

Low-Level Radioactive Waste Management Office



ANNUAL REPORT 2006-2007

working toward community solutions

CC1-1/2007E-PDF

ISBN 978-0-662-46527-0

LLRWMO-513430-041-04000

ISO 9001:2000 certified

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

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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 March 31, 2007.

This report has been prepared in accordance with Section 5.2 of the Memorandum of Understanding between Energy, Mines and Resources Canada (now Natural 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

DIRECTOR'S MESSAGE

The Low-Level Radioactive Waste Management Office (LLRWMO) experienced another year of success in meeting challenges as it pursued initiatives and activities across Canada.

In communities as diverse as Port Hope, ON, Tulita, NWT, and downtown Toronto, ON, the Office continued to fulfill its obligation to manage historic low-level radioactive waste and contaminated materials. In each case the LLRWMO received commendations - from the Canadian Institute of Planners (CIP), the Member of the Legislative Assembly for the remote community of Tulita and the property owner in the heart of urban Toronto.



Robert Zelmer
Director, LLRWMO

Some of the LLRWMO accomplishments for this fiscal year included:

- In 2007 March, the government announced the acceptance of the Port Hope Project Environmental Assessment (EA) Screening Report authorizing the Office to proceed with the licensing process for the Port Hope Project. Also in March, the EA was awarded an honourable mention by the CIP, marking it as one of the best environmental planning submissions in the 2007 Awards for Planning Excellence.
- The draft EA Study Report for the Port Granby Project was submitted to the Federal Authorities for review in June 2006 and it is expected to be finalized early in the next fiscal year. In February 2007, Fisheries and Oceans Canada removed itself as a Responsible Authority, given the intent to relocate the waste away from Lake Ontario.
- The LLRWMO successfully packaged all of the historic low-level radioactive waste (LLRW) in Tulita, NWT into 755 one cubic metre bulk bags for final removal from the community. A personal note of thanks was received from the member of the Northwest Territories Legislative Assembly commending the LLRWMO on a job well done.
- The LLRWMO was once again a contributor to the Environmental Modelling for Radiation Safety (EMRAS) program of the International Atomic Energy Agency (IAEA) [Urban Working Group]. The Office also contributed to the IAEA's program Net Enabled Waste Management Database (NEWMDB) adding the current Canadian inventory of LLRW to this comprehensive international waste inventory database.

I want to thank our colleagues at Natural Resources Canada, Atomic Energy of Canada Limited and the municipal councils in Port Hope and Clarington for their continued support. The cooperation of these and other stakeholders has resulted in the continued success of our various projects. I look forward to next year as we embark on our 25th year of addressing and responding to LLRW issues across Canada.

A handwritten signature in black ink, appearing to read 'R. Zelmer', written in a cursive style.

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

HISTORIC LOW-LEVEL RADIOACTIVE WASTE

The Low-Level Radioactive Waste Management Office (LLRWMO) was established in 1982 to carry out the responsibilities of the federal government for historic low-level radioactive waste (LLRW) in Canada.

The LLRWMO manages LLRW at several large and numerous small historic waste sites located throughout Canada, including locations in Ontario, Alberta and the Northwest Territories. Small volumes of LLRW are removed to the LLRWMO storage buildings at Atomic Energy of Canada Limited's Chalk River Laboratories (CRL), whereas larger volumes of waste are typically managed at or near the site.

At some of the historic waste sites materials have been placed in interim storage pending the development and implementation of a long-term management approach. The LLRWMO provides ongoing monitoring, inspection and maintenance at these sites.

Historic waste at these sites include radium-contaminated soil, building materials and other contaminated items.

Port Hope Area

The Port Hope, Ontario area contains the vast majority of Canada's historic LLRW, in excess of 90 percent. The LLRW dates back to the 1930s when radium was extracted from pitchblende ores for medical and industrial applications at a refinery in the municipality. The LLRW is primarily soil contaminated with waste material from the refinery.

The LLRWMO is working closely with the municipalities of Port Hope and Clarington on the Port Hope Area Initiative (PHAI). The PHAI is a federally-funded initiative to clean up and safely manage historic LLRW in Port Hope and Clarington for the long term. The PHAI comprises the Port Hope and Port Granby Long-Term Low-Level Radioactive Waste Management Projects.

