



2009-2010 ANNUAL REPORT

Low-Level Radioactive Waste Management Office

....working towards community solutions



Natural Resources
Canada

Ressources naturelles
Canada

Canada

CC1-1/2010
ISBN 978-1-100-52272-2

LLRWMO-513430-041-04000

ISO 9001: 2000 certified

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I am pleased to present the Annual Report of the Low-Level Radioactive Waste Management Office (LLRWMO) for the fiscal year ending 31 March 2010.

This report has been prepared in accordance with Section 5.2 of the Memorandum of Understanding 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,

R. L. Zelmer, P.Eng., RPP
Director, LLRWMO



Atomic Energy
of Canada Limited

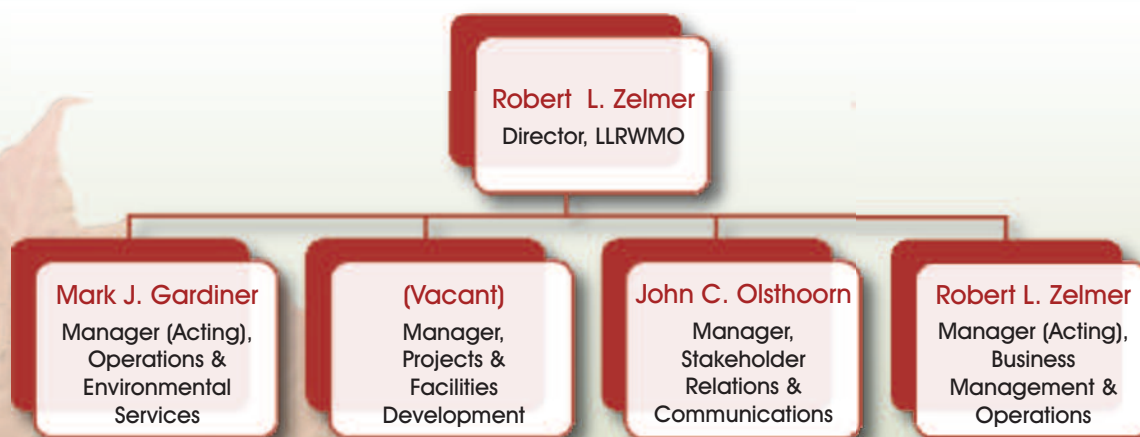
Énergie atomique
du Canada limitée



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MANAGEMENT ...



DIRECTOR'S MESSAGE ...

Building on last year's success in Tulita, Northwest Territories, this fiscal year saw further advancement of the Northern Transportation Route projects. Community meetings in Délîné, Northwest Territories and Fort Fitzgerald, Alberta marked the beginning of discussions toward further remedial activities in the Sahtu (Great Bear Lake area) and South Slave (Slave River area) regions.

I am pleased to report that the Low-Level Radioactive Waste Management Office (LLRWMO) Quality Management System, which guides the quality, safety and compliance of the LLRWMO's activities, was re-certified in 2009 September, following an audit by the Quality Management Institute, SAI-Global. The re-certification is valid for three years. During the audit, the auditor identified customer communication and satisfaction as first class, particularly for the Tulita project. No non-conformance items were identified.



The transition of leadership and staff of the Port Hope Area Initiative (PHAI) from the LLRWMO to the PHAI Management Office (PHAI MO) was completed during the year. In addition to project engineering, project communications, the Property Value Protection Program and other functions were also transferred. The LLRWMO continued to provide ongoing administrative, technical and financial management support to the PHAI MO through 2009-2010. The established local Interim Waste Management Program and National Program support activities of the LLRWMO will continue to operate in Port Hope for the foreseeable future.

It has been a year of transition and strategic progress. I extend to all our staff and our partners my thanks for the continuing contributions made this year to the long-term safe management of historic low-level radioactive waste in Canada.

