

4.17a – Lead Paint Removal – Safe Job Procedure



1.0 OVERVIEW

EMPLOYER	Griffin Properties Ltd.	PREPARED	October 27, 2022
ADDRESS	2061 Malaview Avenue West, Sidney, BC	PREPARED BY	Orca Health & Safety Consulting
PROJECT	Residential Renovation/Demolition	VERSION	V1.0 October 2022
PROJECT SITE	Various Locations	REVISION	--
HAZARD	Lead-Based Paints	RISK LEVEL	MODERATE

2.0 BACKGROUND

2.1 Policy

It is the safety policy of Griffin Properties Ltd. (“Employer” and “Griffin Properties”) to prevent/minimize occupational exposure to lead through the development and implementation of proper controls, safe work procedures (“procedure” or “SWP”) and instruction/training of its workers.

2.2 Policy

The purpose of this procedure is to assist in safely performing lead-based paint (LBP) removal/disturbance work tasks that may put workers at risk of exposure to lead and describe the controls that are put into place to prevent/minimize lead dust exposure. This procedure will discuss designated work area setup, safe handling/removal of lead coatings, decontamination/personal hygiene, work area cleanup and lead waste disposal.

2.3 Scope of Work

Select Griffin Properties workers are required to remove/disturb LBPs on exterior/finishes such as metal, wood, drywall/plaster and/or stucco at various project site located throughout British Columbia. This procedure is for low to moderate risk lead-related work tasks as shown in **Table 1** below.

4.17a – Lead Paint Removal – Safe Job Procedure



Table 1: Risk Level Classification per Lead-Related Work Task

RISK LEVEL	WORK TASK	ANTICIPATED EXPOSURE (mg/m ³)
Low	<ul style="list-style-type: none"> Transporting sealed, labelled, and decontaminated lead waste from designated work area to secured hazardous waste storage area. 	<0.05
Low-Moderate	<ul style="list-style-type: none"> Removing lead paint using powered-tools with a dust shroud connected to a HEPA-filtered vacuum Scraping or sanding of lead-containing coats using non-powered hand tools (small projects). 	0.05-0.50
Moderate	<ul style="list-style-type: none"> Scraping or sanding of lead-containing coats using non-powered hand tools (large projects). Manually demolishing lead-painted interior/exterior finishes using non-powered hand tools. Cleaning up and removing lead-containing dust and/or debris. 	>0.05-1.25

NOTES:

- mg/m³ = milligrams per meter cubed of air.
- HEPA = High-Efficiency Particulate Air

To minimize/prevent lead dust exposure to lead-related during work activities, this procedure is to be followed when removing/disturbing LBPs. Authorized Griffin Properties workers must comprehend the requirements of this procedure prior to disturbing any LBPs.

2.4 Risk Identification & Assessment

Suspect LBPs must be assumed to lead-containing unless sampled/analyzed and found to be non-lead. Employers and/or Owners of buildings, structures, machinery and/or equipment must develop lead inventories/assessments and/or hazardous materials (“HazMat”) surveys.

Prior to any renovation/demolition of a building, structure, machinery and/or equipment, all employers and/or owners responsible for that work, must ensure that a qualified person inspects to identify hazardous materials such as lead as per [Section 20.112](#) of the WorkSafeBC Occupational Health and Safety Regulation.

2.5 Hazards of Lead

Acute lead poisoning can occur with overexposure to lead containing paint and can cause loss of appetite, nausea, vomiting, stomach cramps, constipation, difficulty in sleeping, fatigue, moodiness, headache, joint or muscle aches, and anemia. Severe health effects of acute lead exposure include damage to the nervous system, including wrist or foot drop, tremors, and convulsions or seizures.

Chronic lead poisoning may result after lead has accumulated in the body over time, mostly in the bones or teeth. Lead that has accumulated in the bones or teeth may be excreted, but not necessarily, causing health issues such as impaired hemoglobin synthesis, alteration in the central and peripheral nervous systems, and hypertension.

