



Annual Report

Low-Level Radioactive Waste Management Office

2013-2014

.....working towards community solutions



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Information to
the Canadian
Public

Interim
Waste
Solutions

Community
Consultation

Artefact
Recovery

Manage
LLRW

Annual Report

Low-Level Radioactive Waste Management Office

2013-2014

.....working towards community solutions





Annual Report 2013-2014

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I am pleased to present the Annual Report of the Low-Level Radioactive Waste Management Office for the fiscal year ending 2014 March 31.

This report has been prepared in accordance with Section 5.2 of the Memorandum of Understanding (April 1, 1990) between Natural Resources Canada (formerly Energy, Mines and Resources Canada) and Atomic Energy of Canada Limited for the operation of the Low-Level Radioactive Waste Management Office.

Sincerely,

Harvey Seto, M. Eng., PMP
Director, LLRWMO

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Director's Message

The 2013-2014 fiscal year was characterized by change for the Low-Level Radioactive Waste Management Office (LLRWMO). The year began with the retirement of Robert Zelmer, the LLRWMO's long-serving Director retired after 16 years as its leader. Stepping-up to fill the role, for the interim, was Mark Gardiner, and in April 2014, I was pleased and excited to join the team as the new Director of the LLRWMO.

Overall, I believe the LLRWMO had another successful year in achieving the Government of Canada's historic low-level radioactive waste (LLRW) management expectations. With over 30 plus years of experience in managing historic LLRW programs across Canada, we continue to maintain our close working relationships with key federal partners: Natural Resources Canada (NRCan), the Canadian Nuclear Safety Commission (CNSC), the Port Hope Area Initiative Management Office (PHAI MO) and our other colleagues within Atomic Energy of Canada Limited (AECL).

Our core program activities included the management of consolidated inventories of historic LLRW at sites in Ontario, Alberta and the Northwest Territories. We also finalized the characterization and delineation of all historic LLRW contaminated sites along the Northern Transportation Route (NTR).

In Port Hope, the LLRWMO continued to operate our Interim Waste Management Program to ensure property development can continue without potential negative exposure impacts from historic LLRW in the community. This Program provides for the safe consolidation of contaminated soil and building materials from excavation, renovation and/or demolition activities. The LLRWMO also worked collaboratively with the PHAI MO in delivering programs in Port Hope, ensuring the continued safe management of Canada's historic LLRW in that community.

Activity within the Historic Artefact Recovery Program increased as the Program continues to build, through the provision of technical advice, assistance and management of radioactive artefacts at both public and private properties across Canada.

The LLRWMO once again worked with our colleagues in the Canadian nuclear industry to compile the inventory of radioactive waste in Canada. This data will be used to support Canada's contribution at the next international meeting for the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management in 2015.

Throughout the year, AECL proceeded with the necessary plans to advance the second phase of its federally mandated corporate restructuring. While these plans did not significantly impact the day-to-day work of the LLRWMO, the office has been preparing and will continue to prepare for the transition to the new Government Owned Contractor Operated model, to be implemented in 2015.

On behalf of our many stakeholders across Canada, I would like to thank our dedicated administrative, communication and technical teams in delivering another solid year here at the LLRWMO. In particular, I'd like to give a special thank you to Mark Gardiner, for his perseverance and dedication to "getting the job done" during this time of change.

The collective successes of the LLRWMO are described in more detail in this Annual Report.

Harvey Seto, M. Eng., PMP
Director, LLRWMO



The background is a solid dark blue-grey. On the left side, there are two large, overlapping, semi-transparent light grey circles. A thin white line starts from the left edge, passes through the top of the first circle, and then continues as a straight line to the center of a lime green circle. Another thin white line starts from the left edge, passes through the bottom of the first circle, and then continues as a straight line to the center of a second lime green circle.

LLRWMO

Overview



LLRW Remediation - Tulita, Northwest Territories

1.0 LLRWMO Overview

In 1982, the federal government established the Low-Level Radioactive Waste Management Office (LLRWMO) to carry out its responsibilities for the management of low-level radioactive waste (LLRW) in Canada. The Office is operated by Atomic Energy of Canada Limited (AECL) and receives its policy direction and funding from Natural Resources Canada (NRCan), the federal department that establishes national policy for radioactive waste management in Canada.

1.1 LLRWMO Programs

The LLRWMO delivers three major programs:



What is Low-Level Radioactive Waste?

In Canada, LLRW is defined by exclusion and is radioactive waste that does not fit into the categorical definitions for nuclear fuel waste (high-level waste, spent nuclear fuel), intermediate-level waste (ILW), transuranic waste (TRU), or certain by-product materials such as uranium mill tailings.

Most of Canada's LLRW consists of soil, that became contaminated over the past 80 years, and related waste resulting from the early operations associated with Canada's nuclear industry. The LLRW produced today is the result of activities relating to nuclear energy generation, research and development, and the production of radioisotopes.

Classification of LLRW:

The Canadian Standards Association (CSA - www.csa.ca), in collaboration with industry, government and the Canadian Nuclear Safety Commission (CNSC - nuclearsafety.gc.ca), developed a sub-level classification of LLRW. This classification, as well as a broad description of radioactive waste management in Canada, are available in the 2012 Canadian National Report for the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

LLRW is grouped into two broad categories for management purposes:

1) Historic waste:

LLRW that was managed in the past in a manner no longer considered acceptable, but for which the owner cannot reasonably be held responsible and for which the federal government has accepted responsibility for its long-term management.

2) Ongoing Waste:

LLRW that is generated from ongoing activities of organizations currently in operation, such as nuclear electricity generators. Owners of ongoing waste are responsible for its management.



1.2 LLRWMO Services

The LLRWMO provides the following mandated services:

- strategic planning and technical support, in collaboration with government departments and communities;
- removal of historic LLRW from contaminated sites and placement in temporary or long-term management facilities;
- identification, technical assessment and management of radioactive artefacts throughout Canada;
- management and monitoring of interim LLRW storage facilities and sites until long-term solutions are available;
- provision of information to the general public about historic waste management programs and LLRW in general;
- sharing of technical expertise and practical experience within the international community; and
- technical and management support to the Port Hope Area Initiative Management Office.