R.L. Zelmer, P.Eng., RPP
Director, LLRWMO

ROLE & RESPONSIBILITIES OF THE LLRWMO □ □ □

The Low-Level Radioactive Waste Management Office (LLRWMO) was established in 1982 to carry out the responsibilities of the federal government for the management of low-level radioactive waste (LLRW) in Canada. The Office is operated by Atomic Energy of Canada Limited (AECL), through a cost-recovery agreement with Natural Resources Canada (NRCan), the federal department that provides the funding, direction and priorities for the LLRWMO, and establishes national policy for radioactive waste management.

Responsibilities of the LLRWMO

The LLRWMO's activities fall within three major programs:

1) Historic Waste - The federal government exercises responsibility for the management of historic waste under the Historic Waste Program. The LLRWMO carries out cleanup and long-term management of this waste on behalf of the federal government. Its responsibilities are set out in the 1990 Memorandum of Understanding between NRCan and AECL. Historic waste contamination has been found at various locations in Canada, including Alberta, the Northwest Territories, Ontario and British Columbia, and historic waste artefacts continue to be recovered from numerous sites across the country.

2) Ongoing Waste - Producers and owners are responsible for the management of their radioactive waste. Under the Ongoing Waste Program, the LLRWMO supports NRCan in its development and implementation of national policies and strategies for the management of this waste. The LLRWMO also assists NRCan in meeting its commitments to international organizations such as the International Atomic Energy Agency (IAEA) and the Nuclear Energy Agency (NEA) of the Organization for Economic Cooperation and Development (OECD).

3) Information - The LLRWMO addresses public information needs related to specific historic waste projects and to low-level radioactive waste management in general. The Office responds to inquiries from individuals and communities across Canada as well as from interested parties worldwide.

What is low-level radioactive waste?

In Canada, low-level radioactive waste (LLRW) is defined by exclusion for policy purposes. If a waste is radioactive, but is neither nuclear fuel waste (also called high-level waste) nor uranium mine and mill tailings, then it is classed as LLRW. Most of Canada's LLRW consists of soil that became contaminated over the past 70 years. It includes contaminated soils and related wastes resulting from the very early operations of Canada's nuclear industry. The LLRW being produced today is the result of activities relating to nuclear energy generation, nuclear research and development, and the production and use of radioisotopes in medicine, education, research, agriculture and industry.

The Canadian Standards Association (CSA: www.csa.ca), in collaboration with industry, government and the Canadian Nuclear Safety Commission (CNSC), has developed a more extensive classification of LLRW. In this new classification, sub-level categories of LLRW include very-short-lived low-level radioactive waste (VSLLW) and very-low-level radioactive waste (VLLW). These sub-levels, as well as a broad description of radioactive waste management in Canada, are described in the 2008 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:

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

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.

HISTORIC WASTE PROGRAM ...

MANAGEMENT OF HISTORIC WASTES

The goals of the LLRWMO Historic Waste Program are:

- *clean up and manage for the long term, Canada's historic wastes including the historic waste found in Port Hope and Toronto, Ontario, Fort McMurray, Alberta and at various locations in the Northwest Territories;*
- *perform interim remedial work and ongoing monitoring as required at contaminated sites to protect human health and the environment, prior to the availability of long-term management facilities;*
- *seek opportunities for the resolution of historic waste management needs in the long term; and*
- *provide technical assessments and advice to NRCan for the development of government policies for the management of historic wastes.*

Programs and projects to support these goals, together with the progress made during the fiscal year, are described in the following sections.

Project Sites in Canada



Program Highlights

- **Northern Transportation Route (NTR): (1992 - Present)**
 - Sites characterization
 - Fort McMurray cleanup
 - Interim Waste Management at Ft. Smith, Ft. Fitzgerald, Ft. McMurray and Tulita
 - Tulita Disposal Project
- **Port Hope Area: (1982 - Present)**
 - Sites characterization, consolidation and licensing
 - Siting Task Force support
 - Interim Waste Management
 - Port Hope Area Initiative
- **Toronto Area: (1982-Present)**
 - Malvern mound siting
 - Malvern Remedial Project
 - Interim Waste Management
- **Surrey, BC: (1984 - 2000)**
 - Interim Waste Management
 - Surrey Siting Task Force
 - Surrey Disposal Project

HISTORIC WASTE PROGRAM ...

