consumer Product Safety Commission (CPSC)**

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The CPSC protects the public against unreasonable risk of injury from consumer products through education, safety standards activities, and enforcement. Contact CPSC for further information regarding consumer product safety and regulations.

### **CPSC**

4330 East West Highway  
Bethesda, MD 20814-4421  
1-800-638-2772  
cpsc.gov or saferproducts.gov

## **U. S. Department of Housing and Urban Development (HUD)**

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HUD's mission is to create strong, sustainable, inclusive communities and quality affordable homes for all. Contact HUD's Office of Healthy Homes and Lead Hazard Control for further information regarding the Lead Safe Housing Rule, which protects families in pre-1978 assisted housing, and for the lead hazard control and research grant programs.

### **HUD**

451 Seventh Street, SW, Room 8236  
Washington, DC 20410-3000  
(202) 402-7698  
hud.gov/offices/lead/

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This document is in the public domain. It may be produced by an individual or organization without permission. Information provided in this booklet is based upon current scientific and technical understanding of the issues presented and is reflective of the jurisdictional boundaries established by the statutes governing the co-authoring agencies. Following the advice given will not necessarily provide complete protection in all situations or against all health hazards that can be caused by lead exposure.

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U. S. EPA Washington DC 20460  
U. S. CPSC Bethesda MD 20814  
U. S. HUD Washington DC 20410

EPA-747-K-12-001  
December 2012

# **IMPORTANT!**

## **Lead From Paint, Dust, and Soil in and Around Your Home Can Be Dangerous if Not Managed Properly**

- Children under 6 years old are most at risk for lead poisoning in your home.
- Lead exposure can harm young children and babies even before they are born.
- Homes, schools, and child care facilities built before 1978 are likely to contain lead-based paint.
- Even children who seem healthy may have dangerous levels of lead in their bodies.
- Disturbing surfaces with lead-based paint or removing lead-based paint improperly can increase the danger to your family.
- People can get lead into their bodies by breathing or swallowing lead dust, or by eating soil or paint chips containing lead.
- People have many options for reducing lead hazards.

**Disclosure of Information on Lead-Based Paint and/or Lead-Based Paint Hazards**

**Lead Warning Statement**

*Housing built before 1978 may contain lead-based paint. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. Lead exposure is especially harmful to young children and pregnant women. Before renting pre-1978 housing, lessors must disclose the presence of known lead-based paint and/or lead-based paint hazards in the dwelling. Lessees must also receive a federally approved pamphlet on lead poisoning prevention.*

**Lessor’s Disclosure**

(a) Presence of lead-based paint and/or lead-based paint hazards (check (i) or (ii) below):

(i) \_\_\_\_\_ Known lead-based paint and/or lead-based paint hazards are present in the housing (explain).

\_\_\_\_\_

(ii) \_\_\_\_\_ Lessor has no knowledge of lead-based paint and/or lead-based paint hazards in the housing.

(b) Records and reports available to the lessor (check (i) or (ii) below):

(i) \_\_\_\_\_ Lessor has provided the lessee with all available records and reports pertaining to lead-based paint and/or lead-based paint hazards in the housing (list documents below).

\_\_\_\_\_

(ii) \_\_\_\_\_ Lessor has no reports or records pertaining to lead-based paint and/or lead-based paint hazards in the housing.

**Lessee’s Acknowledgment (initial)**

(c) \_\_\_\_\_ Lessee has received copies of all information listed above.

(d) \_\_\_\_\_ Lessee has received the pamphlet *Protect Your Family from Lead in Your Home*.

**Agent’s Acknowledgment (initial)**

(e) \_\_\_\_\_ Agent has informed the lessor of the lessor’s obligations under 42 U.S.C. 4852(d) and is aware of his/her responsibility to ensure compliance.

**Certification of Accuracy**

The following parties have reviewed the information above and certify, to the best of their knowledge, that the information they have provided is true and accurate.