LLRWMO Project sites in Canada

Scarborough, ON
(1992-1996)



Port Hope, ON
(1982-Present)



Greater Toronto Area, ON
(1992-Present)



H W P

Historic
Waste
Program



Road Remediation and Reconstruction - Fort Fitzgerald, Alberta

2.0 Historic Waste Program

Through the Historic Waste Program, the LLRWMO carries out cleanup and long-term management of historic LLRW on behalf of the federal government. Historic LLRW contamination has been found at multiple locations in Canada, including Alberta, British Columbia, the Northwest Territories and Ontario. The LLRWMO engages the public through consultation and stakeholder involvement, establishing partnerships to resolve historic LLRW issues within their community.

What is “Historic” Low-Level Radioactive Waste?

Historic low-level radioactive waste is LLRW that was managed in the past in a manner no longer considered acceptable but for which the owner cannot reasonably be held responsible and for which the federal government has accepted responsibility for its long-term management.

Canada’s historic LLRW mostly consists of soil mixed with process residues and contaminated material. It dates back to the 1930s when radium was mined and then refined for medical and industrial applications in Port Hope, Ontario, and the resulting waste deposited in numerous locations in the area. Historic waste also includes traces of radium-uranium ores spilled during transportation from the Northwest Territories along the Northern Transportation Route (NTR) to the refinery in Port Hope.



The Goals of the LLRWMO Historic Waste Program

Provide technical assessment and advice to NRCAN on the development of government policies to manage historic LLRW in Canada.

Perform interim remediation and ongoing monitoring of contaminated sites, as required, to protect the health of Canadians and the environment in which they live prior to the availability of long-term management facilities.

Clean up and manage for the long-term, Canada’s historic LLRW at various locations in Alberta, British Columbia, the Northwest Territories and Ontario.

Identify and provide technical consultation and management for radioactive artefacts found on public and private properties located throughout Canada.

2.1 Interim Waste Management

The LLRWMO operates a long-established Interim Waste Management (IWM) Program to manage contaminated soil and other historic LLRW in communities across Canada, prior to identification and implementation of a long-term management solution. Interim waste management includes the creation of temporary waste management storage sites and facilities (licensing where applicable) and LLRW removal and placement at these locations. It also includes the inspection, monitoring and maintenance of the sites to ensure they present no hazard to local residents, workers or the environment.

The IWM Program continues to support the Port Hope Area Initiative Management Office (PHAI MO), until the final PHAI MO remediation of the Port Hope area is completed.

The LLRWMO has operated the IWM Program on behalf of the federal government since the late 1980s, helping communities to use, develop or modify land/structures safely and with confidence.

The IWM Program is delivered through three program components:



1

Construction Monitoring Program (CMP)

The purpose of the CMP is to minimize the spread of soil contaminated with historic LLRW and to reduce the risk to people and the environment that could arise from its presence during construction activities. When a property is found to be contaminated with LLRW, the contaminant is removed from the construction footprint, allowing development of the property to proceed.



2

Property Compliance Program (PCP)

The PCP was established to respond to owner enquiries regarding the radiological status of their properties, and to provide this information to the property owners, their lawyers or realtors. This information may be used to facilitate the sale or purchase of a property or to simply provide radiological information to the property owner.



3

Environmental Monitoring Program (EMP)

The LLRWMO's EMP regularly monitors the environment in the vicinity of its licensed and unlicensed historic LLRW sites. Monitoring activities include visual inspections, gamma radiation surveys, radon measurements and water sampling. The results obtained at LLRWMO-operated licensed sites are reported annually to the CNSC.

2.2 Environmental Remediation

Environmental remediation includes the identification and characterization of the contamination, the safe removal and transport of the contaminated materials to long-term or interim management facilities, and restoration of the area. Since 1982, the LLRWMO has successfully developed and completed LLRW remediation projects in affected communities across Canada. Major remediation projects have been carried out in Tulita, NT and Fort McMurray, AB, along the Northern Transportation Route (NTR), and in Surrey, BC, as well as in Port Hope and Malvern (Scarborough), ON. A number of smaller remediation projects have been carried out in the Greater Toronto Area (GTA) and the Northwest Territories.

The LLRWMO's ongoing success depends largely on its ability to engage the public and municipal leaders through consultation and stakeholder involvement. A key component has been the LLRWMO's establishment of co-existence programs and partnerships to resolve LLRW issues in communities across Canada. The LLRWMO continues to apply these principles and practices in the environmental remediation and management of other sites along the NTR (Northwest Territories to Alberta) and in the Toronto and Port Hope areas of Ontario.