NORTHERN TRANSPORTATION ROUTE

Background

In the early 1990s, the LLRWMO identified a number of contaminated sites along the Northern Transportation Route (NTR), a 2,200 km route used in the past to transport uranium ore and concentrates from the Northwest Territories (NT) to northern Alberta. The NTR extends from the Port Radium Mine site on Great Bear Lake, via a system of lakes and rivers (including Great Bear and Great Slave Lakes, and the Great Bear, Mackenzie, Slave and Athabasca Rivers) south to Fort McMurray, Alberta.



In subsequent years the LLRWMO has surveyed the potential historic transfer points along the NTR, and has removed and consolidated contaminated soil at some of the sites along the route, from residential properties in Fort Smith and Tulita, NT, and from nine different remediated sites in Fort McMurray, AB. This contaminated material was then placed in interim engineered storage mounds, where annual inspections are conducted as necessary to ensure a safe environment for local residents.

2009-2010 Activities

The annual monitoring of LLRWMO-managed sites along the NTR continued in 2009-2010, with



monitoring and inspection of the Fort McMurray storage facility, the Fort Smith landfill cell, and the Fort Fitzgerald area, to ensure that the inventories had no effect on the public and the local environment.

Sahtu Region, NT

The LLRWMO provided technical expertise at community consultation meetings with representatives of the Déliné First Nation

What is “historic” low-level radioactive waste?

Historic low-level radioactive waste is low-level waste that was managed 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.

The historic waste mostly consists of soil mixed with process residues and contaminated materials, including contamination-bearing traces of early radium-uranium ores spilled in transit. Most of this waste dates back to the 1930s when radium was refined for medical and industrial applications in Port Hope, Ontario. Most of the waste is now safely stored at interim storage facilities located at or near the originally contaminated sites.

HISTORIC WASTE PROGRAM ...

NORTHERN TRANSPORTATION ROUTE

community and Indian and Northern Affairs Canada (INAC), in support of INAC's initiative to remediate certain sites in the Sahtu (Great Bear Lake) region of the Northwest Territories. The LLRWMO is continuing its discussions with INAC and NRCAN with respect to planning for the future remediation of the Sawmill Bay site on Great Bear Lake, which was contaminated during the transport of uranium ore from the 1930s to the 1960s.

The LLRWMO team for the Tulita Disposal Project received a AECL Voyageur Award in recognition of the operational excellence shown in finalizing the remediation of one of the major historic LLRW-contaminated sites along the Northern Transportation Route.



This Project, which was completed in January 2009, involved the transfer of 755 bags of uranium-impacted soil from a temporary interim storage stockpile in Tulita to a licensed disposal facility in the U.S. The successful completion of this project fulfilled a long-standing commitment by the Government of Canada to remove historic waste from this community.

South Slave Region, NT

Discussions were initiated at the request of the Smith Landing First Nation (SLFN) regarding the remediation of contaminated areas at Fort

Fitzgerald, Alberta, in the South Slave region. Federal representatives met with SLFN community leaders, information was exchanged and documents were presented for review. Subsequently, the LLRWMO developed preliminary strategic recommendations on remediation planning and consultation in the South Slave region for NRCAN's consideration.



Annual inspections of the Fort Fitzgerald area and the Fort Smith Mound at the landfill site showed no issues that required immediate attention.

Fort McMurray, AB

Annual monitoring and maintenance of the Beacon Hill Long-Term Waste Management Facility in Fort McMurray, Alberta were carried out and the results forwarded to the key stakeholders (Alberta Environment, Alberta Health Services, Canadian Nuclear Safety Commission [CNSC] and the Municipality of Wood Buffalo). No issues were identified that required immediate attention. The LLRWMO submitted the "2009 Monitoring Report: Long-Term Management Facility, Fort McMurray, Alberta" to the Regional Municipality of Wood Buffalo, the CNSC and NRCAN.

HISTORIC WASTE PROGRAM ...

PORT HOPE AREA

The Port Hope, Ontario area contains more than 1.6 million cubic metres of Canada's historic LLRW. The presence of LLRW in Port Hope dates back to the 1930s when radium was extracted from pitchblende ores at a refinery in the municipality, for medical and industrial applications. The LLRW is primarily soil contaminated with the early waste material from the refinery. Consolidated LLRW is stored in several licensed and unlicensed interim storage locations in the area, pending a long-term management solution.