_____	_____	_____	_____
Lessor	Date	Lessor	Date
_____	_____	_____	_____
Lessee	Date	Lessee	Date
_____	_____	_____	_____
Agent	Date	Agent	Date

**Disclosure of Information on Lead-Based Paint and/or Lead-Based Paint Hazards**

**Lead Warning Statement**

Every purchaser of any interest in residential real property on which a residential dwelling was built prior to 1978 is notified that such property may present exposure to lead from lead-based paint that may place young children at risk of developing lead poisoning. Lead poisoning in young children may produce permanent neurological damage, including learning disabilities, reduced intelligence quotient, behavioral problems, and impaired memory. Lead poisoning also poses a particular risk to pregnant women. The seller of any interest in residential real property is required to provide the buyer with any information on lead-based paint hazards from risk assessments or inspections in the seller's possession and notify the buyer of any known lead-based paint hazards. A risk assessment or inspection for possible lead-based paint hazards is recommended prior to purchase.

**Seller's Disclosure**

(a) Presence of lead-based paint and/or lead-based paint hazards (check (i) or (ii) below):

(i) \_\_\_\_\_ Known lead-based paint and/or lead-based paint hazards are present in the housing (explain).  
\_\_\_\_\_

(ii) \_\_\_\_\_ Seller has no knowledge of lead-based paint and/or lead-based paint hazards in the housing.

(b) Records and reports available to the seller (check (i) or (ii) below):

(i) \_\_\_\_\_ Seller has provided the purchaser with all available records and reports pertaining to lead-based paint and/or lead-based paint hazards in the housing (list documents below).  
\_\_\_\_\_

(ii) \_\_\_\_\_ Seller has no reports or records pertaining to lead-based paint and/or lead-based paint hazards in the housing.

**Purchaser's Acknowledgment (initial)**

(c) \_\_\_\_\_ Purchaser has received copies of all information listed above.

(d) \_\_\_\_\_ Purchaser has received the pamphlet *Protect Your Family from Lead in Your Home*.

(e) Purchaser has (check (i) or (ii) below):

(i) \_\_\_\_\_ received a 10-day opportunity (or mutually agreed upon period) to conduct a risk assessment or inspection for the presence of lead-based paint and/or lead-based paint hazards; or

(ii) \_\_\_\_\_ waived the opportunity to conduct a risk assessment or inspection for the presence of lead-based paint and/or lead-based paint hazards.

**Agent's Acknowledgment (initial)**

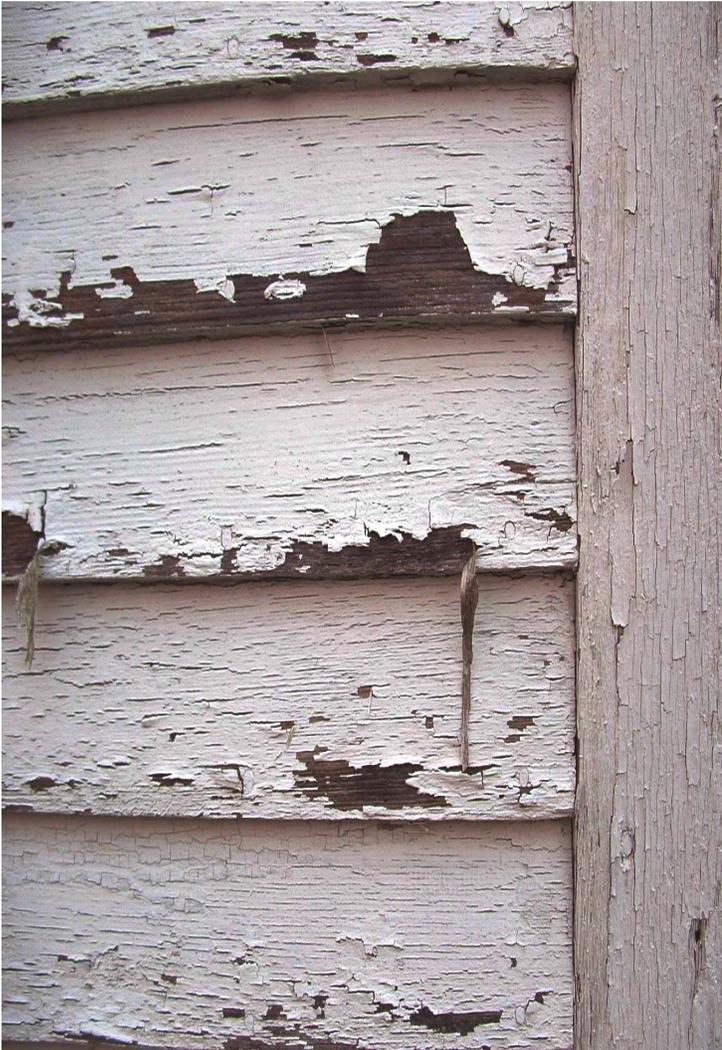
(f) \_\_\_\_\_ Agent has informed the seller of the seller's obligations under 42 U.S.C. 4852(d) and is aware of his/her responsibility to ensure compliance.

