

A property owner's guide to the Property Radiological Survey

The Property Radiological Survey includes four tests that are used to identify the presence of historic low-level radioactive waste on Port Hope properties.

This fact sheet explains what you can expect and the number of scheduled visits required in order for the Port Hope Area Initiative (PHAI) Management Office to complete testing on your property. The PHAI has contracted qualified personnel to conduct these investigations. When finished, the investigations will determine if your property is one of an estimated 10 per cent of Port Hope properties requiring removal of historic low-level radioactive waste.

What you can expect when the technicians arrive

Radon monitoring

Requires two scheduled visits to the property – one to place the monitors and a second to collect them

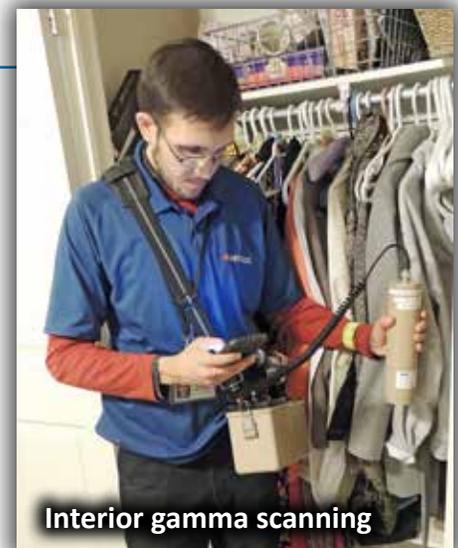
- First, the contractor completes a short checklist to identify information about the property such as underground sprinkler systems, foundation building material, sump pump etc.
- An “Alpha-Track” radon monitor is placed in the basement, and when necessary, in the main living area.
- Monitors are left in place for six months.
- Results are used to determine how many boreholes will be drilled to collect soil samples at your property.
- Data from the testing provides a reliable picture of the annual radon levels. Levels above the Health Canada Guidelines prompt further assessment.



Interior gamma radiation scanning

Requires one visit to the property with the property owner present

- This test is conducted to scan for construction materials that may have been taken from the old Eldorado plant and used in homes and out-buildings.
- A three-hour appointment is scheduled with the property owner but the time required to conduct the scanning depends on the size and age of the home.
- The contractor takes measurements throughout all living areas, including bedrooms and basements, using a hand-held monitor.
- At a minimum, measurements are taken in all four corners and at the centre of each room.



Exterior gamma radiation scanning

Requires one visit to the property; the property owner does not need to be present

- Using a gamma radiation monitor, either hand-held or mounted on a cart, the contractor scans the surface of the yard to measure gamma radiation levels.
- Moving the equipment in a 1-metre by 1-metre grid pattern, the contractor records the gamma radiation measurements at distances of 15 cm and 1 metre from the ground, tracking the location of each measurement through GPS units.
- Where porches, decks, pond, pools or gardens interfere with the grid, readings are taken as close to the grid location as possible.
- If elevated gamma radiation readings are found, further investigations will be conducted.



Exterior gamma scanning

Borehole drilling for soil sample collection and down-hole gamma radiation monitoring

Normally requires one visit to the property; the property owner does not need to be present

- First, all properties are scanned for utility lines that service the property. These services will be marked by colour flags and/or spray paint.
- The number and location of boreholes are determined by a various factors including historic property file information, the results of radon monitoring and gamma radiation surveys and anecdotal information from the property owner.
- Each borehole is drilled to a minimum depth of 2 metres and is 6 centimetres in diameter. The soil is brought to the surface encased in a plastic sleeve.
- Subsurface gamma radiation measurements, or down-hole gamma, are taken every 15 cm inside the borehole.
- Soil collected during the drilling process is bagged, labelled and stored in a suitable container.
- Boreholes are refilled immediately using clean fill or sand, covered with topsoil and the cut-away sod is put back in place. In circumstances where it is necessary to drill through pavement or concrete, the surface is appropriately patched.
- In the event that additional soil information is required, property owners are asked not to remove the coloured flags that mark where the borehole was drilled. **For their safety, please keep children and pets away from all locate markers.**



Borehole drilling

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