The LLRWMO has long been associated with the management of the Port Hope Area waste. Following the work of the Federal-Provincial Task Force on Radioactivity in 1982, the LLRWMO became the successor and the managing agent for these wastes. Since this time, the LLRWMO has advanced the consolidation of LLRW, established coexistence programs and facilities, enabled continued interim safe use of land with residual contamination and partnered with others in advancing the ultimate remediation of the area. These management and planning activities continue today. The current focus of the LLRWMO in Port Hope is the continuation of the long-established Interim Waste Management (IWM) Program and support to the recently established Port Hope Area Initiative Management Office (PHAI MO), which is advancing the completion of remediation and long-term facilities development.

INTERIM WASTE MANAGEMENT PROGRAM

Background

Since 1989, the LLRWMO has operated the Interim Waste Management Program for the historic LLRW in the Port Hope area on behalf of the federal government. Currently, LLRW is located at four licensed LLRWMO sites, one licensed Cameco-operated facility, three small unlicensed consolidation sites and ten major unlicensed sites. The LLRWMO provides regular inspection and ongoing monitoring of its sites and any sites that are discovered during routine construction activities.

A major part of the support provided by the LLRWMO over the past 20 years through the Interim Waste Management Program, has been delivered through its three component program:

- **CMP** (*Construction Monitoring Program*)
- **PCP** (*Property Compliance Program*)
- **EMP** (*Environmental Monitoring Program*)

Support under these three programs will continue to be provided by the LLRWMO as new facilities are constructed and final remediation of sites is completed during future phases of the Port Hope Area Initiative (PHAI).

The LLRWMO operates the CMP in cooperation with the Municipality of Port Hope under an agreement established in 1989. The purpose of the program is to minimize the spread of soils contaminated with historic LLRW and to minimize the permeation of radon and its decay products from these soils into buildings in Port Hope.

The LLRWMO also operates the PCP, which responds to owner inquiries regarding the radiological status of their properties and provides this information to property owners, their real estate agents, or their lawyers. This information may be used to facilitate the sale or purchase of the property or to simply provide radiological information to the property owner. Occasionally, property or building surveys are conducted within the PCP, and remediation or recovery of artefacts is undertaken if criteria failures are evident. Inquiries from the public-at-large are also responded to by the LLRWMO outside of the PCP.

The LLRWMO regularly monitors the environment in the vicinity of its licensed and unlicensed historic LLRW sites in Port Hope through the EMP. The monitoring results at LLRWMO-operated licensed sites are reported to the CNSC on an annual basis.

HISTORIC WASTE PROGRAM ...

PORT HOPE AREA

To meet the Interim Waste Management Program requirements in Port Hope, as well as to meet the needs of other LLRWMO projects across Canada, the LLRWMO operates a sample preparation and analysis laboratory in Port Hope, Ontario. Facilities and core capabilities are maintained to conduct radiation surveys, remediation, waste packaging and transport, and interim waste management.

2009-2010 Activities

Construction Monitoring Program

The importance of the CMP in the local community is reflected in the sustained activity from year to year. During 2009-2010, staff from the LLRWMO responded to 223 requests for CMP services, often related to proposed new construction activities, landscaping or utility excavations.

Approximately 237 cubic metres of contaminated soil was excavated from remediated properties and transported 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 7,200 cubic metres, approximately 60 percent of the licensed capacity of 12,000 cubic metres.

The 2009 annual Construction Monitoring Program report was completed and delivered to the Municipality of Port Hope.

Over the 20 years since its inception, the CMP has responded to 3,413 applications for construction monitoring services, of which 989 were from the

Municipal Public Works Department or utility companies.

Property Compliance Program

Under the PCP, the LLRWMO issued a total of 531 radiological status letters for individual properties during the fiscal year. Although the vast majority were in Port Hope, 138 of these letters dealt with properties outside of Port Hope, mostly in the Greater Toronto Area and other areas in southern Ontario. The LLRWMO also conducted more than 100 property surveys, including interior and exterior gamma surveys and interior radon surveys. These surveys provide information that helps facilitate both private and commercial development applications and the sale of individual properties in the municipality.