**Certification of Accuracy**

The following parties have reviewed the information above and certify, to the best of their knowledge, that the information they have provided is true and accurate.

_____ Seller	_____ Date	_____ Seller	_____ Date
_____ Purchaser	_____ Date	_____ Purchaser	_____ Date
_____ Agent	_____ Date	_____ Agent	_____ Date

# Notice to Occupants



**Promptly report all deteriorated paint or visible paint chips to the Owner or Owner's agent.**

**This means any paint on the inside and outside of this building that is chipping, peeling, chalking, flaking, cracking, or damaged. It also includes any visible paint chips on the ground.**

## Prevent Lead Poisoning

Name of Owner or  
Owner's Agent : \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_



# Online EMP Compliance Statements Establishing Your Personal User Account

1. Go to: <https://secure.vermont.gov/VDH/emp/>  
Click on “Sign Up for an Account Today”

**VERMONT** EMP Compliance Statement  
A Service of the Department of Health

Vermont.gov    FAQs    VDH Website

**Essential Maintenance Practices Compliance Statement Service**

[Click here to conduct an EMP compliance status search](#)

Welcome to the Vermont Department of Health's Essential Maintenance Practices Compliance Statement Service. This service allows completed compliance statements to be submitted electronically to the Vermont Department of Health. There is no charge for using this service to file your statements.

In order to use this online service, property owners and property managers must have their own accounts on the system.

**Please Note:** While a property manager can file a compliance statement for a property, the owner of that property is ultimately responsible.

**Compliance Statement Questions:** \* Required Field

If you have questions regarding the process of filing your Compliance Statement, please refer to the [FAQ](#).

If you have further questions, please contact The Vermont Department of Health at (802) 865-7786 or by email at [EmpCompliance@state.vt.us](mailto:EmpCompliance@state.vt.us).

**First Time User? Don't Have An Account with the Compliance Statement Service?**  
[Sign Up for an Account Today](#)

**Login Information:**

Username:\*

Password:\*

Account Type:\*

[Forgot your Password?](#)

[Accessibility Policy](#) | [Privacy Policy](#)

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2. Choose “Property Owner” or “Property Manager”

**Choose Sign in type**

Account Type:

Property Owner  
Property Manager

3. Fill in required information, **write down your password**, and click “submit”.

**Essential Maintenance Practice's Compliance Statement: Property Manager Account Sign Up**

\* Required Field

You must have an account with the EMP Compliance Statement Service in order to file compliance statements for properties you manage. When you have established an account, any owners for whom you manage properties will be able to select you as the manager for specific properties.

Complete the form below to establish an account. Please remember to record your password. You will need it in the future to access your account.