4.17a – Lead Paint Removal – Safe Job Procedure



3.0 EXPOSURE CONTROLS

3.1 Personal Protective Equipment

Minimum personal protective equipment (PPE) required to prevent/minimize lead dust exposure and contamination outside the designated work area (“lead work zone”) includes:

- Y N95 respirator (low-moderate risk work tasks).
- Y Half-facepiece air-purifying respirator (APR) with P100 HEPA filters (moderate risk work tasks).
- Y Impermeable, full-body suits (i.e., Tyvek) with hoods and booties.
- Y Impermeable gloves (i.e., nitrile)
- Y Eye protection (i.e., goggles, safety glasses w/side shields)
- Y CSA steel toed boots with boot covers
- Y Hard helmet and/or hearing protection (when required)



3.1.1 Respiratory Protection

Respiratory protection required per work task is summarized in **Table 2** below.

Table 2: Respiratory Protection per Work Task Summary

WORK TASK	RESPIRATORY PROTECTION
<ul style="list-style-type: none"> • Transporting sealed, labelled, and decontaminated lead waste from designated work area to secured hazardous waste storage area. 	<ul style="list-style-type: none"> • Respirators should not be required if SWP and proper housekeeping protocols are followed.
<ul style="list-style-type: none"> • Removing lead paint using powered-tools with a dust shroud connected to a HEPA-filtered vacuum • Scraping or sanding of lead-containing coats using non-powered hand tools (small projects). 	<ul style="list-style-type: none"> • N95 respirator (minimum) • Half-facepiece APR with P100 HEPA filters (recommended)
<ul style="list-style-type: none"> • Scraping or sanding of lead-containing coats using non-powered hand tools (large projects). • Manually demolishing lead-painted interior/exterior finishes using non-powered hand tools. • Cleaning up and removing lead-containing dust and/or debris. 	<ul style="list-style-type: none"> • Half-facepiece APR with P100 HEPA filters (minimum)

4.17a – Lead Paint Removal – Safe Job Procedure



3.2 Minimum Lead Dust Control Equipment

A wash station is required for worker decontamination/personal hygiene and shall include at least two (2) wash buckets (wash & rinse), liquid soap, sponges, wet wipes, respirator wipes, towels, and rags.

Other lead-related control equipment required include:

- Y [Certified](#) HEPA-filtered vacuum(s)
- Y 6-mil lead labelled, poly waste bags
- Y Lead warning barrier tape and [signs](#)
- Y Low pressure amended water sprayers
- Y Candlestick delineators
- Y Non-powered hand tools (i.e., scrapers)
- Y Ground Fault Circuit Interrupter (GFCI)
- Y 12-mil and 6-mil poly sheeting
- Y Duct/tuck tape
- Y First aid kit & eye wash bottle
- Y Mops with disposable mop heads
- Y Powered-sander with a dust shroud attached to a certified HEPA-filtered vacuum



4.17a – Lead Paint Removal – Safe Job Procedure



4.0 LEAD WORK ZONE

4.1 Pre-Setup

POSITION/TITLE	TASK	NOTES
Project Manager/ Supervisor	Y Submit a Notice of Project (NOP) to WSBC at least 48 hours prior to disturbing any LBPs.	<ul style="list-style-type: none"> • Attach this SWP and HazMat survey report or lead inventory/assessment. • Keep copy of NOP for 10 years.
	Y Confirm all required PPE is available.	<ul style="list-style-type: none"> • As per PPE and equipment lists above.
	Y Coordinate air monitoring for lead during first shift of work task	<ul style="list-style-type: none"> • Exception to air monitoring requirements. • Keep air monitoring data for 10 years.
	Y Coordinate lead-waste disposal.	<ul style="list-style-type: none"> • Contact an approved hazardous waste facility and transporter.
Supervisor	Y Ensure workers handling LBPs are; <ul style="list-style-type: none"> ○ Clean shaven; ○ Fit tested; ○ Instructed/trained in lead; and ○ Reviewed this procedure. 	<ul style="list-style-type: none"> • Fit test should be carried out at least annually. • Fit test and training records must be maintained at the ship and readily available for WSBC officers.
	Y Post copies of NOP, SWP, and HazMat Survey conspicuously onsite.	<ul style="list-style-type: none"> • Other site documentation include Exposure Control Plan, Risk Assessments, SDSs and First Aid Procedures.
	Y Ensure a water source is available onsite for wetting of LBPs.	<ul style="list-style-type: none"> • LBPs that are to be removed/disturbed must be continuously wetted.

