Deep Geologic Repository for Low and Intermediate Waste – CELA's Commissioned Reports

Canadian Environmental Law Association
Theresa McClenaghan
Richard Lindgren
Ramani Nadarajah
Joseph Castrilli

May 28-30, 2013
CNSC Hearing – Pickering Life Extension Licence
Theresa McClenaghan, Executive Director & Counsel

Presentation to Joint Review Panel
September – October 2013

Canadian Environmental Law Association
EQUITY. JUSTICE. HEALTH.

About CELA

- CELA was federally incorporated in 1970 as a not for profit organization dedicated to using and improving laws to protect the environment
- CELA is also an Ontario Legal Aid clinic with a mandate for client representation, advice, law reform, public legal education and community outreach
- Our priorities presently focus on environmental equity, environmental health, safe and sustainable energy, safe and sustainable water, community planning and sustainability and local to global issues.

Context for CELA's submission to the Joint Panel Review

- CELA's focus in this presentation is on two reports commissioned by CELA with the assistance of the Intervenor Funding Program:
  - A) Whether the Environmental Assessment has complied with the CEAA and the EIS Guidelines and
  - B) A review of the adequacy of the hydrogeology review conducted for the Environmental Assessment

PART A: EA Report of Robert Gibson, Kyrke Gaudreau, Tanya Markvart

- Objective of Report by Gibson, Markvart and Gaudreau was to review the methodology and demonstration of evidence of compliance with the requirements of the Canadian Environmental Assessment Act and with standard Environmental Assessment methodology
- Report authors reviewed EIS documentation, Joint Review Panel Agreement, JRP Terms of Reference, and EIS Guidelines, prepared information requests which were submitted to the Panel on behalf of CELA, reviewed responses, responded to the sufficiency notice, and prepared and submitted a report prior to the Panel`s deadline in August, 2013

Summary of Gibson et al report findings

- The authors' main conclusions were that:
  - OPG and the EA have not met the requirements of the JRP Agreement, Terms of Reference for the Review and EIS Guidelines
  - In light of the deficiencies identified in their report, OPG has not satisfied the relevant provisions of CEAA.
  - These conclusions are described in more detail below

Justification for the Project

- Justification for the project was not established.
- OPG must establish the fundamental rationale for the proposed project based on a demonstration (the scope of which must be determined by the EIS Guidelines) that the proposed DGR is the most appropriate option, among a range of options (including “alternatives to” and “alternative means”), to solve/satisfy the problem/opportunity.

Consideration of alternative locations for the DGR:

- OPG`s preference for the Bruce site rests primarily on its `willing host` criterion; there was no consideration of alternative sites beyond a conceptual level
- OPG must provide additional information about the suitability of the Bruce site relative to other sites in order to present a sound rationale for the proposed DGR project. In particular, OPG must provide detailed information on alternative sites with different geological attributes.

Contributions to sustainability of the alternative means

- The alternative means analysis did not extend to the matters addressed in the Gibson et al report as described below in Sections 7 (Effects Prediction, Mitigation Measures and Significance of Residual Effects), 8 (Malfunctions, Accidents and Malevolent Acts), and 9 (Long-Term Safety of the DGR).
- OPG must clearly demonstrate how it incorporated throughout the EIS consideration of the relative contributions to sustainability of the alternative means. This analysis must extend around the matters addressed in Sections 7 (Effects Prediction, Mitigation Measures and Significance of Residual Final Report to the Joint Review Panel, prepared by CELA 58 Effects), 8 (Malfunctions, Accidents and Malevolent Acts), and 9 (Long-Term Safety of the DGR).

Cumulative effects: determination of ‘significance’ of effects:

- OPG’s approach to cumulative effects assessment only considered effects that were significant at the individual level, as opposed to potentially significant at the cumulative level and did not demonstrate a methodology beyond its team`s `professional judgment``
- OPG must provide an adequate explanation of the methods and definitions used to describe the level of adverse effects. OPG must describe the professional qualifications of the members of the project team in order to demonstrate that their professional judgment is sufficient and provide details on the process used to come to a consensus among professionals involved in the evaluation of significance.