2.3 Historic Artefact Recovery

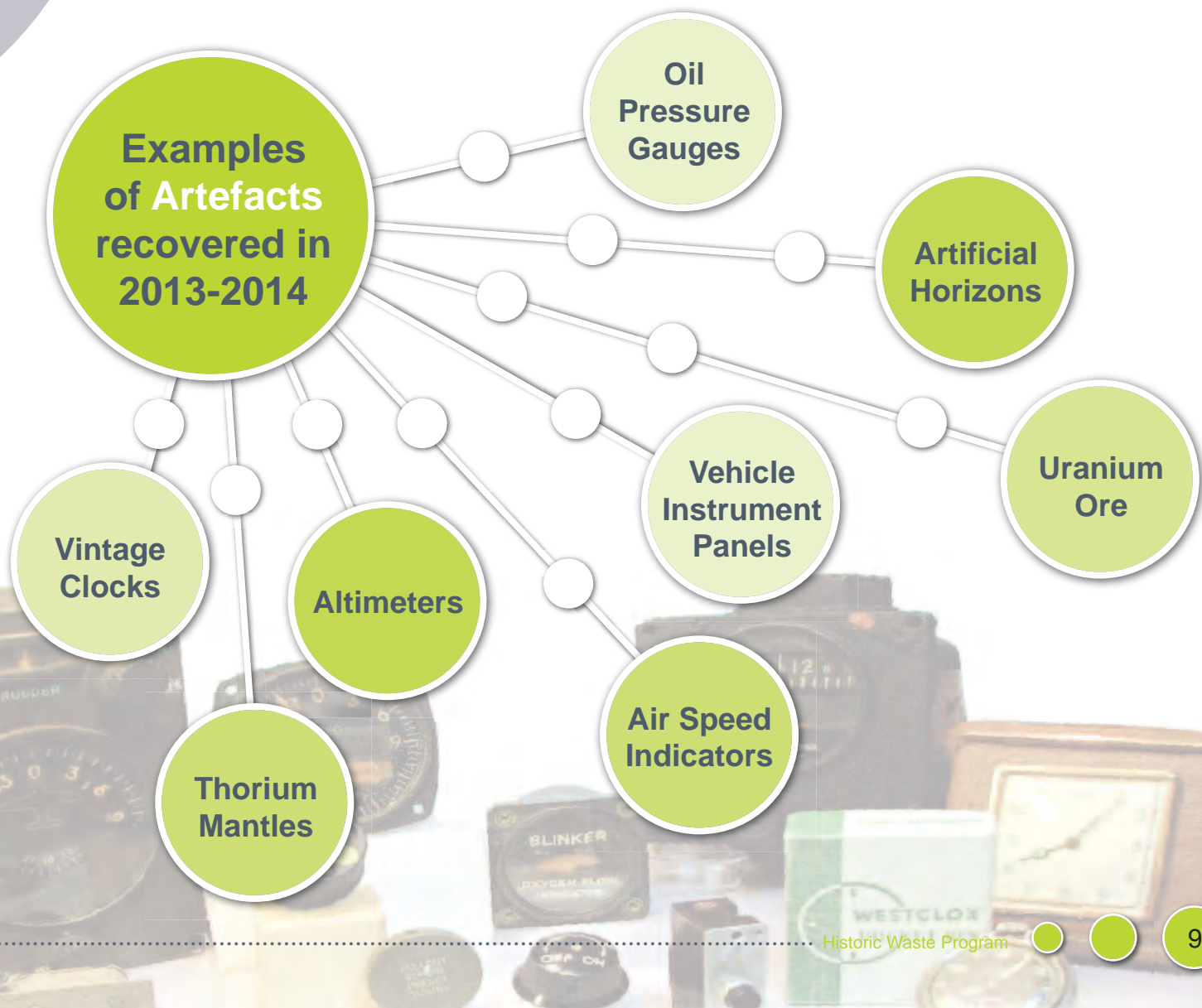
Under the Historic Artefact Recovery Program (HARP), the LLRWMO provides technical advice, including identification, recovery and management of radioactive artefacts found on public and private properties throughout Canada. When necessary, the artefacts (mostly radium-luminous in nature) are collected from the public domain, characterized, and transported to the LLRWMO's long-term storage facility located at AECL's Chalk River Laboratories in Chalk River, Ontario.

Since the 1980s, the LLRWMO's HARP has processed various requests for assistance in the recovery and management of radioactive artefacts from across Canada, building strong relationships with a diverse national community. In the past, radioactive artefacts have included radium-bearing dials, gauges, calibration sources, static eliminators, smoke detectors, thorium coated lenses and uranium ore samples.

Assistance provided by the LLRWMO to the Canadian public continues in response to requests from members of the public, the Canadian Nuclear Safety Commission (CNSC) and other regulators, various levels of government, commercial metal recyclers, private collectors, regional health units, research labs, schools and universities and property owners.

The LLRWMO continues to support the CNSC's Radium Luminous Devices Program, a program developed to inform the public of the identification, safe handling, storage and disposal practices of these devices. The CNSC's website identifies the LLRWMO as a key resource in the management of radium-luminous devices, including their transfer to a CNSC-licensed long-term storage facility, when necessary.

In 2013-2014, the LLRWMO processed requests for assistance from sources located in several Canadian provinces. A total of 279 artefacts were assessed, collected and transported to long-term storage. Artefacts were recovered from a variety of sources including a high school, an aerospace museum, commercial metal recycling companies and private collectors.





The diagram features three light green circles arranged vertically, each containing a white letter: 'O' for 'Ongoing', 'W' for 'Waste', and 'P' for 'Program'. These letters are part of a larger text 'Ongoing Waste Program' where the first letter of each word is inside a circle. Three white lines extend from the left side of the page to the circles. At the bottom left, there are three small light green circles, the first of which contains the number '10'. A horizontal dotted line spans the bottom of the page.