The mandate of the LLRWMO includes:

- *resolving historic low-level radioactive waste problems that are a federal responsibility; and*
- *addressing public information needs concerning low-level radioactive waste.*

The goals of the LLRWMO Historic Waste Program are:

- *to clean up and manage for the long term, Canada's historic wastes including, but not restricted to, the historic waste found in Port Hope and Toronto, Ontario, Fort McMurray, Alberta and at various locations in the Northwest Territories;*
- *to perform interim remedial work as may be required at the aforementioned sites to protect human health and the environment, prior to the availability of long-term management facilities;*
- *to provide technical assessments and advice to NRCAN for the development of government policies for the management of historic wastes; and*
- *to discharge the responsibilities of the federal government for historic waste.*

Included in the PHAI is the LLRW located at the Welcome Waste Management Facility (closed in 1955) in the Municipality of Port Hope and at the Port Granby Waste Management Facility (closed in 1988) in the neighbouring Municipality of Clarington. Cameco Corporation now owns and maintains these sites, which were originally developed by Eldorado Resources Limited, a federal Crown Corporation. The LLRW at these and other sites in each of the respective municipalities is to come under federal ownership upon receipt by the LLRWMO of licences from the Canadian Nuclear Safety Commission (CNSC).

NORTHERN TRANSPORTATION ROUTE

BACKGROUND

In the early 1990s, the LLRWMO identified 20 contaminated sites along the Northern Transportation Route (NTR), a 2,200-km route used in the past to transport uranium and radium ores and concentrates from the Northwest Territories 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 Athabaska Rivers) south to Fort McMurray.

The LLRWMO surveyed the potential transfer points along the NTR in the period between 1991 and 1996, identifying 20 contaminated sites over the course of the investigations. In 1992 and 2001 the LLRWMO remediated residential properties in Tulita, NWT removing the material to a temporary storage mound located near the community's airport.

During the period of 1993-2003, the LLRWMO removed approximately 42,500 m³ of uranium-contaminated soil from nine different sites in Fort McMurray, Alberta and consolidated the LLRW in an engineered storage mound. In 2004 and 2006,

the LLRWMO completed radiological characterization and volume delineation programs in the South Slave section of the NTR. The results of these programs suggest that the potential volume of historic waste in the South Slave area is approximately 7,000 m³.

2006-2007 ACTIVITIES

In late summer 2006, the LLRWMO carried out work to address the long-standing commitment in Tulita. The LLRWMO packaged uranium-impacted soil into 755 (1 m³ each) bulk bags in anticipation of the transfer of these materials to an acceptable location for the long term. LLRWMO staff worked closely with the residents of the community of Tulita, addressing questions and project related issues and providing progress reports to the residents, First Nation leaders and government officials. Upon completion of the work, the member of Northwest Territories Legislative Assembly for the Sahtu Region issued a personal note of thanks to the LLRWMO.

In the next fiscal year, discussions will be held with stakeholders in preparation for the removal of the waste from Tulita to an acceptable long-term management facility.

What is low-level radioactive waste?

In Canada, **low-level radioactive waste** is defined by exclusion. 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 low-level radioactive waste (LLRW). Most of Canada's low-level radioactive waste consists of soil that became contaminated over the past 70 years. It also includes contaminated soils and related wastes resulting from the very early operations of Canada's nuclear industry. Low-level radioactive waste 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. LLRW is grouped into two broad categories, as follows:

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.

FORT McMURRAY

BACKGROUND

For a 25 year period between the 1930s and 1960, uranium and radium ore was shipped by barge from Great Bear Lake, NWT, through a system of lakes and rivers to docking sites at Waterways (now Fort McMurray, AB) where it was loaded onto rail cars for shipment to the refinery in Port Hope. The accidental spillage of the ores during loading operations resulted in the contamination of several sites, within the community.

The LLRWMO first began remedial efforts in Fort McMurray in 1992. Between 1993 and 1996, the Office excavated and removed contaminated soil from eight riverside properties. The completion of the Fort McMurray Waterways project in the summer of 2003 marked the resolution of a decade-long endeavour to clean up and safely manage about 42,500 m³ of marginally contaminated soil from several sites in this northern Alberta city.

The waste is now located in an engineered storage facility within the Municipality's Beacon Hill landfill property. The Fort McMurray facility is maintained and monitored by the LLRWMO through an annual monitoring program that is conducted pursuant to an agreement between the LLRWMO and the Regional Municipality of Wood Buffalo.

2006-2007 ACTIVITIES

During the first week of October 2006, as part of the annual autumn field program, LLRWMO personnel inspected, monitored and completed facility reports on the Long-Term Management Facility (LTMF). The LLRWMO reported on the physical inspection of the site and peripherals (fencing and drainage systems), change-out of the passive radon monitors, and groundwater level monitoring and sampling. The inspection did not identify any issues of concern.

