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Written Submission from

Michael Liska

In the Matter of

Ontario Power Generation Inc.

Proposed Environmental Impact Statement for OPG's Deep Geological Repository (DGR) Project for Low and Intermediate Level Waste

Joint Review Panel

September 16 to October 12, 2013

Mémoire de

Michael Liska

À l'égard de

Ontario Power Generation Inc.

Étude proposée pour l'énoncé des incidences environnementales pour l'Installation de stockage de déchets radioactifs à faible et moyenne activité dans des couches géologiques profondes

Commission d'examen conjoint

16 septembre au 12 octobre 2013

Canada

Written Submission in Support of OPG's Deep Geologic Repository (DGR) Project

Michael A. Liska, P. Eng.
9 August 2013

To the DGR Joint Review Panel,

Prior to my previous career in personal financial planning I worked in the nuclear industry for 27 years in various capacities including:

- designing reactors at Atomic Energy of Canada Ltd.,
- providing reactor design and licensing support at Ontario Power Generation,
- providing nuclear safety and licensing support at the Bruce Nuclear Power Development,
- managing lifecycle maintenance programs for critical reactor components at Bruce Power, and
- managing a project to commission and implement a new fuel bundle design for the Bruce reactors.

My new profession as a personal financial planner serving many people from various backgrounds and working in a variety of industries has allowed me the rare opportunity to have experienced the nuclear industry from both the inside and now the outside. Similar to my observation regarding the complex and highly regulated financial industry, one critical observation that I have is that for most people it is a significant challenge to understand the technical jargon and complexities associated with the nuclear industry. Too often the debate over details detracts from the overall benefits and objectives to be accomplished. For this reason I wish to provide a few comments to provide focus on some key areas of the Ontario Power Generation's Deep Geologic Repository (OPG-DGR).

Project Justification

> It is a necessary and unavoidable outcome as a consequence of maintaining the safe operation of nuclear reactors, which are a critical and essential part of the province's electricity supply, that clothing, tooling, and other service items will become somewhat radioactively contaminated. While programs are in place to minimize the amount of contamination at the outset, and remove or reduce residual contamination where possible it is impossible to completely eliminate contamination altogether. Thus, there is a fundamental need to store contaminated items in a controlled way until the radioactivity decays to more desirable levels.
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> OPG has demonstrated for decades that these contaminated items can be stored safely in a controlled way above ground under their managed program. In my 14 years working on the Bruce nuclear site I don't ever recall an incident regarding low and intermediate radioactive waste management that would have caused me to question my own health and safety while I was working there.
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> Real estate on the nuclear site is limited and must be used effectively to manage everyday operations. Moving the storage of contaminated waste below ground therefore is a useful alternative that allows for additional low-level contaminated waste from the continued operation of the nuclear plants in Ontario to be processed and stored above ground.

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Effects prediction, mitigating measures And Significance of Residual Effects

When someone hears about some event it is a normal response for that person to try to understand what the event means to them by relating it to their previous experiences. Often, though, those experiences may be rare and associated with news media coverage of a catastrophic or significant adverse event. Consequently, when some people hear the words "nuclear" or "radioactivity" the brain immediately associates the words with the widely publicized devastation of Hiroshima and Nagasaki, or the meltdown of one of the reactors at Three Mile Island, the explosion at Chernobyl, or the recent destruction of the Fukushima nuclear plant.

However, the level of intensity and risk associated with radioactivity and contamination varies across a very large range. While the risk associated with even small levels of radioactivity should never be ignored the level of risk concerning the DGR is at the extremely low end of a very large scale.

For more than half a century now various industries handling radioactive items, including the medical industry, have demonstrated the ability to effectively protect workers and members of the public by mitigating the effects of radiation through the use of one or more of the following:

- the use of various shielding materials to contain the radioactivity,
- maintaining an adequate distance from the radioactive source,
- allowing the radioactive source to decay over time.

OPG has employed the use of ALL of these mitigating measures in the DGR.

At the risk of oversimplifying the issue, radiation exposure from the DGR may be viewed as something like this. Imagine that you wanted to go sunbathing. But instead of going to the equator where the sun is hottest you travel to the top of the earth where you are further away from the sun (e.g. the Arctic). You wait until the setting sun is just above the horizon and then lay in the shadow of a brick wall. What would be the likelihood of getting a sunburn?

No doubt there will be many "what-if" scenarios to consider. There may be the usual debate where proponents state that adequate mitigating measures have been taken such that high consequence events are of low probability while opponents argue that low probability events are still possible and that project designers are not infallible or all-knowing. These arguments, however, are usually based on fear or a lack of trust suspecting the project owner will either allow an adverse event to occur or fail to mitigate its consequences adequately. This leads me to my next comment.

Responsible Nuclear Program

The success of a nuclear program or project can be adversely affected by many factors such as the attitudes and behaviors of senior company officials, money issues, design challenges, a change in political party and energy policy, and other factors. However, the one thing that I have experienced in working for several different nuclear companies is a high caliber professional

staff working passionately to ensure the safe operation of nuclear facilities. These people are dedicated to ensuring any of the nuclear facilities are designed and operated safely thereby ensuring their own health and safety, the health and safety of fellow workers, their families, and the public. As I stated previously in my 14 years working on the Bruce site I don't ever recall an incident regarding low and intermediate radioactive waste causing me to question my own safety at the plant. Over the last decade or more OPG managers and staff have worked very hard at improving the level of safety at the nuclear plants as reviewed against strict criteria set by the World Association of Nuclear Operators (WANO) and have substantially improved their rating. To be recognized worldwide as having the ability to safely manage the tremendous energy contained within the nuclear reactors gives me great confidence that OPG can safely manage the DGR. Or, returning to my analogy, I'm not too worried about getting a ”sunburn" when I know they are safely controlling the power of the "sun".

And lastly, I would like to say that OPG has done a great job for the past several years reaching out to the local communities, educating them about the project and soliciting input. I have personally witnessed for the past three years a team of dedicated individuals who have manned the DGR display at the Kincardine Home and Garden Show answering whatever questions visitors may ask and engaging visitors in informative discussions. There has been a sufficiently long period of opportunity for anyone wanting to provide input to have done so. While there still may be the need to respond to some questions in a formal way this step in the process should not prevent the project from moving forward as these questions and comments can be answered in parallel with the implementation stage which will take several years.

Summary and Conclusion

In summary, OPG has demonstrated the need for the DGR to support continued operation of the nuclear power program in Ontario. OPG has demonstrated the safe operation of nuclear power plants in Ontario and is qualified to operate the DGR safely. Not only has OPG announced the DGR project and requested input from the public but OPG has actively reached out to the public, engaged the public in discussion, and requested input over many years in various ways.

I endorse CNSC approval for OPG to move forward with the DGR project.

Sincerely,

Michael Liska, P.Eng.