Ongoing

Waste

Program



Long-Term Storage Facility - Chalk River, Ontario

3.0 Ongoing Waste Program

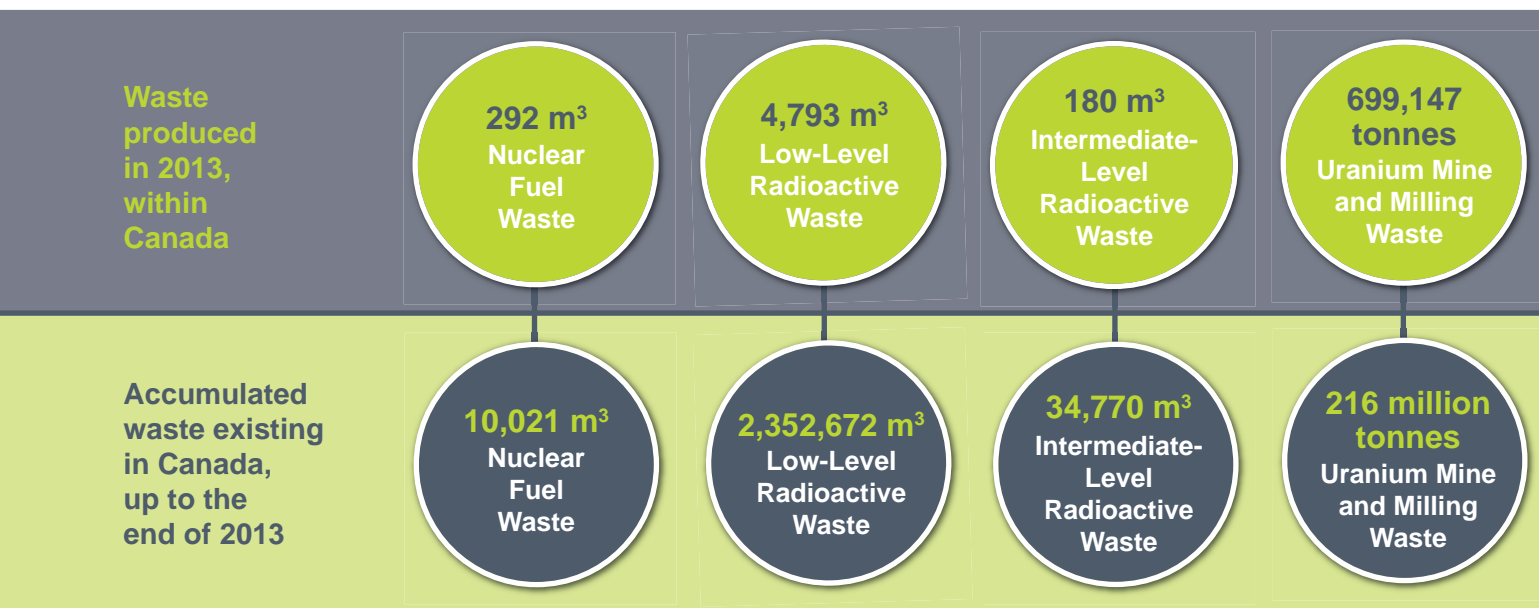
Electrical utilities, nuclear research organizations and fuel manufacturers, and the producers and users of medical and other radioisotopes continue to generate LLRW. These producers have custodial responsibility for the waste they produce.

The LLRWMO assists NRCAN, as required, in developing policies and strategies for the long-term management of ongoing waste, and providing assistance in meeting its commitments to international organizations such as the International Atomic Energy Agency (IAEA) and the Nuclear Energy Agency (NEA) of the Organisation for Economic Co-operation and Development (OECD).

In March 2014, the LLRWMO submitted inventory data tables to the CNSC for inclusion in the preparation of documentation supporting the “Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.”

In the next fiscal year, this data along with other radiological waste inventory information will be released to the public as part of the “Inventory of Radioactive Waste in Canada”. This Inventory includes data for all categories of radioactive waste and is updated and released every three years in conjunction with the IAEA’s Joint Convention meetings.

How much radioactive waste is located in Canada?





The graphic features the words "Information" and "Program" stacked vertically. Each word is preceded by a lime green circle containing a white letter: a large "I" for "Information" and a large "P" for "Program". Two white lines originate from the left edge of the slide and extend diagonally upwards to the right, passing behind the green circles. In the lower-left area, there are two large, overlapping, semi-transparent grey circles. The entire composition is set against a dark blue-grey background.

Information

Program



Stakeholder Information Session - Ottawa, Ontario

4.0 Information Program

The LLRWMO, as part of its mandate from NRCAN, addresses the needs of the public for information concerning LLRW and its management. For over 30 years, the Office has provided this information to individuals and organizations in Canada and abroad. The LLRWMO's Information Program adheres to the Communications Policy of the Government of Canada.

The LLRWMO maintains open and transparent information disclosure to stakeholders and the public in the delivery of its environmental remediation programs. When planning remediation projects and services, the LLRWMO works to build relationships within diverse communities by recognizing and responding to the distinctive information needs of groups and individuals. Community consultation and stakeholder engagement is a key contributing factor in the successful planning and delivery of LLRWMO's projects to date.

In support of the Information Program, the LLRWMO maintains a wide variety of LLRW information accessible to the public on our website including reports, brochures, and general information in both official languages. The Office also regularly provides information at conferences, workshops and meetings through presentations and submission of articles. Public information requests are made through various means including telephone, letters, e-mail, from the website and in person.

The LLRWMO website serves as a major point of contact to the general public. It received approximately 50,000 visits during the year, or about 140 visits per day. About two-thirds of these visits originated outside North America, indicating the continuing high-level of international interest in the LLRWMO's work.



Some 2013-2014 fiscal year activities included:

Participation in the 2013 Real Property Institute of Canada (RPIC) Federal Contaminated sites Regional Workshop held in Halifax, NS, the theme being sustainable approaches to contaminated sites assessment and project planning.

Next Generation LLRWMO Website went live in the Summer 2013.

Delivery of a presentation entitled "Understanding Radiation and Radiation Protection" to the Municipality of Port Hope Chamber of Commerce's Conference and Workshop on "Small Community - Global Impact: Economic Opportunities and the PHAI".

Provided program development support to Sir Sanford Fleming College representatives by supplying training and course content ideas more relevant and useful to the job market.



LLRWMO

Projects



LLRW Road Remediation - Port Hope, Ontario

5.0 LLRWMO Projects

The LLRWMO manages historic LLRW located at various project sites across Canada, including Ontario, Alberta and the Northwest Territories. The Office engages the public through consultation and stakeholder involvement, establishing partnerships to resolve LLRW issues within their community.

5.1 Northern Transportation Route

In the early 1990s, the LLRWMO identified uranium ore impacted sites along the Northern Transportation Route (NTR). This former 2,200-km marine and portage route was used to transport primarily uranium ore from the Port Radium Mine site in the Northwest Territories to the former Railhead site at Waterways (Fort McMurray), Alberta.

Following the surveys of the historic transfer points along the NTR, the LLRWMO removed and consolidated most of the higher density uranium impacted soil from these locations. The LLRWMO continues to engage with the Sahtu and South Slave region communities on planned activities for addressing and potentially removing the remaining lower density uranium impacted soil.

In October 2013, the LLRWMO staff met with the Déline First Nation leadership. The human health risk assessment findings contained in the report entitled “Northern Transportation Route Federal Assessment” were shared, indicating no radiological risk to their health, based on Canadian and international public health protection standards. Also discussed, were LLRWMO’s plans and activities surrounding the characterization of the uranium ore impacted Great Bear River (GBR) sites and remedial options being considered for the Sawmill Bay site.