Environmental Monitoring Program

The LLRWMO conducted environmental monitoring at licensed and unlicensed sites in Port Hope throughout the year. Parameters measured included radon in air, gamma radiation, radium/uranium/arsenic in ground and surface water, and groundwater levels. Monitoring is carried out at LLRWMO-operated licensed sites to satisfy the conditions of the CNSC licences, and at unlicensed sites to ensure environmental diligence as well as to monitor for trends and provide baseline information in Port Hope. An annual inspection of the LLRWMO licensed sites was also performed by the CNSC to confirm that they are being safely operated in compliance with their licences.

Interim Waste Management Components:

CMP - Construction Monitoring Program **PCP** - Property Compliance Program

EMP - Environmental Monitoring Program

HISTORIC WASTE PROGRAM ...

PORT HOPE AREA --- continued...

PHAI SUPPORT SERVICES

Background

During 2009/10, the newly established Port Hope Area Initiative Management Office (PHAI MO) became responsible for completing the planning elements and managing the Port Hope and Port Granby Projects through construction.

The construction phase will span several years and involve facility construction and site remediation. Thereafter, ongoing monitoring of the facilities will take place to ensure that there is no impact on public health and environment in the future. The LLRWMO continued through 2009-2010 to provide ongoing administrative, technical and financial management support to the PHAI MO.

2009-2010 Activities

The transition of leadership and staff of the Port Hope Area Initiative from the LLRWMO to the PHAI MO was completed during the year. In addition to project engineering, project communications, the Property Value Protection Program and other functions were also transferred.

LLRWMO continuing support service to the PHAI through the year included the following key activities: continued operations of LLRWMO Interim Waste Management and environmental services in the community, including operating

existing LLRWMO licensed sites and programs maintaining community confidence; negotiated joint recommendations on 17 issues raised by the Municipality of Port Hope which were delivered to NRCan by the LLRWMO negotiator; technical and



business networking with new PHAI MO staff in support of the transition; and assistance with the advancement of the Small-Scale Sites Resurvey and Remediation Trials Cost Assessment Project and the Biophysical Effects Management Program supported the technical and planning delivery of Port Hope Project commitments.

TORONTO AREA ---

Background

The LLRWMO provides radiological inspections and assessments on public and private properties and provides the owners with information, guidance and support if a remediation of their properties is required.

The LLRWMO also provides technical guidance and may take possession of contaminated materials on a site-specific basis. Contamination at these sites often

resulted from past radium recovery and radio-luminescent dial painting activities. If warranted, the costs of such waste recovery projects are shared between the LLRWMO and the property owner. Regular inspections of these sites by the CNSC, attended by the LLRWMO, ensure that they are being safely managed and that the owners continue to be aware of the regulatory role.

HISTORIC WASTE PROGRAM ...

TORONTO AREA

Past remedial operations have resulted in the development of two historic waste consolidation mounds in the Toronto area. The LLRWMO participated in the construction of the Passmore site and the Lakeshore Road site.

A number of contaminated properties in the Greater Toronto Area are currently under licensing exemption by the CNSC. Contact with the owners of these properties and provision of information on their obligations are regularly provided by the CNSC, in accordance with the *Nuclear Safety and Control Act*. The property owners have agreed to contact the CNSC and the LLRWMO in the event that they wish to renovate, excavate, or construct in the areas that have been identified to them as contaminated.



In 1990, contaminated soil was removed from a site in the urban community of Malvern (Scarborough) in Toronto, ON and in 1995-1996 the LLRWMO undertook a full-scale remediation of development lands and residential property sites in Malvern that contained radium-contaminated soil and artefacts. The marginally contaminated soil was moved to the Passmore Avenue Temporary Storage Site, an LLRWMO engineered storage mound. The licensable material that had been separated from the

contaminated soil was transferred to the LLRWMO's licensed storage facility located at the Chalk River Laboratories (CRL) in Chalk River, ON.