Consideration of synergistic and interactive cumulative effects:

- OPG provides only a simple and incomplete approach to adding up the effects on various VECs, and does not provide any mention of how more complex effects (e.g. synergistic, interactive) were considered, or whether they were even considered at all. This misses the intent of CEA - that the accumulation of ‘trivial’ impacts may ultimately lead to significant effects. OPG treats indirect effects and synergistic effects as synonymous, which is a basic error.
- OPG must describe in detail the conceptual model used for the assessment of cumulative effects, including the screening arguments used to eliminate synergistic effects from further analysis. Further, OPG must provide the screening arguments used to eliminate interactions among VEC and multiple stressors.

Ensuring the VECs reflect the integrity of the broader ecosystem:

- Missing or lacking: how the overall integrity and resilience of the ecosystem will be maintained, including how ecosystem level thresholds will be identified and related effects managed; how the individual monitoring efforts will be sufficient to describe the integrity and resilience of the local ecosystem over the long term and description of what management actions will be undertaken if there are adverse effects on the VECs.
- OPG must adequately describe how the use of individual thresholds for each VEC can be confidently used to assess cumulative effects to local and regional terrestrial and aquatic ecosystems. OPG must further explain how the overall integrity and resilience of the local ecosystem is adequately represented by the selected VECs and how the monitoring and cumulative effects assessment may ensure that thresholds are not crossed.

Relevance of cumulative effects assessment for assessing ‘alternatives to’ and ‘alternative means’:

- OPG’s analysis and decision making concerning its choice among alternatives to or alternative means and identification of the preferred alternative was not informed by attention to cumulative effects. Instead, OPG started with its preferred option, concluded that it would not have significant adverse effects, and decided that a careful examination of alternatives was not needed.
- OPG must provide an adequate explanation of how the cumulative effects assessment informed the evaluation of alternative means of carrying out the Project, as well as the selection of the preferred alternative.

Other concerns relating to cumulative effects assessment

- OPG's CEA did not include any discussion of the potential long-term storage of high level nuclear wastes. OPG has argued extensively in the EIS that Kincardine and the surrounding area are an informed and willing host community for LILW. Given that there is no reason provided for why Kincardine would not be willing to accept Canada's high level nuclear waste, that nearby communities have formally expressed some initial level of willingness to accept nuclear waste, and that the fuel is already being stored at the Western Used Fuel Dry Storage Facility located on the Bruce site, it would be imprudent for OPG to neglect the possibility of this site for future fuel storage in a cumulative effects assessment.
- OPG's cumulative effects assessment must provide sufficient detail on the cumulative effects of transporting hazardous wastes to the proposed site for the DGR. Furthermore, it must include a detailed discussion of the potential cumulative effects of long-term storage of high level nuclear wastes.

Care in perpetuity: ensuring resources for long-term monitoring and response

- OPG must ensure that the cost of all phases of the project (including 300+ years of passive monitoring) are not borne by future generations who are not responsible for, or beneficiaries of, generation of the nuclear waste. The costs calculations outlined in the EIS and the IAS do not sufficiently address the cost of care in perpetuity. The IAS costing provided in section 2.6.4 of the IAS does not extend beyond the decommissioning phase of the DGR. At this point, it is unclear how OPG updated the cost calculations from the original IAS to ensure that sufficient capacity will be available for long-term monitoring and response, and to ensure that the cost of this capacity will not be borne by future generations.
- OPG must provide an adequate rationale for the 300-year timeframe for passive monitoring, given the long time-frame of the project.

Care in perpetuity: ensuring proper requirements for abandonment and passive control

- OPG states “at this time there are no specific plans [for passive control]. Control mechanisms aren’t required for another 50 to 100 years. At that time, it is expected several countries will be in the same position, and that a solution will be developed with international consensus.” This appears to displace the risk of passive control onto future generations. Sustainability and equity considerations demand that OPG does not place burdens on future generations resulting for current actions. Furthermore, placing faith in future technological achievements appears a risky gambit, in part because of the uncertain future of nuclear power in the world.
- OPG must provide an adequate explanation of how OPG’s plans for operating the DGR anticipate requirements for future passive control. Include reference to adaptive management plans and processes. Describe OPG’s reasonably anticipated range of possible requirements for abandonment.