TORONTO (MALVERN)

BACKGROUND

Radium-contaminated soil was discovered in 1980 on residential properties and in 1990 on development lands in the urban community of Malvern in Toronto, ON. Between 1995-1996, a full-scale remediation of the development lands and residential property sites was undertaken. An engineered storage mound, known as the Passmore Avenue Temporary Storage Site, was constructed for the storage of marginally contaminated soil. The licensable material was transferred to the LLRWMO's licensed storage facility at CRL.

A construction monitoring program, modelled in part after the Port Hope experience, was established to ensure that future municipal servicing projects or construction in the vicinity of the remediation sites would identify unexpected occurrences of related contamination.

The LLRWMO monitors the Passmore Avenue Temporary Storage Site on a yearly basis under a cost recovery program with the Province of Ontario. Monitoring results are reported annually to the City of Toronto, the CNSC, the Ontario Realty Corporation and the Ontario Ministry of the Environment. The results are available to the public at the Malvern Public Library. To date, the monitoring results indicate that there are no effects on the surrounding environment.

2006-2007 ACTIVITIES

Given the demonstrated facility performance over the past ten years, the sampling program (groundwater, radon in air, physical inspection and gamma radiation, leak detection system sample/check/pump) underwent review with the objective of identifying a more appropriate frequency (i.e. quarterly vs monthly).

OTHER HISTORIC WASTE PROGRAM ACTIVITIES

The LLRWMO hosts regular meetings, chaired by the CNSC, to keep NRCan and the LLRWMO abreast of licensing issues and to provide an opportunity to maintain and strengthen working relationships. Regular meeting topics include updates on regulatory changes, the Port Hope Area Initiative (PHAI), and the status of projects elsewhere in the country.

Commercial Site - Peterborough

The owner of a commercial site in Peterborough, ON contacted the LLRWMO to discuss recommended radiological approaches for an Environmental Site Assessment to be conducted on properties immediately adjacent to a property on which uranium ore was discovered and removed in 2005. Fieldwork conducted by LLRWMO staff gave no indication of gamma radiation above background levels on either adjacent property.

Toronto Area Properties

The LLRWMO enjoys an excellent reputation as it continues to provide radiological inspections and assessments (and removal where required) on public properties, providing the owners with the necessary information, guidance and support regarding the remediation of their properties.

In June 2006, The LLRWMO remediated the backyard of a residential property in downtown Toronto, ON, located adjacent to a former radium dial painting operation.

A new property manager for a building in downtown Toronto also contacted the LLRWMO about the building's history with radium dial painting and the potential for contamination in

certain suites in the building. Renovations to the suites proceeded in consultation with the LLRWMO staff who subsequently conducted radiological/contamination surveys of the suites. Some of the suites exhibited radiation levels above background.

The owner of another LLRW contaminated property contacted the LLRWMO for information on what a new lessor might need to do to convert the property to a tenant residence. The LLRWMO established that portions of the building were not conducive to full time occupation due to elevated gamma radiation levels.

The LLRWMO will assisted with radiation monitoring in support of conditions imposed by the Niagara Escarpment Commission pertaining to radiological monitoring during the lifting and renovation of a historic structure. The LLRWMO is responsible for the management of any radioactively contaminated materials found.

Other Radioactive Material

In 2006-2007, the LLRWMO received numerous requests for information regarding the disposal of radioactive material. The use of portal monitors at municipal waste and metal recycling facilities continued to be a source of information requests. The disposal of smoke detectors and other consumer goods with radioactive sources were also a source of requests, likely as a result of the information posted on the LLRWMO website. For example, an individual involved in the restoration of a Harvard aircraft contacted the LLRWMO to determine how to dispose of the radium dial faces.

PORT HOPE AREA INITIATIVE: PROJECTS - ENVIRONMENTAL ASSESSMENT

BACKGROUND

The Port Hope Area Initiative (PHAI) is a community-based program for the development and implementation of the safe, local long-term management solution for the historic LLRW in the Municipalities of Port Hope (the Port Hope Project) and Clarington (the Port Granby Project). In 2001, Natural Resources Canada (NRCan) and the municipalities entered into a Legal Agreement for the management of historic LLRW, within the communities, in aboveground facilities that are designed to last several hundred years.

The Environmental Assessment (EA) of the Port Hope Project resulted in the recommendation to consolidate all of the historic LLRW into a single facility at the site currently occupied by the Welcome Waste Management Facility and the adjacent auto recycling operation.