2009-2010 Activities

Passmore

The LLRWMO continues to monitor the Passmore Avenue Temporary Storage Site in Malvern (Scarborough) Toronto, ON under a cost recovery program with the Province of Ontario. Environmental monitoring over the last ten years shows no adverse impact of the site on the local environment.

The monitoring results for 2009-10, including radium and uranium measurements, show the site continues to perform satisfactorily. The "2009 Annual Report – Passmore Site Environmental Monitoring and Malvern Construction Monitoring" report was submitted to the Ontario Realty Corporation (ORC) and the CNSC.

The LLRWMO also provided environmental monitoring services to the Toronto and Region Conservation Authority (TRCA) at the Lakeshore Road consolidation mound.

Other Toronto Area Properties

Annual inspections by the CNSC, attended by the LLRWMO, confirm that the licensing exempt properties are being safely managed and that the owners are aware of the regulatory requirements.

The LLRWMO attended inspections by the CNSC of these "institutionally controlled sites" in the Toronto area. None of the inspections revealed issues that needed immediate attention.

The LLRWMO also performed radiation surveying and site characterization during the installation of equipment and services at two sites in the area.

HISTORIC WASTE PROGRAM ...

ARTEFACT RECOVERY

Background

The LLRWMO provides technical advice on the identification and management of radium and other radioactive artefacts found on public and private properties throughout Canada. Where necessary, the artefacts are characterized, removed and stored at licensed sites.

As the primary point of contact for technical advice, the LLRWMO has responded to inquiries from diverse locations in Canada and offshore.

2009-2010 Activities

The historic Artefact Recovery Program in 2009-2010 saw more activity than in the previous years. The LLRWMO assisted in the removal of radioactive devices from eight different locations

across Canada, including locations in Ontario, Quebec and New Brunswick.

Highlights of the year's work included the following:

- *One device containing radium, recovered from a site in Ontario, was the most radioactive artefact ever brought under LLRWMO management.*
- *The recovery of radioluminescent dials from the Rexdale laboratory of the Ontario Ministry of Labour's Radiation Protection Service.*
- *A request from the Department of National Defence (DND) for support in their radium dial recovery operations from locations across Canada.*

QUALITY, SAFETY AND COMPLIANCE

Background

In November 2006, the LLRWMO issued its integrated "Quality, Environment, Health and Safety Management Program" document. The program was implemented to ensure optimum control of the environmental impacts of LLRWMO activities, while protecting the health and safety of the public and operational staff. The program is structured to satisfy the following requirements:

- **Quality** - ISO 9001:2000
- **Environment** - ISO 14001:2004
- **Health and Safety Standards** - CSA Z1000:2006

The program assists in the maintenance of regulatory compliance with AECL's Emergency Preparedness and Response, Radiation Protection, and Radioactive Materials Shipping Programs.

2009-2010 Activities

The LLRWMO's Quality Management System was re-certified in 2009 September, following an audit

by the Quality Management Institute, SAI-Global. The re-certification is valid for three years. During the audit, the auditor identified customer communication and satisfaction as first class, particularly for the Tulita project. No non-conformance items were identified.

During the year, the LLRWMO provided quality oversight, environmental monitoring, and operational controls on all routine reporting activities.

The scope of the ISO 9001:2000 registration includes:

- *the management of historic low-level radioactive wastes and the resolution of related issues on behalf of the federal government;*
- *the assessment of low-level radioactive wastes produced by the nuclear industry and medical, industrial and research institutions; and*
- *tracking and reporting on national and international developments pertaining to low-level radioactive waste.*

HISTORIC WASTE PROGRAM ...

FACILITIES AND LICENSING

Background

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 (typically not requiring licensing) are managed at or near their sites of origin.

At some of the historic waste sites, materials have been placed in interim storage pending the development and implementation of long-term management solutions. The LLRWMO conducts

Commission for various facilities and equipment. The table below summarizes the licences and their descriptions.