Care in perpetuity: drawing from international experience:

- OPG notes that the DGR project introduces a new type of facility that is unique to North America and to counter the concerns related to the uniqueness of the undertaking, mentions considerable international experience with all three options (enhanced processing and storage, surface concrete vaults, and deep rock vaults) for the long-term storage of LILW. But OPG has not provided sufficient detail to indicate what insights have been gained, what uncertainties remain, and how the successes and failures experienced should influence decision making regarding the proposed DGR.

Care in perpetuity – drawing from international experience, cont`d

- OPG must provide an adequate description of the ‘considerable international experience’ of other DGR projects in order to establish how the success and failure of other DGR-type projects can inform the proposed DGR. Furthermore, OPG must explain how its technologies and mitigation and management methods have been proven. It must define the criteria used to determine whether a technology or method is “proven”, and explain whether these “proven” technologies relate only to LLW, or also include ILW.

Ensuring positive socioeconomic outcomes: boom and bust dynamics

- Given the concerns about economic boom and bust noted by stakeholders, and the potential for significant changes to employment with regards to other nuclear and non-nuclear related activities, OPG must consider boom and bust at the cumulative effects level, and describe how it may act differently in light of the cumulative level assessment on boom and bust. To date, however, OPG has not addressed the fluctuations in employment opportunities, and the impacts on workers and their families.
- OPG must explain why economic boom and bust socioeconomic effects were not considered at the level of cumulative effects assessment. The explanation must consider fluctuations in employment opportunities and the impacts on workers and their families.

Ensuring positive socio-economic outcomes: socio-economic monitoring and follow-up:

- OPG has not outlined a sufficiently robust program for tracking and responding to socioeconomic dynamics in its follow-up program. In particular, the lack of baseline data and OPG's reliance on public attitude research render the program incapable of detecting such important socioeconomic impacts as boom and bust effects, as well as other effects on tourism and cottaging sectors. Ensuring adequate follow up monitoring and response is essential for tracking the actual effects of the DGR project on the relevant socioeconomic as well as biophysical systems, and for preparing suitable responses to identified problems and emerging opportunities.
- OPG must provide an adequate description of how OPG will ensure that its follow-up program will be sufficiently comprehensive to adequately characterize the socioeconomic system beyond the 2009 baseline. Provide additional rationale with respect to the effects of the DGR on the tourism and cottaging sectors due to the location of the DGR being near Lake Huron.

Consideration of the precautionary principle:

- OPG has failed to consider the precautionary principle throughout decision making. Specifically, OPG has not described how the alternatives to the proposed DGR and the alternative means of carrying out the project were evaluated and compared in light of risk avoidance, adaptive management capacity, and preparation for surprise. The JRP must ensure that OPG has explicitly adopted and applied these three generic criteria (by themselves or as components of a more comprehensive set of criteria for comparative evaluation) throughout the basic stages of planning and decision making. The DGR project cannot be identified as the preferred option until this has been done.

Consideration of the Precautionary Principle cont`d

- OPG must describe how the alternatives to the proposed DGR project and the alternative means of carrying out the project were evaluated and compared in light of risk avoidance, adaptive management capacity, and preparation for surprise. OPG must define these three criteria; describe how the three criteria were applied (by themselves or as components of a more comprehensive set of criteria for comparative evaluation) as a framework for evaluating and comparing the alternatives to and the alternative means, considering a range of plausible scenarios including accidents, malfunctions and malevolent acts; describe how each alternative performs in relation to the three criteria, considering a range of plausible scenarios including accidents, malfunctions and malevolent acts; and describe why the DGR was selected as the preferred option, giving explicit attention to the three criteria.