**Account Information:**

Username:	Your Username will be emailed to you after successful filling out of the form below.
Password: *	<input type="password"/> (Minimum 8 letters and numbers, at least 1 letter and at least 1 number)
Retype Password: *	<input type="password"/>
First Name: *	<input type="text"/>
Last Name: *	<input type="text"/>
Phone: *	( <input type="text"/> ) <input type="text"/> - <input type="text"/>
Organization/Business Name:	<input type="text"/>
Mailing Address: *	<input type="text"/>
Mailing Address (cont):	<input type="text"/>
City: *	<input type="text"/>
State: *	VERMONT
Postal Code: *	<input type="text"/>
Email Address: *	<input type="text"/>

(You will receive an email to the entered address to verify your account before you may log on to the Compliance Statement Service.)

#### 4. Your username will be sent to your email address.

Your username and instructions for logging into the site will be sent to your email address.

**You need to sign into your account within 48 hours** or you will have to repeat step 3 above.

Your username will be your first name and your last name with a period between them (**example: John.Doe**).

Some usernames may also have a number after the last name. Numbers are used when more than one person has the same name.

5. Log in to the Compliance Service within 48 hours to confirm your account!

**EMP Compliance Statement**  
A Service of the Department of Health

Vermont.gov | FAQs | VDH Website

### Essential Maintenance Practices Compliance Statement Service

[Click here to conduct an EMP compliance status search](#)

Welcome to the Vermont Department of Health's Essential Maintenance Practices Compliance Statement Service. This service allows completed compliance statements to be submitted electronically to the Vermont Department of Health. There is no charge for using this service to file your statements.

In order to use this online service, property owners and property managers must have their own accounts on the system.

**Please Note:** While a property manager can file a compliance statement for a property, the owner of that property is ultimately responsible.

**Compliance Statement Questions:** \* Required Field  
If you have questions regarding the process of filing your Compliance Statement, please refer to the [FAQ](#).  
If you have further questions, please contact The Vermont Department of Health at (802) 865-7786 or by email at [EmpCompliance@state.vt.us](mailto:EmpCompliance@state.vt.us).

**First Time User? Don't Have An Account with the Compliance Statement Service?**  
[Sign Up for an Account Today](#)

**Login Information:**

Username:\*  ← Username has a period between the first and last name.  
Password:\*   
Account Type:\*

[Forgot your Password?](#)

[Accessibility Policy](#) | [Privacy Policy](#)  
A Vermont Government Website Copyright 2013 State of Vermont

## Important Notes

- A username has a period between the first and last name. **Example: John.Doe**
- Only property owners can establish properties in the system. An owner must add his or her property to his or her account before a manager can be assigned or a compliance statement can be filed.
- A property manager must create his or her own personal user account before a property owner can assign a property to him or her to manage.

**Questions?** Send an Email to: [EmpCompliance@state.vt.us](mailto:EmpCompliance@state.vt.us) or call 802-865-7786

# Sample Residential Rental Property Compliance Statement

## How a Completed Statement Looks in the Online System

**Steps to Completion:**

Property Specifics	Building Exterior	Common Areas	Unit(s) Interior	Change of Tenant	Signature	DONE!
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### EMP Rental Property Compliance Statement

An EMP Compliance Statement must be filed every 365 days for each residential rental property.

#### Property Specifics

Original Date of Construction: 1900-1950	Number of Rental Units in Building: 4
Property Type: Standard Rental Housing	
Physical Address of Property	
Physical Address 1: 11 Elmwood Ave	
Physical Address 2:	
City: Burlington	Zip Code: 05401

#### Property Owner(s)

Primary Owner				
First Name: John	Last Name: Public	Company: EMP Training Incorporated	Phone Number: (802)357-2468	
Mailing Address: PO Box 45	Mailing Address Cont.:	City: Burlington	State: VERMONT	Zipcode: 05401

#### Property Manager

First Name: Rick	Last Name: Manager	Company:	Phone Number: 8021234567	
Mailing Address: 123 Lakeside Road	Mailing Address Cont.:	City: Anywhere	State: VERMONT	Zipcode: 05000

#### EMP Certified Individual(s) Performing Maintenance

List the name(s) and EMP certificate number(s) of the individual(s) who performed Essential Maintenance Practices for this property in the last 365 days. Use the list to specify which EMPs each individual performed.