2009-2010 Activities

Recent changes have been made to the Nuclear Substance and Radiation Devices Regulations of the *Nuclear Safety and Control Act*, which bring the regulations in line with international standards and practise. As a result of these changes, the CNSC has determined that the requirement for licensing the radionuclides contained in some consolidated interim waste management sites no longer exists. These sites included the Fort Smith mound

FACILITY	LICENCE NUMBER & TYPE	DESCRIPTION	EXPIRATION DATE
LLRWMO National Laboratory	20004-7-11.2 Nuclear Substances & Radiation Devices Licence	Licence for the LLRWMO National Laboratory in Port Hope, Ontario	Sept 30, 2011
Pine Street Extension Temporary Storage Site	WNSL-W1-182.1/2011, Waste Nuclear Substance Licence	Licence for the Pine Street Extension Temporary Storage Site in Port Hope, Ontario	Dec 31, 2011
Port Hope Waste Management Facility	WNSL-W1-344-1.4/ind, Waste Nuclear Substance Licence	Licence for the Pine Street Extension Consolidation Site, Strachan Street Consolidation Site & Sewage Treatment Plant Temporary Storage Site in Port Hope, Ontario	Indefinite from date of issue
Historic Waste Remediation Operations	WNSL-W2-2202.1/2016, Waste Nuclear Substance Licence	Historic low-level radioactive waste management at Canadian sites.	Nov 30, 2016
X-Ray Fluorescence Analysis	20004-15-11.0 Nuclear Substances & Radiation Devices Licence	License issued for X-Ray Fluorescence Analyzer at LLRWMO National Laboratory in Port Hope, Ontario	Apr 30, 2011

ongoing monitoring, inspection and maintenance at these interim storage sites. The historic waste at these sites includes uranium and/or radium contaminated soil, building materials and other contaminated items.

To enable it to carry out its responsibilities for interim LLRW management and associated technical activities, the LLRWMO currently holds five licences issued by the Canadian Nuclear Safety

(Northwest Territories), the Beacon Hill Long-Term Waste Management Facility (Fort McMurray, Alberta), and the Passmore site (Toronto, Ontario). The LLRWMO provided the CNSC with a report containing radioactive inventories and other information on these and other privately owned sites, to assist them in reassessing the licensing requirements of the sites.

HISTORIC WASTE PROGRAM ...

FACILITIES AND LICENSING ————— continued...

The changes to the licensing requirements for the above sites do not absolve governments of their responsibilities, nor the owners and managers of these sites from their regulatory obligations. The sites will continue to be maintained and monitored by the LLRWMO to ensure that they are being

safely managed, and the results forwarded to the CNSC.

All 2009 annual licensing compliance reports were completed and forwarded to the CNSC.

ONGOING WASTE PROGRAM ...

Background

Electrical utilities, nuclear research organizations, nuclear fuel manufacturers, and the producers and users of medical and other radioisotopes continue to generate LLRW. These producers are responsible for the wastes they produce.

The LLRWMO assists NRCan by providing technical input when NRCan develops policies and strategies for the long-term management of this ongoing waste.

The LLRWMO also assists NRCan, on request, in activities with international organizations such as the International Atomic Energy Agency (IAEA) and the Nuclear Energy Agency (NEA) of the Organization for Economic Cooperation and Development (OECD).

2009-2010 Activities

The final report “Inventory of Radioactive Waste In Canada”, which describes the inventories of all classes of radioactive wastes in Canada was completed in print and electronic form during the fiscal year. The electronic version of the report was distributed at the International Joint Convention (IJC) on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management meeting at the International Atomic Energy Agency in Vienna in 2009 May.

The LLRWMO prepared to participate as a member of the Canadian delegation to the IJC meeting by preparing contributions to Canada’s national report,

reviewing and preparing questions on four other national reports, and assisting in the preparation of the Canadian presentation at the meeting. Responses were also provided to international



The most recent report on “Inventory of Radioactive Waste in Canada” was completed in this fiscal year.

reviewers’ questions on Canada’s contribution to the IJC report. For the first time, a new definition and classification of sub-level categories within LLRW, in accordance with the Canadian Standards Association, was integrated into the report.