Part B: Hydrogeology review

- CELA retained Prof. Chris Smart and Hydrogeologist Wilf Ruland to undertake a review of hydrogeology issues regarding the proposed DGR
- Document review, site tour, participation in the preparation of information requests submitted to the Panel on behalf of CELA, and review of responses was undertaken for the purposes of preparing the report

Process Issues

- The Information Request (IR) process has been dysfunctional, and was a major impediment to obtaining the necessary information to properly review and understand the DGR proposal.
- New documents were still being submitted on behalf of the proponent a couple of weeks before the August 13, 2013 deadline by which intervenors were required to submit their final reports. There was not adequate time to thoroughly review and understand these new documents.

Recommendation re Process Issues

- The Joint Review Panel should take the deficiencies in the environmental assessment process into account in its review and assessment of the viability of the DGR project. Furthermore, future Panels should take the deficiencies in the environmental assessment process into account and take all necessary steps to ensure that these do not occur in any new environmental assessment process under the Canadian Environmental Assessment Act.

Concerns about the Site Characterization

- Ruland`s hydrogeology report states that although the site is potentially suitable from a hydrogeological perspective there are a number of issues which could and should have been investigated or explained more thoroughly in the EIS documentation in order to provide further assurance about its viability.

The issues requiring further investigation/explanation

- the high hydraulic heads in the Cambrian sandstone, and the lack of information about hydraulic heads in underlying Precambrian basement;
- information on deep oil/gas exploration boreholes;
- permeability of the Silurian “barrier” formations;
- the existing groundwater and surface water quality in the vicinity of the DGR site (in particular the elevated tritium levels and the reasons for these).

Recommendations re Information on Hydraulic Conditions in the Cambrian Sandstone and the Underlying Precambrian Basement

- The proponent should provide information on the shut-in pressure, hydraulic conductivity and the water quality at the Precambrian unconformity.
- The proponent should provide a discussion of whether the proposed excavation depth of 746 mbgs is needed for the ventilation shaft, given the overpressured high hydraulic conductivity and overpressured high hydraulic head Cambrian sandstones which underlie the DGR site.

Recommendations re Information on Deep Oil/Gas Exploration Boreholes

- The proponent should provide a full description of the measures taken to secure each of the 11 deep “abandoned” wells within 40 km of the DGR site.
- The worst-case scenario of undocumented oil exploration wells being present in the area of the proposed DGR should be considered and explicitly addressed by the proponent.

Recommendations re Permeability of the Silurian “Barrier” Formations

- Further work on the DGR project should be premised on a prudent assumption that the Silurian bedrock formations will not provide an effective hydraulic barrier over the long term.
- The proponent should model DGR performance using worst-case permeabilities, based on leach testing of all “barrier” formations.

Recommendations Re Existing Groundwater and Surface Water Quality near the DGR Site (and Tritium Levels)

- Workplace practices and incidents led to the tritium contamination which is observed in groundwater throughout the area of the Western Waste Management Facility.
- The distribution of tritium in the subsurface should be mapped by integration of all monitoring data and communicated to site operators, regulators, and the public.
- The migration of tritium in the subsurface should be modelled using values of effective porosity appropriate to the karstic host formations.

Recommendations re: Existing ground and surface water cont'd

- The proponent should provide a full description of what measures will be undertaken to ensure that workers and the storm water management pond (SWMP) does not become contaminated by tritium (or other radiological contaminants) during construction and operation of the DGR.
- The proponent's radiological surface water monitoring parameter list includes tritium, gross beta, and carbon 14. Proposed maximum target levels for each parameter should be proposed for the SWMP by the proponent, with a rationale provided for each parameter.
- Field workers exposed to local groundwater should have appropriate briefings, operational protocols and monitoring appropriate to the potential tritium hazard.

