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NUCLEAR WASTE MANAGEMENT ORGANIZATION
SOCIÉTÉ DE GESTION DES DÉCHETS NUCLÉAIRES

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NWMO BACKGROUND PAPERS
7. INSTITUTIONS & GOVERNANCE

7-10 REVIEW OF THE LEGAL AND ADMINISTATIVE ASPECTS OF THE NON-PROLIFERATION TREATY IN RELATION TO SPENT NUCLEAR FUEL MANAGEMENT EXECUTIVE SUMMARY

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EXECUTIVE SUMMARY

This paper provides a review of the legal and administrative aspects of the Treaty for the Non-Proliferation of Nuclear Weapons ("Non-Proliferation Treaty" or "NPT"), particularly in relation to spent nuclear fuel management. The purpose of this review is to assess the implications of the NPT on the various methods that the Nuclear Waste Management Organization (NWMO) might consider for the management of Canada's spent nuclear fuel. This issue arises in the context of the NWMO's mandate to investigate approaches for managing Canada's used nuclear fuel with a view to submitting proposed approaches and a recommended approach to Canada's Minister of Natural Resources.

The Treaty on the Non-Proliferation of Nuclear Weapons

The NPT is an agreement among nations to prevent the proliferation of nuclear weapons. The State Parties to the NPT, of which Canada is one, have agreed to accept safeguard measures to prevent the proliferation of nuclear weapons. Their commitments extend not only to nuclear weapons and nuclear explosive devices, but also to source and special fissionable materials as well as equipment and material designed or prepared for the processing, use or production of special fissionable material.

The NPT recognizes the benefits of peaceful applications of nuclear technology and such uses are subject to safeguards to verify that nuclear material is not diverted to non-peaceful uses. These safeguards apply broadly to nuclear materials, including spent nuclear fuel.

Canada's Safeguards

The International Atomic Energy Agency (IAEA) is the body designated in the NPT with whom safeguard agreements are to be negotiated and concluded by State Parties for the purpose of verifying the fulfillment of their obligations under the NPT.

Canada's safeguard commitments under the NPT are contained in agreements made with the IAEA: the *Agreement Between the Government of Canada and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons* ("Safeguards Agreement") and the *Protocol Additional to the Agreement Between Canada and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons* ("Additional Protocol").

Pursuant to the foregoing safeguard agreements, Canada has committed to maintain records and submit reports to the IAEA regarding nuclear materials involved in peaceful uses within Canada's boundaries or under Canada's control in other jurisdictions. Canada has also committed to provide IAEA inspectors access to records and nuclear materials and facilities for the purposes of verification of Canada's submitted reports. Canada must also submit related

information identified in the Additional Protocol to the IAEA in the form of a declaration. Reporting requirements apply to spent nuclear fuel.

Canada's safeguards requirements with respect to nuclear material are terminated when the nuclear material is consumed or diluted and is no longer usable for any nuclear activity that requires safeguards or when the nuclear material has become practically irrecoverable. Nuclear material of specified concentrations and weights may also be exempt from safeguards. Safeguard responsibilities are transferred during international transfers of nuclear material. Canada and the IAEA may also negotiate circumstances that will allow the termination of safeguards with respect to nuclear material used in non-nuclear activities that both Parties agree is practicably irrecoverable.

Canada's regulator of nuclear material, the Canadian Nuclear Safety Commission (CNSC), has the task of monitoring the use, storage and flow of nuclear material at Canadian nuclear facilities to ensure that all nuclear material in Canada is adequately reported and accounted for.

The Role of the International Atomic Energy Agency

In the context of the NPT, the IAEA has the responsibility of providing the international community with a credible assurance that any nuclear material involved in a peaceful use is not being diverted to nuclear weapons or other nuclear explosive devices. Under the Safeguards Agreement, the IAEA has an obligation to ensure that safeguards are applied to nuclear material that is involved in peaceful uses within Canada's boundaries and in other jurisdictions in which nuclear material is under Canada's control. To this end, the IAEA receives reports and other information submitted by Canada in order to ensure that nuclear materials are not being diverted to non-peaceful uses. Information regarding spent nuclear fuel in Canada is included in the information submitted to the IAEA.

Activities pursued by the IAEA for the implementation of the safeguards are limited to the exclusive purpose of verifying that such material is not diverted to nuclear weapons or other nuclear explosive devices and may include a review of records, conducting inspections and collection of samples and measurements. Furthermore, it is the IAEA that determines when safeguards are terminated.

IAEA safeguards serve to both deter and detect any diversion of nuclear material from peaceful uses to nuclear weapons or explosive devices. It is the information that Canada and other Party States supply to the IAEA through established safeguards agreements that allows the IAEA to inform the world whether nuclear material is being diverted to nuclear weapons or other nuclear explosive devices.

Activities of the Canadian Nuclear Safety Commission

As the regulator of Canada's use of nuclear material, it is the CNSC that is the domestic agency responsible for the implementation of Canada's commitment to NPT safeguard measures. This

function is performed in cooperation with the IAEA to ensure that Canada's nuclear materials, including spent nuclear fuel, are not diverted to non-peaceful uses.

The Role of the Department of Foreign Affairs and International Trade

The Department of Foreign Affairs and International Trade (DFAIT) is active in pursuing Canada's longstanding policy objective to stop the proliferation of nuclear weapons and other weapons of mass destruction and represents Canada at NPT Party Conferences. While representing Canada's interests before other NPT Member States at the most recent Review Conference held in 2000, DFAIT identified nuclear safety and the storage and disposal of nuclear fuel waste as important issues facing peaceful nuclear cooperation and actively encouraged the Conference to embrace a principle adopted at the 1995 Review Conference that encouraged nuclear safety in waste management practices. Furthermore, Canada's non-proliferation policy requires that nuclear material exported to another State requires Canadian approval for retransfers, reprocessing and storage and subsequent use.

The Role of Natural Resources Canada

Natural Resources Canada (NRCan) develops policies to ensure that operational and funding responsibilities imposed by Canada's waste plans are met throughout Canada's management of nuclear waste. NRCan is not the lead agency with respect to the NPT. Accordingly, none of NRCan's publications discussing the long-term management of nuclear waste make reference to the NPT.

Implications of the Non-Proliferation Treaty for the Mandate of the NWMO

The NPT itself does not expressly prefer one method of spent nuclear fuel management to another, as long as the methods considered do not constitute a breach of Canada's undertakings not to possess, acquire or manufacture nuclear weapons and to accept safeguards with respect to source and fissionable material.

Assuming that all nuclear waste management options to be considered by the NWMO meet these criteria, the NPT is neutral with respect to possible approaches for nuclear waste management. The methods under consideration by the NWMO may be analyzed with respect to cost and ease of compliance with Canada's safeguards obligations at the appropriate time.

Canada's Safeguard Agreement provides several circumstances for the termination of the safeguards that may be relevant, depending upon the possible approaches to be considered.

The NPT requires that Canada's method of nuclear waste management must not permit the proliferation of nuclear weapons and must allow Canada to meet its obligations to report and provide access for inspection in accordance with its safeguards agreements unless the circumstances allow the termination of safeguards.

Subject to these conditions, the NWMO may pursue its nuclear fuel waste management objectives and Canada, as a nation, may pursue its nuclear non-proliferation policy objectives with respect to the management of nuclear waste, whether through bilateral agreements with other nations regarding the management and return of spent Canadian-origin fuel, other multilateral treaties concerning nuclear risk management, or through unilateral domestic security regulations.