The Port Granby Project EA determined that the recommended approach was to remove the LLRW from its current location on the shore of Lake Ontario and transport the waste to a new facility on a neighbouring site about 700 m away from the lake.

The Port Hope Project EA Study Report was originally submitted to the Federal Authorities in 2005 for review. Upon completion of the federal review process, a revised Port Hope Project EA Study Report and Geology and Groundwater Environmental Effects Assessment Report were submitted to the authorities, in January 2006.

2006-2007 ACTIVITIES

The LLRWMO will provide updates to new councils in Port Hope and Clarington following the November 2006 municipal elections. The LLRWMO has had excellent relationships with past councils and is working to ensure that these relationships are maintained.

Port Hope

The Port Hope Project made major strides this fiscal year, by: (i) achieving the finalization of the cleanup criteria, (ii) gaining the acceptance of the final EA Study Report by the Responsible

Authorities, and (iii) receiving confirmation from the Government of Canada that the Port Hope Project would not result in significant adverse effects.

The LLRWMO was notified of the favourable decision in a March 15, 2007 letter, which indicated that the LLRWMO could proceed in

obtaining the necessary regulatory approvals from Fisheries and Oceans Canada and the CNSC. The news of the government's decision was simultaneously conveyed to the public through a press release.

The necessary approvals, as specified in the Screening Report for the Port Hope Project, are as follows:

The works and undertakings associated with the Port Hope Harbour, except for fish removal, have the potential to result in the harmful alteration, disruption or destruction (HADD) of fish habitat and may need a Subsection 35(2) Fisheries Act authorization. Also, while there is a fish removal plan for the Harbour, a Section 32 authorization must still be sought in case some fish remain and are killed during dredging operations.

A Waste Nuclear Substance Licence is required for the possession, management and storage of nuclear substances under Subsection 24(2) of the Nuclear Safety and Control Act. The LLRWMO should therefore continue to prepare the necessary licensing submissions in support of the licence application, which was submitted to the CNSC in December 2004.

NRCan also indicated that the Office could proceed in seeking the financial authorization necessary to allow the Port Hope Project to proceed.

The Port Hope Area Initiative (PHAI) comprises the following three phases:

- | | |
|-----------------|---|
| Phase 1: | Environmental Assessment, Preliminary Design, Engineering & Regulatory Approval |
| Phase 2: | Construction & Cleanup |
| Phase 3: | Long-term Monitoring & Maintenance |

PORT HOPE AREA INITIATIVE: PROJECTS - ENVIRONMENTAL ASSESSMENT

Port Granby

The EA Study Report for the Port Granby Project was submitted to the Federal Authorities for review in June 2006. In February 2007, the Office received the last of the federal review comments on the Port Granby Project EA Study Report.

Notably, Fisheries and Oceans Canada (DFO) issued a letter to NRCan, the lead RA, indicating that it was the opinion of DFO that a HADD of fish habitat is not likely to occur if the Port Granby Project is implemented as proposed.

Given that a Subsection 35(2) *Fisheries Act* authorization was not required, DFO was no longer a Responsible Authority for the EA.

The CNSC issued a final letter on February 28, 2007 summarizing their remaining comments on the EA Study Report. Activities related to the completion of the EA Study Report and the resolution of federal review comments occupied most of this fiscal year. The Port Granby Draft Screening Report will be made available for public review by the RAs in early 2008.

PORT HOPE AREA INITIATIVE: PROJECTS - LICENSING

Background

The receipt of a favourable EA decision allowed the LLRWMO to proceed with the application for a licence. The Office spent much of the fiscal year preparing a series of documents that will comprise the Port Hope Project licensing submission to the CNSC. Included in the licensing submission is information relating to safety assessment, radiation protection, health and safety, environmental protection, security and emergency management.

2006-2007 ACTIVITIES

The LLRWMO submitted the first group of the Port Hope Project licensing documents to the

CNSC for formal review February 15, 2007. The second group of documents are currently under revision. Specifically, the Safety Assessment is being revised to conform to the requirements of the CNSC Guidance Document G-320 which was issued in December 2006. Once the Safety Assessment is revised, the remaining documents can be completed and then submitted first to AECL's Safety Review Committee (SRC) and then to the CNSC for formal review.

The LLRWMO expects the timing of the finalization of the Port Granby Project licensing process to be in late 2008.

PORT HOPE AREA INITIATIVE: INTERIM WASTE MANAGEMENT PROGRAM

BACKGROUND

For over 20 years, the LLRWMO has overseen the interim management of historic LLRW in Port Hope on behalf of the federal government. Currently, there are LLRW at four licensed sites and nine major unlicensed sites. The LLRWMO provides regular inspection and ongoing monitoring of these sites and any sites that are discovered during routine construction.

The Interim Waste Management Program in Port Hope comprises the Construction Monitoring

Program (CMP), the Property Compliance Program (PCP) and the Environmental Monitoring Program (EMP).

The LLRWMO operates the CMP in cooperation with the Municipality of Port Hope. Any project requiring a building permit is automatically referred to the CMP. Under the CMP, the LLRWMO will test the soil at the proposed construction/excavation site and transfer any contaminated soil to its licensed Pine Street Extension Temporary Storage Site.

PORT HOPE AREA INITIATIVE: INTERIM WASTE MANAGEMENT PROGRAM

The LLRWMO also operates the Property Compliance Program which responds to inquiries regarding the radiological status of properties and provides information to property owners, their real estate agents, or their lawyers.

The PCP program ensures:

- *timely production of radiological status letters;*
- *collection of new radiological data to update individual property files; and*
- *cleanup of properties that exceed the criteria for remedial action.*

Through the EMP, the LLRWMO regularly monitors the environment in the vicinity of major licensed and unlicensed historic LLRW sites in Port Hope. The monitoring results are reported to the CNSC on an annual basis.

2006-2007 ACTIVITIES

Construction Monitoring Program

Under the CMP, a total of 330 m³ of contaminated soil was excavated and transported to the licensed Pine Street Extension Temporary Storage Site (PSE TSS) in the Municipality of Port Hope.

The importance of the CMP in the local community is reflected in the sustained activity levels year to year. Personnel from the LLRWMO investigated 239 inquiries related to possible

The Interim Waste Management Program in Port Hope comprises:

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

property contamination.

The volume stored at the PSE TSS in both Pad I and Pad II combined is now approximately 6,500 m³, approximately 50 percent of the licensed capacity. The

majority of CMP calls were related to service line connections, proposed additions, and interruptions of water services.

Property Compliance Program

In 2006-2007, the LLRWMO conducted 88 property surveys and issued a total of 561 radiological status letters (RSLs). Approximately 175 of the RSLs were dealing with properties outside of Port Hope, mostly in the Greater Toronto Area and other areas in southern Ontario.

Environmental Monitoring Program

Early this year, remedial action was taken to address the elevated uranium levels observed in the surface water of the catch basin at the PSE TSS Pad I (noted at the close of the 2005-2006 fiscal year). The contaminated material that was recovered from the catch basin was placed on the PSE TSS Pad II, and the water in the catch basin was retested at the next sampling opportunity. The uranium levels in the catch basin were lower in the post-remediation sample, having declined to below the investigative threshold. The remedial activity was judged successful and the results were reported to the CNSC during routine reporting.

2006-2007 INTERIM WASTE MANAGEMENT SUMMARY

CMP Surveys	239
PCP-originated Property Surveys	88
Soil Volume to the Pine Street Extension TSS (m ³)	330
Radiological Status Letters.....	561

PORT HOPE AREA INITIATIVE: COMMUNICATION AND INFORMATION INITIATIVES

BACKGROUND

For almost 25 years the LLRWMO has conducted remedial projects across Canada and has provided open and transparent information and communication to communities and other stakeholders.

For the PHAI, the LLRWMO continues to provide information to the public and other stakeholders through its Project Information Exchange (PIE) office, presentations to the Municipal Councils, community groups, staff, public and on its website.

Throughout the preparation of the EA studies for both Projects, the LLRWMO proactively communicated and consulted with Port Hope and Clarington residents. In addition to hosting workshops, open houses and meetings, knowledgeable LLRWMO employees staffed booths during home shows and fall fairs in order to take the discussion and the information to the broader community. Facility tours were also offered, focusing on the proposed new facilities and remedial activities to be undertaken.

The LLRWMO worked closely with municipal staff and public on issues related to the PHAI.