Hydrogeological Impact Assessment

- Groundwater Impacts during Construction and Operations –
  - proposed groundwater monitoring program is adequate for the construction and operation period.
  - DGR construction and operation period should not be problematic from a groundwater quality perspective, assuming the site is reasonably well run and any spills are promptly reported and thoroughly addressed.
  - Any DGR construction and operations related impacts on groundwater quality will be significantly attenuated (mainly by dilution) once they reach the lake

Groundwater Hydrogeological Impact Assessment - Post-Closure Impacts, and Implications for Monitoring

- The proponent's impact assessment concludes that there should not be any long-term groundwater impacts from the wastes being disposed of in the DGR - assuming the DGR facility and the bedrock strata in which it is entombed remain intact, and that the shaft seals and backfill are effective in eliminating vertical hydraulic connections along the vertical shaft tunnels.
- The proponent's impact assessment is based on the above assumptions, however these assumptions do not, in Ruland`s professional opinion, adequately consider a conceivable worst case scenario relating to the effectiveness of the shaft seals and backfill in preventing vertical groundwater movement.

Post-closure impacts cont'd

- Proposed DGR facility will be situated within and below hundreds of meters of bedrock formations of extraordinarily low permeabilities
- Highly unlikely that the various seal and backfill materials proposed to be used to close off the main access shaft and ventilation shaft will achieve anywhere close to host bedrock permeabilities. As a result, the sealed and backfilled shaft tunnels will represent permanent weaknesses in the long-term entombment of the radioactive wastes in the DGR. Ruland states they will in fact be the weakest points in the proposed containment of the completed DGR facility.

Post-closure impacts cont'd

- There will very likely be vertical groundwater movement in the disturbed bedrock areas (EDZ) around the shaft tunnels from the time that the tunnels are excavated through to the closure of the DGR.
- During the closure period when the shaft tunnels are being backfilled and sealed will provide the best opportunity to try to also ensure that the EDZ surrounding disturbed bedrock areas around the tunnels are made as impermeable as possible to vertical groundwater movement. But it will be tremendously challenging to create an effective seal that will last for hundreds of thousands of years.

Post closure impacts, cont'd

- Study of Excavation Damaged Zone (EDZ) assessment and remediation is an emerging science. The proponent is committed to minimizing the EDZ around the shaft tunnels and to effectively sealing these features, but Ruland sees no sign that there is currently any capability to actually do so with confidence that the end result has recreated the permeability of the undisturbed bedrock.
- Vertical permeabilities in the sealed and backfilled shafts are, in Ruland`s opinion, likely to be a factor of 1000 or more higher than in the surrounding low-permeability bedrock formations. By implication it is a near certainty that if any contamination from the DGR facility migrates vertically then it will be coming up via the areas of disturbed bedrock around one or both of the former shafts.

Post closure impacts cont'd

- Proponent acknowledges that there is a risk of increased permeability adjacent to the backfilled and sealed shafts, but there is no sign that this has been recognized in the development of proposals for long-term groundwater monitoring of the site. The locations for proposed monitoring wells do not appear to include the actual vertical tunnels of the sealed and backfilled shafts, even though these are almost certainly the pathways which any upward moving groundwater contamination will be following.

Recommendations re Post closure impacts

- The proposed groundwater monitoring plans for the DGR facility should be amended to include monitoring well nests atop each of the vertical tunnels of the main access shaft and the ventilation shaft.
- These wells should be installed after the shafts have been sealed and backfilled to ground surface.
- The bottom well in each nest should be installed at the top of the low-permeability shaft seal/backfill materials, and wells should be installed in higher permeability units above that depth with a maximum spacing of 40 meters vertically.

Hydrogeological Concerns with respect to Site Design and Operations

- Ruland states that for the most part, the design and operations are well thought out and presented at an adequate level of detail for an environmental assessment. As with the impact assessment, the proposals for site design and operations have evolved and been clarified through the IR process. Earlier issues which he and Prof. Smart had identified have been resolved or explained to their satisfaction - with one notable exception, the Storm Water Management Pond.
- Recommendations 7 to 10 in the Ruland report deal with requirements related to the Storm Water Management Pond

Recommendations re Monitoring and Contingency Plans

- The additional monitoring issues requiring further consideration/description by the proponent include the following:
  - the duration of the proposed post-closure monitoring period (300 years) seems arbitrary and too short given the long-lived contaminants being disposed of in the DGR;
  - provision needs to be made for development of robust monitoring programs;
  - there is no provision in the EIS outlining how the proponent will respond in the event of adverse monitoring results, or what monitoring results might trigger a response from the proponent;
  - independent review (including adequate funding and public access to information) is needed for the DGR monitoring programs.