EMP Certified Workers at Property for This Filing		
First Name: EMP Trained	Last Name: Person	Company: Lead Safe Painting Company
		<b>EMPs Performed:</b>
		Visually inspected exterior and outbuildings (if any).
		Visually inspected interior units and interior common areas (if any).
		Removed visible paint chips from ground on the property.
		Stabilized interior paint.
		Did specialized cleaning in common areas.
		Checked wooden windows to verify that window well inserts were installed.
		Inspected unit interior/bldg. exterior at change of tenant.
		Did specialized cleaning in unit at change of tenant.
	EMP Cert #: 12143	

[Continue](#)

(Sample Completed EMP Rental Compliance Statement 2<sup>nd</sup> Continued)

Steps to Completion:

Property Specifics ✓ Building Exterior Common Areas Unit(s) Interior Change of Tenant Signature DONE!

EMP Rental Property Compliance Statement

Building Exterior and Grounds

You may be able to skip some questions on this compliance statement. A message will pop up to tell you if your answer to a particular question will allow you to skip the following question(s).

1. An EMP Certified individual visually inspected all exterior surfaces of the building and outbuilding(s) to identify deteriorated paint.

Yes  No

Date of Inspection 04 / 02 / 2013

2. Deteriorated paint exceeding 1 sq. ft. was identified on exterior surface of the building or outbuilding(s).

Yes  No

3. Was deteriorated paint on external surfaces stabilized within 30 days?

Yes  No

Why wasn't deteriorated paint stabilized?

Deteriorated paint was discovered after November 1st but before May 31st.

Other Reason:

4. Was access to the area by children blocked if exterior deteriorated paint exceeding 1 sq. ft. was identified after November 1st but before May 31st?

Yes  No

How was access to the area blocked(?):

5. Were safe work practices used to stabilize deteriorated paint on exterior surfaces?

Yes  No  Stabilization not yet completed

6. For any outdoor area, visible paint chips were found on the ground at the property.

Yes  No

Were visible paint chips removed? Yes  No

Back Continue

(Sample Completed EMP Rental Compliance Statement 3<sup>rd</sup> Continued)

**Steps to Completion:**

Property Specifics ✓ Building Exterior ✓ Common Areas Unit(s) Interior Change of Tenant Signature DONE!

### EMP Rental Property Compliance Statement

#### The Building's Common Areas

7. An EMP Certified individual visually inspected all common areas of the building to identify deteriorated paint.  
Yes  No  Building does not have common areas

8. Deteriorated paint exceeding 1 sq. ft. was identified in common areas of the building.  
Yes  No

Because you answered this question "No," questions 9 and 10 do not need to be filled in.

9. Was deteriorated paint in common areas stabilized within 30 days?  
Yes  No   
Why wasn't deteriorated paint stabilized?

10. Were safe work practices used to stabilize deteriorated paint in common areas?  
Yes  No  Stabilization not yet completed

11. An EMP Certified individual performed annual specialized cleaning in common areas within the building.  
Yes  No   
Date of Specialized Cleaning: \* 04 / 11 / 2013

12. Notice is posted for occupants encouraging them to report deteriorated paint to the owner or owner's agent.  
Yes  No   
Location of notice posted: Common Area  Individual Unit(s)

[Back](#) [Continue](#)

(Sample Completed EMP Rental Compliance Statement 4<sup>th</sup> Continued)

**Steps to Completion:**

Property Specifics ✓ Building Exterior ✓ Common Areas Unit(s) Interior Change of Tenant Signature DONE!

### EMP Rental Property Compliance Statement

#### Rental Unit(s) Interior

13. An EMP Certified individual visually inspected all interior surfaces in all rental units to identify deteriorated paint.  
Yes  No   
Date Inspection Completed: 04 / 10 / 2013

14. Deteriorated paint exceeding 1 sq. ft. was identified on interior surfaces of the building  
Yes  No

Because you answered this question "No," questions 15 and 16 do not need to be filled in.