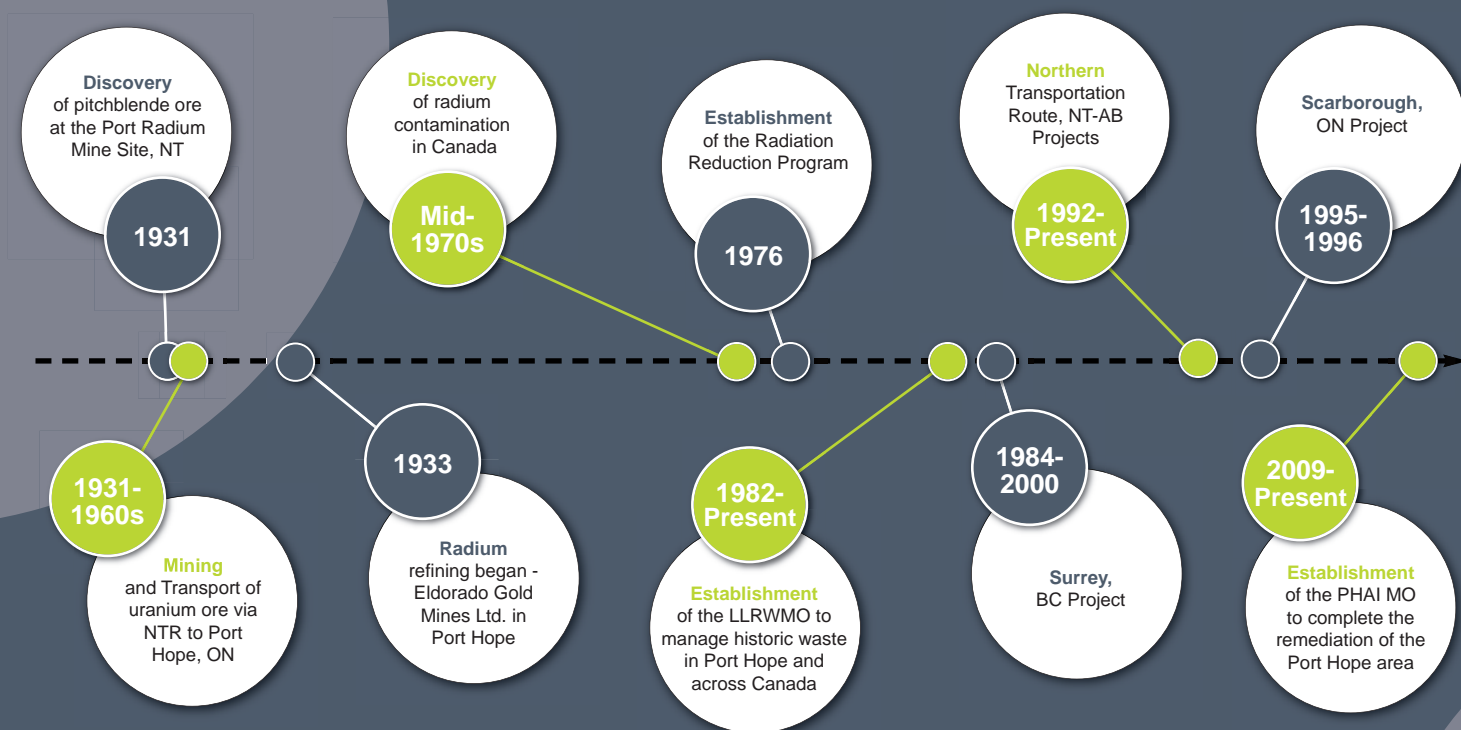
The largest project undertaking for the LLRWMO in the FY 2013-2014, was conducting a Characterization and Delineation Study of the NTR GBR sites. During the fall of 2013, over 140,000 terrestrial gamma survey measurements were taken covering a 20 hectare surface area and resulted in soil samples being taken from over 200 locations to determine the depth of the spilled uranium ore. This Study added significant certainty to the extent and scope of clean-up to be considered for the GBR sites and that there was no uranium or arsenic leachate toxicity concerns. These findings will be used to develop and assess different remedial options including their costs in FY 2014-2015.

With the added information from the GBR Study and ongoing Sawmill Bay remedial options assessment findings, it was determined that the uranium impacted NTR soil volume is approximately 15% lower than originally estimated for restoring these sites back to unrestricted future land use; according to the soil quality guidelines of the Canadian Council of Ministers of the Environment and the Government of Alberta.



In 2013, annual surveillance and maintenance inspections were performed for select South Slave Region sites, including interim waste consolidation mounds at the Fort Smith landfill and Fort Fitzgerald, the Beacon Hill long-term management facility in Fort McMurray, and in Fort Fitzgerald and Bell Rock. The site inspections continue to verify the integrity of these facilities/sites with no observable detrimental impacts to the environment or the health and safety of local residents.

Historic Waste in Canada Timeline



5.2 Port Hope Area

The Port Hope area in Ontario contains more than 1.7 million cubic metres of Canada's historic LLRW. The presence of LLRW in the Port Hope area dates back to the 1930s when radium, used mainly at the time for medical and industrial applications, was extracted from pitchblende ore at the Eldorado Gold Mines Ltd. refinery in the town.

In Port Hope, the LLRWMO operates the Interim Waste Management (IWM) Program which includes the Construction Monitoring Program (CMP), the Property Compliance Program (PCP) and the Environmental Monitoring Program (EMP). The Office also conducts regular monitoring and inspections of licensed and unlicensed LLRW sites in the area.

