

392

**Re: Parallex Project
Emergency Response Assistance Plan
MOX FUEL ASSISTANCE PLAN FROM
MOSCOW TO CHALK RIVER**

100-37000-TD-007

Revision 1

CELA Report 392

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Prepared by:

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September 15, 2000



CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

October 15, 1999

Parallex Test Documentation
Transport Dangerous Goods Directorate
Transport Canada
Place de Ville
9th Floor
330 Sparks St.
Ottawa, ON
K1A 0N5

Attention: Ms. Karen Plourde

Fax # 1-613-990-2917
cc by email to: mox@tc.gc.ca

Re: Parallex Test Documentation

These comments are made by Canadian Environmental Law Association as to documents filed by Atomic Energy of Canada Limited in support of its application for approval of shipment plans for the Parallex Test at Chalk River. The documents filed include the U.S. MOX test quantity transportation plan; the Russian MOX test quantity transportation plan; the U.S. MOX test quantity emergency response assistance plan and the Russian MOX test quantity emergency response assistance plan.

As confirmed to the writer by Transport Canada, the comment date was extended to October 15, 1999 because of delay in posting the last listed document.

Canadian Environmental Law Association (CELA) is a not for profit legal clinic, federally incorporated in 1970. CELA takes an active interest in environmental, human health and safety

issues arising from nuclear power production in Canada. CELA's interest in this regard includes the legislative, regulatory and policy regimes applicable to nuclear power production in Canada. CELA provides legal case representation and summary advice to clients in environmental law matters; provides public environmental legal education and advocates for environmental law reform in the public interest. CELA's interests include the protection of the environment and Canadians from environmental and ecosystem hazards, and from environmental health and safety hazards.

CELA opposes the granting of the requested transportation permits to AECL for the reasons outlined below. CELA submits that Transport Canada deny the requested transportation permits to AECL for both the U.S. MOX fuel shipment and the Russian MOX fuel shipment described in the applications.

- **Notice**

The first objection to the issuance of the transportation permits is based upon the lack of appropriate notice to the affected communities. No direct notice to municipal councils was provided prior to the decision by AECL to import plutonium from dismantled nuclear weapons for the parallel tests. Furthermore, 28 days notice is an inadequate time frame for communities to learn of the project; and to inform themselves in order to make comments upon the proposal.

- **Lack of Community Consent**

Almost none of the Canadian communities along the proposed transportation routes have consented to the shipments of plutonium through their communities, whether by municipal representatives or otherwise. In fact, an overwhelming number of communities have actively objected to the shipments of plutonium through their communities and have passed formal resolutions to that affect after formal debate in their municipal councils.

- **Lack of Benefit to Affected Communities**

The communities located along the proposed transportation routes will bear the risks of shipment; but will derive no benefit from the shipments.

- **Discrimination against Rural and Northern Communities**

Almost all of the communities located along the proposed transportation routes are rural or northern communities. They lack the population density of other possible routes and the routes through their communities were apparently chosen in part for that reason. Accordingly, residents of those communities will bear a disproportionate share of the risks of plutonium fuel shipments compared to southern Canadian or more densely populated regions of Canada.

- **The Nuclear Liability Act**

Presumably the Nuclear Liability Act would apply to any accidents with respect to the plutonium fuel shipments. The cap on liability provided by that legislation means that completely inadequate liability insurance is in place in case of any accident that affected property, environment or human health. It further means that the residents along the proposed shipping routes are bearing the brunt of a major subsidy accorded to AECL by way of the Nuclear Liability Act since they would bear the consequences of any accident without mandatory compensation beyond the totally inadequate NLA provisions.

- **Lack of Need**

There is no Canadian need for the MOX fuel shipments. There is no current plan to burn MOX fuel in Canadian CANDU reactors. Ontario Hydro (now Ontario Power Generation) has denied any further interest in use of MOX fuel in its reactors, for instance. MOX fuel is not a fuel of choice for CANDU reactors. MOX fuel is expensive to process and as described further below presents extremely large additional risks to Canadians compared to non-enriched uranium used in CANDU reactors.

- **Obligations to future generations**

By taking plutonium from the U.S. and Russia, and burning it as MOX in Canadian nuclear reactors, Canada will be assuming responsibility for future storage and safekeeping of the resulting fuel waste. The AECL transportation plans state, for example, that title to the plutonium will transfer to AECL at the Canadian border from the U.S. Department of Energy. A very large proportion of the plutonium in the fuel will remain even after use as fuel. The waste fuel will remain extremely hazardous and will present extreme hazard to the environment, and to human health and safety for millennia to follow. Canadians will be leaving a legacy of waste that is almost impossible to guarantee can be safely dealt with, to hundreds of generations to follow us.

- **Not the best method to treat MOX fuel**

Vitrification of plutonium from the dismantled weapons in the country of origin is far preferable to transporting it across continents and oceans. Vitrification renders the fuel less accessible in case of accident or terrorism. Dealing with the waste in country of origin keeps the waste closer to its source and therefore results in far less risk from transportation.

- **Not necessary for Canadian support for nuclear weapons non-proliferation**

Canada can demonstrate credible and effective support for nuclear weapons non-proliferation without taking plutonium for MOX fuel. Furthermore, use of MOX fuel in

Canadian reactors would legitimize world trade in weapons grade plutonium, greatly increasing risk of that fuel falling into the hands of terrorists or unstable governments.

- **The MOX transportation plan is constitutionally invalid.**

The MOX transportation plan will violate Canadians' Charter rights to security of the person (section 7 of the Charter) and Aboriginal Peoples' existing aboriginal and treaty rights as protected by the Constitution (section 35 of the Constitution Act, 1982).

- **Accident or release threatens ecosystem health and human health and safety.**

In case of accident that does result in release of plutonium to the atmosphere, residents and the ecosystem along the transportation routes and in the pathways from the point of release would be exposed to undue risks of radiation induced adverse health effects, and long term property damage. Similarly, plants, animals, and other species, along with their habitats and the functioning of the ecosystem would be impaired; perhaps severely impaired, depending upon the release.

- **Canadian Environmental Assessment Act**

In addition to the other submissions herein, no further consideration to approval of the requested plans by AECL ought to be considered until the proposal is remitted to a panel review under the Canadian Environmental Assessment Act. The Minister of Transport ought to recommend to the Minister of Environment a referral of the matter to a panel review, which terms of reference must be broader than the transport issues alone, in accordance with the *CEAA*. We disagree with AECL's assessment that an environmental assessment under *CEAA* is only required in the event that "Canada was to consider participation in a large-scale MOX fuel utilization program". An environmental assessment of the current test plans and the requested transportation permits is also required.

- **Atomic Energy Control Board Approval Unclear**

From AECL's Transportation Plan for the Los Alamos to Chalk River Shipment, at page 2 of 26, a statement is made that "AECB is also reviewing the proposed small-scale tests to confirm that they are within the existing licensed scope of CRL facilities." Transport Canada ought to give no further consideration to the matter without such confirmation. Obviously, public participation in the AECB proceedings to amend any existing licences to consider the Paralex project tests must be required and hearings held by that agency.

- **The proposal is contrary to the recommendations of the Standing Committee on Foreign Affairs and International Trade**

The December, 1998 report of the Standing Committee on Foreign Affairs and International Trade recommended that the Government "reject the idea of burning MOX fuel in Canada because this option is totally unfeasible, but that it continue to work with other governments to address the problem of surplus fissile material." (Recommendation #8 of that Report)

- **Municipal Fire Departments Oppose the Transportation Plan & Inadequate State of Ontario's Emergency Preparedness**

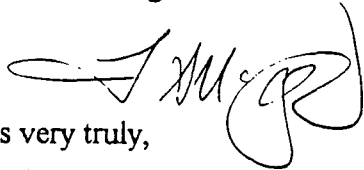
Not only have municipal counsels all along the proposed transportation routes passed formal resolutions in opposition to the plans, but many of their fire departments have expressed unpreparedness to deal with any emergency dealing with plutonium shipments. More generally, the province of Ontario has a completely unready and inadequate emergency response capability with respect to any serious accident involving release of highly radioactive materials. Problems with this capability range from lack of capacity to transport radiation injured persons for medical treatment, to lack of appropriate facilities for such treatment. Even in the municipalities in which CANDU nuclear plants are located, which would be expected to be the most prepared, all aspects of the emergency response network are unprepared for radiation accidents. The remainder of the province is even worse in terms of capability to respond to such accidents. Furthermore, capability to respond to terrorist acts is not reflected in the plans.

- **Accidents Can Happen**

Regardless of the optimism of those who advocate that the possibility of accident is low, accidents of calculated "low probability" can and, unfortunately, do happen: with unexpected and severe consequences. That such accidents can happen even with fuel reprocessing was all too tragically demonstrated with the recent Japanese fuel reprocessing accident. No nuclear - associated accident is ever "expected" or welcome. The mere possibility of accident, together with the complete lack of acceptance by the communities who would bear the consequences of such an accident, and the woeful state of Ontario's nuclear emergency preparedness all combine to dictate that the requested transportation permits to AECL for the U.S. MOX fuel transportation and the Russian MOX fuel transportation plans must be denied.

We would be happy to provide any further information, clarification, submissions or details as to the above noted submissions.

As requested, Transport Canada may add this submission to Transport Canada's web site for public viewing if so desired.



Yours very truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

per

Theresa A. McClenaghan

Counsel

Writer's direct email: mcclenat@olap.org

cc Campaign for Nuclear Phaseout, Attention Kristen Ostling, National Coordinator
email cnp@web.net

cc Hon. Jean Chretien, Prime Minister, Fax 1-613-941-6900

cc Hon. Lloyd Axworthy, Fax 1-613-947-4442

cc Hon. Ralph Goodale, Fax 1-613-992-5098

cc Hon. Michael Harris, Premier, Fax 416-325-7578 / email webprem@gov.on.ca

cc Hon. Lucien Bouchard, Premier, 1-418-643-3924



CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

Friday, September 15, 2000

MOX Comments Officer
Transport Dangerous Goods Directorate
Transport Canada

Sent by Fax 1-613-993-5925
And by Mail

9th Floor, Tower C
330 Sparks Street
Ottawa, Ontario K1A 0N5

**Re: Parallex Project
Emergency Response Assistance Plan
MOX FUEL ASSISTANCE PLAN FROM
MOSCOW TO CHALK RIVER
100-37000-TD-007
Revision 1**

Attention: Mr. J. Read

We write to provide CELA's comments with respect to the above-noted consultation, expiring on today's date.

We understand that Transport Canada has declined our earlier requests for an extension to the comment period, but we reiterate the need for an extension to the comment period.

We also understand from a conversation today with you that Transport Canada will not be requiring AECL to respond to concerns of Dr. Gilles Grenier, "specialiste en plans d'urgence relies a un accident nucleaire", and "medecin conseil a la DSP de la Mauricie", as well as of Dr. Leon Larouche, "conseiller en sante environnementale pour la direction de la sante publique du Saguenay/Lac-Saint-Jean", and of Dr. Jean-Luc Dion, as expressed by them yesterday, and as reported today in Le Quotidien by reporter Normand Boivin. These concerns, in essence, were that, based on data newly received by them, there is a greater danger to the population in case of an accident from flight of the fuel from Russia than these officials had earlier been led to believe by AECL. As a consequence, because of the dangers of inhalation of plutonium dust, these

officials believe that an evacuation order would be required in the event of an accident. Specifically, the data received indicates that the contaminated zone could be many kilometres; not merely hundreds of metres. These officials also complain about a lack of public disclosure of the details of the risk. The report notes that they are unsatisfied with the assurances provided by AECL.

I queried of you today, upon receipt of this report, whether AECL will be required by Transport Canada to deal with these concerns. Your response, in short, was that AECL would not be required by Transport Canada to deal with these concerns, and particularly, would not be required to address the issue of evacuation. You responded that the reason was that AECL has no jurisdiction to order an evacuation; this is the jurisdiction of the civil authority, provincial or municipal, and accordingly, AECL could not be asked to provide assurances about this capability in their plan.

CELA disagrees with this position and this conclusion. We submit that emergency planning for radioactive materials is federal jurisdiction, as held by an Ontario court in 1993, in *Energy Probe et al v. A.G. Canada et al*. It is Transport Canada's responsibility, we contend, to hold AECL responsible for and accountable for all aspects of the necessary emergency response from an accident involving the plutonium fuel that they are importing into and shipping through Canada by air. This would certainly include immediate, urgent, emergency evacuation of civilian peoples. Even if a civil authority has the ability to order an evacuation, you must require AECL in their Emergency Response Assistance Plan to explain how this would be done; who along the route would be contacted for this determination; what parties would carry out aspects of an evacuation; how the public would be contacted; how contaminated casualties would be cared for, including transport and medical attention in the receiving medical facility. None of this is provided in AECL's emergency response assistance plan, which you are asked by them to approve.

The current situation is that you are requiring no-one to ensure that there is an evacuation capability in case of an accident. This is not acceptable.

For these reasons, even without more, we submit that you must decline the approval of this request by AECL for the emergency response plan. Their emergency response assistance plan is incomplete and unacceptable. The health and safety of the public in the aftermath of an air transport crash is not assured.

We also repeat, incorporate here by reference, and rely upon the comments provided to you by us on August 25th, 2000 and on October 15, 1999. We also incorporate here by reference, and rely upon the comments being submitted today by the Campaign for Nuclear Phase-Out.

We will be forwarding under separate cover by regular mail the package containing these documents as well as the following.

We also incorporate into these comments the following documents, most of which you already have, but which will be forwarded with the mail copy of this letter. We ask that you consider the entire package as our submission, and that they all be included in your compilation of comments and report upon the public consultation.

1. Legal Opinion of CELA dated February 16, 2000 and published February 22, 2000.
2. CELA Media Release dated February 22, 2000 titled "Environmentalists Attack Legality and Politics of Plutonium Airlift"
3. Letter from CELA of June 16, 2000 to AECB Secretariat
4. Letter from CELA of June 20, 2000 to Director General of Transport Canada
5. Letter from CELA of June 27, 2000 to Director General of Transport Canada
6. Media Release by Campaign for Nuclear Phaseout dated June 28, 2000, "Citizens Groups head to court over Plutonium Imports"
7. CNSC letter to CELA dated July 20, 2000
8. Letter from CELA of July 31, 2000 to Director General of Canadian Nuclear Safety Commission
9. Letter from CELA of July 31, 2000 to Director General of Transport Canada
10. Letter from Director General of Transport Canada to CELA dated August 14, 2000
11. Letter from CELA of July 31, 2000 to Hon. Ralph Goodale
12. Media Release by Campaign for Nuclear Phaseout dated August 2, 2000, "Citizens Groups Demand Truth from Federal Government on Plutonium Airlift Plan"
13. Letter from CELA of August 16, 2000 to Director General of Transport Canada
14. Letter from CELA of August 22, 2000 to Director General of Transport Canada
15. Letter from CELA of August 23, 2000 to Director General, CNSC
16. Comments by CELA of August 25, 2000 to Transport Canada re ERAP consultation
17. Comments on the Emergency Response Assistance Plan for the MOX Fuel Shipment from Moscow to Chalk River by Edwin S. Lyman, PhD, Nuclear Control Institute, Washington, DC
18. Facsimile transmission of August 28, 2000 from Transport Canada to CELA
19. Web posting by Transport Dangerous Goods re Expected Revision to the AECL proposed ERAP dated August 25, 2000
20. Letter from CELA of August 28, 2000 to Director General of Transport Canada
21. CELA Media Release dated August 31, 2000 titled "Legal Challenge Prompts Public Accountability; Consultation Reveals AECL Unable to Confirm Safety of Plutonium Flights"
22. Letter from CELA of September 12, 2000 to Director General of Transport Canada
23. Media Release by Campaign for Nuclear Phaseout, Canadian Coalition for Nuclear Responsibility, Sierra Club of Canada and Canadian Environmental Law Association, titled, "Groups Find Serious Deficiencies in Newly Revised Plan for Dealing with Plutonium Spill; Seek Extended Comment Period"
24. Letter to CELA from Director General of Transport Canada dated September 14, 2000, advising that the comment period will remain to close on September 15, 2000 and advising that "clean-up is not required within the scope of an emergency response assistance plan."

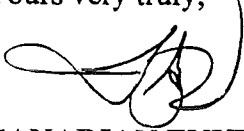
We repeat that we rely on and incorporate all of the concerns that we have expressed in our above-noted communications in this submission, as well as those of Campaign for Nuclear Phase-Out, Canadian Coalition for Nuclear Responsibility and Dr. E. Lyman. We include some of the responses from yourselves and CNSC for context and completeness in this submission, but do NOT agree with nor adopt those responses. Nor do we agree that the concerns are adequately addressed by those responses.

For example, we do not agree that clean up considerations are not to be required in an emergency response assistance plan. Radioactive plutonium dust is very unlike a "fire" in that the "fire" is not "out" following a short-duration response. An analogy to chemical spills is similarly

unresponsive to the hazard and threat to public health and safety presented by an accident in which plutonium dust escapes the container and is dispersed to people and the environment. Details of training, communication, response capability, and prevention of harm are all lacking in terms of contaminated casualties, emergency response equipment and siting, evacuation requirements, and many other aspects.

Given that Transport Canada does not apparently intend to require further elaboration and planning by AECL, we call on Transport Canada to decline this approval.

Yours very truly,

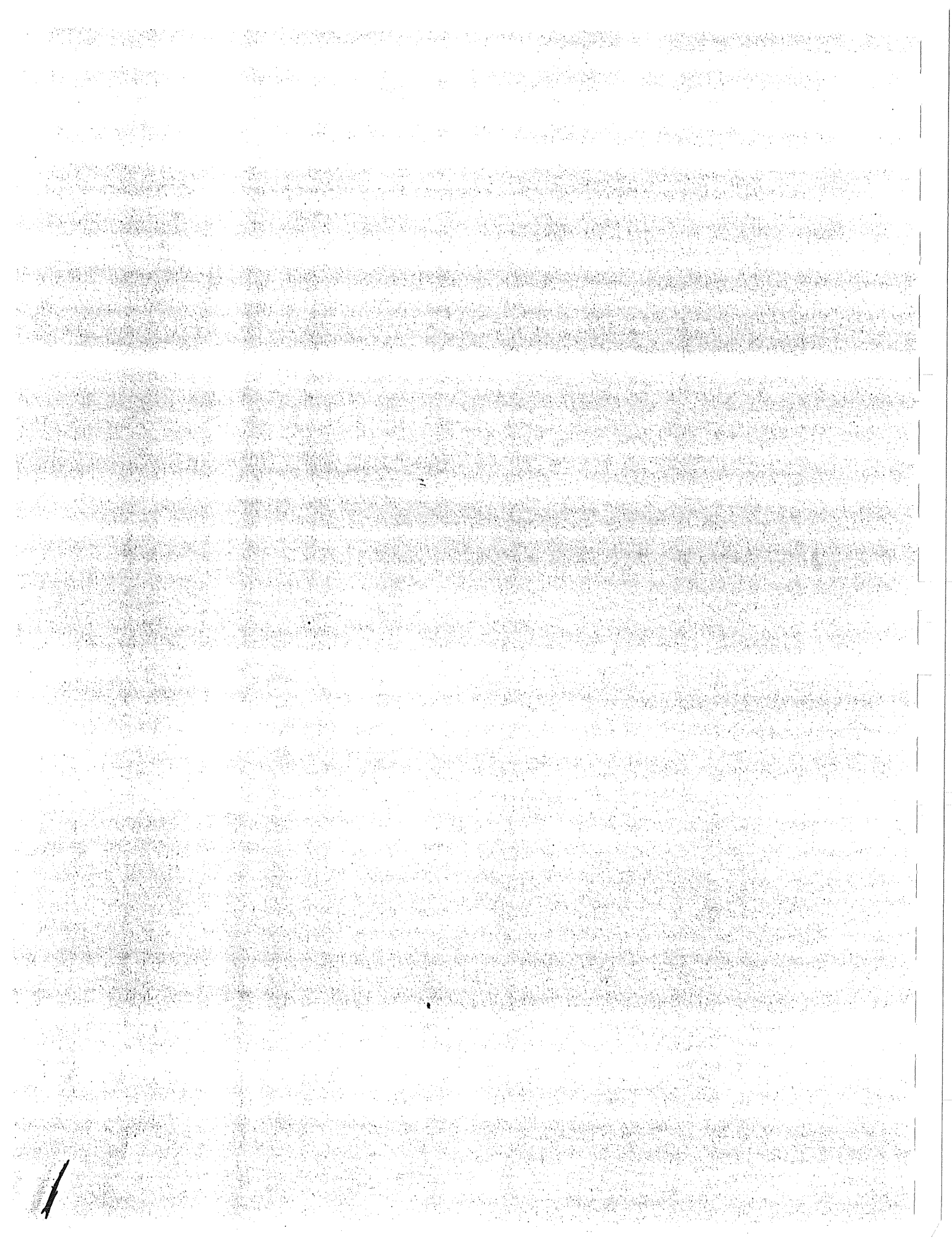


CANADIAN ENVIRONMENTAL LAW ASSOCIATION

per

Theresa A. McClenaghan

Counsel





Canadian Environmental Law Association
LEGAL OPINION

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February 16, 2000

Legal Opinion for:

Ms. Kristen Ostling - Campaign for Nuclear Phase-Out
Ms. Brennain Lloyd, Ms. Kathie Broesmer - North Watch
Ms. Cecilia Fernandez - Clean North
Mr. Steven Shallhorn - Greenpeace
Ms. Elizabeth May, Mr. Andrew Chisholm - Sierra Club of Canada
Dr. Gordon Edwards - Canadian Coalition for Nuclear Responsibility
Chief Tim Thompson - Mohawk Council of Akwesasne
Dr. Ole Hendrickson - Concerned Citizens of Renfrew County
Mr. Marc Chenier - Centre d'analyse des politiques
Mr. Norman Rubin - Energy Probe Research Foundation
Chief Larry Sault - Association of Iroquois and Allied Indians

Re: Amendment to Emergency Response Plan

By Department of Transport

Approved January 10, 2000

Transportation of Mixed Oxide Fuel (MOX)

Sault Ste. Marie to Chalk River, Ontario

Thank you for the opportunity to provide a summary legal opinion regarding the legality of a decision of the Department of Transport Canada, namely an approval to an amendment of AECL's Emergency Response Assistance Plan pertaining to the Transportation of Mixed Oxide Fuel (MOX) from Sault Ste. Marie to Chalk River, Ontario. That plan was originally approved in November, 1999, based on transport by road. The January 10, 2000 amendment allowed transport by air.

While you have serious concerns about the "Parallex" Test Project as a whole, including transport of MOX fuel to, in and through Canada by any mode of transport, this opinion is directed only at the January 10, 2000 Department of Transport decision. We understand that you will be publicly releasing this opinion on or about February 22, 2000.

SUMMARY OF CONCLUSIONS:

We have arrived at the following conclusions:

1. The public relied on the application documents and the Department of Transport's original report, accompanying the original approval. It included a statement that flying MOX was illegal in Canada. There was therefore no reason for the public to expect the amendment nor the flights.
2. We are of the opinion that the decision made by the Department of Transport to amend the Emergency Response Assistance Plan to allow transport by air was unreasonable and therefore illegal, pursuant to administrative law principles.
3. We are of the opinion that the Department of Transport acted illegally in failing to consult with the public before making a significant amendment to the plan such as changing the approved mode of transport from road to air.
4. Because of concerns as to future flights of MOX, you should first pursue the solutions described below under the section titled, "Legislative Solutions".
5. You should reserve the right to initiate Judicial Review proceedings in the Federal Court of Canada should there be no action by the government of Canada to ensure no continued flights of MOX fuel in Canada.
6. Pursuant to discussions that you have held with U.S. counsel, Terry Lodge, Esq., Canadian groups and individuals affected by and concerned about the flights of MOX fuel in Canada should support and even join in that U.S. litigation as parties.

PART I – SELECTED FACTS

On November 4th (announced November 16th, 1999), Transport Canada approved emergency response assistance plans submitted to Atomic Energy of Canada, Ltd. relating to transport of Mixed Oxide (MOX) fuel samples from the United States and Russia to Chalk River, Ont. Transport Canada conducted a nine-week public consultation process prior to granting its approval. At the time of announcing the approval, Transport Canada issued its report titled "Transport Canada Review of Two Emergency Response Assistance Plans Proposed by the Atomic Energy of Canada Limited for the Importation of up to Six Shipments of Test Samples of MOX Fuel". I refer to this document below as the "Report".

On January 14th, Transport Canada posted to its web site and issued a News Release announcing that on January 10th it had issued an amendment to its approval of the emergency response plan dealing with the U.S. source MOX. This amendment allowed for air shipment.

There was neither public notice nor consultation prior to the amendment.

On January 14th, 2000, one helicopter flight of MOX fuel originating from the U.S. was flown from Sault Ste. Marie to Chalk River. The amended plan allows for a total of three shipments; therefore the remaining two shipments are now "approved" for either road or air transport. The amended plan did not deal with the Russian shipments. There is a fear that a similar process would see that emergency response plan also amended, again without public consultation or notice, to allow for air shipment, whether from the currently intended port at Cornwall, Ontario, or as members of CNP have suggested, from Halifax or even across the ocean.

The Transport Canada web site posting describes the chronology leading to the amendment. It is astonishing in its speed. The web sites states that "In late December, 1999, the Atomic Energy of Canada Limited requested advice on the requirements to be satisfied should they wish to transport the MOX samples by air in Canada..." On December 21, 1999 AECB sent a letter to Transport Canada "explaining that the effects of a credible air accident would not necessarily be any more severe than the effects of a credible road accident." The document goes on to say that, "based on this assessment", "Transport Canada officials accepted the premise that the road mode emergency response assistance plan could be acceptable for air transport, provided there were an amendment to the road mode plan to address access to an accident site." In late December, AECL provided an informal copy of an amendment. On December 23, 1999, a Transport Canada official observed a "full dress exercise". On January 7, 2000, AECL submitted a formal request for approval of an amendment to its road mode emergency response plan to allow for the transport of MOX fuel by air from Sault Ste. Marie to Chalk River." The document notes that approval was granted on January 10, 2000.

The United Nations Number for Radioactive material, fissile, n.o.s. is number UN2918. This is key to tracking the applicable regulations under the Transport of Dangerous Goods Act.

The quantity of plutonium to be contained in each MOX test sample exceeds the minimum quantity or concentration set out in the TDG Act and therefore necessitated the requirement for approval of an emergency response assistance plan (ERAP) from Transport Canada before the importation and transportation of the MOX fuels, according to a letter of October 17, 1999 from the Minister of Transport, David Collenette, to Ole Hendrickson and Elizabeth May.

The original Emergency Response Plans described the shipments in Canada as occurring by road from the U.S. and by ship from Russia; thereafter, by road only on the Canadian leg of the journeys.

In the November, 1999 Report from the Department of Transport, which accompanied the original approval of the Emergency Response Plans for the shipments by road, there was an outline of some of the questions from the public, along with the Department's responses. In particular there appears the following:

"I. Mode of Transport

"I.1 The Government could change air regulations. Could fly over less populated areas.

[DoT response] **Not until there were a container deemed safe enough to survive all credible airplane accidents.**

I.2 Notes that the United States do not want to fly the shipment.

[DoT response] **It is presently against both Canadian and United States law to fly the MOX test samples."**

PART II – LEGAL GROUNDS

The question you have asked is whether the Department of Transport's amendment of the emergency response plan pertaining to the shipment of the U.S. source MOX was legal.

Transportation of Dangerous Goods Act

The Transport of Dangerous Goods Act provides a general prohibition (section 5) against transporting dangerous goods unless certain requirements are met. These include compliance with "all applicable prescribed safety requirements", as well as a requirement that "the means of containment and transport comply with all applicable prescribed safety standards". Under section 7 of the Transportation of Dangerous Goods Act, it is necessary for anyone who wishes to transport fissile material in Canada to obtain approval from Transport Canada for an Emergency Response Assistance Plan, which must be approved by the Minister of Transport or his designate. This is the approval that was granted in November 1999 and then amended on January 10th, 2000.

The Transport of Dangerous Goods Regulations (TDG Regs) cover MOX fuel transport. They do not explicitly authorize transport of MOX fuel by air.

Transportation of international or domestic consignments of dangerous goods by aircraft is for the most part exempted from the Transportation of Dangerous Goods Regulations. The Regulations require domestic consignment of dangerous goods by aircraft to be "done in accordance with the International Civil Aviation Organization Technical Instructions." (TDG Regulation section 2.9)

We have consulted the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air, which as mentioned, are incorporated by reference into the Canadian Transportation of Dangerous Goods Regulations. We have checked the 1999-2000 version. It states that for UN Shipping No. 2918 (radioactive material, fissile, n.o.s.), there is a "state variation" for Canada, referenced as State Variation CA1. That Variation reads as follows,

"Any request concerning the applicability of variations CA-1, CA-2 or CA-3 must be addressed to AECB, Radioisotopes and Transportation Division.

CA-1 Fissile radioactive material in any quantity may not be transported by aircraft to, from or over Canada without prior permission."

Canada is the only country with such a notation for this class of material. Kristen Ostling found a reference in the Hansard record by the Hon. John Crosbie, from 1987, advising Parliament that Canada had imposed this protection by way of a "State Variation" to the international technical standard.

We endeavoured to discover whether Canada gave permission in accordance with the ICAO notation, and who in Canada gave that permission. A letter from the Atomic Energy Control Board, dated February 3rd, 2000, responding to an enquiry by us on a different point, advised us that AECB gave AECL this permission on December 22 (revised December 23, 1999). This permission is described more fully below under the discussion dealing with the applicable AECB regulations.

The Transport of Dangerous Goods Regulations expressly also require compliance with the Transport Packaging of Radioactive Materials Regulations which are administered by the AECB.

Transport Packaging of Radioactive Materials Regulations -- SOR/83-740

On February 1, 2000, we wrote to the Director General of the AECB, to ascertain whether the AECB issued a package design approval certificate pursuant to section 15 of the Regulation, or an endorsement pursuant to section 16 of the Regulation. Not only must the package have one of these (or an authorization from the Board for a nonconforming package under section 4), but furthermore, the person proposing to transport the material must advise the Board in writing of their intended use of that certificate or endorsement and must have received written notice from the Board permitting their use of the certificate or endorsement. The Board may impose additional terms and conditions upon the use of the certificate or endorsement. (Section 10 of the Regulation).

The new Director General of the AECB Secretariat, Mr. G.C. Jack, replied with a letter of February 3rd, enclosing a copy of an Approval dated December 22, 1999 and revised December 23, 1999. That approval expressly gave permission to AECL to ship one "Type B(U)F package, AECL model 4H. The approval expressly noted that "The shipment will leave Sault Ste. Marie, Ontario on December 29, 1999 directly to Atomic Energy of Canada Ltd., Chalk River Ontario via Helicopter Transport Services Canada." The December 23, 1999 revision to that approval added a statement requiring advance notification to the AECB Transportation Licensing Section if the shipment is delayed, "Prior to the departure of the shipment."

In that same letter of February 3rd, 2000, Mr. Jack advised that "In addition to the packaging requirements, the Canadian *Transport of Dangerous Goods Regulations*, through reference to the technical instructions on safe transport of dangerous goods issued by the International Civil Aviation Organization, require that fissile material (including plutonium) in any quantity may not be transported by aircraft to, from, or over Canada without prior permission by Canada. AECL sought, and received, such approval from the AECB for this shipment. AECB staff gave such approval after ensuring that the shipment met all regulatory requirements."

The permit issued to AECL by AECB contains a statement that "This authorization is issued pursuant to ICAO State Variation CA-1 (IATA equivalent CAG-01)."

Administrative Law Requirements

We have reviewed the January 10, 2000 decision by the Department of Transport to amend the Emergency Response Assistance Plan to allow transport by air as well as by road on the basis of its compliance with the principles of administrative law. There are two areas in which, in our opinion, the decision failed to comply with those principles. These are discussed below under the headings of "Unreasonability" and "Legitimate expectations".

Unreasonability

Administrative law principles protect against unreasonable decision making by public officials. The doctrine states that public officials' powers must be exercised reasonably. The hurdle to prove unreasonability within the parameters of the courts' tests is quite high. However, in this case, it is our opinion that the decision to amend the Emergency Response Assistance Plan to allow air transport of MOX rather than just road transport of MOX would be considered by the courts to be unreasonable. This finding would support a range of possible remedies, including to quash the decision; to grant a writ of prohibition against repeating the decision for the transport of the Russian MOX; and to grant a

declaration that the decision offended administrative law principles. These remedies would therefore deal with both the additional two shipments authorized from the U.S. as well as the shipment still expected from Russia.

The grounds for a claim that the decision was unreasonable would include both the substance of and the manner in which the decision was made. Some of the relevant facts include the following:

- AECB made a statement on December 23, 1999, to Transport Canada that "the effects of a credible air accident would not necessarily be any more severe than the effects of a credible road accident." That statement is unsupported by any evidence whatsoever.
- Evidence known to the government of Canada demonstrates that it is extremely dubious that the type of package used in the transport of MOX by air, the 4H Type B(U)F package would provide sufficient protection in case of an air accident. For example, an International Atomic Energy Agency technical document states that:

"...the safety standards currently used for multimodal approval of package designs do not cover the same large fraction of possible conditions likely to be encountered in an aircraft accident as are encountered in sea or land mode accidents."

- There is no evidence that credible air accident scenarios were explored by Transport Canada before granting the amendment to the ERAP to allow air transport. The accident scenarios cited by AECL in its original ERAP and the approval of those scenarios by Transport Canada indicate the depth of analysis that should have been carried out for another mode of transport.
- Transport Canada itself stated in its November, 1999 report, that "It is presently against both Canadian and United States law to fly the MOX test samples" and that the government could not fly the MOX "until there were a container deemed safe enough to survive all credible airplane accidents".
- AECL stated in its original submissions, Transport Canada stated in consultations with the public before the road transport ERAP approval; and the U.S. Department of Energy stated that the MOX transport would be by road only and that air transport would not be considered.
- Transportation of MOX fuel by air is illegal in the United States and in fact the U.S. Department of Transportation certification for the AECL package used in the transport expressly states that "This certificate provides no relief from the limitations for transportation of plutonium by air in the United States as cited in the regulations of the U.S. Nuclear Regulatory Commission".
- The change in the transport mode is so significant that it amounts to a new plan and ought not to have been approved as an "amendment".

It is our opinion that the January 10, 2000 Transport Canada decision is unreasonable in fact and in law.

Doctrine of legitimate expectations:

The doctrine of legitimate expectations is a common law principle, developed under the principles of

general administrative law. Essentially it is the right to make representations. It is a rule of natural justice; a requirement for procedural fairness under principles of administrative law.

We are of the view that the circumstances of this case meet the requirements of this doctrine. The Department of Transport engaged in a nine-week period of public consultation prior to the original approval. They notified and consulted with the general public, municipalities, fire departments and police departments, among others. In addition to all of the meetings with the public and public officials that were conducted in person, the Department of Transport received 122 submissions from the public before October 15, 1999 and another 11 submissions after that date, along with submissions through Natural Resources Canada, including 17 municipal council resolutions and a letter on behalf of 19 mayors in Quebec, and 10 Band Council Resolutions from First Nations in Quebec and Ontario, almost all expressing concerns about the transport of MOX in Canada.

There are several sources for the understanding by the public that the MOX fuel would be transported by road only. These include statements in the November approval report by Transport Canada. As well, a document posted to the Transport Canada web site during the consultation, which was described as a 1997 AECB document outlining the Canadian regulations regarding MOX Parallelex Tests expressly stated that:

"The fuel test elements will be transported directly by truck from Los Alamos National Laboratory to Chalk River Laboratories without additional handling at the border crossing. The same transport will be used throughout."

The AECL Transportation Plan for the Shipment, dated August 1999, stated that,

"Air transport, rail and highway transport are all possible modes of shipping the LANL MOX fuel to CRL. However, evaluations done for the USDOE eliminated both air transport and rail options from further consideration. Accordingly, highway transport was the only mode considered in the current Canadian evaluation."

The U.S. Department of Environment Environmental Assessment for the Parallelex Project Fuel Manufacture and Shipment, dated January, 1999, stated that:

"The restrictions imposed for transportation of plutonium by air prohibits this alternative for shipment of the MOX fuel quantities needed for the Parallelex Project. In addition, air transport is considered to be more hazardous than ground transport due to the potential for greater distribution of radioactive materials in the event of a major air accident. This alternative was dismissed from further analysis."

The public relied on these statements as well as on the Department's November, 1999 report, accompanying the original approval. It included a statement made by the Department in the report, that flying MOX was illegal in Canada. There was therefore no reason for the public to expect the amendment nor the flights.

It is our opinion that the Department of Transport's January 10, 2000 decision breached the administrative law principle of fairness; in particular, the doctrine of legitimate expectations. The nature of the hazard, the interests at stake and the consultation process conducted prior to the November decision support the requirement that the Department extend to the public an opportunity to comment and provide input before a substantial amendment is made to the Emergency Response

Assistance Plan. One text on administrative law describes part of the underlying reason for this doctrine:

"A third source which feeds the concept of fairness is the simple recognition, firstly, that social order requires that individuals accept the decisions of public officials, and secondly, that this acceptance will not arise where individuals feel that they have been treated unfairly in the making of that decision."

PART III – COURT PROCEEDINGS

These judicial review remedies against the Department of Transport could be sought in the Federal Court of Canada. The kind of relief that you would be seeking does not have a specific time limit, other than "laches" or undue delay. The Courts also usually want to see any statutory or express appeal remedies exhausted before turning to the courts on a judicial review application. Although there are none in our case and therefore this will not be an issue, you do want to pursue any available political solutions to clarify the status of MOX flight in Canada, as quickly as possible. Therefore, it is reasonable to defer a decision to proceed with judicial review while you explore those options.

If you launch this type of an application in the Federal Court, you can expect many interlocutory proceedings. For example, in the CANDU litigation that Sierra Club is involved in; the Nuclear Liability Act litigation that Energy Probe was involved in; and other cases, the Applicants were obliged to respond to many interlocutory motions by interveners and respondents, and appeals from motions by interveners and respondents. These steps, of course, add to the resources required to carry on this type of litigation, as well as to the time required before final resolution, and as to the potential for adverse cost awards, not only at the end of the day, but upon the various interlocutory motions. In addition to an application for judicial review, should you decide to proceed, you should expect motions to challenge standing of applicants; motions to strike or narrow the relief requested; motions to strike all or parts of evidence submitted; motions to challenge the relief expected; motions to challenge your right to seek the relief requested, and others. Furthermore, deponents of Affidavits should expect to be cross-examined. There may also be interlocutory proceedings initiated by us for disclosure of documents.

Although Canadian courts often decline to award adverse costs to public interest litigants, it would not be prudent to count on this course of action. Costs are discretionary to the judge hearing the case, and the Federal Court now has the power under its rules to award adverse costs against parties, both in interlocutory proceedings and at the end of the day.

PART IV - LEGISLATIVE SOLUTIONS

The best and most expeditious solution to the problem of flying MOX in Canada is a legislative one. It is incumbent upon the responsible Ministers to clarify the state of the law and to make an express statement in legislation or regulation, that MOX / plutonium may not be transported in, over or through Canada by air. This is the situation in the United States where there is a clear legislative statement, as noted above, that prohibits air transport of MOX fuel. This is a reasonable legislative position to take in Canada. It would then be consistent with the United States legal regime, one of the originators of the MOX fuel shipments. It is a much more prudent legislative approach in terms of public safety. Express legislative or regulatory prohibition would bring legal certainty to the question of whether it is legal to transport MOX fuel by air in Canada – that is, that it would be clearly illegal to do so. No administrative decision to allow MOX fuel flight by the AECB and Department of

Transport could then be sought by AECL or anyone else.

Even more immediately, the federal Ministers responsible should be requested to issue clear policy direction to their respective Departments, immediately, requiring Departmental officials to allow no permits for MOX fuel overflights, pending implementation of the policy in express regulation. Furthermore, the Department of Transport should rescind the approved amendment that it granted on January 10th, 2000, leaving only the November 4th approved ERAPS in place. This would ensure that the additional two shipments of U.S. MOX fuel covered by the approved ERAP could not be flown in Canada. As to the Russian shipment expected at spring break up, a governmental policy directive followed by immediate regulatory provision should be sufficient to prevent the Department of Transport from again amending the Russian MOX ERAP to allow that MOX fuel to be flown to Chalk River.

CONCLUSIONS

1. The public relied on the application documents and the Department of Transport's original report, accompanying the original approval. It included a statement that flying MOX was illegal in Canada. There was therefore no reason for the public to expect the amendment nor the flights.
2. We are of the opinion that the decision made by the Department of Transport to amend the Emergency Response Assistance Plan to allow transport by air was unreasonable and therefore illegal, pursuant to administrative law principles.
3. We are of the opinion that the Department of Transport acted illegally in failing to consult with the public before making a significant amendment to the plan such as changing the approved mode of transport from road to air.
4. Because of concerns as to future flights of MOX, you should first pursue the solutions described above, under the section titled, "Legislative Solutions".
5. You should reserve the right to initiate Judicial Review proceedings in the Federal Court of Canada should there be no action by the government of Canada to ensure no continued flights of MOX fuel in Canada.
6. Pursuant to discussions that you have held with U.S. counsel, Terry Lodge, Esq., Canadian groups and individuals affected by and concerned about the flights of MOX fuel in Canada should support and even join in that U.S. litigation as parties.

Yours very truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

per

Theresa A. McClenaghan

Counsel

Paul Muldoon

Executive Director and Counsel

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CELA
Canadian
Environmental
Law Association

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Toronto, ON
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Canadian Environmental Law Association
MEDIA RELEASE
FOR IMMEDIATE RELEASE

(Posted on behalf of the Campaign for Nuclear Phase-out)
cnp@web.net

February 22, 2000

Environmentalists Attack Legality and Politics of Plutonium Airlift:

Legal opinion demonstrates that January transport of plutonium by air violated principles of law. Groups call on Government of Canada to halt all imports of plutonium

Ottawa--Ottawa, February 22, 2000 - Environmentalists today attacked the legality of the January plutonium airlift and the broader politics surrounding the Chrétien government's highly controversial plutonium import (MOX) scheme.

The decision to transport plutonium by air violated Canadian law, according to a legal opinion released today by the Canadian Environmental Law Association (CELA). The legal opinion was requested by several groups including the Campaign for Nuclear Phaseout, the Canadian Coalition for Nuclear Responsibility, the Sierra Club of Canada, Northwatch, Greenpeace Canada, the Mohawk Council of Akwesasne and the Concerned Citizens of Renfrew County.

Based on the opinion, a number of these groups may seek a judicial review in the Federal Court of Canada as well as participate in U.S. litigation. The groups are calling on the Government of Canada to rescind its decision to proceed with the weapons plutonium project.

"The decision to transport plutonium fuel by air in January contravenes Administrative Law principles protecting against unreasonable decision-making by public officials," states Theresa McClenaghan, a lawyer with CELA. The legal opinion finds that the government had created an expectation that the public would be consulted on any change in transportation plans. This is especially the case with regard to air transport, which Transport Canada had publicly declared was "contrary to American and Canadian law".

Several Canadian groups have already joined in a U.S. suit claiming that not only have U.S. laws been broken, but public safety compromised. The transportation of plutonium by air is effectively prohibited for safety reasons by U.S. law. "We are bringing in several new Canadian plaintiffs in our case. We will be filing our motion later this week," states Terry Lodge, lead counsel in the U.S. case.

Gordon Edwards of the Canadian Coalition for Nuclear Responsibility states: "Plutonium transport is fundamentally incompatible with democracy. Because plutonium is the stuff of nuclear weapons, security interests will always be given priority over the rule of law and democratic principles."

"There is mounting opposition to the plutonium transport through Québec, but

flying it over Québec will be an even greater threat." says Marc Chénier of the Centre d'analyse des politiques énergétiques. In Québec, 53 municipalities have passed resolutions against plutonium transport.

Kathleen Brosemer, spokesperson with Northwatch expressed frustration over the way the plutonium fuel issue has been handled: "We have been lied to repeatedly. We were told that the plutonium would be trucked - then it was flown over our heads. We were told that it was absolutely safe - yet we saw a military operation at Sault Ste. Marie involving up to 100 soldiers of unidentified nationality and dozens of military vehicles."

Many groups are concerned that the Russian shipment of plutonium fuel will also be flown over their communities. Chief Mamie David of the Mohawk Council of Akwesasne, a community along the Russian plutonium transport route, states: "We don't want plutonium transported through Akwesasne. First Nations must be consulted as to whether dangerous materials are going to be shipped through First Nations communities and this includes airspace."

Dr. Ole Hendrickson is a researcher with the Concerned Citizens of Renfrew County, an organization located close to AECL's Chalk River Labs, the destination for the plutonium shipments. He states: "We have repeatedly called for the cancellation of this project. The Chalk River site is already overburdened with nuclear contamination problems. Two workers at Chalk River were overdosed with plutonium just this summer. Moreover, plumes of highly radioactive fission products from the facility have migrated into surface waters at Chalk River, and then into the Ottawa River."

Kristen Ostling, National Coordinator for the Campaign for Nuclear Phaseout, says that "not only must plutonium overflights be stopped, but all plutonium imports whether by air, land or water must be halted. It's time for the Chrétien government to listen to the wishes of the people of Canada rather than the special interests of the nuclear lobby. The government must face the fact that the CANDU MOX scheme does not stand up to the stated goal of nuclear non-proliferation. It was for this reason that an all-party parliamentary committee recommended that the entire plutonium import project be scrapped."

CELA Legal Opinion (11 pages)

Additional documentation available at the website of the Campaign for Nuclear Phase-out or contact Kristin Ostling at the number below or at cnp@web.net

- 30 -

For more information, contact:

Kristen Ostling, National Coordinator, Campaign for Nuclear Phaseout, 613-789-3634 (Ottawa)
Theresa McClenaghan, Counsel, Canadian Environmental Law Association
416-960-2284 or 416-998-0997 (cell) (Toronto)
Dr. Gordon Edwards, President, Canadian Coalition for Nuclear Responsibility
514-489-5118 or 514-853-5736 (pager) (Montréal)
Chief Mamie David, Mohawk Council of Akwesasne, 613-575-2377 or 613-930-3288 (cell) (Cornwall)
Dr. Ole Hendrickson, Researcher, Concerned Citizens of Renfrew County, 613-735-4876 (Pembroke)
Marc Chénier, Spokesperson, Centre d'analyse des politiques énergétiques,
514-527-2712 (Montréal)
Elizabeth May, Executive Director, Sierra Club of Canada, 613-241-4611

(Ottawa) (available on Feb. 23)

Tom Clements, Executive Director, Nuclear Control Institute, 202-822-8444
(Washington, DC)

Terry Lodge, Lead Counsel, US MOX court challenge, (419) 255-7552 (Toledo,
Ohio)

Kathleen Brosemer, Northwatch, 705-949-3862 (Sault Ste. Marie)

Brennain Lloyd, Northwatch, 705-497-0373 (North Bay) (available on Feb. 23)

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June 16, 2000

Atomic Energy Control Board
Secretariat
Ottawa, Canada
K1P 5S9

By Facsimile 1 – 613-995-5086

Attention: G.C. Jack
Director General, Secretariat and Secretary, AECB

Re: MOX Fuel Shipments – Paralex Project

Dear Mr. Jack:

Further to our letter of February 1, 2000 and your reply of February 3, 2000.

We continue to represent Campaign for Nuclear Phase-Out, along with several additional groups in the above mentioned matter.

We would appreciate your assistance once again, this time with respect to the transportation of the MOX fuel approved to be shipped from Russia. Has the AECB issued or been asked to issue any authorization to ship that Mixed Oxide for the Paralex project from Russia? If so, could you provide copies of the authorization? Has the AECB approved or been asked to approve said shipment by air? If so, could you provide copies of the authorization? Similarly, could you provide the relevant package endorsement or certification for the shipment of MOX fuel from Russia?

In addition, it came to our attention in April that there was some discussion of a change in plans by which the entire three shipments from Russia would be transported in one shipment. Has the AECB been asked to approve such a change? If so, are there any packaging changes, and what packages would be used? If so, could you advise and if any approval has been issued, provide a copy of such approvals?

Thank you for your assistance.

Yours very truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

Per
Theresa A. McClenaghan
Counsel

Cc Kristen Ostling, Gordon Edwards, Elizabeth May, Chris McCormick, Brennain Lloyd, Larry White, Ole Hendrickson

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June 20, 2000

> Paralex Test Documentation
> Transport Dangerous Goods Directorate
> Transport Canada
> Place de Ville
> 9th Floor
> 330 Sparks St.
> Ottawa, ON
> K1A 0N5

>
>
> Attention: Mr. John Read
>
> Fax # 1-613-990-2917
> cc by email to: moz@tc.gc.ca

>
> Re: Paralex Test Documentation

> Further to our letter of June 16, 2000, and your prompt reply, which we appreciate, we write to enquire as to the following additional matters.

Can you advise as to whether you are aware of any plans by AECL to apply for an amendment to the emergency response assistance plan that was approved November, 1999, pertaining to the Russian MOX shipment for the paralex project (the ERAP)?

If so, could you advise as to whether the application is expected as to any or all of the following:

- 1) to amend the ERAP to allow transport by a different mode of transport, in particular by flight?
- 2) to amend the ERAP to allow an increase in the quantity of MOX to be shipped per shipment?
- 3) To change the approved shipment route?

If there is an application to Transport Canada to amend the ERAP, will there be public consultation prior to a decision by Transport Canada as to whether to approve the amendment?

If there is to be public consultation, what type of consultation do you expect to conduct (how will submissions be sought; how much time will be allowed; who will be consulted; as to what issue/s will comments be solicited)?

Thank you for your assistance.

>
> Yours very truly,
>
> CANADIAN ENVIRONMENTAL LAW ASSOCIATION
>
>
>
> per
> Theresa A. McClenaghan
> Counsel
>
> Cc Kristen Ostling, Gordon Edwards, Elizabeth May, Chris McCormick, Brennain
Lloyd, Larry White, Ole Hendrickson
>
> Theresa McClenaghan
> Counsel
> Canadian Environmental Law Association
> phone 416-960-2284 fax 416-960-9392
> Suite 401 517 College Street
> Toronto, ON M6G 4A2
> PLEASE NOTE NEW email: mcclenat@olap.org
> CELA's Web site is at <http://www.cela.ca>
>

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June 27, 2000

> Paralex Test Documentation
> Transport Dangerous Goods Directorate
> Transport Canada
> Place de Ville
> 9th Floor
> 330 Sparks St.
> Ottawa, ON
> K1A 0N5
>
>
> Attention: Mr. John Read
>
> Fax # 1-613-990-2917
> cc by email to: READJ@tc.gc.ca
>
> Re: Paralex Test Documentation
>

Once again, thank you for your reply to my previous correspondence. My clients are very concerned that there not be any chance that they miss a consultation period that may be posted for an amendment to the Russian MOX Fuel Transport ERAP, approved November, 1999. They are checking the Transport Canada web site daily in that respect. They have asked me to contact you to double-check that no consultation has yet been posted; and further to double-check that no request for an amendment of the said ERAP has been received by Transport Canada. Could you confirm that there is no request for amendment to the said ERAP yet received by Transport Canada and further, no consultation yet initiated? They have further asked me to check these two matters with you frequently; an alternative to sending you a request like this every couple of days would be to ask you whether you are in a position to commit to notifying me when any amendment request is received by Transport Canada regarding the said Paralex Project, Russian MOX fuel transport ERAP.

Thank you for your assistance.

>
> Yours very truly,
>
> CANADIAN ENVIRONMENTAL LAW ASSOCIATION
>
>
>
> per
> Theresa A. McClenaghan
> Counsel
>
> Cc Kristen Ostling, Gordon Edwards, Elizabeth May, Chris McCormick, Brennain
Lloyd, Larry White, Ole Hendrickson
>

Theresa McClenaghan
Counsel

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Suite 401 517 College Street
Toronto, ON M6G 4A2

PLEASE NOTE NEW email: mcclenat@olap.org
PLEASE NOTE NEW WEB SITE ADDRESS: CELA's Web site is at [http:// www.cela.ca](http://www.cela.ca)

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Campaign for Nuclear Phascout
Campagne contre l'expansion du nucléaire

Media Release

For release Wednesday, June 28, 2000

Citizens Groups head to court over Plutonium Imports

Ottawa - Citizens and First Nations groups are taking the federal government to court over the unlawful manner with which it is importing weapons-plutonium MOX fuel into Canada.

The Chrétien government violated the public trust when it flew American plutonium fuel in January from Sault-Ste Marie to Chalk River, Ontario. The government explicitly ruled out air transport and then flew the plutonium at the last minute, placing communities along the route at even greater risk. They did this without prior public notification or consultation. The case argues this action was illegal.

The case aims to ensure that the Canadian public retains its full democratic right to be notified and to comment on all aspects of transportation plans associated with the imminent shipment of plutonium fuel from Russia.

“With massive opposition from communities, the federal government may very well want to fly the Russian shipment too — even though there may be five times as much plutonium as in the American shipment, and this mode of transport is forbidden in the United States for safety reasons. Under Canadian law it is illegal to deny Canadians their right to comment. Most Canadians want the shipment stopped.” states Gordon Edwards of the Montreal-based Canadian Coalition for Nuclear Responsibility.

Applicants in the case include the Sierra Club of Canada, the Canadian Coalition for Nuclear Responsibility, the Mohawk Council of Akwesasne, Northwatch, Concerned Citizens of Renfrew County and the Association of Iroquois and Allied Indians. The Minister of Transport is named as the respondent in the case.

“We are joining in this court action because we do not want to see weapons plutonium being transported through our community by land, sea or air, “ stated Larry White of the Mohawk Council of Akwesasne. “There must be adequate consultation so that Canadians’ wishes can be heard.”

To date, 155 municipalities in Quebec have passed resolutions calling on the federal government to

scrap the plutonium import plan — the Montreal Urban Community, representing 1.8 million people, being the most recent community to do so.

“We want to prevent the federal government from flouting the law by changing transportation plans in the case of the Russian plutonium shipment, as they did with the U.S. plutonium shipment,” states Angela Rickman of the Sierra Club of Canada.

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For further information please contact:

Campaign for Nuclear Phaseout, 613-789-3634
Canadian Environmental Law Association, 416-960-2284

Campaign for Nuclear Phaseout
cnp@web.net





Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

P.O. Box 1046, Station B
Ottawa, Ontario
K1P 5S9

C.P. 1046, Succursale B
Ottawa (Ontario)
K1P 5S9

Fax: (613) 995-5086
Secretariat

Télécopieur : (613) 995-5086

RECEIVED JUL 27 2000

Your file Votre référence

Our file Notre référence

July 20, 2000

1-3-10-0

Ms. Theresa A. McClenaghan
Counsel
Canadian Environmental Law Association
517 College Street, Suite 401
Toronto, ON
M6G 4A2

Subject: MOX fuel shipments - Parallex Project

Dear Ms McClenaghan:

This is in response to your letter of June 16, 2000 in which you ask several questions concerning the proposed shipment of MOX fuel from Russia. As you are no doubt aware, on May 31, 2000 with the coming into force of the *Nuclear Safety and Control Act*, Canada's federal nuclear regulator is now the Canadian Nuclear Safety Commission (CNSC), not the Atomic Energy Control Board(AECB), so, replies below refer to both organisations.

For clarity, I repeat each of your questions then provide a response.

Has the AECB issued or been asked to issue any authorization to ship that Mixed Oxide for the Parallex project from Russia? If so, could you provide copies of the authorization?

Enclosed is a copy of import licence SG 3051 which expired on December 31, 1999. Subsequently, AECL made an application for a similar licence. That application is under consideration by CNSC staff.

Has the AECB approved or been asked to approve said shipment by air? If so, could you provide copies of the authorization? Similarly, could you provide the relevant package endorsement or certification for the shipment of MOX fuel from Russia?

The CNSC (AECB) has not received a request to approve transport of MOX fuel by air from Russia.

.../2

2000-129.ers

Canada

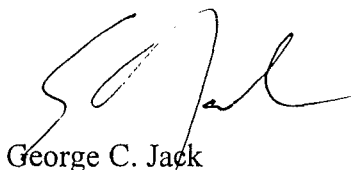
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There was some discussion of a change in plans by which the entire three shipments from Russia would be transported in one shipment. Has the AECB been asked to approve such a change? If so, are there any packaging changes, and what package would be used? If so, could you advise and if any approval has been issued, provide a copy of such approvals?

CNSC (AECB) import licences specify the total amount of material that may be imported, and the time frame within which the import may occur. There is no requirement for the CNSC to approve any change in the import approach unless the applicant proposes to make the shipment by air. As stated above, the CNSC has not been asked to approve any such flight.

In its application to import the material from Russia, AECL has requested to use package TMB 0145. As the Canadian certification of that package has lapsed, CNSC staff are reviewing the request to re-endorse the certificate.

Yours sincerely,



George C. Jack
Director General
Secretariat

Commission de contrôle de l'énergie atomique
C.P. 1046
Ottawa, Canada
K1P 5S9
Télex 053-3771

APPLICATION FOR LICENCE TO IMPORT URANIUM, THORIUM, PLUTONIUM, OTHER RADIOACTIVE ISOTOPES AND DEUTERIUM
DEMANDE DE PERMIS POUR IMPORTER DE L'URANIUM, DU THORIUM, DU PLUTONIUM, D'AUTRES ISOTOPES RADIOACTIFS ET DU DEUTERIUM

AECB File No.
N° du dossier de la CCEA

(a) Importer (Name, address, telephone) Importateur (nom, adresse, téléphone) Atomic Energy of Canada Limited Chalk River Laboratories CHALK RIVER, Ontario, Canada K0J 1J0		(b) Importer's Licence No. N° du permis de l'importateur NRTE 1.2/96	Date 98 June 30
(c) Supplier (Name, address) - Fournisseur (nom, adresse) Bochvar Institute of Inorganic Materials State Research Centre of Russian Federation 5 Rogov Street Moscow, Russia		(e) Purpose for which the goods are imported Fins pour lesquelles les marchandises sont importées Test irradiation at CRL.	
(d) Applicant - Requérant			

(i) Country of Origin Pays originaire	(o) Description	(h) Quantity authorized Quantité autorisée	(j) Approx. Value Valeur approx. (\$ can.)
Depl.U. (UK)	Mixed Oxide Fuel Pellets		\$5,000
Plutonium (Russia)	Natural uranium in the form of sintered UO2 pellets		
Nat.U. (Canada)	No more than 20 kg depleted uranium and 500 g plutonium will be shipped in any one shipment. TNB-0145 packages will be used.		

MULTIPLE SHIPMENTS - EXPÉDITIONS MULTIPLES
(k) Description of Current Import - Description de l'importation en cours

THE UNDERSIGNED HEREBY CERTIFIES THAT ALL INFORMATION GIVEN IN THIS APPLICATION IS TRUE AND CORRECT.
LE SOUSSIGNÉ CERTIFIE QUE TOUS LES RENSEIGNEMENTS DONNÉS SUR CETTE DEMANDE SONT EXACTS.

[Signature]
Signature

98-6-30
Date

FOR DEPARTMENT USE ONLY - À L'USAGE DU MINISTÈRE SEULEMENT	
<p>LICENCE</p> <p>1. The imports of goods described above is permitted subject to the Atomic Energy Control Act and pursuant regulations.</p> <p>2. This licence is valid only for use of the applicant or indicated importer.</p> <p>3. Import customs documents must agree with this licence.</p>	<p>PERMIS</p> <p>1. L'importation des marchandises décrites ci-dessus est autorisée sous réserve de la Loi sur le contrôle de l'énergie atomique et les règlements applicables.</p> <p>2. Ce permis ne peut être utilisé que par le requérant ou l'importateur indiqué.</p> <p>3. Les documents douaniers d'importation doivent concorder avec ce permis.</p>
<p>Checked by collector of customs - Date stamp of port of validation. Vérifié par le receveur de la douane - Timbre à date du port de validation</p> <p>ATOMIC ENERGY CONTROL BOARD APPROVED 7 DEC 1999 <i>[Signature]</i> Designated Officer, AECB Agent désigné, CCEA</p>	<p>(i) Licence No. - N° de permis 563051</p> <p>(m) Date of issue Date d'émission DEC - 7 1999</p> <p>(n) Expiry Date - Date d'expiration DEC 31 1999</p> <p>(o) Multiple Shipments Expéditions multiples</p>

AECB 89/78 IMPORTER - Present to customs at port of validation
CUSTOMS - Return to Atomic Energy Control Board
7340-31-873-3143
IMPORTATEUR - A présenter aux douanes au port de validation
DOUANES - Retourner à la Commission de contrôle de l'énergie atomique
CCEA 89/78
1

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CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

Sent by regular mail and facsimile.

Mr. George C. Jack,
Director General
Secretariat
Canadian Nuclear Safety Commission
P.O. Box 1046, Station B
Ottawa, ON
K1P 5S9

July 31, 2000

Dear Mr. Jack,

Thank you for your response to my letter of June 16, 2000 regarding the proposed shipment of MOX fuel from Russia. I am aware of Transport Canada's recent announcement that it will transport MOX fuel from Russia to Chalk River, Ontario, by air transit.

Would you please provide me with a copy of the application for the MOX air shipment, as well as any CNSC approvals for the shipment. I would also like to receive any background documents that you are, or have been considering with regard to the air shipment.

Thank you.

Yours truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

Signed in the writer's absence.

Theresa McClenaghan
Counsel

Cc
Ian Dick, Counsel, Justice Canada
Shan Gaudet, Counsel, Justice Canada

517 COLLEGE STREET • SUITE 401 • TORONTO • ONTARIO • M6G 4A2
TEL: 416/960-2284 • FAX 416/960-9392 • E-MAIL: cela@web.net • www.cela.ca

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Chris McCormick, Association of Iroquois and Allied Indians
Kristen Ostling, Campaign for Nuclear Phase-out
Gordon Edwards, Canadian Coalition for Nuclear Responsibility
Lynn Jones, Concerned Citizens of Renfrew County
Larry White, Mohawks of Akwesasne
Kathie Brosemer, Northwatch
Andrew Chisholm , Sierra Club of Canada
Paul Bates, Counsel, Lerner & Associates

6



CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

Sent by regular mail, facsimile and email.

Mr. John Read
Transport Dangerous Goods Directorate
Transport Canada
Place de Ville
9th Floor
330 Sparks St.
Ottawa, ON
K1A 0N5

July 31, 2000

Dear Mr. Read,

I am writing with regard to Transport Canada's recent announcement that it will transport MOX fuel from Russia to Chalk River, Ontario, by air transit.

Would you please provide me with a copy of the rationale (as part of the application or otherwise) for air shipment of the MOX fuel, despite comment, in the *Transport Canada Review of Two Emergency Response Assistance Plans Proposed by Atomic Energy of Canada Limited for the Importation of up to Six Shipments of Test Samples of MOX Fuel* that there is potential for release of a damaging heavy dust should air transport result in an accident.

Would you please provide me with a copy of any accident analysis that may have been carried out with regard to MOX fuel air transport, as well as any analyses that may have been performed regarding the testing of the packaging materials that will be used during the shipment. Please include a copy of any certification or endorsement that may have been given by the Canadian Nuclear Safety Commission with regard to the safety of the packaging materials. Would you please also include an explanation of who carried out any testing that may have been done on the packaging materials.

Will Transport Canada be advising the communities that will be flown over during the air shipment of this change in transportation plans? Likewise, will Transport Canada be advising parties that were commentators on the previous ERAP process of the proposed changes, as well as new communities that weren't affected by the prior surface route? Similarly, will municipalities and First Nations in Ontario and Québec that have passed resolutions against the proposed shipment be advised of the air shipment plans?

I will be in Ottawa on Tuesday, August 1, 2000 and could pick up any materials that might be available at that time.

Thank you.

Yours truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

Signed in the writer's absence

Theresa McClenaghan
Counsel

Cc:

Ian Dick, Counsel, Justice Canada
Shan Gaudet, Counsel, Justice Canada
Chris McCormick, Association of Iroquois and Allied Indians
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Larry White, Mohawks of Akwesasne
Kathie Brosemer, Northwatch
Andrew Chisholm, Sierra Club of Canada
Paul Bates, Counsel, Lerner & Associates

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Transport
Canada

Transports
Canada

Safety and Security Sécurité et sûreté.

Transport
Dangerous Goods
Directorate

Direction générale du
transport des marchandises
dangereuses

RECEIVED 116 22 2000

Your file Votre référence

Our file Notre référence

AUG 14 2000

Ms Theresa McClenaghan
Counsel
Canadian Environmental Law Association
517 College Street, Suite 401
Toronto, Ontario
M6G 4A2

Ms. Theresa McClenaghan,

In reply to your letter of July 31, 2000:

I would like to note that the MOX fuel samples will not be transported by Transport Canada nor on behalf of Transport Canada as you indicated in your first paragraph.

Concerning your second paragraph, the decision to use air transport is a decision of the importer, the Atomic Energy of Canada Limited. They may transport by air provided all regulations are complied with, including the use of an acceptable container. As you are now aware, the federal Canadian Nuclear Safety Commission has determined that the container to be used will provide an acceptable level of safety. It is recommended that you contact the Commission directly with respect to their decision.

All questions in your third paragraph should be asked directly of the Canadian Nuclear Safety Commission.

Concerning your fourth paragraph, the selection of the mode of transport is a decision of the Atomic Energy of Canada Limited. Transport Canada will not be directly advising any communities or commentators on this decision of the Atomic Energy of Canada Limited. However, we do recognize that their decision has received discussion in the national media and within several communities.

Also concerning your fourth paragraph, with respect to the application for approval of a new emergency response assistance plan, this is available for comment on the Transport Canada website. This was made known at the recent press conference in Ottawa, which is the same procedure as was followed last year.

Yours truly,

John Read
Director General
Transport Dangerous Goods (TDG)

Canada

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CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

Sent by regular mail and facsimile.

The Honourable Ralph Goodale
Minister,
Natural Resources Canada
580 Booth St.
Ottawa, ON
K1A 0EA

July 31, 2000

Dear Mr. Goodale:

I am writing with regard to the press conference materials that were released by your office this past Friday. In those materials, your office states that the decision to file application for the air shipment of MOX fuel from Russia, to Chalk River, Ontario, was driven, in part, by public comments received during the MOX fuel consultations that were held in the fall of 1999. Would you please provide me with the details of who made these comments, where and at what time. Please provide the text of these comments as well as the context in which they were made.

Thank you.

Yours truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

Signed in the writer's absence.

Theresa McClenaghan
Counsel

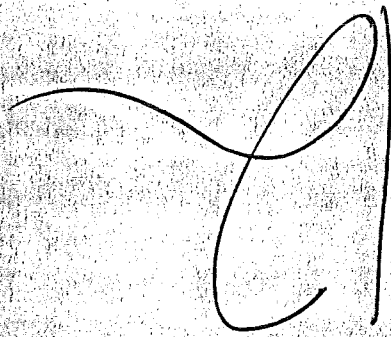
Cc

Ian Dick, Counsel, Justice Canada
Shan Gaudet, Counsel, Justice Canada
Chris McCormick, Association of Iroquois and Allied Indians
Kristen Ostling, Campaign for Nuclear Phase-out
Gordon Edwards, Canadian Coalition for Nuclear Responsibility

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Andrew Chisholm , Sierra Club of Canada
Paul Bates, Counsel, Lerner & Associates

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[Back to Media page](#)



Campaign for Nuclear Phaseout

Campagne contre l'expansion du nucléaire

Media Release

For release Wednesday, August 2, 2000

Citizens Groups Demand Truth from Federal Government on Plutonium Airlift Plan

Ottawa - Citizens groups today charged that the federal government's plutonium airlift plan released last Friday continues to ignore widespread opposition along the flight path and proves that the government's position on plutonium imports is fundamentally dishonest.

"People want truth and fairness. We are calling on the Chrétien government to cancel the Russian weapons plutonium shipment altogether or, at the very least, to halt the shipment until independent public hearings have been held into the policy assumptions underlying the plutonium import scheme," said Kristen Ostling of the Campaign for Nuclear Phaseout.

On Friday, July 28th, apparently in reaction to the timing of a recent judicial review application initiated by citizens groups and First Nations, the Chrétien government publicly announced that weapons plutonium MOX fuel would be transported by air from Russia to Chalk River, Ontario. The announcement provides for a 28-day period of public comment on a revised AECL transportation emergency response plan.

In the opinion of a number of citizens groups, the federal government has been dishonest and inconsistent in its message to the Canadian public about the MOX issue. Some examples follow:

- News reports quote the federal government as stating that air transport was chosen in accordance with suggestions made during public hearings last fall. However there were no public hearings last fall; there were only last-minute public-relations events hastily organized to counter a growing tide of public opposition to plutonium imports in Ontario.

Since then, municipalities have continued to pass resolutions against the plan. In Quebec, 155 municipalities have passed resolutions which explicitly object to the transportation of plutonium through Quebec by air as well as by land and sea.

"If Ottawa wants to respond to public suggestions," said Elizabeth May of the Sierra Club of Canada, "the overwhelming message is crystal clear: don't fly it, scrap it."

- In its November 1999 report, Transport Canada stated that "the material will not be flown" because a severe transportation accident "could result in the release of a heavy dust [which] has the potential for damage if inhaled." Noting that AECL would be using a Type B container (rather than a Type C container as required by US Law for air transport), Transport Canada was firm that the MOX test samples could not be flown: "Not until there were a container deemed safe enough to survive all credible airplane accidents."

Last Friday, however, a new Emergency Plan from AECL was posted, based on flying more than four times as much Russian military plutonium in a similar Type B container. It is now claimed that this container is perfectly safe and can withstand any credible accidents.

However, Dr. Ed Lyman, Scientific Director of the Washington-based Nuclear Control Institute states, "There is no credible scientific evidence that a Type B container can withstand an air crash." Dr. Gordon Edwards of the Canadian Coalition for Nuclear Responsibility also notes that a Type C container is still in the design stages. Moreover, according to a July 20, 2000 letter received by the Canadian Environmental Law Association on July 27th, from the Canadian Nuclear Safety Commission (formerly AECB), certification for the transport container lapsed some time ago.

- In its November 1999 report, Transport Canada stated five times that weapons plutonium "will not be flown", adding that "It is presently against both Canadian and United States law to fly the MOX test samples". Yet two months later, in January 2000, 120 grams of US weapons plutonium was air-lifted to Chalk River by helicopter.

- The "Parallex Project" was originally intended to lay the groundwork for a parallel, symmetric reduction in the excess weapons plutonium stockpiles of the USA and Russia. When the US announced earlier this year that they have no intention of sending any more plutonium to Canada, the stated rationale for the Parallex Project collapsed. Yet the Project still proceeds as if nothing has changed. "There is no parallelism anymore," said Kristen Ostling.

- The Chrétien government promotes the MOX scheme as a disarmament initiative. But the impetus for the idea of burning plutonium in reactors comes not from the peace and disarmament community, but from the nuclear power establishments of Russia, the US and Canada - all of whom would like to see their aging reactors running for another 25 years.

"Ottawa's position is not sound," said Dr. Edwards. "Using plutonium to fuel reactors doesn't eliminate the plutonium, and therefore offers no permanent solution to the security problem. Yet circulating plutonium in civilian society does make plutonium more accessible, thereby making clandestine bombs more likely."

Kristen Ostling said, "A much more sensible approach would be to phase out nuclear reactors, thereby halting the production of new plutonium, while taking the existing plutonium out of circulation permanently through immobilization. A responsible government would welcome debate on these issues," she added.

- In the original emergency plan, the routes were delineated and therefore the communities that could be impacted were identifiable. In the new plan, there are no routes delineated, no communities specified, consequently no identifiable communities that can be impacted. "We're concerned about all aspects of the planned plutonium import plan, including the resulting wastes which will remain in

Canada. Ottawa seems intent on denying Canadians their basic democratic right to have specific input on decisions that may affect their communities," said Lynn Jones of Concerned Citizens of Renfrew County.

- The federal government has told Canadians that it is virtually impossible for plutonium to be released in a respirable form under any conceivable accident scenario. Yet the US Department of Energy, in a 1997 environmental assessment document, states:

"Two credible transportation accident scenarios were analyzed for the shipment of MOX fuel to the Canadian border

"The first accident relates to an event that leads to the MOX fuel package container breaking open, igniting, and releasing plutonium dioxide particles into the air.... The public is assumed to be near enough to the accident to breathe air contaminated with plutonium dioxide."

The report makes it clear that this scenario, while unlikely, has "a reasonable probability of occurrence". (Section 5.2 "MOX Transportation Accidents")

In the previous AECL Emergency Plan for ground transport, AECL identified 4 out of 8 categories of accidents where the container would be destroyed. But in the new plan, there are no specific accident scenarios at all.

Citizens groups note that the government has chosen the worst time of year for a 28-day period of public comment. "They could have done it earlier, as the Emergency Plan was ready in May. They could have done it later, simply by waiting until the weapons plutonium MOX fuel transport container had been certified by the regulatory agency. There is something distasteful about staging a public comment period when most people are not available for comment," said Gordon Edwards.

Theresa McClenaghan of the Canadian Environmental Law Association noted that, "the judicial review we launched for citizens groups in June played an important role in getting the government to reveal its plans to fly plutonium fuel from Russia. It is time now for the federal government to put the brakes on the project and subject its plutonium policy to serious public scrutiny."

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For more information:

Campaign for Nuclear Phaseout, (613) 789-3634
Canadian Environmental Law Association (416) 960-2284

Campaign for Nuclear Phaseout
cnp@web.net

B



CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

Sent by regular mail, facsimile and email.

Mr. John Read
Transport Dangerous Goods Directorate
Transport Canada
Place de Ville
9th Floor
330 Sparks St.
Ottawa, ON
K1A 0N5

August 16, 2000

Dear Mr. Read,

Further to our earlier correspondence, I am writing on behalf of Campaign for Nuclear Phase-Out and my other clients to formally request that Transport Canada extend the comment period with respect to the Emergency Response Assistance Plan consultation for transport of the MOX fuel sourced in Russia to Chalk River for the Paralex project, from August 25th, 2000 to September 29th, 2000.

My clients and others have found that it is difficult to respond to this consultation in the time frame provided, given that the consultation began during the major summer vacation time for most people.

I also note that we are still awaiting responses to information requests previously forwarded to you, to Minister Goodale, and to the Canadian Nuclear Safety Commission, and the information requested is of vital importance in preparing comments on behalf of the Canadian Environmental Law Association and for our clients in preparing their comments. Therefore, an extension of the comment period would be appreciated for this reason as well, in order to give you and the other named officials an opportunity to reply and CELA and our clients an opportunity to review and to take that information into account.

Thank you for your assistance.

Yours truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

Theresa McClenaghan
Counsel

Cc:

Ian Dick, Counsel, Justice Canada

Shan Gaudet, Counsel, Justice Canada

Chris McCormick, Association of Iroquois and Allied Indians

Kristen Ostling, Campaign for Nuclear Phase-out

Gordon Edwards, Canadian Coalition for Nuclear Responsibility

Lynn Jones, Concerned Citizens of Renfrew County

Larry White, Mohawks of Akwesasne

Kathie Brosemer, Northwatch

Andrew Chisholm , Sierra Club of Canada

Paul Bates, Counsel, Lerner & Associates

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CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

Sent by regular mail, facsimile and email.

Mr. John Read
Transport Dangerous Goods Directorate
Transport Canada
Place de Ville
9th Floor
330 Sparks St.
Ottawa, ON
K1A 0N5

August 22, 2000

Dear Mr. Read,

I am writing with regard to the proposed air transport of MOX fuel from Russia to Chalk River, Ontario.

Would you please provide me with any additional material that may have been submitted to Transport Canada by AECL, in support of its application to transport MOX fuel, since the announcement and posting of the public consultation regarding the ERAP. If such additional material has been submitted, would Transport Canada consider publishing this information and allowing additional time for revised or supplementary comments by the public?

Thank you.

Yours truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

Signed in the writer's absence

Theresa McClenaghan
Counsel

Cc:

Ian Dick, Counsel, Justice Canada
Shan Gaudet, Counsel, Justice Canada
Chris McCormick, Association of Iroquois and Allied Indians
Kristen Ostling, Campaign for Nuclear Phase-out
Gordon Edwards, Canadian Coalition for Nuclear Responsibility
Lynn Jones, Concerned Citizens of Renfrew County
Larry White, Mohawks of Akwesasne
Kathie Brosemer, Northwatch
Andrew Chisholm , Sierra Club of Canada
Paul Bates, Counsel, Lerner & Associates

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CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

Sent by regular mail and facsimile.

Mr. George C. Jack,
Director General
Secretariat
Canadian Nuclear Safety Commission
P.O. Box 1046, Station B
Ottawa, ON
K1P 5S9

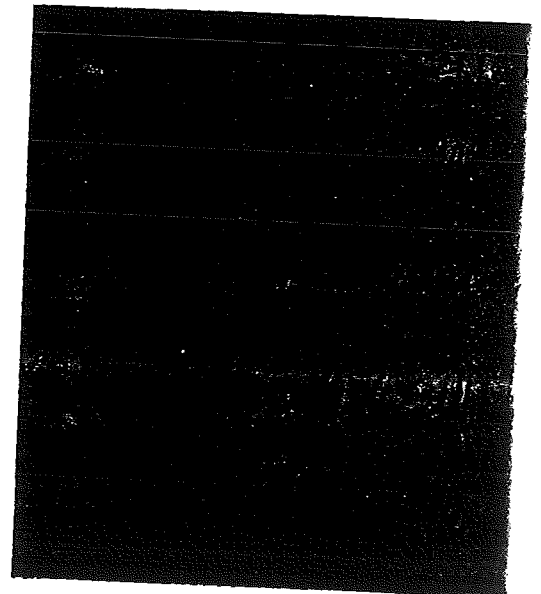
August 23, 2000

Dear Mr. Jack,

Thank you for your letter of August 16, 2000 and the accompanying CNSC endorsement of the TNB-0145 shipping container.

John Read of Transport Canada suggested that I direct the following questions to you. Would you please provide me with a copy of any accident analysis that may have been carried out with regard to MOX fuel air transport, as well as any analyses that may have been performed regarding the safety and testing of the TNB-0145 shipping container. Would you please also include an explanation of who carried out any testing that may have been done on the TNB-0145 container. I would also appreciate receiving a copy of the initial, 1973 certification for the TNB-0145 container as well as all subsequent revisions of the certification. Please include documentation concerning testing analysis and testing results that were undertaken in support of the various revisions of the TNB-0145 certification. Finally, please also include information regarding the standards to which each revision was held.

Thank you.



Yours truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

Signed in the writer's absence



Theresa McClenaghan
Counsel

Cc:

Ian Dick, Counsel, Justice Canada
Shan Gaudet, Counsel, Justice Canada
Chris McCormick, Association of Iroquois and Allied Indians
Kristen Ostling, Campaign for Nuclear Phase-out
Gordon Edwards, Canadian Coalition for Nuclear Responsibility
Lynn Jones, Concerned Citizens of Renfrew County
Larry White, Mohawks of Akwesasne
Kathie Brosemer, Northwatch
Andrew Chisholm, Sierra Club of Canada
Paul Bates, Counsel, Lerner & Associates

Confirmation Report - Memory Send

Time : Aug-23-2000 07:33pm
Tel line : +4169609392
Name : CELA

Job number : 046
Date : Aug-23 07:32pm
To : 916139955086--30
Document pages : 003
Start time : Aug-23 07:32pm
End time : Aug-23 07:33pm
Pages sent : 003
Status : OK

Job number : 046

*** SEND SUCCESSFUL ***



CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT
517 College Street • Suite 401 • Toronto • Ontario • M6G 4A2

FAX COVER SHEET

To: Mr. George Jack
From: J. McClenaghan
Date: Aug 23 / 00
Total number of pages (including cover sheet): 3
Operator: _____
If you do not receive all of the pages, please call us at (416) 960-2284
Fax Number: 613-995-5086 Account: 30

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Confirmation Report - Memory Send

Time : Aug-23-2000 07:34pm
Tel line : +4169609392
Name : CELA

Job number : 047
Date : Aug-23 07:33pm
To : 98679192--30
Document pages : 003
Start time : Aug-23 07:34pm
End time : Aug-23 07:34pm
Pages sent : 003
Status : OK

Job number : 047

*** SEND SUCCESSFUL ***



CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT
517 College Street • Suite 401 • Toronto • Ontario • M6G 4A2

FAX COVER SHEET

To: Paul Bates
From: K. Keenan
Date: Aug 23 / 00
Total number of pages (including cover sheet): 3
Operator: _____
If you do not receive all of the pages, please call us at (416) 960-2284
Fax Number: 867-9192 Account: 30

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CANADIAN ENVIRONMENTAL LAW ASSOCIATION

L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT
517 College Street • Suite 401 • Toronto • Ontario • M6G 4A2

FAX COVER SHEET

To: Paul Bates

From: K. Keenan

Date: Aug 23 / 00

Total number of pages (including cover sheet): 3

Operator: _____
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CANADIAN ENVIRONMENTAL LAW ASSOCIATION

L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT
517 College Street • Suite 401 • Toronto • Ontario • M6G 4A2

FAX COVER SHEET

To: Mr. George Jack

From: J. McClenaghan

Date: Aug 23 / 00

Total number of pages (including cover sheet): 3

Operator: _____
If you do not receive all of the pages, please call us at (416) 960-2284

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CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

Sent by regular mail and facsimile.

MOX Comments Officer
Transport Canada Dangerous Goods Directorate
Transport Canada
Mailstop: ASD
330 Sparks St.
Ottawa, ON
K1A 0N5
fax: 613-993-5925

August 25, 2000

RE: Consultation on the MOX Emergency Response Assistance Plan

Dear Sir or Madam,

I write to provide comments from the Canadian Environmental Law Association with respect to the consultation ending August 25, 2000 regarding the Paralex project and Atomic Energy Canada Ltd.'s request for an amended or new Emergency Response Assistance Plan (ERAP) in which they propose to transport plutonium fuel from Russia to Canada by fixed wing aircraft to either Baggotville, Québec or to Trenton, Ontario, and from that point to Chalk River laboratories by helicopter.

I note that we have requested, on August 16, 2000, on behalf of Campaign for Nuclear Phase-out and others, an extension to the comment period. We reiterate the need for an extension. Also, we requested, on August 22, 2000, an opportunity to see and comment on any further information provided by AECL, particularly as it relates to further information or changes pertaining to the ERAP, for example, in response to queries or requests by Transport Canada. We reiterate the need for that opportunity.

In our last correspondence to Transport Canada, we noted that we were awaiting responses to information requests that we submitted to Transport Canada, the Canadian Nuclear Safety Commission and Minister Goodale, early in this comment period. We wish to acknowledge, as

advised by Mr. John Read of Transport Canada, that we were in error in thinking that Transport Canada's response had not been received; it was in fact received by email prior to that letter, for which we thank Transport Canada. One of the responses from Transport Canada was to advise that the information in question should be sought from the Canadian Nuclear Safety Commission; we have since communicated those queries to them. Accordingly, we are still awaiting the response to our original query to CNSC. I gratefully acknowledge receipt of the CNSC Certification of the TNB-0145 shipping container in response to my letter. However, I have not yet received several other requested documents: the application for the MOX air shipment, CNSC approvals for the shipment (which would include permission pursuant to the State Variation to the International Technical Manual for Transportation of Dangerous Goods by Air pertaining to fissile material), as well as any background documents that the CNSC is considering with regard to the air shipment. I have also not yet received a response to our latest query to CNSC, which the Commission would have only received lately and presumably has not had an opportunity to provide in response to our request.

As noted in our earlier request for an extension, this brief consultation has fallen in the middle of most Canadians' vacation schedules and the writer is no exception. I and my office have endeavoured to make the necessary information requests and engage in the communication we feel necessary in order to meaningfully review the ERAP and provide comments, despite the fact that the 28 day consultation falls in a period during much of which I was on vacation. I point this out primarily to demonstrate the real difficulty that even highly interested and well informed Canadians have with this comment period and to reemphasize that for most members of the public and the affected communities, consultation during this time frame was not practical. We strongly urge you to extend the comment period or to offer a new time frame for comments. We had previously requested to the end of September and that would seem to us to be a reasonable time period, assuming that the balance of our information requests are answered in the near future.

Turning to the comments that we can provide at this time, CELA makes the following submissions. We reiterate and repeat here, by reference, the comments made in our submission to the original ERAP approval which was granted in November, 1999 by Transport Canada.

We strenuously object to an approval that would permit AECL to change the mode of transport for this plutonium fuel from Russia, that is, to flight from Russia to Canada and helicopter transport within Canada. Flying the plutonium fuel is even more hazardous to public health and the environment, in case of accident, than transporting it by ship and road. Although we object to the project *per se*, we submit that Transport Canada should only approve an ERAP for the least hazardous mode of transport. Based on the information that we have been able to obtain to date, we also object that the packaging materials proposed to be used are not safe enough to transport by air.

Furthermore, we object to an approval for a larger quantity of MOX fuel to be transported in a single shipment than AECL originally requested in the November, 1999 approval.

From the investigation that we have conducted over the past several months, we also object that many communities, and particularly First Nation communities, were inadequately prepared for

their own emergency response in case of accident, even under the prior approval and ERAP. With greater potential consequences from an air shipment, this concern is magnified.

We reiterate in particular the issue of community objection. First Nations and municipalities throughout Québec and Ontario have vehemently objected to this project and to the transport of the plutonium fuel through their territories. Their consent has not been sought nor have they been properly or adequately consulted and in many cases, not consulted at all, other than by this posting and comment period.

Canada is the only nation with an express "State Variation" to the International Technical Manual for Transportation of Dangerous Goods by Air, pertaining to fissile material, noting that express permission is required by Canada for flight of plutonium fuel into, over, through or within Canadian air space. Without admitting the legality of any Canadian permission purported to be given in respect of the proposed shipment from Russia, we note that it is unacceptable for Canada or its approval agencies to give approval in any respect of this project for air transport of plutonium fuel into, over, through or within Canada. Such approval is unacceptable in view of the increased hazard for air transport and in view of the fact that Transport Canada has already given AECL an approval for an ERAP by which they could transport the fuel which would not involve flight at any stage of the shipment.

We further express concern that the Canadian public was misled in the fall of 1999 by AECL and Canadian officials, including Transport Canada officials, who stressed that there would be no flights of the plutonium fuel. Based on the information posted to Transport Canada's web site and the AECL ERAP referenced there, with respect to the new proposal, we are not satisfied that the proposed ERAP provides a sufficient guarantee of safety and a sufficient emergency response to communities along the flight path. It remains a concern that the particular flight paths have not been identified, since assessment of accessibility, proximity to appropriate response centres, and health, fire, and radiation response cannot be done with specific reference to the flight path. This lack of information means that in terms of the most critical concerns arising out of a potential accident, the sufficiency of the ERAP is unknowable to most Canadians.

We understand from discussions with Transport Canada that AECL has been asked to advise how it would respond to an assumed accident with an assumed container breach and an assumed 100 m dispersion of plutonium dust. We are extremely anxious to understand the basis for the 100 m dispersion assumption and in particular, how a response by AECL in this respect would ensure a satisfactory response and protection of the public in case of a wider dispersion, for example, from a mid-air explosion or from windy conditions. We would also like to know whether your request to AECL assumes that the 100 m dispersion area was in a populated centre. As noted, we reserve our right to comment on these matters after receipt and review of AECL's response to you, which we have asked you for in earlier correspondence.

We thank you for your assistance to date and look forward to an opportunity for additional comment as noted herein.

You may include these comments in the public record as well as our previous inquiry letters written during the comment period.

Yours very truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

Signed in the writer's absence.



Theresa McClenaghan
Counsel

Cc
John Read
Transport Dangerous Goods Directorate
Transport Canada

Confirmation Report - Memory Send

Time : Aug-25-2000 01:41pm
Tel line : +4169609392
Name : CELA

Job number : 089
Date : Aug-25 01:39pm
To : 916139935925--30
Document pages : 005
Start time : Aug-25 01:39pm
End time : Aug-25 01:41pm
Pages sent : 005
Status : OK

Job number : 089

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CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT
517 College Street • Suite 401 • Toronto • Ontario • M6G 4A2

FAX COVER SHEET

To: MOX Comment Officer
From: Theresa McClanahan / Karyn Keenan
Date: Aug 25 / 00
Total number of pages (including cover sheet): 5
Operator: If you do not receive all of the pages, please call us at (416) 960-2284
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Time : Aug-25-2000 01:44pm
Tel line : +4169609392
Name : CELA

Job number : 090
Date : Aug-25 01:39pm
To : 916139902917--30
Document pages : 005
Start time : Aug-25 01:41pm
End time : Aug-25 01:44pm
Pages sent : 005
Status : OK

Job number : 090

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COMMENTS ON THE "EMERGENCY RESPONSE ASSISTANCE PLAN" FOR THE MOX FUEL SHIPMENT FROM MOSCOW TO CHALK RIVER

Edwin S. Lyman, PhD
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1000 Connecticut Avenue, NW Ste. 410
Washington, DC 20036
August 25, 2000

Overall comments

The "Emergency Response Assistance Plan" (ERAP) prepared by Atomic Energy of Canada, Ltd (AECL) does a wholly inadequate job of informing the public of the potential risks of the air shipment of MOX fuel to Canada. Numerous assertions are made regarding the robustness of both the shipping package and the MOX fuel pellets themselves under extreme conditions typical of an air crash --- however, no technical documents are referenced and no other evidence is provided to support them. On the other hand, evidence is publicly available that contradicts many of these assertions. These statements call into question the ability of AECL to accurately assess the potential risks of an air crash involving the Parallax MOX fuel, and hence raise doubts about whether the ERAP that AECL has developed is based on a sufficiently conservative "worst case scenario."

The flaws in the ERAP are extremely damaging to the AECL's credibility with regard to its ability to safely oversee this shipment. Without having a realistic appraisal of the "worst-case scenario," AECL cannot make a convincing case that it is taking the necessary precautions to ensure that the public will be protected if the unthinkable indeed comes to pass. It should be noted that the public health consequences of the September 1999 criticality accident in Tokaimura were greatly worsened by the failure of government authorities and plant management to take into account a worst-case accident in their emergency planning guidelines.

Vulnerability of the shipping package

The ERAP contains numerous highly misleading descriptions of the robustness of the TNB-0145/4 shipping package that will be used for the MOX fuel air transport.

While the ERAP asserts that "the TNB-0145/4 packaging is specially designed to withstand transportation accidents," nowhere does it make clear that this statement refers to ground-based accidents only. The TNB-0145/4 is a "Type B(U)F" package, which means that it has been designed to meet "Type B" transport standards developed by the International Atomic Energy Agency (IAEA). These standards, which include a series of drop tests from a height of nine meters onto an unyielding surface (corresponding to an impact velocity of 13.2 m/s), followed by a 30-minute engulfing fire test at 800°C, have been determined by the IAEA to be inadequate to guarantee the same level of safety

when applied to air transport as when applied to ground transport. This conclusion follows from the obvious point that the mechanical and thermal stresses experienced by a transport package during an air crash are likely to be considerably greater than those experienced during a typical accident on the ground. In fact, the IAEA assumes that Type B packages would leak when exposed to impact conditions typical of a plane crash.¹

As a result, the IAEA developed a new, more stringent set of standards for packages intended for the transport of large quantities of radioactive materials by air, known as "Type C" standards. The Type C test regimen involves an impact test at a velocity of 90 m/s on an unyielding surface, and a (non-sequential) 60-minute fire test at a temperature of 800°C.

These standards, which took ten years to be developed and were heavily influenced by IAEA member states with a commercial interest in the air shipment of plutonium, fall far short of what would be necessary to guarantee an appropriate level of safety for air transport of radioactive materials. In fact, in developing the standards, the IAEA itself conceded that around 10% of plane crashes were likely to generate conditions more severe than those represented by the Type C tests. Nevertheless, they represent a considerably more severe accident environment than the Type B tests. For example, the Type C impact test delivers a kinetic energy more than forty times greater than the Type B test.

Current IAEA regulations allow an exemption from the Type C requirement for quantities of weapons-grade plutonium below about 3 terabecquerels (TBq), and that the amount in the Paralex shipment (about 1.4 TBq) is less than half this value. However, this exemption value was based on the (unsupported) supposition that a Type B package subject to a Type C impact would release from 0.3% - 3% of its contents. For the Paralex shipment, this corresponds to a release of 1.6 to 16 grams of weapons-grade plutonium. IAEA would consider this an "acceptable" release. However, a release of this magnitude, if occurring in a populated area such as southern Ontario, could have a significant radiological impact. In addition, there is little experimental evidence to support releases as small as those used by the IAEA in deriving the exemption values. It is likely that a Type B package would lose its containment function completely in a serious plane crash.

The ERAP asserts that "testing has shown that the actual reserve safety margins for packages licensed to ship radioactive materials extend well beyond the IAEA test requirements before failure," and infers that this applies to the TNB-0145/4 as well. However, AECL provides no references to credible, well-documented or reproducible evidence to support this claim, either for Type B radioactive material transport packages in general or the TNB-0145/4 in particular.

¹ International Atomic Energy Agency (IAEA), *The Air Transport of Radioactive Materials in Large Quantities of With High Activity*, TECDOC-702 (Vienna, 1993), p. 31.

While large, heavy spent fuel transport casks may contain such a margin, since the thickness of their steel walls (on the order of 25 centimeters) is determined by gamma ray shielding considerations and not by structural requirements, there is no basis for a similar conclusion regarding the thin-walled TNB-0145/4 package.

On the contrary, there is considerable evidence to support the conclusion that packages are designed with little excess margin for cost reasons. One example is the use of elastomeric (rubber-like) lid seals instead of more expensive and heat-resistant metal seals. Although these seals degrade and lose their containment function after heating to 250-350°C, they are still in routine use in Type B packages because fire tests usually show that the seals remain below this temperature after a 30-minute fire at 800°C. However, the margin to failure is not very large. A recent study by Sandia National Laboratories (SNL) shows that for typical Type B spent fuel packages --- which are much more massive and would heat up much more slowly in a fire than the TNB-0145/4 --- the seal failure temperature can be reached in as little as 35 minutes at a fire temperature of 1000°C, and as little as 64 minutes for a fire temperature of 800°C.² Thus a package that passes the Type B fire test could well fail the Type C fire test. There is no indication that it could survive the even more severe fire that could result from a plane crash.

AECL tries to deny this by arguing that "packages similar to the one selected for the ... shipment have survived tests in the 1970s based on *then-current standards* [emphasis added] for aircraft flight recorders (black box) and impact tests onto a runway at more than 200 km/hr."

There are at least two misleading and technically unsound inferences in this sentence. First of all, tests on "packages similar" to the TNB-0145/4 have little bearing on the TNB-0145/4 itself. Variations in design assumptions, construction materials, and manufacturing quality control all play a significant role in the robustness of a package. Even two packages manufactured from an identical design may behave differently under test conditions. There have been numerous examples of individual packages constructed according to approved designs failing Type B drop tests, the most recent example being the DOE 9975 package, a 35-gallon drum designed for plutonium transport not unlike the TNB-0145/4. In April of this year, a Type B drop test caused a large gap to open in the seal area of a 9975, resulting in an effort to redesign the package.³

Second of all, even if one assumes (in the absence of actual data or references) that this "similar package" indeed survived the "black box" standards that were current in the 1970s, then one may ask if this provides any indication that the package could withstand the standards in place today. New black box standards were introduced in 1990 because, as the Transportation Safety Board of Canada pointed out in a letter to

² J.L. Sprung et al., *Re-Examination of Spent Fuel Shipment Risk Estimates, Vol. 1*, NUREG-6672 (SAND2000-0234) (Albuquerque, NM: Sandia National Laboratories, March 2000), p. 6-5.

³ U.S. Defense Nuclear Facilities Safety Board (DNFSB), *Savannah River Site Report for Week Ending April 7, 2000*, available on the World-Wide Web at www.dnfsb.gov.

Transport Canada in 1995, "as recorders certified to the [then-] existing standards failed, the standards were raised to improve the survivability."⁴

The revised black box standards are considerably more stringent than the IAEA Type C standards. First of all, a black box must be able to withstand an entire test sequence, involving impact, penetration, static crush, high or low temperature and fluid immersion, whereas different Type C packages can be used for the impact and thermal tests. Second, the impact test is equivalent to a crash at a speed of 130 m/s into an unyielding surface, about 1.44 times the Type C speed (and 10 times the Type B speed). Third, the thermal tests are much more severe than the Type C test. The high temperature test involves exposure to a temperature of 1100°C (typical of jet fuel fires) for 60 minutes, while the low temperature test involves exposure at 260°C for 10 hours to simulate a smoldering burn.

Given that the black box standards were developed based on experience from actual plane crashes and are far more stringent than Type C standards, AECL's assertion that the TNB-0145/4 would survive a plane crash is entirely incredible. If AECL is so confident on this point, then it should arrange to subject this package to the current black box test sequence and invite the public to observe. A successful test would go a long way toward convincing the public of the safety of the MOX shipment.

Dispersibility of MOX fuel

AECL's characterization of MOX fuel as a virtually indestructible material is not supported by publicly available information.

Its contention that "MOX fuel will not explode, ignite or react with air or water" is a highly misleading statement. While it is true that it will not explode and it would be difficult to ignite, there are accident conditions which certainly could cause it to react with air or water.

Most important of these from an accident perspective are oxidation reactions at relatively low temperatures (from 250-430°C), which can result in significant particulate formation. It has been demonstrated that exposing sintered MOX fuel pellets to a temperature of 430°C in air for 60 minutes resulted in release of nearly 70% of the fuel in the form of particles with diameters less than 25 microns, of which over 6% was observed to be of respirable size (below 10 microns).⁵ An accident involving an impact which breaches the fuel cladding, followed by a relatively low-temperature fire, could cause the package seals to fail, oxygen ingress into the package, and fuel pulverization.

⁴ Letter from M. Poole, Transportation Safety Board of Canada, to M. Sastre, Transport Canada, April 24, 1995; Appendix 2 of the *Report of the Ottawa Meeting of the Dangerous Goods Panel of the International Civil Aviation Organization (ICAO)*, DGP/WG95-DP/2, 24-28 April 1995.

⁵ H. Seehars and D. Hochrainer, "Durchfuehrung von Experimenten zur Unterstuetzung der Annahmen zur Freisetzung von Plutonium bei einem Flugzeugabsturz (Fraunhofer-Institut fuer Toxikologie und Aerosolforschung, March 1982), p. 50-54.

AECL also claims that for MOX fuel, "high energy impact tests do not generate a significant portion of the fuel as a fine powder that could be dispersed in an accident." However, ceramics are brittle materials and will indeed pulverize if subjected to the impacts typical of plane crashes. According to a correlation for uranium fuel used by DOE, an impact at 130 m/s would cause 1.7% of the initial fuel mass to be released in the form of respirable particles, hardly an "insignificant portion."⁶ This corresponds to about 9 grams of plutonium for the Paralex shipment. If the impact were followed by a low-temperature fire as described in the previous paragraph, the production of respirable particles would be considerably greater.

Conclusion

The ERAP should be rejected in its current form. It should be rewritten, taking into account the most recent analyses and experimental evidence regarding the performance of Type B shipping packages and the dispersibility of MOX fuel in air crashes. A realistic worst-case scenario should be explicitly defined, the unmitigated consequences should be modeled, and the impact of proposed emergency planning measures on reducing those consequences should be assessed. Only then will Transport Canada have a basis for assessing whether the ERAP fully and credibly meets its requirement that it address "accidents in which the MOX fuel samples may be released outside of the ... package as a mixture of ceramic pellets and dust."

⁶ J. L. Sprung et al., *Re-Examination of Spent Fuel Risks, Vol. 1*, p. 7-45.

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Theresa McClenaghan, Canadian Environmental Law Association
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Theresa McClenaghan, Canadian Environmental Law Association,

On July 29, 2000, Atomic Energy of Canada Limited applied for approval of an emergency response assistance plan associated with the proposed importation of MOX fuel samples from Russia to Chalk River, Canada.

On August 17, 2000, Transport Canada officials advised Atomic Energy of Canada Limited that an initial review of the proposed emergency response assistance plan indicated that the plan did not sufficiently address response to a scenario in which MOX is released as a powder.

Also on August 17, 2000, Atomic Energy of Canada Limited was provided with the scenario of an accident in which MOX powder was released but contained within an area of radius 100 metres.

An area of radius 100 metres has been identified as this will require control of non-responders, will require control of several responders, will require sufficient survey resources to locate the area, and will demonstrate that the added complications of a larger area can be addressed. None of these features would be present if the assumption was that the powder was located within a few metres of the container.

Atomic Energy of Canada Limited advised Transport Canada on August 24, 2000 that it will submit a revision to its emergency response assistance plan application on or about September 1, 2000.

In recognition of the reply from Atomic Energy of Canada Limited, on August 25 Transport Canada posted an information note on its web page immediately extending the current comment period on the Atomic Energy of Canada Limited application until 14 days following the posting of the revision on the Transport Canada web page.

The direct link to the Transport Canada MOX web page site is
http://www.tc.gc.ca/tdg/en/mox/revision_e.asp (English) or
http://www.tc.gc.ca/tnd/fr/mox/revision_f.asp (French).

MOX Comments Officer
Transport Dangerous Goods Directorate
Transport Canada
9th Floor, Tower C
330 Sparks Street
Ottawa, Ontario
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Transport Dangerous Goods Transport des marchandises dangereuses



0. Expected Revision to the Atomic Energy of Canada Limited proposed emergency response assistance plan

- | | |
|---|--|
| <p>0. Expected Revision</p> <p>1. <u>Proposed Russian air shipment</u></p> <p>2. <u>ERAP submitted by AECL</u></p> <p>3. <u>Evaluation of the ERAP</u></p> <p>4. <u>How to comment on the ERAP</u></p> <p>5. <u>ERAP requirements</u></p> <p>6. <u>Air operator considerations</u></p> <p>7. <u>FAQs</u></p> <p>8. <u>Related web sites</u></p> | <p>On August 17, 2000, Transport Canada provided an interim reply to Atomic Energy of Canada Limited on portions of its emergency response assistance plan for the importation of MOX fuel samples from the Russian Federation to Chalk River, Ontario.</p> <p>Based on the Transport Canada interim reply, Atomic Energy of Canada Limited advised Transport Canada on August 24, 2000 that it will provide a revision to its emergency response assistance plan application on or about September 1, 2000.</p> <p>In recognition of this, Transport Canada is immediately extending the current comment period until 14 days following the posting of this revision to this web page.</p> <p>The initial observations provided by Transport Canada were based on applying the proposed emergency response assistance plan to a very low probability accident involving the release of MOX in powder form. This unlikely accident was chosen in order to test the limits of the emergency response assistance plan.</p> |
|---|--|

Go to Proposed Russian air shipment web site. Related web sites.

This site consists of eight pages. This link (Return to Proposed Russian Air Shipment) will return you to this page.

Feedback



Return to TDG Home Page

Last updated: August 25, 2000

Canada

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me



CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

Mr. John Read
Transport Canada Dangerous Goods Directorate
Transport Canada
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9th Floor
330 Sparks St.
Ottawa, ON
K1A 0N5

August 28, 2000

Dear Mr. Read,

I am writing to thank you for your telephone call of Friday, alerting CELA to Transport Canada's extension of the comment period regarding the proposed shipment of MOX fuel. I would also like to acknowledge Transport Canada for granting the comment period extension, which will permit comment on new material submitted by AECL. CELA will monitor the Transport Canada web site in order to become apprised of the new deadline. However, if it would be possible, we would also appreciate receiving notification, once a date has been set.

Thank you.

Yours truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

Theresa McClenaghan
Counsel

Cc:

Ian Dick, Counsel, Justice Canada
Shan Gaudet, Counsel, Justice Canada
Chris McCormick, Association of Iroquois and Allied Indians
Kristen Ostling, Campaign for Nuclear Phase-out
Gordon Edwards, Canadian Coalition for Nuclear Responsibility

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Lynn Jones, Concerned Citizens of Renfrew County
Larry White, Mohawks of Akwesasne
Kathie Brosemer, Northwatch

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Canadian Environmental Law Association
MEDIA RELEASE
FOR IMMEDIATE RELEASE

August 31, 2000

Legal Challenge Prompts Public Accountability; Consultation Reveals AECL Unable to Confirm Safety of Plutonium Flights

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Toronto. Claiming a partial victory for public accountability, the Canadian Environmental Law Association (CELA) announced today that it has dropped the lawsuit launched on behalf of opponents to the plan to import mixed oxide (MOX) plutonium for use as fuel in Canadian nuclear reactors.

"The Canadian government has now done what we were asking the Court to order them to do, namely, to publicly declare their intentions rather than to operate in secrecy," stated Kathleen Brosemer of Northwatch. "Accordingly, it is not necessary for us to proceed with this litigation."

"We remain deeply offended by the government's actions in January, secretly flying plutonium from the United States over protests rather than facing public concern," said Elizabeth May of the Sierra Club of Canada. "Public scrutiny of plans to fly Russian plutonium into Canada is further revealing the serious hazards of this project," Ms. May said.

On July 28th, Transport Canada's Dangerous Goods Directorate provided the public with 28 days to comment on plans to transport plutonium fuel by airplane from Russia to Canada, and by helicopter within Canada. However, this very brief summer consultation is now being slightly extended (likely to mid-September) to enable further public scrutiny of highly pertinent information required of Atomic Energy of Canada Limited (AECL). "It is evident from Transport Canada's requirement for more information as well as from independent expert review of the Russian plutonium flight proposal that AECL has not adequately addressed the risks of air transport," said Dr. Gordon Edwards of the Canadian Coalition for Nuclear Responsibility.

"If we had not initiated our lawsuit, there would not have been a public review of these flawed plans. Greater scrutiny is also apparent within Transport Canada. Rather than accepting AECL's line that an accident is impossible, Transport Canada is insisting that AECL address the very real possibility of an accident releasing plutonium powder into the environment," Dr. Edwards said.

According to a detailed review of the Russian proposal by the Nuclear

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Control Institute (NCI) in Washington, D.C., "The flaws in the ERAP are extremely damaging to the AECL's credibility with regard to its ability to safely oversee this shipment."

The NCI review reveals that, incredibly, the plutonium containers proposed for use by AECL do not even meet "black box" standards from the 1970s. Current "black box" standards are far more stringent precisely in response to their previous inability to prevent damage resulting from an air accident. "Without the public review process prompted by our litigation, Transport Canada might never have received this kind of independent review of AECL's lack of safety planning," said Theresa McClenaghan, counsel with CELA.

"Public input on these transportation plans is important," said Kristin Ostling of the Campaign for Nuclear Phaseout. "Since Ottawa has chosen not to allow any public hearings on the fundamental acceptability of plutonium imports, it is only through public comments on the transportation plans that federal decision makers can learn about Canadians' concerns and opinions."

"Canadians can use the comment period to raise their concerns with decision-makers at all levels. The Chretien government must be held accountable not only on the transportation hazards and emergency plans, but also the larger ramifications associated with the whole idea of Canada getting involved in the plutonium business" Ms. Ostling stated. "Starting a global trade in deadly plutonium erodes Canada's reputation both as a peace-maker and as an environmentally concerned nation state," added Ms. May.

Applicants in the lawsuit included the Association of Iroquois and Allied Indians, the Canadian Coalition for Nuclear Responsibility, the Concerned Citizens of Renfrew County, the Mohawks of Akwesasne, Northwatch, and the Sierra Club of Canada.

More information about the project can be obtained from the Transport Canada website at www.tc.gc.ca/tdg/en/mox/contact_mox.htm , including the address to which comments should be sent. See also the websites of the Canadian Coalition for Nuclear Responsibility www.ccnr.org, and the Campaign for Nuclear Phaseout, www.cnp.ca.

[Campaign for Nuclear Phaseout Action Alert on Weapons Plutonium Fuel](#)

[Comments By Dr. Edwin Lyman, Nuclear Control Institute, Washington, D.C., on the "Emergency Response Assistance Plan" For the MOX Fuel Shipment from Moscow to Chalk River \(pdf file\)](#)

For more information, please contact:

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CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

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VIA FAX: (613) 993-5925

September 12, 2000

Dear Mr. Read,

I am writing on behalf of Campaign for Nuclear Phaseout and other clients with regard to the proposed air transport of MOX fuel from Russia to Chalk River, Ontario.

We write to request a further extension to the public comment period. The reasons for this request follow:

1. The Revision posted on September 1, 2000 is essentially a new ERAP and therefore should have a minimum 28 day comment period as previously accorded, at the least. Furthermore, the new ERAP contains much new content which is of significant public interest. However, for additional reasons that follow, we submit that 28 days will still be insufficient.
2. We also seek additional information, set out in the next part of this letter, and it will presumably take a moderate amount of time for this information to be provided to us.

In addition to, and in partial reason for the request for the extension, my clients also have the following information requests of Transport Canada:

1. Can you advise if Transport Canada has any independent sources of information and expertise to assess and critique AECL's proposed clean-up plan?
2. Could you please provide to us copies of all correspondence and documentation exchanged between AECL and Transport Canada with respect to the plan to fly MOX fuel, including any accident scenarios and any discussions as to clean up plans? We note that it is expected that AECL itself would determine the extent of any subsequent clean up and only AFTER an accident occurred. These are unacceptable conflicts of interest and in addition, it is impossible to assess the adequacy of the emergency response without advance determination of the ultimate clean up requirements. Early response could be critical to the success of the ultimate clean up and avoidance of unnecessary health and environmental hazard and harm.
3. In furtherance to the above mentioned point we request that an independent body be required to set the ultimate clean up standard in advance of approval of the ERAP. Also, AECL should be required to advise in the ERAP of how their emergency response actions will be affected by that ultimate clean up standard. Furthermore, we seek public input into the standard thus to be established.
4. With respect to the requirement of AECL to advise as to their plans to deal with a 100 metre plutonium dispersal area in the event of an accident, we note that the previous ERAP described the four categories considered in the U.S. transportation plan and considered the possibility that there could be downwind contamination for a distance of 80 kilometres. Therefore, on that basis, a 100 metre distance is difficult to justify, and we would ask for consideration of how AECL would embark on an initial response and cleanup in case of an 80 kilometre dispersal.
5. We would also ask you to seek additional information from AECL as to how they would deal with contaminated casualties, especially for transport and hospital treatment? What assurances are there that such facilities would be available and how would contamination of those facilities be avoided? Furthermore, we note that only AECL personnel are mentioned in terms of protective gear. What provisions have been made with respect to other non-AECL emergency responders, such as local fire fighters, police and medical personnel?

We look forward to your response. Thank you.

Yours truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

Theresa McClenaghan
Counsel

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Cc:

Chris McCormick, Association of Iroquois and Allied Indians

Kristen Ostling, Campaign for Nuclear Phaseout

Gordon Edwards, Canadian Coalition for Nuclear Responsibility

Lynn Jones, Concerned Citizens of Renfrew County

Larry White, Mohawks of Akwesasne

Kathie Brosemer, Northwatch

Andrew Chisholm, Sierra Club of Canada

Paul Bates, Counsel, Lerner & Associates

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Canadian Coalition for
Nuclear Responsibility
Regroupement pour la
surveillance du nucléaire



Sierra
Club of Canada



NEWS RELEASE

For Release Thursday, September 14, 2000

GROUPS FIND SERIOUS DEFICIENCIES IN NEWLY REVISED PLAN FOR DEALING WITH PLUTONIUM SPILL SEEK EXTENDED PUBLIC COMMENT PERIOD

Ottawa - September 14, 2000: A coalition of environmental groups has identified a number of serious deficiencies in Atomic Energy of Canada Limited's (AECL) latest emergency plan for the air transport of plutonium fuel from Russia. Accordingly, the groups are asking Transport Canada to extend the deadline for public comment until mid-October to allow these serious flaws to be adequately addressed by the public as well as independent experts.

On August 17, 2000, Transport Canada notified AECL that review of its emergency plan could not go forward because it did not deal with the issue of an accident involving the release of plutonium fuel powder. On September 1, AECL responded by submitting a revised emergency plan which describes, for the first time, the measures to be taken in the event of plutonium-fuel powder escaping into the environment. Accordingly, Transport Canada has extended the deadline for public comment from August 25 to September 15, 2000.

Expert testimony from Dr. Edwin Lyman of the Washington-based Nuclear Control Institute has confirmed accidental release of plutonium-fuel powder is indeed possible. It is known that the container chosen by AECL can be destroyed by a severe impact, such as that caused by an aircraft accident. The ceramic fuel pellets would be partially pulverized by such an impact, and can become almost completely pulverized by exposure to fire in the presence of oxygen for as little as 30 minutes.

Elizabeth May of the Sierra Club of Canada noted that "AECL's new emergency plan raises more questions than it answers. Canadians have a right to know prior to allowing this hare-brained scheme to go forward, what the risks are to our health and the environment." Specific concerns raised by the Sierra Club of Canada include : what level of remediation and clean-up will be required? Would AECL be required to recover 100% of spilled plutonium? or only 80%? or perhaps as little as 20%?

The revised AECL plan acknowledges that emergency response teams would require full face respirators and special protective clothing in the event of an accident. Previously AECL has downplayed concerns about possible accidents involving MOX fuel in the media, saying that a piece of paper could block radioactive emissions if there were an accident. (See for example, The Montreal Gazette, March 23, 1999, p. A11, "Even if an accident happened en route, [AECL spokesperson, Larry Sewchuck] said, 'all you'd need to block the radioactivity from hitting you would be a single piece of paper.'" See also: the Calgary Herald, April 27, 1999, p. A9)

Dr. Gordon Edwards, president of the Canadian Coalition for Nuclear Responsibility, said: "Full-face respirators, plastic body suits and double rubber gloves for AECL personnel are for the first time described as mandatory, but there is no training program outlined for teaching fire-fighters, medical personnel, and other emergency responders how to use this kind of equipment. Nor is there any indication of how to prevent the inadvertent spread of plutonium contamination during the disrobing operation."

According to Patrick Rasmussen of the Mouvement Vert Mauricie, "The new emergency plan envisages the possibility that plutonium-contaminated casualties might be transferred to hospital before the arrival of AECL's RAT (Radiological Assessment Team), but there is no consideration of measures to prevent plutonium contamination of the transport vehicles, emergency rooms or medical personnel who would be called on to deal with these casualties. Nor is there any training described for nurses, doctors and paramedics to prepare them to deal with plutonium-contaminated casualties," he adds.

Theresa McClenaghan of the Canadian Environmental Law Association states that, "The adequacy of emergency response in issues such as transportation and medical treatment of radioactively contaminated casualties is a major concern. In a 1993 trial concerning the Nuclear Liability Act, we had evidence from Ontario medical officers of health that these capabilities were completely absent. Very little has changed since then in Ontario and we have no reason to think the situation is better elsewhere in Canada."

Kristen Ostling, National Coordinator of the Campaign for Nuclear Phaseout, stated that "The serious flaws in AECL's plans confirm our position that the Chrétien government should call for an immediate halt to the plutonium import project."

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[Click here to download Letter from CELA to Transport Canada requesting extension and pointing out deficiencies in AECL's ERAP \(in Acrobat PDF format, 109 K\).](#)

For further information:

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Canadian Coalition for Nuclear Responsibility, 514-489-5118 (www.ccnr.org)
Canadian Environmental Law Association 416-960-2284 (www.cela.ca)
Campaign for Nuclear Phaseout, 613-789-3634 (www.cnp.ca)

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Campaign for Nuclear Phaseout

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FACSIMILIE TRANSMITTAL FORM / BORDEREAU DE TRANSMISSION POUR TELECOPIEUR

TO/A: Theresa McClenaghan
CELA
Fax: (416)960-9392

FROM/DE: John Read
Transport Canada
Transport Dangerous Goods Directorate

DATE: September 14, 2000

SUBJECT: Importation of MOX

Please see attached

Thank you

2 pages to follow



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Your File - Notre référence

Our File - Votre référence

September 14, 2000

Theresa McClenaghan
Counsel
Canadian Environment Law Association
517 College Street, Suite 401
Toronto, Ontario
M6G 4A2
Fax: (416)960-9392

Dear Ms McClenaghan,

I have received your fax of September 12, 2000 regarding the proposed importation of MOX fuel from Russia to Chalk River.

1. Revision 1 which was posted on September 1 is an extension of Revision 0 which was posted on July 29, 2000. I cannot agree that it is "essentially a new ERAP". As was earlier advised, the comment period will close at midnight on September 15.
2. As a general reply to your next series of questions, clean-up is not required within the scope of an emergency response assistance plan.

The goal of emergency response is to arrive as rapidly as possible at a stable state in which there is no longer an immediate threat to public safety. Unlike clean-up, this is normally done without attention being paid to cause or fault.

A fire department works to extinguish a fire and to ensure no immediate threat remains. The fire department does not clean up the site of the fire. Similarly, an emergency response assistance plan operates to remove any immediate threat to public safety but does not address clean-up and restitution of an accident site. This is the manner in which

emergency response assistance plans have operated for years in respect of, for example, truck accidents and train derailments.

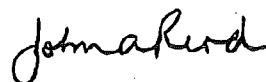
In response to your second series of questions:

1. Clean-up is not within the scope of an emergency response assistance plan.
2. Clean-up is not within the scope of an emergency response assistance plan.
3. Clean-up in this context is not within the legislative authority of Transport Canada.
4. The Atomic Energy of Canada Limited was advised on August 17, 2000 that a contaminated site of radius at least 100 metres would be assumed during the evaluation of the emergency response assistance plan application. Planning for this larger size would include addressing registration and control of non-responders, control of additional responders and being prepared to obtain additional equipment such as sufficient survey resources to locate the site.

An assumed contaminated site of radius at least 100 metres is sufficient to demonstrate that the added complications of a larger area can be handled.

5. Included in the review of the Atomic Energy of Canada Limited's proposed emergency response assistance plan is a site visit to the Chalk River facility to verify the existence of specific equipment and procedures (e.g., call out procedures and dealing with contaminated persons). Included would be further discussion on their intended operation of the restricted zone (see emergency response assistance plan application). With respect to protective clothing, Atomic Energy of Canada Limited also addresses this in the context of the operation of the restricted zone.

Yours truly



John A. Read
Director General
Dangerous Goods Directorate