Recommendation re Arbitrary 300 Year Post Closure Monitoring Period

- The proponent should commit to sustaining a longer-term monitoring effort for the DGR facility following closure.
- The commitment should be open ended (ie. to monitor “as long as possible”) with a minimum monitoring period of 1000 years.

Recommendations re Development of Robust Monitoring Programs

- The full details of the necessary DGR monitoring programs should be developed by OPG, and made available to all EA stakeholders for review and comment.
- An arm's length process for critical analysis and review of the data and the effectiveness of the DGR monitoring programs should be established by the proponent.
- The DGR monitoring programs should undergo periodic review to consider adoption of contemporary best practices and technologies as these evolve and in response to monitoring results and analysis .

Recommendations re The Proponent's Contingency Responses to Adverse Monitoring Results

- The conceptual details of the necessary DGR contingency plans should be developed by the proponent, and made available to all EA stakeholders for review and comment.

Recommendations re Independent Review and Public Dissemination of DGR Monitoring Results

- The proponent should subject its DGR monitoring program results to independent non-governmental review, and should provide funding to facilitate this review process.
- The proponent should make the full results of its monitoring programs readily available to the public for review.

Ruland`s Conclusions

- 1) The proposed DGR site is potentially suitable from a hydrogeological perspective. The proposed DGR is to be situated in low permeability and structurally sound shaley limestone formations, which will provide a suitable host formation for the DGR excavations. These shaley limestone host formations are overlain by very thick (200 meters) and even lower permeability shales, which provide the hydraulic containment of the site. Overlying the 200 meters of shale bedrock are a further 450 meters of various kinds of sedimentary rocks, which will provide the deep shales with protection from surface erosion over the million year time frame in which the DGR will be required to contain its radioactive wastes.

Ruland conclusions cont`d

- 2) The upper 170 meters of carbonate bedrock at the DGR site are considered a zone of active karst development. There is little evidence of karst activity or potential below this depth. However over the long term karstic enhancement and/or evaporite dissolution-related enhancement of formation permeabilities is a potential issue in the upper 450 meters of sedimentary bedrock, which could under various glaciation scenarios could be vulnerable to significant permeability increases.

Ruland Conclusions cont`d

- 3) The deep 200 meter thick shale bedrock layers which immediately overlie the DGR host horizon are not considered to be vulnerable to erosion or significant permeability increases over a million year timeframe.

Ruland Conclusions cont`d

- 4) The proposed disposal in the DGR of Ontario's low- and intermediate-level radioactive wastes (L&ILW) would replace the current temporary storage of these wastes at the nearby WesternWaste Management Facility (WWMF) on the Bruce Nuclear Property. There is extensive tritium contamination in the area of the WWMF, but it has not been possible to determine the extent and distribution and reasons for this. If a decision is made to move the wastes to the DGR based on a review of all the evidence at the hearing, then this site from a hydrogeological perspective would provide a considerably more secure location for these wastes than their current situation can provide. However, Ruland takes no position on whether the proponent's EA work to date satisfies CEAA provisions, the JRP Agreement, or EIS Guidelines respecting the analysis of alternatives to and alternative sites.

Ruland Conclusions cont`d

- 5) There were a significant number of problems with the environmental assessment process being administered by the Canadian Nuclear Safety Commission (CNSC) and the Canadian Environmental Assessment Agency (CEAA). These include problems with the IR process and the late production and disclosure of the documents by the proponent. These problems are described in detail in Section 3 of Wilf Ruland`s report.