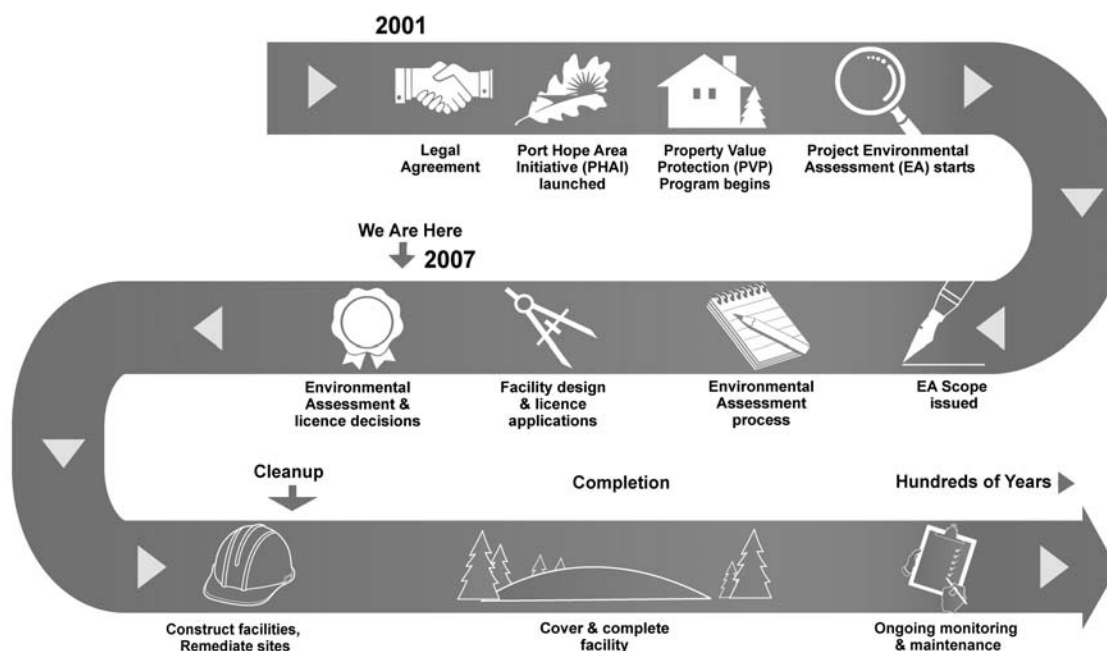
2006-2007 ACTIVITIES

Numerous local media articles, electronic interviews combined with continued participation in community events and local presentations help to maintain a high level of awareness about the Long-Term Low-Level Radioactive Waste Management Projects.

Awareness of the projects is also developed through interviews and briefings with key stakeholders such as elected officials, First Nations representatives and nearby residents. The LLRWMO continues to provide briefings on both projects to the area MPs and MPPs.

The Property Value Protection (PVP) Program office and Port Hope Field Services Office moved to join the PIE at 196 Toronto Road in Port Hope. These additions finalize the consolidation of all but one of the LLRWMO offices in the Port Hope area to the offices at 196 Toronto Rd.

Port Hope Area Initiative *Project Status*



PORT HOPE AREA INITIATIVE: COMMUNICATION AND INFORMATION INITIATIVES

The Port Hope PIE office is also a satellite repository for information and documents on the Public Registry for the environmental assessment of the Port Hope and Port Granby Projects.

The LLRWMO, through its communications activities in the Port Hope community, has steadily increased awareness and support of the PHAI project. According to the 2006 results of an annual poll conducted in Port Hope, the residents are more aware of the PHAI (~80%) and are increasingly pleased with project information being regularly provided. This level of awareness is enhanced by newsletters and information mailings for both projects, media releases to appropriate local news organizations, advertising in local media and displays in prominent community locations such as the public libraries.

As the PHAI project moves forward the communications activities are focussed on neighbourhoods and individual residences and the predicted effect of remedial activities on people's lives.

A Port Granby Discussion Group was established by the LLRWMO to provide information and solicit views from area residents. This new communications group has quickly gained a high profile in the community.

The LLRWMO provided communications support to NRCan and CNSC staff regarding the public release of the Port Hope Project Screening Report. Local residents and municipal officials also visited the PIE to obtain copies of the approved Screening Report and discuss next steps in the Port Hope Project.

The final revision of the Port Hope Project clean-up criteria document reflects two years of discussions between the LLRWMO, municipalities and regulatory agencies. It incorporates input from scientists, technical specialists and members of the public. The criteria establish measurements for safe levels of radiological and other contaminants in air, soil, water and groundwater and for radon in houses. The criteria will be used to determine which properties need remediation and how much soil will be removed.

The LLRWMO continues to strengthen ties with the local real estate agencies providing liaison within the community to facilitate information reaching home-buyer service providers such as local lawyers and mortgage vendors.

Through direct contact via our Project Information Exchange, our website, briefings and mail-outs, the LLRWMO continues to provide regular Project updates to Port Hope and Clarington stakeholders including the public, area MPs, MPPs and local officials. Numerous articles on the Projects have appeared in local media and have included comments from LLRWMO officials.

LLRWMO PHAI

Independent Public Survey Results on Public Opinion

The LLRWMO continued to receive positive assessments regarding its public communications efforts as residents reported being well served and informed. Moreover, assessments of communications and familiarity with Port Hope Project News are positively correlated with most of the attitudes about the presence of the low-level radioactive waste and the processes related to dealing with the waste.

- *75% are familiar with Port Hope Project newsletters.*
- *85% of respondents are satisfied with accessibility of the information about the Port Hope project.*
- *77% were satisfied with the manner in which they were able to provide input into the environmental assessment studies*
- *75% are familiar with the EA studies carried out over the past four years to determine the most appropriate ways to clean up the LLRW in Port Hope compared to 66% in 2005.*
- *Port Hope residents continue to have a good level of confidence in the PHAI*

Results of the five annual "waves" of public attitude surveys are available through the LLRWMO.

PORT HOPE AREA INITIATIVE: PROPERTY VALUE PROTECTION PROGRAM

BACKGROUND

Established as a requirement under the PHAI Legal Agreement, the Property Value Protection (PVP) Program was launched in October 2001. The PVP program is designed to compensate owners of residential, commercial or industrial properties in designated parts of the municipalities of Port Hope and Clarington if they realize financial loss on the sale or rental of their property or mortgage renewal difficulties as a result of the PHAI. The municipal councils of Port Hope and Clarington consider the PVP Program an important economic mitigation measure.

Key features of the PVP Program include:

- A claim process;
- An appeal process; and
- The appointment of independent Compensation Officers to hear appeals.

- Two of the six denied claims were appealed at a mediation hearing.
- of the two decisions appealed;
 - one resulted in the Compensation Officer ordering partial compensation be paid, and
 - one resulted in the Compensation Officer upholding the PVP decision not to award compensation.

In all cases where the PVP program denied compensation, it was because it found, on analysis, that there had been no general or specific effect of the PHAI.

The PVP Program responded to an Ontario Real Estate Association bulletin, sent to member realtors, which mentioned Port Hope in reference to proposed new Health Canada guidelines for radon in homes. The PVP response explained that stringent standards for radon gas concentrations in private homes have been in place in Port Hope since the mid 1970s. It reminded member realtors that the LLRWMO maintains information on the radiological status of houses and properties in Port Hope and issues a summary of this information to owners, on request, at the time of listing.

The PVP office was relocated to 196 Toronto Road as the LLRWMO consolidated three of its four offices (Field Services Office, PVP Program Office and the PIE Office) in Port Hope into one larger office.

Overall, the PVP Program continues to operate well and provide timely information to area residents and to respond quickly to claims as required under the Legal Agreement.

2006-2007 ACTIVITIES

The PVP continued to provide property owners with information and assistance, particularly in cases where properties have a potential for project-related effects and appear difficult to sell. The area real estate market remained strong throughout the year, consistent with baseline communities showing no evidence of generalized effects related to the Projects.

The PVP Program office met with potential claimants to explain the PVP process. The first Port Granby claim was in 2005-2006 and was resolved to the satisfaction of all parties.

To date 13 claims have been made:

- Seven claims approved in full or part (six standard claims plus one conditional claim)
- Six standard claims were denied in full.

ONGOING WASTE PROGRAM

Low-level radioactive waste continues to be generated by electrical utilities, nuclear research organizations, nuclear fuel manufacturers, and the producers and users of medical and other radioisotopes. These producers are responsible for the wastes they produce. The annual accumulation of such wastes in Canada is about 4,000 m³.

Upon request, 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 IAEA and the Nuclear Energy Agency of the Organization for Economic Co-operation and Development.

The LLRWMO is Canada's delegate to the Urban Working Group at the IAEA program on Environmental Modelling for Radiation Safety (EMRAS), in Vienna. This group is concerned

with the release of radionuclides to particular types of environment (e.g. urban and aquatic environments), restoration of sites with radioactive residues and impact of environmental radioactivity on non-human species.

The LLRWMO continued to distribute its publication entitled "Inventory of Radioactive Waste In Canada" upon request and to address questions from the public and stakeholders on general radioactive waste issues.

On behalf of Canada, under the direction of NRCan, the LLRWMO prepared and submitted information to the IAEA on nuclear waste accumulations in Canada as well as responses to a number of waste-related questions. This annual compilation is prepared for submission to the Net Enabled Waste Management Database (NEWMDB) of the International Atomic Energy Agency (IAEA).