4.2 Setup Procedure

4.2.1 Toolbox Talk

Supervisor to conduct a Toolbox meeting with workers to:

1. Discuss hazards and review this safe work procedure;
2. Review emergency response plan and entry/exit requirements for site; and
3. Verify all workers are trained, clean shaven and have required PPE in good working condition.

4.2.2 Setup Lead Work Zone (“Work Zone”)

1. Follow all site-specific access and egress procedures for site.
2. Confirm all required safety-related documentation are available at the work zone.
3. Determine location of decontamination area within the work zone adjacent to the exit (refer to **Section 4.2.3** below for Worker Decontamination Area Setup).
4. Place “candlestick” delineators around work zone with lead warning barrier tape tied to the delineators to establish work zone.
5. Post lead warning signs at access point(s) to the works zone.

4.17a – Lead Paint Removal – Safe Job Procedure



6. De-energize/lockout all forced air ventilation and seal with poly/tape all air supply/return ducts within the work zone prior to disturbance/removal of lead coatings until successfully completed.
7. Move any loose items (e.g., furniture, equipment etc.) from the work zone to an adjacent clean zone and cover any unmovable items (e.g., fixtures, millwork, heavy machinery) with poly within the work zone.
8. Instruct any unprotected occupants/workers to leave the work zone and only allow authorized (instructed/trained) workers within the work zone.
9. Ensure all electrical equipment (i.e., HEPA-filtered vacuum) are plugged into a GFCIs to prevent electrical hazards as continuous wetting is required for all lead coating disturbance/removal.
10. Ensure lead coatings have been re-sampled (including material substrates) and analyzed for leachability by Toxicity Characteristic Leaching Procedure (TCLP) as required by [Schedule 3\(9\)](#) of BC Hazardous Waste Regulation prior to disposal to determine if “hazardous waste”. Lead coatings on metal substrates are excluded as they can be recycled.

NOTE: Work zone boundary needs to keep all unprotected occupants/workers approximately 10 feet away from the work zone (preferably out of the building area).

4.2.3 Setup Worker Decontamination Area

1. Place poly drop sheet large enough to for the number of workers and equipment.
2. Setup wash station including;
 - a. Two (2) wash buckets (wash & rinse), and
 - b. Adequate liquid soap, sponges, wet wipes, respirator wipes, towels, and rags.
3. Place a lead waste bag for contaminated suits, gloves, wipes, rags etc.
4. Setup HEPA-filtered vacuum with brush attachment for worker decontamination/personal hygiene.
5. Provide new/clean disposable PPE including suits, gloves and P100 cartridges.



4.2.4 Don Personal Protective Equipment

Authorized workers prior to entering the lead work zone shall don (put on) the following PPE;

1. N95 respirator (low-moderate risk work tasks);
2. Full-facepiece APR with P100 HEPA-filters (moderate risk work tasks);
3. Impermeable full-body suit with wrists duct taped;
4. CSA steel toed boots with boot covers;
5. Eye protection (i.e., goggles, safety glasses w/ side shields);
6. Impermeable gloves (i.e., nitrile);
7. Hearing protection (if noise levels >85 dBA); and
8. Hard hat (if overhead hazards present).



4.2.5 Respirator Use & Maintenance

1. Inspect prior to every use for damage and ensure inhalation and exhalation valves are present and functioning before donning.
2. Complete positive and negative fit checks prior to entering lead work zone.

4.17a – Lead Paint Removal – Safe Job Procedure



3. Ensure respirator straps are worn under hoods (not over) and nothing is permitted to intrude between the facepiece and the face, or which interferes with the face seal.
4. After use, clean respirator by:
 - a. Washing with respirator wipes;
 - b. Rinse in clean, warm water; and
 - c. Wipe dry and hang to complete drying.

NOTES:

- Respirators should be donned first and doffed (taken off) last for best practice to prevent worker exposures to lead.
- Never share respirators to prevent infectious diseases from spreading between workers.

5.0 LEAD-BASED PAINT REMOVAL

Eating, drinking, smoking, applying cosmetics and/or storing food within lead work zone (not within designated clean zones such as lunch/break rooms) is [prohibited](#).

To minimize lead exposure, workers must adhere to the following steps:

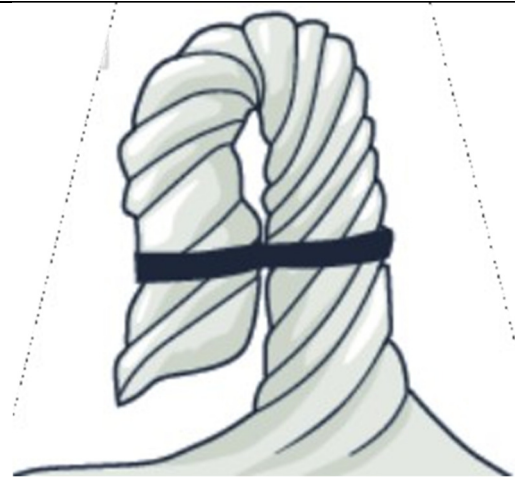
1. Place 12-mil poly drop sheet under area to be removed/disturbed.
2. Secure poly drop sheet tight to wall, floor, or baseboard with duct/tuck tape.
3. Have 6-mil lead waste bags adjacent to work area for lead dust/debris.
4. Wet area to be removed/disturbed with low pressure sprayer and amended water.
5. Remove/disturb lead coatings with hand tools.
6. Equip powered-sander with dust shroud attached to a certified HEPA-filtered vacuum.
7. Use wet wiping/mopping and HEPA-filtered vacuum for dust/debris cleanup.
8. Follow **Section 6.1** below for bagging lead waste prior to disposal into a waste bin procedure.
9. Continue removing/disturbing lead coatings following steps 1-8 above until complete.



6.0 LEAD WASTE HANDLING/STORAGE

6.1 Bagging Procedure

1. Once a lead waste bag is roughly 2/3 full, inspect the bag for damage.
2. Gently twist the bag closed (do not squish out the air to prevent worker exposure) and then fold over twisted portion (“goose neck”) and duct tape closed.
 - a. A HEPA-filtered vacuum can be used to safely remove air from a bag.
3. Wet wipe the outside of the bag.
4. Inspect for damage and transfer to a secured, labelled lead waste bin for hauling.
5. Repeat bagging procedure until all lead waste is successfully removed from work area to bin.



6.2 Designated Waste Storage Area

Lead waste must be bagged, sealed, and labelled (if not already labelled) immediately – as it can be further disturbed – to maintain worker exposures to lead as low as reasonably achievable. Storage areas (i.e., bins, containers etc.) containing lead waste cannot be left unattended/unsecured to prevent unprotected occupants/workers from rummaging through bins and being exposed. Therefore, the following protocols will always be followed:

- Y Transfer bagged, decontaminated lead wastes bags to the secured and labelled waste storage area at the end of each work shift.
- Y No lead waste will be allowed to accumulate at/within removal work areas.
- Y All waste bins/containers will have lids on them that can be closed and locked at after hours.

6.3 Spill Response/Cleanup

The section is to be used in the event a lead waste bag breaks open (i.e., splits or punctured).

1. Immediately soak down the bag and debris with low flow water sprayer and setup a temporary lead work zone using delineators and barrier tape to prevent unprotected occupants/workers entering the contaminated area.
2. Don all required PPE (if not already done) as per **Section 4.2.4** above.
3. Repeat bagging procedure (refer to **Sections 6.1** above) to remove all lead dust/debris.
4. If contents were spilled on soil, remove a layer of topsoil with lead dust/debris.
5. If contents were spilled on any other surface:
 - a. HEPA-filter vacuum debris;
 - b. Wet wipe area with disposable wet rags; and
 - c. Dispose of used rags in lead waste bag.

NOTE: Although transferring sealed/decontaminated lead waste bags outside the work area to the waste storage area is a low-risk work activity (no PPE required) it is industry standard to require clean PPE be worn by workers during waste transferring in case of spill. Workers must not exit the lead work zone to transfer waste to the waste storage area without properly decontaminating as per **Section 7.2** below.

4.17a – Lead Paint Removal – Safe Job Procedure



7.0 DEMOBILIZATION/DECONTAMINATION

7.1 Work Area Cleanup ([Housekeeping](#))

1. Wash hand tools in a bucket of water.
2. Dry hand tools with unused rags and store tools outside of lead work zone.
3. Dispose of used rags in lead waste bag.
4. Fold poly drop sheets and cover sheets gently inwards;
 - a. Fold in two opposing ends to middle.
 - b. Fold other two opposing ends to middle.
 - c. Fold smaller until it fits in a lead waste bag.
5. HEPA-filtered vacuum and wet wipe all horizontal/vertical surfaces within work area.
6. Take down/remove any lead warning barrier tape/signs into a poly waste bag.

NOTE: Never use [prohibited cleaning methods](#) that increase exposures to lead dust such as using compressed air, leaf blowers and dry sweeping/mopping.

7.2 Worker Decontamination ([Personal Hygiene](#))

1. Proceed to worker decontamination area.
2. Remove eye protection, hard helmet and/or hearing protection and clean with wet wipes/rags.
3. HEPA-filtered vacuum with brush attachment and wet wipe with sponge/rags suit and boots (use “buddy system” when available).
4. Remove suit (inside out method) and discard in a poly waste bag.
5. Remove gloves (inside out “first aid” method) and place in a poly waste bag.
6. Wash hands, wrist, forearms, exposed areas of face and outside of respirator with wet wipes/rags.
7. Remove (doff) respirator and remove P100 HEPA-filtered cartridges:
 - a. If pancake, cloth style P100 HEPA-filtered cartridges, discard into lead waste bag.
 - b. If hard plastic style P100 HEPA-filtered cartridges and to be reused:
 - i. Place duct tape over inlets; and
 - ii. Store in a sealed, labelled bag separate from respirator.
8. Clean respirator (without cartridges) with respirator wipes and allow to fully dry before storing in a sealed, labelled bag.
9. Discard all used N95 respirators, sponges, rags, wipes etc., into a poly waste bag.
10. Exit the worker decontamination zone and enter “clean zone” to don personal clothing and store decontaminated, dry and reusable PPE (i.e., respirator, boots, eye/hearing protection & hard hat).

7.3 Demobilization/Waste Transfer

1. Take down barrier tape, signs, candle stick delineators and replace any moved items (e.g., furniture, equipment etc.) back to their original locations.
2. Transfer any remaining bagged, sealed, and decontaminated lead waste bags to the waste storage area (i.e., waste bin).
3. If not already done so, retain a Qualified Person (i.e., Consultant) to collect one composite, representative sample of lead coatings with respective substrates to determine leachability by TCLP.

4.17a – Lead Paint Removal – Safe Job Procedure



4. Notify hazardous waste transportation contractor (if applicable) and/or approved hazardous waste facility prior to disposal with leachate testing results. Waste should not be transported in open trucks unless sealed.
5. Complete chain of custody (“waste manifest”) and maintain a record with safety-related documentation.

8.0 QUALIFIED PERSON SIGN-OFF

PREPARED BY			
Name	Kris White, Env. B.Sc., & Dipl., AHERA, <i>Senior Project Manager</i>	Signature	
Company	ORCA Health & Safety	Contact	(250) 857-4262 k.white@orcasafety.ca
Date	October 27, 2022	Revision	--