

**ENVIRONMENTAL ASSESSMENT PROCESS  
FOR THE PORT HOPE PROJECT AND THE PORT GRANBY PROJECT:  
A RESPONSIBLE AUTHORITY PERSPECTIVE**

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**Abstract**

Detailed environmental assessments were initiated very early in project planning for two Government of Canada projects proposing to clean up and locally manage historic low-level radioactive waste over the long-term in the Port Hope area of Ontario. Both the Port Hope Project and the Port Granby Project are based on conceptual approaches proposed by the local communities as local solutions to a long standing environmental issue. In a legal agreement signed in 2001 with the affected municipalities, the Government of Canada accepted the community approaches as potentially suitable solutions for management of the waste. Federal environmental assessments of the proposals were launched shortly thereafter and have been used as planning tools to further define the community approaches with the participation of the local municipalities and the public. The environmental assessment process has been designed to allow for preferred alternatives for implementing each project to emerge that are environmentally, technically and socially acceptable.

**Introduction**

Low-level radioactive waste contamination in the Port Hope area of southeastern Ontario is a long-standing environmental issue. As a result of a community-driven process the Government of Canada signed a legal agreement with the affected municipalities in 2001 that established a cooperative approach to address the issue. Federal environmental assessments (EAs) were then initiated for two projects based on community-developed conceptual approaches.

**Background**

In the early 1930s, pitchblende ore was mined in the Northwest Territories of Canada for its radium concentration and transported to the Town of Port Hope in southern Ontario. At Port Hope the ore was refined to extract radium and the wastes, which were contaminated with uranium and arsenic, were disposed of at various sites within the municipality. In time, the refining process shifted to the extraction of uranium and the resulting wastes were rich in radium and arsenic. The wastes were managed at the plant site itself, at certain designated residue areas, and in ravines and vacant lands in the Town of Port Hope.

In 1948, the owner of the refinery – Eldorado Mining and Refining Limited, a federal Crown Corporation – built a waste management facility for the wastes in a neighboring municipality, the Township of Hope. By 1955, that waste management facility reached its capacity and a second facility was built in another neighboring municipality, the Municipality of Clarington.

Thus, over time, wastes from the Port Hope refinery had been deposited at various sites within the Town of Port Hope and at two purpose-built waste management facilities in two neighboring municipalities. The early waste residues were managed largely in an unregulated environment as Canada's nuclear regulator, the Atomic Energy Control Board - now the Canadian Nuclear Safety Commission, was established in 1946 and only began regulating waste management facilities in 1955.

The problem of low-level radioactive contamination in the Town of Port Hope was first discovered in 1974 and the nuclear regulator moved quickly to remove the most serious contamination from the area. However, a large amount of material remained within the community. Furthermore, waste management problems were later discovered at the two waste management facilities and, in 1980, the regulator ordered the waste owner to decommission both sites.

In response, Eldorado began a search for a new site for its wastes and identified three technically-suitable sites in the local area. EAs were initiated but each site was opposed locally - the public view was that the wastes should be moved out of the local communities. Accordingly, the Government of Canada sought a less controversial alternative process to address the siting issue.

The Government initiated an independent task force that developed an alternative to the traditional siting approach, known as the Cooperative Siting Process. The new approach was based on an open, consultative and voluntary process where communities would volunteer to be considered potential hosts for the waste management facilities while always maintaining the potential to "opt out" of the process. A Siting Task Force was then established that sought a voluntary host community among all 850 municipalities in the Province of Ontario. In the end, however, this process was unsuccessful.

### **Locally Driven Solution**

As the Siting Task Force process came to an end, the communities where the wastes are located came forward with local solutions for the management of the low-level radioactive wastes. This process involved resolutions passed by each of the municipal councils to begin discussions with the Government of Canada, the establishment of local citizen committees to develop a solution to the local waste issue, and the review and acceptance of the committee-proposed solutions by the relevant municipal councils. The Government of Canada provided funding to the committees for their costs and facilitated the committees' efforts. At the end of the process, all three municipal committees had each put forward their own local solution to the waste issue in their own municipality and each solution was endorsed by the respective municipal council.

The three municipal proposals were conceptual in nature and involved the development of three new local long-term waste management facilities. These facilities would accommodate low-level radioactive wastes from local contaminated sites and interim licensed waste management facilities. The approaches reflect concepts important to the municipalities that developed them: the facilities would be above-ground; they would be actively monitored; and they would be

engineered for recreational uses.

The municipalities recognized that further study would need to be carried out to provide the necessary assurances that the conceptual proposals were technically, environmentally, and socially acceptable. Similarly, the Government of Canada considered the conceptual approaches to be innovative and realistic approaches for dealing with the issue, and recognized that the proposals would be subject to environmental and regulatory review processes. Therefore, all parties saw the conceptual approaches as a starting point for the further definition of the eventual projects through EAs.