15. Was deteriorated paint on interior surfaces stabilized within 30 days?  
Yes  No   
Why wasn't deteriorated paint on rental unit building surfaces stabilized within 30 days?

16. Were safe work practices used to stabilize deteriorated paint on interior surfaces?  
Yes  No  Stabilization not yet complete

17. An EMP Certified individual visually inspected all units to verify that window well inserts were installed in pre-1978 wooden windows  
Yes  No  Inserts Not Needed because windows are vinyl or aluminum   
Did all wooden windows have window well inserts? Yes  No

[Back](#) [Continue](#)

(Sample Completed EMP Rental Compliance Statement 5<sup>th</sup> Continued)

Steps to Completion:

Property Specifics ✓ Building Exterior ✓ Common Areas ✓ Unit(s) Interior ✓ Change of Tenant ✓ Signature DONE!

### EMP Rental Property Compliance Statement

#### Change of Tenant(s)

18. Since the last EMP Compliance Statement filing for this rental property, has there been a change of tenant within any of the property rental units?  
Yes  No

19. An EMP Certified individual visually inspected rental unit interior and building exterior surfaces to identify deteriorated paint for each rental unit with a change of tenant.  
Yes  No   
Why wasn't each rental unit with a change of tenant inspected?

20. Deteriorated paint exceeding 1 sq. ft. was identified on rental unit interior or building exterior surfaces.  
Yes  No

21. Was deteriorated paint on rental unit interior or building exterior surfaces stabilized within 30 days?  
Yes  No   
Why wasn't deteriorated paint on rental unit building surfaces stabilized within 30 days?

22. Were safe work practices used to stabilize deteriorated paint on rental unit interior or building exterior surfaces?  
Yes  No  Stabilization not yet complete

23. An EMP Certified individual performed specialized cleaning in each rental unit with a change of tenant.  
Yes  No

24. Prior to entering into a lease or rental agreement (written or oral), did you provide to all approved new tenants a copy of the pamphlet "Protect Your Family From Lead in Your Home" and a copy of the most recent EMP Compliance Statement?  
Yes  No

(Sample Completed EMP Rental Compliance Statement 6<sup>th</sup> Continued)

Steps to Completion:

Property Specifics ✓ Building Exterior ✓ Common Areas ✓ Unit(s) Interior ✓ Change of Tenant ✓ Signature DONE!

### EMP Rental Property Compliance Statement

#### Attestation and Signature

25. Within 10 days of signing this Compliance Statement, I will ensure that the pamphlet "Protect Your Family From Lead in Your Home" and a copy of this EMP Compliance Statement will be given to an adult tenant in each rented unit of the property. A copy of this EMP Compliance Statement will also be given to my liability insurance company. \*  
Yes  No

#### Signature

I hereby certify that all information provided on this form is true and accurate. I understand that providing false, incomplete or inaccurate information on this form is unlawful and is punishable by civil and criminal penalties pursuant to Vermont law.

/  /   
Property owner's or manager's name Date

Signer's Mailing Address \* Mailing Address Cont. City \* State \* Zipcode \*

# Sample Child Care Facility Compliance Statement

## How a Completed Statement Looks in the Online System

**Steps to Completion:**



### EMP Childcare Facility Compliance Statement

An EMP Compliance Statement must be filed every 365 days for each Child Care Facility.

#### Property Specifics

Original Date of Construction: 1951-1977	Number of Units in Building: 1
Property Type: Child Care Facility	
Physical Address of Property	
Physical Address 1: 1138 Pine St	
Physical Address 2:	
City: Burlington	Zip Code: 05401

#### Property Owner(s)

<u>Primary Owner</u>			
First Name: John	Last Name: Public	Company: EMP Training Incorporated	Phone Number: (802)357-2468
Mailing Address: PO Box 45	Mailing Address Cont.:	City: Burlington	State: VERMONT      Zipcode: 05401

#### Property Manager

No Property Manager Listed

#### EMP Certified Individual(s) Performing Maintenance

List the name(s) and EMP certificate number(s) of the individual(s) who performed Essential Maintenance Practices for this property in the last 365 days. Use the list to specify which EMPs each individual performed.