Late in the year, LLRWMO staff were heavily involved in preparations for the visit of the CEO and staff of ANDRA (France) who wished to learn from Canada’s expertise in managing LLRW, particularly the remediation of small-scale contaminated sites. The visit is to take place early in the next fiscal year.

INFORMATION PROGRAM ...

Background

The LLRWMO provides information about LLRW and its management in Canada. LLRWMO offices in Port Hope and Ottawa respond on a daily basis to public inquiries received by telephone, letter, e-mail, through the LLRWMO's web site and in person, from across Canada and abroad.

2009-2010 Activities

The LLRWMO Annual Report for fiscal year 2008-2009 was completed and published.

Following the establishment of the PHAI Management Office, a separate PHAI web site was designed with the assistance of LLRWMO staff, and the LLRWMO web site was reviewed and updated for consistency. Information on LLRW management in Canada may now be obtained at www.llrwmo.org and www.phai.ca.

The LLRWMO's web site received more than 55,000 visits throughout the 2009-2010 fiscal year, or well over 120 visits per business day. About half of these originated outside North America, showing the level of international interest in the work of the Office.

Visits to the LLRWMO offices at Port Hope and Ottawa by interested members of the public and contractors continued throughout the year.



The LLRWMO's web site received more than 55,000 visits throughout the 2009-2010 fiscal year.

Presentations were given on request to numerous communities and institutions across Canada.

FINANCIAL REVIEW ...

LLRWMO operations are funded by NRCan through a cost-recovery agreement (Memorandum of Understanding) with AECL. Supplementary funding in FY 2009-2010 was generated through cost-recovery activities supporting other AECL divisions and external organizations, including preparatory work for the future resurvey of properties in Port Hope and communications assistance in the development of the new PHAI web site, etc. The LLRWMO's accounts and financial control systems conform to those of AECL.

Each fiscal year, the LLRWMO submits a business plan to NRCan for approval. The plan describes

how the LLRWMO intends to carry out NRCan's priorities with the available funding. Each quarter, LLRWMO staff and representatives from NRCan's Uranium and Radioactive Waste Division review and adjust the plan as necessary.

The financial statements in this annual report detail the LLRWMO's financial performance for the fiscal year ending 31 March 2010. The following table illustrates how funding was allocated to the LLRWMO's mandated business lines in 2009-2010. For comparison, funding for 2008-2009 is also provided.

FINANCIAL REVIEW ... continued

	Total Expenditure (\$ thousands)	
Historic Waste Program		
Program Areas	2008-2009	2009-2010
Port Hope Area Initiative		
Port Hope Area – Long-Term Management Projects	2,900	-
Port Hope Area – Property Value Protection Program	360	-
Port Hope Area – Transition Phase	509	-
Support to PHAI MO	-	279
Subtotal: Port Hope Area Initiative	3,769	279
Northern Sites Initiative		
Fort McMurray	26	40
Northern Transportation Route	1,355	92
Subtotal: Northern Sites Initiative	1,381	132
Other Historic Waste Initiatives		
Toronto (Malvern)	22	9
Historic Waste at Other Locations	58	85
Port Hope Area Interim Waste Management	418	263
Subtotal: Other Historic Waste Initiatives	498	357
Other Mandated Activities		
Ongoing Waste Program	83	26
Information Program	172	130
LLRWMO Facilities	16	77
Management, Administration and Support ⁽¹⁾	-	1,042
Subtotal: Other Mandated Activities	271	1,275
Other Support from LLRWMO		
AECL and Other Sources:	-	35
Total LLRWMO Activities:	5,919	2,078
Cost Recovery		
Less Cost Recovery from PHAI MO	-	(279)
Less Cost Recovery from Ontario for Toronto (Malvern)	(22)	(9)
Less Cost Recovery from AECL and Other Sources	-	(35)
Total Cost Recovery:	(22)	(324)
Total expenditures for NRCan funding:	5,897	1,754

⁽¹⁾ In fiscal year 2008/09, the Management, Administration and Support expenses were pro-rated to each specific project based on their relative FY expenditures. In FY 09/10, the Management, Administration and Support expenses were reported under project 10093 - Management, Administration and Support.

AUDIT STATEMENT ...

Atomic Energy of Canada Limited 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.