### **The Legal Agreement**

The Government of Canada accepted the three community proposals as the basis of a potential solution and a legal agreement (the Agreement) was signed between the Government and the municipalities on March 29, 2001, launching the Port Hope Area Initiative (the Initiative).

The Agreement contains provisions that recognize that EA of the community proposals is required for the Government of Canada to carry out the projects. Within this context, it explicitly recognizes that in proceeding through the EA process, economically and technically feasible alternative ways of carrying out the projects may be identified and assessed. The Agreement requires the proponent to consult the municipalities on alternative ways of carrying out the projects and to obtain the written consent of the municipalities to the preferred option that goes forward to Government of Canada decision-makers for their review. If the preferred option that is agreed upon involves moving wastes between the municipalities or involves technology other than above-ground storage technology, an amendment to the Agreement is required. Once the EA process is completed, if the decision reached by government decision-makers as a result of the environmental assessment is not what the municipalities agreed to, the municipalities have 90 days to notify the Government of Canada if they do not want the projects to proceed.

In addition, the Agreement requires that the project proponent work closely with the municipalities on project-related communications and provides for the municipalities' administrative costs related to the Initiative. It includes the implementation of a property value protection program to compensate property owners for property value losses that occur as a direct result of the projects. A host community fee of C\$10 million has also been provided to each municipality to address, as they see fit, impacts of hosting a waste management facility in their community.

### **The Environmental Assessments**

The EAs of the community approaches were initiated in November 2001 under the *Canadian Environmental Assessment Act (CEAA)*. As the municipal approaches are at a conceptual level, the Government of Canada has used the EA process as a planning tool to develop the projects in a safe and environmentally sound manner and as a mechanism for public input into the projects as they become further defined. The three responsible authorities (RAs), or decision-makers for

the EAs, are Natural Resources Canada, the Canadian Nuclear Safety Commission and Fisheries and Oceans Canada.

The community approaches are being assessed as two projects - the Port Hope Project and the Port Granby Project - based on current municipal boundaries and reflecting local decision-making authority under the Agreement. Since the signing of the Agreement, two of the communities have amalgamated into one municipality, the Municipality of Port Hope. Therefore, at the start of the EAs, the Port Hope Project consisted of two components based on the approaches proposed by the former Town of Port Hope and Township of Hope. The Port Granby Project consisted of the Municipality of Clarington's approach.

The Low-Level Radioactive Waste Management Office (LLRWMO), Canada's agent for the management of historic wastes, has been designated as the proponent of the Initiative, on behalf of the Government of Canada. The conduct of the environmental studies has been delegated to the proponent, as is common practice under the *CEAA*. Once the LLRWMO has completed its studies and determined the preferred alternative for each project, with the support of the respective municipality for that alternative, their EA study reports are to be forwarded to the RAs for evaluation.

Based on the EA study reports submitted by the LLRWMO, the RAs will prepare their own EA screening reports on the two projects. The EAs of the projects are not expected to be completed before mid-2006.

### **Environmental Assessment Scopes**

The two EAs are screening-level assessments under the *CEAA*. However, because of project complexity, the local history of the waste issue and public interest in the projects, the RAs have scoped the assessments to be as thorough and detailed as if they were comprehensive studies under the *CEAA* and to require extensive public consultation. The scopes of the EAs establish what must be considered in the assessments and provide guidance to the LLRWMO on how to meet these requirements. The scopes were finalized by the RAs in July 2002 after consulting with the public.

All phases in the life of the projects are to be assessed, including activities related to the remediation of contaminated sites, waste management facility construction and their operations over the long-term, defined as several hundred years. Although decommissioning of the waste management facilities is not included as part of the projects proposed, options for the Government of Canada to consider in respect to facility decommissioning and their potential environmental effects need to be addressed at a conceptual level. Any future proposal to decommission the facilities would need to undergo a separate EA.

The scopes of the screenings for the Port Hope and Port Granby projects have required that various factors associated with the proposals be examined in detail. Mandatory factors that must be considered in a *CEAA* screening are the environmental effects of the projects - including accidents, malfunctions and cumulative effects; mitigation measures; public comments; and, the

significance of environmental effects. Additional factors that the RAs have determined warrant consideration are alternative means of carrying out the projects that are technically and economically feasible and their environmental effects; the need for the projects; the purpose of the projects; the capacity of renewable resources likely to be significantly affected to meet present and future needs; and, the need for follow-up programs.

Recognizing both the history of past efforts that have been unable to resolve the waste issue and the Agreement with the local municipalities for a local solution, *alternatives to* the projects will not be evaluated. The scopes define *alternatives to* the projects as proposals that are not for long-term management; are not within either of the two local municipalities; and, are not based on above-ground storage technology.