EMP Certified Workers at Property for This Filing		
First Name: Sue	Last Name: Caregiver	Company: Learn Your ABCs Child Care
	EMP Cert #: 11783	EMP's Performed: Visually inspected exterior and outbuildings (if any). Visually inspected interior units and interior common areas (if any).

[Continue](#)

(Sample Completed Childcare Facility Compliance Statement 2<sup>nd</sup> Continued)

Steps to Completion:

Property Specifics  Building Exterior  Common Areas  Unit(s) Interior  Change of Tenant  Signature  DONE!

EMP Childcare Facility Compliance Statement

Building Exterior and Grounds

You may be able to skip some questions on this compliance statement. A message will pop up to tell you if your answer to a particular question will allow you to skip the following question(s).

1. An EMP-certified individual visually inspected all exterior surfaces of the building to which children have access to identify deteriorated paint.

Yes  No

Date of Inspection 04 / 16 / 2013

2. Deteriorated paint exceeding 1 sq. ft. was identified on exterior surface of the building to which children have access.

Yes  No

Because question 2 was answered "No,". Questions 3, 4, and 5 do not need to be filled in.

3. Was deteriorated paint on external surfaces stabilized within 30 days?

Yes  No

If No, Why wasn't deteriorated paint stabilized?

Deteriorated paint was discovered after November 1st but before May 31st.

Other Reason:

4. Was access to the area by children blocked if exterior deteriorated paint exceeding 1 sq. ft. was identified after November 1st but before May 31st?

Yes  No

How was access to the area blocked(?):

5. Were safe work practices used to stabilize deteriorated paint on exterior surfaces?

Yes  No  Stabilization not complete

6. For any outdoor area, visible paint chips were found on the ground at the property.

Yes  No

Were visible paint chips removed? Yes  No

Back Continue

(Sample Completed Childcare Facility Compliance Statement 3<sup>rd</sup> Continued)

Steps to Completion:

Property Specifics ✓ Building Exterior ✓ Common Areas Unit(s) Interior Change of Tenant Signature DONE!

EMP Childcare Facility Compliance Statement

The Building's Common Areas

7. An EMP Certified individual visually inspected all common areas of the building to identify deteriorated paint.

Yes  No  Building does not have common areas

Because your building has no common areas, questions 8, 9, 10, and 11 do not need to be filled in.

8. Deteriorated paint exceeding 1 sq. ft. was identified in common areas of the building.

Yes  No

9. Was deteriorated paint in common areas stabilized within 30 days?

Yes  No

If No, Why wasn't deteriorated paint stabilized?

10. Were safe work practices used to stabilize deteriorated paint in common areas?

Yes  No  Stabilization not complete

11. An EMP Certified individual performed annual specialized cleaning in common areas within the building.

Yes  No

Date of Specialized Cleaning: \* MM / DD / YYYY

12. A notice is posted in the child care facility encouraging individuals to report deteriorated paint to the owner or owner's agent.

Yes  No

Location of notice posted: Common Area  Individual Unit(s)

Back Continue

(Sample Completed Childcare Facility Compliance Statement 4<sup>th</sup> Continued)

Steps to Completion:

Property Specifics ✓ Building Exterior ✓ Common Areas ✓ Unit(s) Interior Change of Tenant Signature DONE!

EMP Childcare Facility Compliance Statement

Unit(s) Interior

13. An EMP-certified individual visually inspected all interior surfaces of the child care facility to identify deteriorated paint.

Yes  No

Date Inspection Completed: 04 / 16 / 2013

14. Deteriorated paint exceeding 1 sq. ft. was identified on interior surfaces of the child care facility.

Yes  No

Because you answered this question 14 "No," questions 15 and 16 do not need to be filled in.

15. Was deteriorated paint on interior surfaces stabilized within 30 days?

Yes  No

If No, Why wasn't deteriorated paint on unit building surfaces stabilized within 30 days?