Ruland Conclusions cont`d

- 6) There were a number of shortcomings in the characterization of the DGR site, and 4 major issues requiring further investigation/explanation were identified:
  a. the high hydraulic heads in the Cambrian sandstone, and the lack of information about hydraulic conductivity and head in the underlying Precambrian basement;
  b. the inadequate information on deep oil/gas exploration boreholes;
  c. the permeability of the Silurian “barrier” formations;
  d. the existing groundwater and surface water quality in the vicinity of the DGR site (in particular the elevated groundwater tritium contamination levels and the reasons for these).
- These issues are described in detail in Section 4 of the W. Ruland report.

Ruland conclusions cont`d

- 7) The DGR construction and operation period should not be problematic from a groundwater quality perspective, assuming the site is reasonably well run and any spills are reported and addressed promptly and thoroughly.

Ruland conclusions cont`d

- 8) For the most part, the design and operations are well thought out and presented at an adequate level of detail for an environmental assessment. There are however several design and operational issues pertaining to the stormwater management pond (SWMP) which require further attention:
  a. targets for discharge water quality;
  b. lack of proponent commitments on in-design mitigation and SWMP treatment proposals;
  c. inadequate pond capacity;
  d. the proposal to hold back SWMP contents following adverse test results.
- These issues are described in detail in Section 6 of the W. Ruland report.

Ruland Conclusions cont`d

- 9) The weakest aspects of the DGR proposal on hydrogeology issues are the monitoring and contingency plans, which are currently only developed at a conceptual level. Critical details are missing from the plans which have been presented, and there is a concern that these critical details will avoid public scrutiny if their development is put off until after the conclusion of the EA process. The proposed 300-year post closure monitoring period is not adequate. His concerns about the proposed monitoring and contingency plans are described in detail in Section 7 of the W. Ruland report**.**

Decision Requested

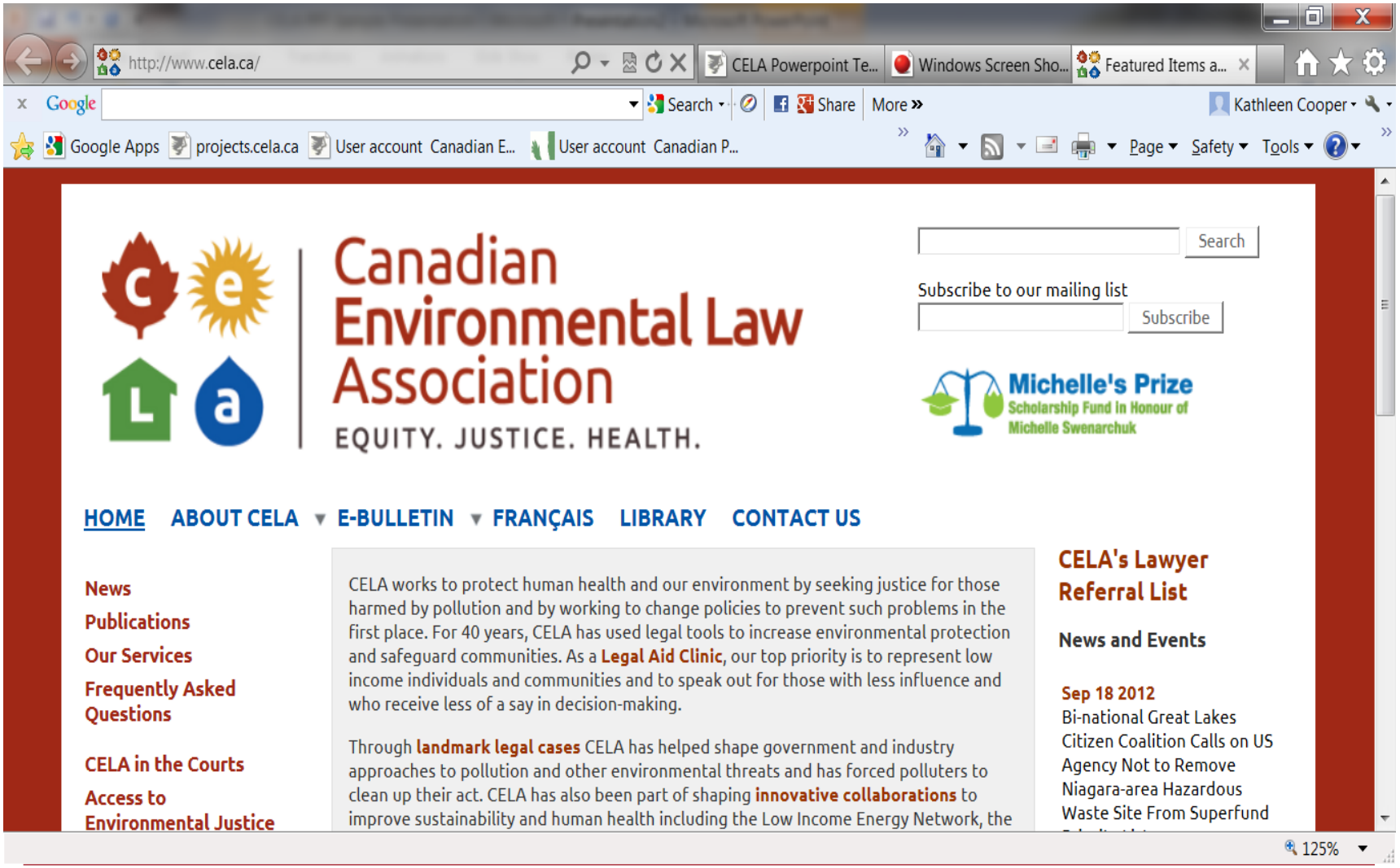
- On EA issues, the JRP should not recommend approval of the DGR project, conditionally or otherwise, unless and until the EA deficiencies identified in the EA report submitted by CELA are satisfactorily addressed in an open and accountable manner, subject to meaningful public/agency review/comment.
- On Hydrogeology issues, the EIS (with its supporting documentation) should not be approved in its current form. The proponent should be required to address and implement the recommendations provided in the hydrogeology Report submitted by CELA.