The scopes recognize that key environmental and social concerns with respect to the proposed projects need to be addressed. It also identifies specific alternative means of carrying out the projects that must be considered. These include alternative transportation routes, monitoring mechanisms, land use options for the waste management facilities and facility designs. In addition, for the Port Hope Project, the alternative means of accommodating all the historic wastes from the Municipality of Port Hope in one waste management facility needs to be considered. For the Port Granby Project, the alternative means of moving and accommodating all the historic wastes in a waste management facility at a site located further away from Lake Ontario needs to be considered.

Most importantly, the EA process is being used as a mechanism to inform the public about the projects and to provide opportunities for public input into the projects as they develop. The scopes recognize the importance of public participation in the assessment process and require the proponent to implement an extensive consultation and information program.

### **Conduct of Assessments**

Following the release of the EA scopes for the Port Hope and the Port Granby projects in July 2002, the RAs met regularly with the LLRWMO to be kept informed of progress on the two assessments. The RAs reviewed public consultation plans to ensure appropriate public involvement in the process and attended a number of key public meetings and workshops during the progress of the assessment studies. Through these mechanisms the RAs have satisfied themselves that alternative means and other issues of concern were examined in an open and consultative manner.

In addition to working closely with the two municipalities throughout the process, the LLRWMO implemented an extensive information and consultation program. It has actively informed the public about the projects and provided opportunities for issues the public considers to be important to be identified and addressed. The interested public has also been engaged directly in EA-related activities, such as the identification of Valued Ecosystem Components for detailed study and in identifying feasible alternative means of carrying out the projects and how these alternatives were to be evaluated in the assessments. The process to assess alternative means of carrying out the projects was a key mechanisms for addressing public concerns.

The original community concepts for each project have evolved as a result of the alternative means assessment process to find the most environmentally and technically sound options for implementing the projects. For the Port Hope Project, the preferred alternative to emerge from this process was consolidation of all historic wastes in the Municipality of Port Hope at one long-term waste management mound located at the present site of the existing Welcome Waste Management Facility, an option that requires an amendment to the Agreement to be implemented. For the Port Granby Project the most environmentally and technically sound option to emerge was the relocation of the existing Port Granby wastes into an above-ground long-term waste management facility located at a nearby site further away from the Lake Ontario shoreline. The public was extensively consulted throughout this process and both municipal councils, supported by environmental consultants provided for through the Agreement, endorsed the detailed consideration of these options.

Under the Agreement, the written consent of the municipalities to the preferred option for the projects is required prior to the submission of the EA study reports to the RAs for final review.

### **Government Review and EA Screening Reports**

Once the municipalities of Port Hope and Clarington have provided their consent to the preferred alternative for implementing the Port Hope and Port Granby projects, respectively, the LLRWMO is expected to submit its EA Study Reports for the two projects to the RAs. The RAs will review the completeness and technical soundness of the reports with the assistance of technical experts from other federal departments and provincial ministries, including Transport Canada, Environment Canada and Health Canada and the Ontario ministries of Environment and Natural Resources. Once satisfied with the EA study reports, the RAs will use them as the basis for the screening reports that will contain the RA findings and conclusions on the EAs.

To ensure the EAs of the projects continue to be open and transparent, the RAs will consult the public on the draft screening reports prior to their being finalized.

Once the EAs are completed and if it is concluded there are no likely significant adverse environmental effects, the RAs will be permitted to move forward in the exercise of their decision-making powers over the projects. Natural Resources Canada would be permitted to consider project funding decisions and the projects could advance into applicable regulatory processes that are the responsibility of the Canadian Nuclear Safety Commission and Fisheries and Oceans Canada.

### **Conclusion**

The Port Hope Area Initiative demonstrates the importance of key stakeholder involvement in decision-making from the beginning of a project - project conceptualization, through project planning, evaluation, and on to implementation.

The Agreement has put in place a framework for cooperation that provides confidence to both

the affected municipalities and to the Government of Canada that an agreed upon local solution to this long standing environmental issue will now be realized. The Agreement also provides the municipal governments with assurances on the terms by which the projects will be developed and on their ongoing role in the process leading to the implementation of the projects.

The EAs for the Port Hope Project and the Port Granby Project were begun early in the project planning process, prior to the finalization of the project designs, and are being used as planning tools to further define the municipal approaches. It was understood by all parties that these approaches would evolve through this process to ensure the proposals are technically, environmentally, and socially acceptable. An open and consultative EA process leading to safe, environmentally-sound and publicly-accepted projects continues to be paramount to the success of the Initiative.

In implementing the Port Hope Area Initiative, the Government of Canada, together with the local municipalities, will at last resolve the issue of low-level radioactive wastes in the Port Hope area.