CNSC LICENCES HELD BY THE LLRWMO

The LLRWMO currently holds five licences issued by the Canadian Nuclear Safety Commission for various operations and facilities. The following table summarizes the licensing obligations of the LLRWMO.

FACILITY*	LICENCE NUMBER & TYPE	DESCRIPTION	EXPIRATION DATE
Port Hope Field Services Office Laboratory	20004-7-11.2 Nuclear Substances & Radiation Devices Licence	Licence for the LLRWMO Laboratory in Port Hope	Sept 30, 2011
Pine Street Extension Temporary Storage Site	WNSL-W1-182.0/2011, 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-W1-344-1.3/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
Prescribed Substances at Unspecified Locations	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	Licence issued for x-ray fluorescence analyzer used or stored at LLRWMO Field Services Office Laboratory in Port Hope, Ontario	Apr 30, 2011

* A further five unlicensed low-level radioactive waste storage mounds are also monitored by the LLRWMO. These are: Lakeshore Road Storage Mound and Passmore Avenue Temporary Storage Site, both in Toronto; the Fort McMurray Long-Term Management Facility in Fort McMurray, Alberta; and in the Northwest Territories, the Fort Smith Interim Storage Mound and the Tulita Interim Storage Mound.

INFORMATION PROGRAM

The LLRWMO provides information about LLRW and its management in Canada. LLRWMO offices in Port Hope and Ottawa respond to public inquiries received by telephone, letter, e-mail and in person. The LLRWMO's popular web site received well over 4,000 visits per month in 2006-2007. On a daily basis, the Office responded to requests for information from people across Canada and abroad.

The LLRWMO is an active contributor of information and knowledge to colleagues within the international community. Significant strides are being made to ensure that the best radioactive waste management practices are implemented worldwide.

ACRONYMS

AECL:	Atomic Energy of Canada Limited	NRCan:	Natural Resources Canada
CMP:	Construction Monitoring Program	NTR:	Northern Transportation Route
CNSC:	Canadian Nuclear Safety Commission	NTCL:	Northern Transportation Company Limited
CRL:	Chalk River Laboratories	PCP:	Property Compliance Program
EMP:	Environmental Monitoring Program	PHAI:	Port Hope Area Initiative
EMRAS:	Environmental Modelling for Radiation Safety	PHFSO:	Port Hope Field Services Office
IAEA:	International Atomic Energy Agency	PIE:	Project Information Exchange
LLRW:	Low-Level Radioactive Waste	PVP:	Property Value Protection
LLRWMO:	Low-Level Radioactive Waste Management Office	RA:	Responsible Authority
LTMF:	Long-Term Management Facility	RSL:	Radiological Status Letter

FINANCIAL REVIEW

LLRWMO operations are funded by NRCan through a cost recovery agreement (Memorandum of Understanding) with AECL. The LLRWMO's accounts and financial control systems conform to those of AECL.

Prior to the start of 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 March 31, 2007. The table illustrates how funding provided by NRCan was allocated to the LLRWMO's mandated business lines in 2006-2007. For comparison, 2005-2006 is also provided.

FINANCIAL REVIEW

	TOTAL EXPENDITURE (\$ THOUSANDS)	
HISTORIC WASTE PROGRAM		
PROGRAM AREAS	2005-2006	2006-2007
PORT HOPE AREA INITIATIVE		
Port Hope Area – Long-Term Management Projects	5 465*	3 425*
Port Hope Area – Property Value Protection Program	286	258
Port Hope Interim Waste Management	497	512
Subtotal: Port Hope Area Initiative	6 248	4 195
NORTHERN SITES INITIATIVE		
Fort McMurray	52	18
Northern Transportation Route	73	552
Subtotal: Northern Sites Initiative	125	570
OTHER HISTORIC WASTE INITIATIVES		
Toronto (Malvern)	39	22
Historic Waste at Other Locations	243	106
Subtotal: Other Historic Waste Initiatives	282	128
OTHER MANDATED ACTIVITIES		
Ongoing Waste Program	56	15
Information Program	124	108
LLRWMO Restructure	85	467
Subtotal: Other Mandated Activities	265	590
Less Cost Recovery from Ontario for Toronto (Malvern)	(39)	(22)
TOTAL EXPENDITURES FOR NRCAN FUNDING	6 881	5 461

* Includes Payroll variance credit

AUDIT STATEMENT

Atomic Energy of Canada Limited (AECL) is audited annually by the Office of the Auditor General of Canada and Ernst & Young. 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.