Contact Info

Theresa McClenaghan, Executive Director & Counsel
Ramani Nadarajah, Counsel
Joseph Castrilli, Counsel
Richard Lindgren, Counsel
Canadian Environmental Law Association
416-960-2284
www.cela.ca
130 Spadina Ave., Suite 301
Toronto, ON M5V 2L4

Canadian Environmental Law Association
EQUITY. JUSTICE. HEALTH.

www.cela.ca


http://www.cela.ca/
CELA Powerpoint Te...
Windows Screen Sho...
Featured Items a...
Google
Search
Share
More »
Kathleen Cooper
Google Apps
projects.cela.ca
User account Canadian E...
User account Canadian P...
Page
Safety
Tools
Canadian Environmental Law Association
EQUITY. JUSTICE. HEALTH.
Search
Subscribe to our mailing list
Subscribe
Michelle's Prize
Scholarship Fund in Honour of Michelle Swenarchuk
HOME
ABOUT CELA
E-BULLETIN
FRANÇAIS
LIBRARY
CONTACT US
News
Publications
Our Services
Frequently Asked Questions
CELA in the Courts
Access to Environmental Justice
CELA works to protect human health and our environment by seeking justice for those harmed by pollution and by working to change policies to prevent such problems in the first place. For 40 years, CELA has used legal tools to increase environmental protection and safeguard communities. As a Legal Aid Clinic, our top priority is to represent low income individuals and communities and to speak out for those with less influence and who receive less of a say in decision-making.
Through landmark legal cases CELA has helped shape government and industry approaches to pollution and other environmental threats and has forced polluters to clean up their act. CELA has also been part of shaping innovative collaborations to improve sustainability and human health including the Low Income Energy Network, the
CELA's Lawyer Referral List
News and Events
Sep 18 2012
Bi-national Great Lakes Citizen Coalition Calls on US Agency Not to Remove Niagara-area Hazardous Waste Site From Superfund
125%