16. Were safe work practices used to stabilize deteriorated paint on interior surfaces?

Yes  No  Stabilization not yet completed

17. An EMP Certified individual visually inspected the child care facility to verify that window well inserts were installed in pre-1978 wooden windows.

Yes  No  Inserts Not Needed because windows are vinyl or aluminum

Did pre-1978 wooden windows have window well inserts? Yes  No

Back Continue

(Sample Completed Childcare Facility Compliance Statement 5<sup>th</sup> Continued)

Steps to Completion:

Property Specifics ✓ Building Exterior ✓ Common Areas ✓ Unit(s) Interior ✓ Change of Tenant Signature DONE!

EMP Childcare Facility Compliance Statement

Attestation and Signature

18. Within 10 days of signing this Compliance Statement, I will ensure that a copy of this EMP Compliance Statement will be filed with the tenant (if any), the Department for Children and Families and my liability insurance company.

Yes  No

Signature

I hereby certify that all information provided on this form is true and accurate. I understand that providing false, incomplete or inaccurate information on this form is unlawful and is punishable by civil and criminal penalties pursuant to Vermont law.

John Public

Property owner's or manager's name

04 / 19 / 2013

Date

PO Box 45

Signer's Mailing Address \*

Mailing Address Cont.

Burlington

City \*

VERMONT

State \*

05401

Zipcode \*

Back



**State of Vermont**  
**Lead Paint Safety / Essential Maintenance Practices (EMP)**  
**Training Course**

**REGISTRATION FORM**

(Please print clearly)

**Participant Name:** \_\_\_\_\_

**Mailing Address:** \_\_\_\_\_

\_\_\_\_\_

**Phone Number:** \_\_\_\_\_

**Email Address:** \_\_\_\_\_

**Date of Birth:** \_\_\_\_\_ (used only for identification of persons with similar names)

- Reason for Attending:**
- Rental Property Owner
  - Property Manager
  - Contractor / Painter
  - Maintenance Person
  - Child Care Provider
  - Other: \_\_\_\_\_

**Date of Training:** \_\_\_\_\_

**Location of Training:** \_\_\_\_\_

The Vermont Department of Health maintains a list of EMP-certified individuals and companies who can be hired by property owners to complete EMP's. Contractors who would like to be placed on this list should check the box below.

- Please include me on the Health Department's list of individuals or businesses offering EMP services to property owners. If you decide to be included on the list, your name and contact information will also be accessible on the Department of Health web site:  
[www.healthyvermonters.info](http://www.healthyvermonters.info)

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**For Office Use:**

- Exam                       Evaluation Form                       Certificate sent

# Lead Paint Safety / Essential Maintenance Practices Training Course

## Participant Course Evaluation Form

Participant Name: \_\_\_\_\_

Date of Training: \_\_\_\_\_ Location of Training: \_\_\_\_\_

The purpose of this survey is to provide the instructors and administrators with information to use in judging: a) progress of students and teacher(s) toward achievement of course objectives and b) the effectiveness of the course materials.

***Please indicate the extent to which you agree or disagree with each of the following statements. Circle a letter (A through E) where A indicates strong agreement, and E indicates strong disagreement.***

1.    A   B   C   D   E        The purpose and objectives of the course were clearly stated
2.    A   B   C   D   E        The instructor(s) demonstrated an acceptable attitude towards learning
3.    A   B   C   D   E        The instructors were enthusiastic
4.    A   B   C   D   E        The course was well organized and conducted
5.    A   B   C   D   E        There were ample opportunities for students to actively participate in class
6.    A   B   C   D   E        The class time was wisely and effectively used
7.    A   B   C   D   E        The instructional aides (videotapes, overheads, demonstrations) were helpful to my personal learning
8.    A   B   C   D   E        I feel I now have a good understanding of lead safety, Vermont's Essential Maintenance Practices, and the requirements of State and Federal law.

***Please also answer the following questions:***

9.    What were the major strengths of the course?
10.   What could be improved about the course?
11.   Other comments:



