## Home & Garden

The goal of the Home & Garden Program within THE Plan is to prevent and reduce health risks from exposure to lead and smelter metals in the home and yard environment. Specific goals are:

* to prevent people’s, and particularly young children’s and pregnant women’s, exposure to lead in their home and yard environments
* to inform and engage the community, and particularly expectant families and families with young children, about the potential health risks from lead and other smelter metals in the home, yard environment and in the community
* to promote lead-safe work practices

The Home & Garden Program works towards these goals through the following main approaches:

* + - Community Program Office
    - Healthy Homes Program
    - Residential Soil Assessment
    - Residential Soil Remediation and Yard Improvement Work
    - Home Renovation Support Program
    - Other Assessment and Remediation in the Community

### Each of these approaches is described in detail below.

### Community Program Office

The Community Program Office (CPO) is a storefront in downtown Trail from which the Home & Garden Program operates and where the public can access information about THEP services. It is a key component of THEP’s community outreach and engagement efforts, as described in Plan section CE.

In addition to providing accessible information about THEP services, the Program Office offers the following support to delivery of the Home & Garden Program:

* providing information, advice and support for residents on how to prevent or minimize health risks from exposure to metals in soil or dust, including dust stirred up by home renovations
* community support services for non-smelter related home and garden inquiries such as;
  + providing information on how to submit samples to a lab for analysis (i.e. water and soil samples from outside of the program area),
  + responding to inquires related to lead-based paint, radon, asbestos, and mould,
  + coordinating the distribution of radon test kits.

CPO staff continuously update their resources/information, utilizing the most current best practice information available from sources such as Health Canada, WorkSafe BC, the US Centres for Disease Control and Prevention (US CDC), the US Environmental Protection Agency (EPA) and the US Department of Housing and Urban Development (HUD).

### Healthy Homes Program

The “Healthy Homes” program is part of the new “Healthy Families Healthy Homes” Program that started in 2013 as described in Family Health section XX. The Program was developed in response to US CDC guidance to expand efforts to prevent exposure to lead in communities where young children’s BLLs test > 5µg/dL. This program takes a holistic approach to home health and safety, and is based on information from various agencies including Health Canada and the Housing and Urban Development (HUD), CDC and EPA in the US. The holistic approach promotes the Seven Principles of Healthy Homes – Keep it dry, clean, safe, ventilated, pest-free, contaminant-free, and maintained.

The Healthy Homes Program is centered around an in-home visit where Home and Garden staff meet with a family at their home to help them identify the best opportunities to prevent lead exposure to themselves and their children.

* Home Visits are offered to every family in Trail and Rivervale as shown on the map, who are expecting children as well as any families with children 3 years of age or younger who have not been reached when the family is expecting.
* Qualifying families are identified/contacted through participation in the Kootenay Boundary Regional Hospital Expectant Parent Event, family friendly public events, and blood lead clinics as well as through the newsletter, the Program Office and other THEP communications. THEP has a system for obtaining clients’ consent to share contact information between the Family Health and Home & Garden Programs.
* Healthy Homes visits are prioritized using a “scheduling priority” function in the THE Database. As much as possible, visits are scheduled when soil assessment results are available, as discussed in section HG 1.1.3.
* Visits include a review of the soil assessment results, education, information, advice, a visual environmental assessment of the home and yard and documentation/demonstration of exposure prevention tools/strategies (as appropriate).
* Educational topics include preventing health risks from lead exposure, keeping dust down in the home and yard, strategies for yard and garden improvement, lead-safe home renovation including removal of lead-based paint, and other home health topics, as appropriate. Key messages for different topics are provided in Appendix aa).
* Visits are guided by a checklist that identifies key topics (see Appendix xx). Families may be offered a Dust Buster Kit, and Greening Your Garden Kit, a covered sandbox, a HEPA-vacuum and/or home renovation supplies to support family actions to prevent lead exposure. Contents of the Dust Buster Kit were based on recommendations for lead and allergy kits from a US source (Carol Kawecki, Healthy Housing Solutions Inc., personal communication). Demonstrations are offered for some of the provided supplies.
* Visits end with a discussion of the family’s top 3 opportunities to make a difference in reducing exposure to lead. The opportunities are noted on the Healthy Families Healthy Homes poster (see Appendix xx) along with THEP follow-up actions.
* Follow up includes:
  + Data and documentation management (entry in THE DB),
  + Case conferencing (as needed),
  + Additional communication with the family,
  + Additional materials to support the family (HEPA vacuums, sandboxes, etc.)
  + Remedial or yard improvement work
  + Paint screening as part of the Lead-Based Paint Pilot study discussed in Section XX.

The geographic area covered by the Healthy Homes Program is Trail and Rivervale. See map H&G.

Supporting materials include:

* THEP Healthy Families Healthy Homes poster – part of SOP?
* THEP Greening Your Garden rack card
* THEP Family Health materials (as listed in Section xxx)
* THEP communications materials (as listed in Section zzz)
* Go Green when you Clean (produced by…)
* Bust that Dust (by…)
* Creating Healthy Environments for Kids (by)
* Hazardcheck: Hazards in your Environment (by)

Note: Appendices need to be developed with:

* key messages - for dust buster kit, carpets/vacuuming, pets, garden kit, renovations, lead-based paint
* OP for lead-paint screening
* OP for In-Home Visits (and how to use the poster/checklist)

### Residential Soil Assessment

Soil assessment is available for Trail and Rivervale residents to prevent and reduce health risks from exposure to metals that may be present in yard and garden soil. Top priority is expectant families, families[[1]](#footnote-1) with children age 3 and under, and families with children who have measured blood lead levels above the Family Health case management thresholds. Vegetable gardens and yard assessment of targeted blocks of properties close to the smelter are also priorities.

* + - The geographic area covered by the Residential Soil Assessment Program is Trail and Rivervale, except for requests considered case-by-case from outside this area.
    - Yard soil assessment is offered to every expectant family and family with children 3 years and under living in Trail and Rivervale. This is part of the Healthy Homes Program (see xx above).
    - Vegetable garden soil assessment is available upon request for residents in Trail and Rivervale.
    - Yard soil assessment is offered in a targeted manner to residents of city blocks in areas close to the smelter and where it is suspected that soil metal levels may exceed remediation action levels (see remediation section below). Assessment is offered to residents on a block-by-block basis each year, depending on available resources.
    - People outside Trail and Rivervale can request soil sampling, which are considered on a case-by-case basis. These requests are typically low priority as other communities are likely to have soil metal concentrations below remediation action levels.

Residential soil assessment generally takes place between April and November when the ground is snow-free. The soil assessment process includes:

* + - Obtaining signed consent from property owner to conduct soil assessment;
    - A site reconnaissance visit: on-site inspection of property conditions, sketch and photographs of property, and interview with property owner/tenant re. metals contamination issues;
    - Soil sample collection: shallow soil samples (up to 0.15 m. below grade) are collected from across the property including key areas such as bare soil, sandboxes and vegetable gardens. Deeper soil samples are collected on a case-by-case basis when screening indicates high metal concentrations or in situations where it is suspected that metals may be present in soil for reasons other than aerial emissions.
    - Soil screening: All soil samples are screened with an X-Ray Fluorescence (XRF) analyzer for preliminary information about metal levels.
    - Laboratory analysis: approximately 2-3 soil samples from each property are submitted for laboratory analysis. This typically includes the highest sample, the median and any samples from vegetable gardens.
    - Quality assurance/control measures: One of every 10 samples sent to the lab is a duplicate sample (one sample split into two) to evaluate laboratory precision. Occasionally, replicate samples (two samples taken from the same location) are submitted to verify sample accuracy/representation. Other quality assurance measures include calibration of the XRF, sterilization of field equipment, certification and field training for all soil assessment personnel.
    - Data interpretation: For yard assessments, the XRF screening readings are correlated with the laboratory results and the 95% upper confidence limit of the mean is calculated for each property. For vegetable gardens, the laboratory result is the measure used to compare with remediation action levels.
    - Data management : property information is tracked and managed through the THE database described in Section 1.1.7. HG.
    - Reporting: Assessment results letters are provided to property owners following the assessment work and a summary letter is submitted to Teck after the assessment season is complete. Assessment results are reviewed with property owners where properties qualify for remediation as well as for all families participating in the Healthy Homes Program or receiving Family Health case management.

Support materials include:

* + - OP for Soil Assessment
    - OP for THE Database

### Residential Soil Remediation & Yard Improvement Work

The residential soil remediation and yard improvement program is designed to manage risks related to soil on residential properties where elevated levels of smelter metals, including lead, have been identified through soil assessment. As long as soil is well covered, the health risks are negligible. The main concern is exposure to bare soil and the main health risks are to young children. Residential yards and vegetable gardens are prioritized for remediation and yard improvement work to prevent or minimize health risks.

The geographic area covered by the residential soil remediation and yard improvement work program is Trail and Rivervale. Residential properties qualify for remediation in cases where soil assessment results (described in section 1.1.3 HG) exceed remediation Action Levels established by the Trail Health & Environment Committee.

**ACTION LEVELS FOR YARDS AND FLOWER GARDENS**

#### For yard and flower garden remediation, the current Action Level corresponds to the Upper Cap Concentration (UCC), set out in Protocol 11 of the BC Ministry of Environment, Contaminated Sites Regulation. Where soil concentrations are greater than the UCC, full remediation of some or all of the yard is offered. The remediation involves soil removal to a depth of 30 cm (approximately 1 foot), installation of a demarcation layer (visual barrier fabric) and replacement of at least 30 cm of approved fill material. Generally the remediation trigger is 5,000 ppm lead, however remediation is also offered for other smelter metals that exceed the UCC.

#### For yard soil and flower gardens less than the UCC, yard improvement work is offered in cases where an expectant family or family with children less than 3 years of age is present on the property and where there is bare soil or poor ground cover. Yard improvement work is determined based on the soil assessment results and a visual assessment of ground conditions and property use. Areas of particular concern are; areas of poor ground cover or bare ground, drip zones, play areas, parking areas, pathways, patios, as well as vegetable and flower gardens. In these cases, the yard improvement work typically consists of removing existing surface soil and ground cover and replacing it with better ground cover. The objective is to prevent young children’s potential exposure to metals in dust and soil.

#### ACTION LEVELS FOR VEGETABLE GARDENS

#### For vegetable gardens, the Action Levels correspond to risk-based values developed for lead through HHRA in the Trail area (ref). Property owners with vegetable gardens with soil metal concentrations greater than 1,000 ppm lead, (## ppm cadmium, other metals?), are offered remediation. The remediation involves soil removal to a depth of 60 cm (2 feet) across the vegetable garden, the installation of a demarcation layer, and the replacement of at least 60 cm of soil.

**RATIONALE FOR CURRENT ACTION LEVELS**

Trail is a dynamic and complex site where current and historic smelter activities are a primary source of metals exposure. The Trail Area Health and Environment Program (THEP) works to reduce health risks associated with smelter metals while maintaining a thriving local economy through the continued operation of the Teck Metals Smelter. With an operating smelter, Air Quality improvements (emissions reductions) remain the greatest opportunity for reducing health risks in Trail. The current Action Levels help prioritize the highest risks first.

Rationale for the Action Level for Families:

Air Quality improvements will likely be the largest determinant of reducing childhood blood lead levels in coming years. While Teck continues to reduce air emissions and evaluate the effectiveness of soil remediation, we are offering home visits, soil assessment and support through the Healthy Families Healthy Homes Program, as discussed in section HCXX. This supports children at a critical stage in their development (ref) and works to prevent children’s exposure to indoor dust. Educating and supporting families to reduce indoor dust may present a greater opportunity than soil remediation for reducing metals exposure to young children (ref – primary pathway for young children).

Based on experiences at other smelter sites, soil remediation will likely have little effect on reducing blood lead levels (ref) thus, for soil less than Action Level, yard improvement work (not remediation) is offered. Having good ground cover (sod, gravel, mulch, concrete, etc.) helps reduce dust tracked into the home (ref).

Rationale for the Action Level for Vegetable Gardens:

For soil in vegetable gardens, a risk-based Action Level is recommended due to the high exposure to bare soil and the risks associated with consuming garden produce as determined by the HHRA (ref). Lead is the Action Level because there is a relationship between lead in soil and concentrations of other smelter metals such as arsenic and cadmium. Therefore, the remediation of vegetable gardens with soil lead above the Action Level protects residents from potential exposure to other metals that may be present in their garden soil. The concentrations of all metals are scrutinized, and in cases where any metal is greater than UCC (i.e. cadmium > 30 ppm), garden remediation is offered.

Rationale for the Action Level for Yard Soil:

Yard soil remediation is offered for all or part of a residential yard where soil is greater than the current UCC. This Action Level helps prioritize properties with the highest potential risks due to elevated metals in soil. There is no reason to delay the remediation of properties with soil greater than the UCC as preliminary data from the Long Term Soil Study (LTSS) (SECTION HGXX) show that current emissions will not bring soil metals concentrations back to current levels for many decades. Over the next few years, THEP will continue to remediate properties above UCC and evaluate the effectiveness of the soil remediation efforts through the LTSS. At the same time, Teck is working on Air Quality improvements at the smelter (section AQ XX). Thus, we anticipate that the remediation Action Level for yards will soon include properties with soil less than the current UCC and that future remediation actions will be maintained longer (i.e. recontamination is slower).

It is expected that a combined effort of improving air quality, reducing indoor dust, educating families and remediating soils will help achieve long term goals for Trail. For example, future goals may be:

* + - lower blood lead levels in children,
    - incremental cancer risks between 1 in 100,000 and 1 in 10,000
    - non-cancer hazard indexes < 1

The goals change with emerging scientific data and guidance from the community. The comprehensive nature of THEP is a result of the realization that it is going to take a combined effort to reduce residents’ exposure to smelter metals.

REMEDIATION PRIORITIES

Priorities are determined based on soil lead concentrations in conjunction with the following factors:

* + - properties with expectant families or families with children under age 3. This includes family homes, daycares and homes of extended family and other caregivers where children spend a significant amount of time;
    - gardening season for people preparing their vegetable garden to grow food;
    - remediation logistics for the contractor (e.g. proximity to other remediation work) and/or property owner/tenant (e.g. preference, availability etc.);
    - inclement weather (e.g. too wet or potentially extremely hot, dry & dusty);
    - worker health and safety;
    - condition of existing ground cover.

The remediation process is provided in the attached OP and involves the following key steps:

* + - Reviewing soil assessment results and developing the scope of remediation or yard improvement work required (full remediation of whole or partial yard, yard improvement, vegetable garden remediation);
    - Submitting additional soil samples as necessary, for lab analysis to determine levels of leachable metals for soil disposal purposes;
    - Preparing regulatory documentation for the BC Ministry of Environment, Land Remediation Site Advisor for properties receiving full remediation of all or part of the yard. This includes the Notification of Independent Remediation (NOIR), a Site Risk Classification Report, an Exposure Pathway Questionnaire, a survey plan, a copy of the land title and a map of metals concentrations in the soil[[2]](#footnote-2).
    - Obtaining signed consent to access the property from the property owner and developing a remediation/yard improvement work plan in consultation with the property owner/tenant and contractor;
    - Scheduling remediation/yard improvement work based on prioritized list of properties
    - Submitting documentation to BC Ministry of Environment as listed above[[3]](#footnote-3)
    - Performing the remediation/yard improvement work as described in the Remediation Operating Procedures (see Appendix xx) and includes;
  + For full remediation of yards and flower gardens; removal of soil to a depth of at least 30 cm.
  + For full remediation vegetable gardens; removal of soil to a depth of at least 60 cm.
  + For Yard Improvement work; the improvement of cover in specific areas which may include removing soil to a shallow depth, fertilizing and topdressing sod to encourage better grass cover, the replacement of bare areas with more permanent ground cover. The improvement work is determined on a case by case basis.
  + Disposing of excavation material (if any) at a designated and approved location.
  + Sampling the base of any excavations to record soil conditions and if necessary ensure all soil greater than UCC is removed.
  + The placement of a geotextile at the base of any full remediations to act as a visual demarcation layer of the extent of the remediation work.
  + The replacement or installation of suitable contaminant-free cover material (soil, gravel, mulch, etc.)
  + Sampling surface soil to document metals levels on the property.
  + The replacement of surface features such as sod and landscape plants as required.
    - Completing the work and obtaining a sign-off from the property owner that the work has been completed to their satisfaction;
    - Submitting a Notification of Completion of Independent Remediation (NCIR) to the BC Ministry of Environment[[4]](#footnote-4);
    - For High Risk Sites as determined under Protocol 11 of the CSR; providing a Site Reclassification Report signed by a Contaminated Sites Approved Professional (CSAP) to change the high-risk designation on the Site Registry to either non-high risk or a risk-managed high risk site[[5]](#footnote-5).
    - Providing a summary of the remediation/yard improvement work to the property owner and to Teck.

Support materials include:

* + - OP for Residential Soil Remediation
    - OP for THE Database

### Home Renovation Support Program

The Home Renovation Support Program (HRSP) was initiated based on a recommendation by the Trail Community Lead Task Force following the 2000 Community Consultation (Hilts et al., 2001). The recommendation was to: “Implement a new program to advise and assist people doing excavation, construction, demolition, or renovation”.

Further recommendations were as follows:

* + - To encourage homeowners and contractors to follow precautions when undertaking, excavation, construction demolition or renovation projects in order to minimize dust exposure to workers and residents.
    - To assist people who need to dispose of contaminated soil or dust or other material (e.g. rain gutter debris).
    - The program is not meant to encourage people to undertake projects such as soil replacement. Instead, it is intended to make it safer and easier for people who, on their own, have decided to do work on their properties.
    - In addition, the THEP 2010 Community Consultation led to the following recommendation:
    - “Given strong public support but low awareness of this program, it is a priority to conduct more extensive promotion of the Home Renovation Support Program. This includes expanded outreach to young families throughout Greater Trail through daycares, family play groups, home & garden stores, libraries and other businesses and services that cater to young families. There also will be increased outreach to home renovation professionals and links to the RDKB building permits department.”

Based on these recommendations the HRSP continues to evolve and strive to be an integral, accessible THEP service.

The HRSP Program consists of advice and information on preventing lead exposure during home renovations, provision of free supplies to qualifying clients, loan of a construction grade HEPA vacuum (shop vac) and, under special circumstances, on-site visits to help set up or monitor a renovation.

The HRSP Program operates as follows:

* + - Residents and property owners can access the HRSP through the Community Program Office. A member of the Home & Garden Program Team ensures the client’s eligibility for the program prior to initiating support. HRSP support is available to all homeowners, tenants and landlords in the Trail and Rivervale area. HRSP is also available to homeowners, tenants and landlords in the Greater Trail area who are renovating pre-1976 homes. See Map HG-XX.

* + - For eligible clients, the following steps are taken to determine and arrange the safety supplies and materials required for the project:

1. Completion of Project Scope Survey (Appendix HG-XX)
2. Completion of HRSP request form (Appendix HG-XX); Appendix HG-XX is an itemized product list of the HRSP safety supplies.
3. HRSP request is faxed to a nearby equipment supplier
4. Client picks up filled order from supplier or the CPO.
5. Client picks up HEPA vacuum from CPO, if required
   * + Client information is cross-referenced with THE database at the time the HRSP request is made. This supports seamless provision of THEP services to residents by identifying other THEP programs that may relate to that property or family, ie. children who have not been in contact with the Family Health Program; updating property owner information; obtaining yard soil assessment consent, etc.
     + To support thorough clean-up, clients are able to loan one of THEP’s four HEPA vacuums, including all necessary attachments and disposable bags[[6]](#footnote-6).
     + Each HRSP request is considered an educational opportunity to engage the client about potential lead-related health risks associated with home renovations and construction. It is also an opportunity to demonstrate how to set up a work area to best protect people and their home from dust during renovations. Home & Garden Program staff are available to provide this support either in the CPO or in the client’s home. Educational materials and information for lead-safe home renovation and construction are provided free of charge to the client.

Additional Home Renovation Support Program Services include:

* + - *BC One Call:* BC One Call is a province-wide non-profit organization that provides the excavating community, including contractors and homeowners, with a means to request information on the location of underground services prior to digging or ground disturbance on a worksite. City of Trail is a member of BC One Call. When a BC One Call request is made the City it provides a dimensional site plan to the requester. Which each request, through collaboration with the City and THEC, the City has attaches a copy of the THEP Home Renovation Support brochure and copies the CPO on the response to the property owner (Appendix HG-XX). The CPO then follows up with the property owner or person doing the work to ensure proper handling of soil and/or renovation materials. The procedures are outlined in HRSP-OP.
    - *Construction Sector and Consumer Engagement:* The HRSP recognizes that contractors doing work in homes in the Greater Trail Area may be exposed to lead dust generated during renovations. The Home and Garden Team is developing a program to betterinform the construction sector about lead exposure prevention guidelines*.* Contractors and construction professionals are expected to provide the necessary training and safety equipment to staff as per the WorkSafe BC lead-safe construction guidelines (WorkSafe BC, 2006). In the Trail Area, contractors need to comply with THEP lead safe home renovation guidelines to protect workers, residents and the community from potential lead exposure.

Currently, THEP partners with the Regional District of Kootenay Boundary (RDKB) to provide HRSP brochures with each building permit issued in Greater Trail (still need to check this). The RDKB provides building inspection services to the City of Trail and the Greater Trail Area. THEP is considering how best to expand the partnership with the RDKB to engage building inspectors in promoting the HRSP guidelines. THEP is also currently reaching out to residential construction contractors, and particularly roofing contractors, to get their input into the development of a a training program for roofing contractors. The aim of this program is to have all construction projects minimize dust/soil disturbance and exposure to lead.

* + - *Providing information on housing-related health and safety risks:* Since the CPO opened in 2010, an increasing number of community members have enquired about radon and asbestos. While these enquires are non-smelter related, the Home & Garden Program provides information, as appropriate, recognizing the opportunity to provide service to the community and build THEP’s reputation as a reliable source of credible information on home health and safety. THEP distributes the Hazardcheck booklet, product of a public education campaign of the Government of Canada that promotes awareness about environmental health risks in the home. The information is geared toward families and can be accessed online or in the booklet. A copy of the Hazardcheck booklet is attached as Appendix HG-XX.
    - Coordinating the distribution of radon test kits: As described in the CPO section, the Home & Garden program coordinates the distribution of radon test kits in Trail in partnership with the Donna Schmidt Lung Cancer Memorial Fund (DSLCMF). The kits are free with a suggested $15 donation going to the DSLCMF. Sign-up forms are attached in Appendix HG-XX. Additional information is provided to clients, as needed.
    - Responding to enquiries regarding asbestos: Many of the non-smelter-related enquires received at the CPO are about asbestos, including requests for asbestos sampling. We provide WorkSafe BC handouts and refer people to the WorkSafe BC Asbestos interactive website: [*http://www.hiddenkiller.ca*](http://www.hiddenkiller.ca). Examples of these handouts are attached in Appendix HG-XX.

The Home Renovation Support Program provides two levels of service for geographic areas within Greater Trail. The entire Greater Trail region is eligible for advice, information, contractor training, and HRSP supplies & use of vacuums for home owners/tenants of pre-1976 homes. Trail and Rivervale is the area in which all home owners/tenants conducting renovations qualify for supplies and use of THEP’s HEPA vacuums. See map HGxx.

Supporting educational materials and handouts include:

* THEP Home Renovation Support brochure (Appendix HG-XX)
* Lead in Your Home (CMHC, 2004)
* Renovate Right (Appendix HG-XX)
* Hazardcheck (Appendix HG-XX)

### Soil Assessment & Remediation in the Community

Upon request (typically from Teck, the City of Trail, or local residents), soil assessments are conducted for other sites including playgrounds, school yards, parks, picnic areas, rodeo grounds, play fields and other sites of concern. These situations typically involve sites receiving considerable use by children or the public, or where there are concerns about metals concentrations. In one case, the site qualified for improvement work which was carried out. The soil lead concentrations were below 5,000 ppm but the site was exposed and very accessible to the public.

### Monitoring, Evaluation and Continuous Quality Improvement

Due to the adaptive nature of THEP we are continuously monitoring evaluating and improving our programs to meet the changing needs of the community.

Long-term Soil Study (2010 - ): To evaluate the effectiveness of residential remediation programs while having a continually operating smelter. Both soil and garden produce are studied, as follows:

* + - Remediated Soils: A study is being carried out to monitor metals concentrations on remediated yards and vegetable gardens over time. The study is expected to continue over the long-term to determine changes in measured soil metal concentrations.
    - Produce sampling: Each year, a representative sample of garden produce is collected from approximately 30 properties. The sample is small and depends upon the produce that the gardeners are growing or have harvested. It is intended to correspond to the sampling done for the HHRA.

Other Studies/Monitoring

* + - Opportunities to perform monitoring or studies are brought to the Home and Garden Program from the City of Trail, THEC, community members and other groups in the area. These studies help define the focus of the programs and answer questions brought up in the community.
    - Grass Clipping assessment (2012): This was done to respond to questions from local gardeners, to determine what we should advise residents about the impacts of including grass clippings in garden compost. Samples of grass clippings were collected from 10 yards and analyzed for metal content. The results of the study have not yet been finalized.
    - Lead Based Paint Study*:* Lead-based paint screening is limited to the Healthy Homes Program and, in exceptional situations, where there may be a significant risk of exposure for child/children outside of their primary residence (e.g. daycare, play school). Lead-based paint testing is described in detail in the Lead Based Paint Screening OP. Permission to test requires signed consent by the property owner (see Appendix xx). Lead-based paint testing is conducted using an X-ray Fluorescence handheld analyzer. Results are included in a pilot study to assess the prevalence of lead-based paint within the program area and the possible impact of non-smelter sources of lead in homes where children are present.
    - Roof Replacement Study
    - Data Management – Bruce to include overview as appropriate

Continuous quality improvement in THEP information and communications

Information provided by through the CPO is regularly vetted by the Program Team for the most current best practice guidelines, techniques, and practices to help people plan and make good healthy choices when undertaking a project. (We may need to consolidate this somewhere in the plan.)

Supporting documents

* SOP for THE Database
* SOP for Produce Sampling
* SOP for Long Term Soil Study

### References

Soil Assessment and Remediation

Soil Assessment Operating Procedures

Soil Remediation Operating Procedures

THE Database Operating Procedures

Home and Garden Team Health and Safety Procedures

Healthy Homes

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Healthy Housing Institute

<http://www.healthyhouseinstitute.com/a-853-How-to-Choose-a-HEPA-Vacuum-Cleaner#sthash.QzCHWeTf. http://www.allergybuyersclub.com/hepa-vacuum-cleaners.htmldpuf>

Home Renovation Support

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Health Canada. 2012. Radon: It’s Your Health. <http://hc-sc.gc.ca/hl-vs/iyh-vsv/environ/radon-eng.php> (June, 2012)

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HUD. 2011. Lead Paint Safety: A Field Guide for Painting, Home Maintenance, and Renovation Work. U.S. Department of Housing and Urban Development Office of Healthy Homes and Lead Hazard Control. HUD-1779-LHC

WCB. 2006. Lead: preventing exposure at work. Workers’ Compensation Board of British Columbia. BK 17 (Available online at: <http://www.worksafebc.com/publications/health_and_safety/by_topic/assets/pdf/lead.pdf> ).

WCB. 2012. Safe Work Practices for Handling Asbestos. Workers Compensation Board of British Columbia. (Available online at: <http://www.worksafebc.com/publications/health_and_safety/by_topic/assets/pdf/asbestos.pdf> )

THEC. 2010. THEP Community Consultation….

### Contacts

Please refer to Table 1-1 for more information or to obtain copies of the referenced documents.

|  |  |  |  |
| --- | --- | --- | --- |
| **Table 1-1 Contact Information for the Home and Garden Program** | | | |
| Program Area | Contact Person | Contact Phone Number | Contact Email |
| Trail Health and Environment Program General Information | Mark Tinholt | 250-364-4385 | Mark.Tinholt@Teck.com |
| Residential Yard Remediation |  |  |  |
|  |  |  |  |
| Home Renovation Support Program |  |  |  |

1. Families include extended families, caregivers and other situations such as daycares where children age 3 and under are present on the property for a significant amount of time. [↑](#footnote-ref-1)
2. Note that the submissions to the MoE are proposed to change following an Approval in Principal (AiP) for the Trail Area. The proposed method subsequent to an AiP, is to carry out remediation and yard improvement work throughout the year and update the MoE annually with a summary document listing all properties and the work completed. [↑](#footnote-ref-2)
3. As above [↑](#footnote-ref-3)
4. All these notes need the same footnote…how do I do that? [↑](#footnote-ref-4)
5. As above [↑](#footnote-ref-5)
6. The US Environmental Protection Agency defines a HEPA vacuum as:  *"…a vacuum cleaner which has been designed with a high-efficiency particulate air (HEPA) filter as the last filtration stage. A HEPA filter is a filter that is capable of capturing particles of 0.3 microns with 99.97% efficiency. The vacuum cleaner must be designed so that all the air drawn into the machine is expelled through the HEPA filter with none of the air leaking past it.*" [↑](#footnote-ref-6)