CMP requests in the 2013-2014 fiscal year:

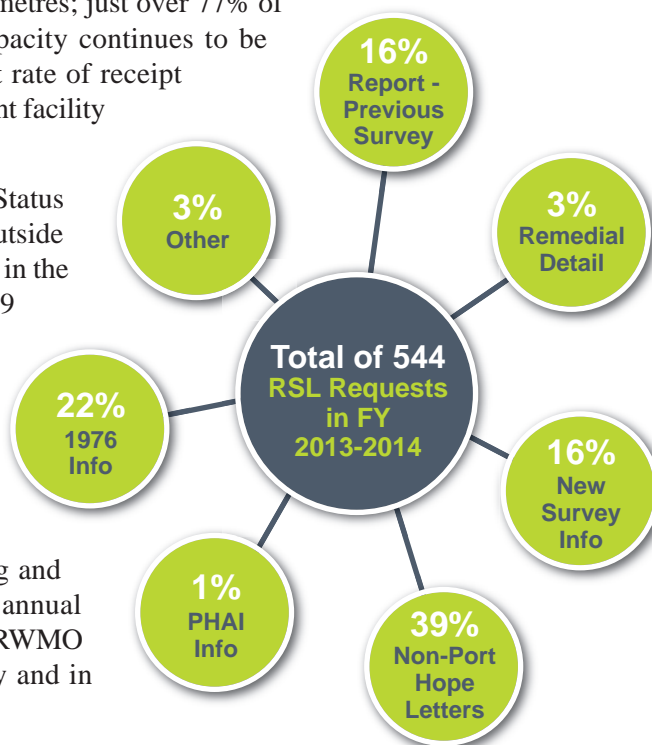


A total of 18.1 cubic metres of contaminated soil was removed from municipal and residential properties and transferred to the licensed Pine Street Extension Temporary Storage Site (PSE TSS) in the Municipality of Port Hope. The accumulated

volume stored at the PSE TSS is now approximately 9,200 cubic metres; just over 77% of the licensed capacity of 12,000 cubic metres. The PSE TSS capacity continues to be sufficient for LLRW resulting from IWM activities at its current rate of receipt (300m³/year); until the PHAI MO local long-term waste management facility is able to receive material collected under the PHAI program.

Under the PCP, the LLRWMO issued a total of 544 Radiological Status Letters (RSL) during the year. Of these, 213 dealt with properties outside Port Hope (Ward One); including locations in southern Ontario and in the Greater Toronto Area (GTA). The LLRWMO also conducted 89 property surveys; an increase of almost 10% from the previous year. PCP surveys provide information that facilitates real estate transactions within the municipality. In December 2013, the LLRWMO completed remediation of surface contaminated materials at two private properties in Port Hope.

The LLRWMO conducted its EMP activities at both licensed and unlicensed sites in Port Hope throughout the year. Regular testing and visual inspections continue to be performed at these sites. The annual Canadian Nuclear Safety Commission (CNSC) inspection of the LLRWMO managed sites found that the sites continue to be operated safely and in compliance with their licences.



5.3 Greater Toronto Area

The LLRWMO provides radiological inspections and assessments on public and private properties located in the Greater Toronto Area (GTA), removes historic LLRW contamination where required and provides the owners with information, guidance and support regarding the radiological status of their properties.

The LLRWMO continues to assess GTA properties to determine the extent of radium contamination, often the result of former radium dial painting operations, prior to owner planned demolition and/or renovation.

During 2013-2014 the LLRWMO provided technical guidance and operational oversight during the construction of conventional waste containers at one GTA institutionally controlled site and, at the request of the CNSC, provided monitoring services and radiological assessment to facilitate owner planned renovations at a second property.



Building LLRW Remediation - Toronto, Ontario

A number of known historic radium-impacted properties await remediation in the GTA. The LLRWMO may, if required, take possession of contaminated materials on a site-specific basis. Regular inspections of these sites by the CNSC, attended by the LLRWMO, ensure that they are being safely managed and that the property owners continue to be aware of the regulatory requirements.

Several properties in the GTA are currently under licensing exemption by the CNSC. Provision of information on the property owners' obligations are regularly provided by the CNSC, in accordance with the Nuclear Safety and Control Act. The property owners have agreed to notify the CNSC and the LLRWMO if they plan to undertake any renovation, excavation or demolition activities on their properties.

In 2013-2014, the LLRWMO and NRCan met with Infrastructure Ontario (IO) to discuss the status and federal plans for the Passmore Avenue Temporary Storage Site located in Scarborough (GTA), ON. The meeting advanced discussion of the development of disposal options for the waste inventory (9,000 m³) located at the Passmore Avenue Site.

Quarterly and bi-annual environmental monitoring continued at the Passmore Avenue Site under the terms of a cost-recovery agreement with the Province of Ontario. The monitoring results indicate that the site continues to perform satisfactorily and indicates no adverse impact of the site on residents or the local environment. These results are captured in the report entitled "Annual Report - Passmore Site Environmental Monitoring and Malvern Construction Monitoring", available to the public at the Malvern Public Library.

Facilities

and

Licensing



Beacon Hill Landfill Cell - Fort McMurray, Alberta

6.0 Facilities and Licensing

The LLRWMO manages LLRW at a number of historic waste sites located throughout Canada, including locations in Ontario, Alberta and the Northwest Territories. Small volumes of LLRW are transported to the LLRWMO storage buildings at AECL’s Chalk River Laboratories (CRL), whereas larger volumes are managed at or near their sites of origin.

In 2013, the LLRWMO held four Waste Nuclear Substance Licences issued by the CNSC for multiple facilities. The LLRWMO transferred the licence (WNSL-W1-344-1.5/ind) and management oversight of the CNSC-licensed Port Hope Waste Management Facility (Pine Street Extension Consolidation Site, Strachan Street Consolidation Site and the Sewage Treatment Plant Temporary Storage Site) to the PHAI MO, in January 2014. This transfer will enable the PHAI MO to create and implement Port Hope Project specific maintenance, monitoring and remediation planning activities at these sites. The table below summarizes the three remaining licences and their descriptions.

In the spring of 2013, the LLRWMO completed planning, and in support of new criteria for waste acceptance, advanced the reopening of the LLRWMO’s Waste Management Area D (WMA D) at CRL to accept additional material. Inspections conducted in WMA D identified deteriorating waste containers. As a result, additional containers were procured for use next fiscal year to “over-pack” the containers to ensure long-term storage integrity. At several historic waste sites, materials have been placed in interim storage pending the development and implementation of long-term management solutions.

The LLRWMO maintains and monitors the sites on a regular basis to ensure that they are being managed safely and comply with the licence requirements. All annual compliance reports were completed and forwarded to the CNSC in 2013-2014.

Facility	Licence # and Type	Description	Expiration Date
Pine Street Extension Temporary Storage Site	WNSL-W1-182.0/2021, Waste Nuclear Substance Licence	Licence for the Pine Street Extension Temporary Storage Site in Port Hope, ON	2021 December 31
LLRWMO Environmental Laboratory	20004-7-16.1 Nuclear Substances & Radiation Devices Licence	Licence for the LLRWMO Environmental Laboratory in Port Hope, ON	2016 September 30
Historic Waste Remediation Operations	WNSL-W2-2202.3/2016, Waste Nuclear Substance Licence	Temporary historic low-level radioactive waste management at sites in Canada	2016 November 30



Quality,

Safety, and

Compliance



Uranium Impacted Soil Testing - Tulita, Northwest Territories

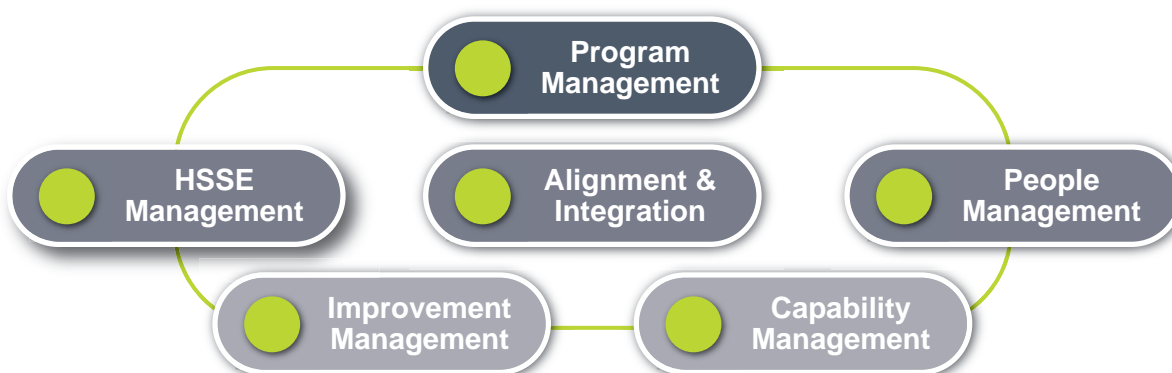
7.0 Quality, Safety and Compliance

The LLRWMO operates an integrated Quality, Environment, Health and Safety Management program, ensuring optimum control of the environmental impacts of LLRWMO activities, while protecting the health and safety of the public and operational staff.

The LLRWMO is certified to ISO 9001:2008 under the scope of AECL's Nuclear Laboratories registration. In October 2013, the LLRWMO successfully passed an independent external ISO 9001 Quality Management System Surveillance Audit. There were no corrective actions as the LLRWMO activities remain in conformance with the standard.

In July 2013, the LLRWMO received the findings from the March 2013 Nuclear Oversight Audit report. The audit report noted one Non-Conformance: more documented governance and processes required to support oversight and procedural documentation, including additional LLRWMO process management tools. The report also noted one opportunity for improvement: continual improvement related to use of the ImpAct system and conducting self assessments on a regular basis. Corrective actions proposed by the LLRWMO to strengthen alignment with AECL's corporate management and continual improvement systems were accepted by the ImpAct Review Board in September 2013.

Management System Framework:



In this fiscal year, the LLRWMO completed two significant management system documents: the Governing Documentation Index (GDI) in July 2013 and the Organization (ORG) document in November 2013. The Organization document describes the mandate, organizational structure, roles and responsibilities of management personnel, and the interfaces required for planning and undertaking the LLRWMO activities. With the release of these documents, the management systems of the LLRWMO and AECL became better integrated and aligned.

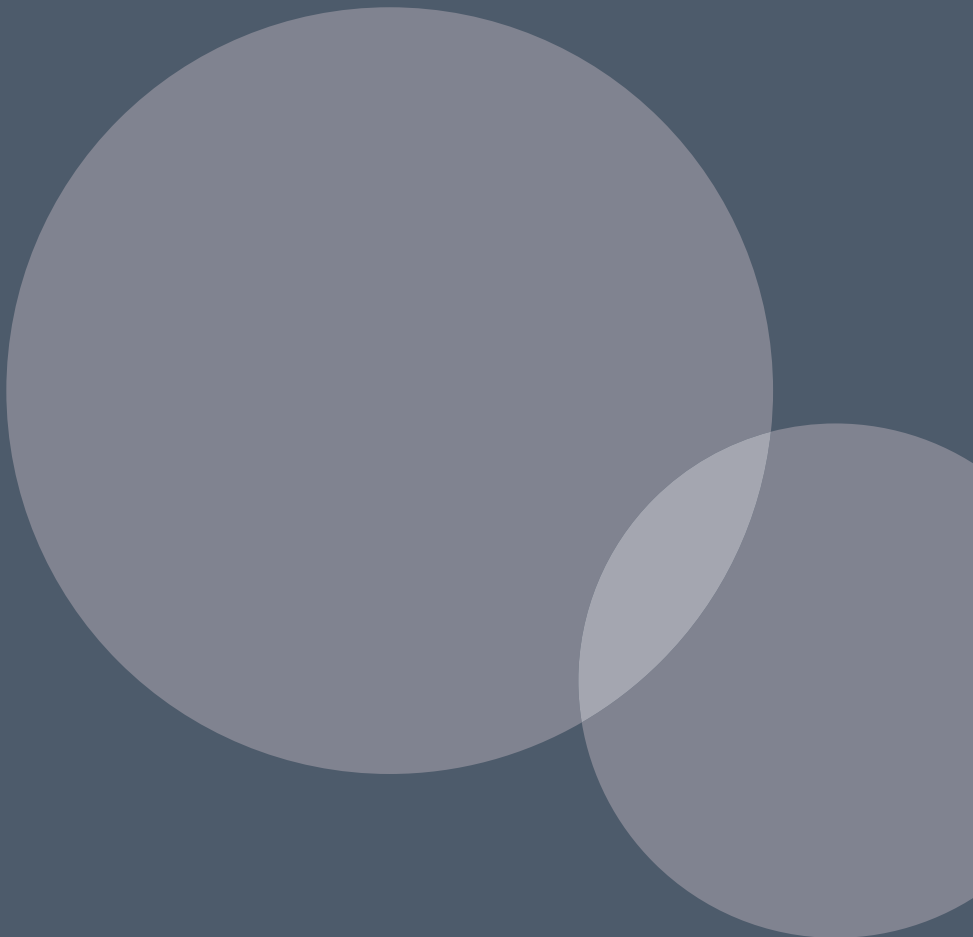
Continuous improvement initiatives for the FY 2014-2015 include a Management Performance and Program Review of 2012-2013 and 2013-2014 activities, development of a document recovery plan and the preparation of ongoing updates and enhancements of our management system documentation.



