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CITIZENS ENVIRONMENT ALLIANCE
of southwestern Ontario

Marc Leblanc
Commission Secretary
Canadian Nuclear Safety Commission
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Via email: Interventions@cnsc-ccsn.gc.ca

November 10, 2008

Re: Comments on the Environmental Assessment of the proposed life-extension of the Pickering B

Dear Members of the Commission,

I am writing to state my opposition to the life-extension of the Pickering B nuclear station.

Just 30 km from downtown Toronto, the Pickering nuclear station is closer than any other nuclear reactor in the world to a major population centre. For this reason, the Canadian Nuclear Safety Nuclear Commission (CNSC) would not allow a new plant to be built at Pickering today.

The environmental review on the proposed life-extension of Pickering B nuclear station systematically excludes and misrepresents the significant environmental impacts resulting from the continued operation of the Pickering nuclear station. For this reason, I feel the environmental review must be rejected.

The following summarizes my primary concerns:

Radioactive Waste:

There is approximately 20,000 tonnes of high-level radioactive waste stored at the Pickering nuclear station. Extending the life of the Pickering B nuclear station will create approximately 10,000 additional tones. These radioactive wastes must be isolated from the environment and humans for a million years. Although the nuclear industry-controlled Nuclear Waste Management Agency is searching for a community, including communities from southwestern Ontario, willing to house these wastes, there is no guarantee such a community will ever be found.

Recommendation: The CNSC should not approve the life-extension of Pickering B before a long-term plan for the management of the radioactive wastes produced by Pickering is established.

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Terrorism:

The Pickering nuclear station was not designed to withstand terrorist attacks. In the post September 11th world, the Pickering B reactor design would not be approved because of its vulnerabilities to terrorist attacks. Pickering B's multi-unit design and shared systems make it particularly vulnerable to catastrophic accidents in the event of a terrorist attack.

Although the design of new nuclear stations in Canada will be required to be robust enough to resist certain terrorist attacks, the CNSC has allowed existing nuclear stations to forgo expensive design changes to adapt to the post September-11th reality. Furthermore, while requiring environmental reviews on new reactor designs assess the environmental impacts of terrorist attacks, the CNSC has specifically excluded such an analysis from the present environmental review. The current environmental assessment, therefore, is inadequate.

Recommendation: All environmental assessments on the proposed life-extension of ageing nuclear stations, including the present review, should include a review of the environmental impacts of potential terrorist events.

Recommendation: Given the design vulnerabilities of the Pickering B station, the life extension of the station should not be approved.

Recommendation: Existing radioactive waste storage facilities should be made resistant to terrorist attack.

Accidents and Evacuation:

The environmental assessment identifies a nuclear accident involving the release of radiation and triggering evacuations or sheltering in a 10 km area around Pickering B as 'credible'. That is, according to the CNSC's own guidelines this accident has a reasonable probability of occurring. Such an accident would cause chaos across Toronto. The siting of a nuclear station so close to such a dense population centre poses an unacceptable risk to the City of Toronto.

Recommendation: The CNSC should not approve the life-extension of the Pickering B nuclear station. The station should be shut down at the end of its operational life in 2014.

Slightly Enriched Uranium:

The CANDU design shares an inherent design flaw with the Chernobyl RBMK reactor design that significantly weakens its ability to control and cool the nuclear reaction in accident situations. Specifically, the reactor core design of both the CANDU and Chernobyl reactors exhibit "positive reactivity"; that is, the reactor power has a tendency to increase, potentially in an explosive pulse.

Because of the inherent hazard of positive reactivity of CANDU reactors, Ontario's nuclear stations would be deemed too hazardous to licence under modern safety requirements.

Bruce Power is currently proposing to change from natural uranium fuel to slightly enriched uranium, otherwise known as Low Void Reactivity Fuel (LVRF), to mitigate the hazards of positive reactivity. The use of enriched uranium, however, presents new environmental hazards in the nuclear fuel chain in Canada, such as out of reactor criticality.

The environmental assessment on the life-extension of Pickering B has not addressed the possibility of using enriched uranium to mitigate the hazards of positive reactivity. The current assessment is, therefore, inadequate, pending a review of the environmental impacts of using of slightly enriched uranium

Recommendation: Given that modern licensing requirements would not permit the licensing of reactors with positive reactivity, the CNSC should not approve the life-extension of Pickering B.

In conclusion, the CNSC would not allow a new plant to be built at Pickering today. What's more, Pickering's design flaws would deem it too dangerous to build today. I believe, then, that the CNSC has a duty to order the shut down of Pickering B when it reaches the end of its operational life in 2014.

Thank you for this opportunity to comment on the environmental assessment of the proposed life-extension of the Pickering B nuclear station.

Sincerely,

Derek Coronado
Research and Policy Coordinator,
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