Financial



Review





8.0 Financial Review

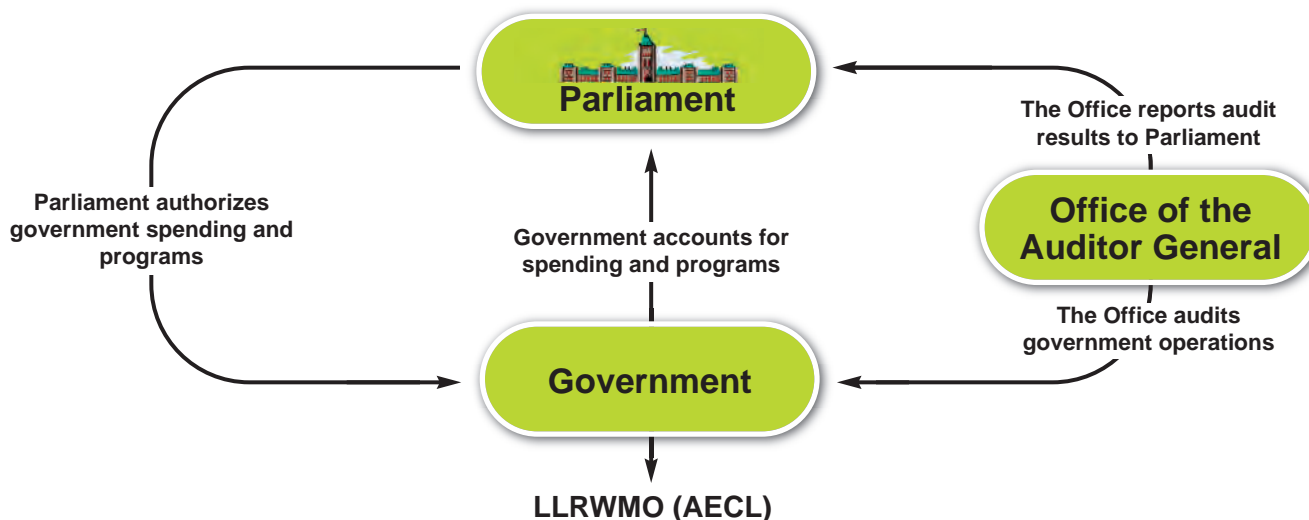
The LLRWMO is a division of Atomic Energy of Canada Limited (AECL) and is funded by Natural Resources Canada (NRCAN) through a cost-recovery agreement with AECL. Supplementary funding in FY 2013-2014 was generated through cost-recovery activities supporting other AECL divisions and external organizations. The LLRWMO's accounts and financial control systems conform to those of AECL.

In March 2013, in accordance with past practice, the LLRWMO submitted a Business Plan for FY 2013-2014 to NRCAN for approval. The plan described how the LLRWMO planned to carry out NRCAN's priorities with the available funding. Each quarter, LLRWMO staff and representatives from NRCAN's Uranium and Radioactive Waste Division reviewed and adjusted the Plan as necessary.

The financial statements in this Annual Report detail the LLRWMO's financial performance for the fiscal year ending 2014 March 31. The upcoming table illustrates how funding provided by NRCAN was allocated to the LLRWMO's mandated business lines in 2013-2014. For comparison, funding for FY 2012-2013 is also provided.

8.1 Audit Statement

AECL is audited annually by the Office of the Auditor General of Canada and KPMG LLP. The audit is conducted in accordance with generally accepted auditing standards. The review of the LLRWMO's financial statements falls within the scope of that audit and the opinions expressed in the AECL audit report are equally applicable to the LLRWMO's financial results.



LLRWMO National Program

Total Expenditures (\$ thousands)

2012-2013

2013-2014

Historic Waste Program

Northern Sites Initiatives

Northern Transportation Route	273	504
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Subtotal: Northern Sites Initiatives

273	504
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Other Historic Waste Initiatives

Passmore Avenue Temporary Storage Site (GTA)	7	8
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Historic Waste at Other Locations	108	144
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Port Hope Area Interim Waste Management	779	445
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Subtotal: Other Historic Waste Initiatives

894	597
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Port Hope Area Initiatives

Support to PHAI MO	81	53
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Subtotal: Port Hope Area Initiatives

81	53
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Other Mandated Activities

Ongoing Waste Program	1	57
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Information Program	177	130
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Environmental Operations and Support	245	131
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Management, Administration and Support	1,283	1,121
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Subtotal: Other Mandated Activities

1,705	1,439
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Total LLRWMO Activities:

2,953	2,593
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Cost Recovery

Less Cost Recovery from PHAI MO	(81)	(53)
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Less Cost Recovery from Infrastructure Ontario for Malvern (Scarborough)	(7)	(8)
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Total Cost Recovery:

(87)	(61)
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Total expenditures for NRCAN funding:

2,865	2,532
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Low-Level Radioactive Waste Management Office

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