

1 The design of the mound and water treatment
2 plant incorporates proven and best available technologies.

3 The detailed designs for the Port Granby
4 Project are complete. This work contains hundreds of
5 drawings and specifications that are ready for tender,
6 incorporating the requirements of the environmental
7 assessment screening report.

8 All of the technical documents required for
9 licence activities have been reviewed and accepted by the
10 staff of the Canadian Nuclear Safety Commission. The
11 Municipality of Clarington and its peer review team have
12 also participated in the rigorous review process and are
13 satisfied with the quality and content of the design
14 documents and drawings.

15 I will now provide a general overview of
16 the key features of the Port Granby Project.

17 This aerial photo depicts the extreme
18 south-east corner of Clarington between Highway 401 and
19 Lake Ontario where the project will take place.

20 The new, long-term waste management
21 facility will be located on a site approximately 700
22 metres north of the lake. This distance is indicated by
23 the bright green line in the centre of the slide.

24 The facility will be located on lands that
25 will be purchased by the Government of Canada from Cameco

1 Corporation after the licence is issued. The boundaries
2 of the relevant federal lands are outlined in blue on the
3 slide.

4 The nearest house to the new facility is
5 located approximately half a kilometre to the northeast.
6 This property is just outside of this aerial photo shot.

7 Following acquisition of the lands later
8 this year, AECL will assume responsibility for the
9 operation of the Port Granby Waste Management Facility
10 shown in the lower centre of the slide.

11 It is proposed that the existing facility
12 be operated using the current Cameco facility licensing
13 manual until the new water treatment plant is operational.

14 Conventional construction activities will
15 be initiated in 2012. This construction involves upgrades
16 to area roads that were selected during the environmental
17 assessment process and are indicated by the red-dashed
18 line on the slide. This will facilitate the movement of
19 workers and clean construction materials to the new site
20 along the designated transportation route with minimal
21 disruption to the community.

22 Preparation of the area of the new, long-
23 term waste management facility, shown in the centre of the
24 slide, will also begin. This will include clearing
25 vegetation, installing fencing, and establishing storm

1 water management features.

2 In mid-2012, we plan to award the contract
3 to construct a new waste water treatment plant which will
4 be located in the southwest corner of the long-term waste
5 management facility.

6 The dedicated internal road, which is
7 indicated by the yellow dashed line on this slide, will
8 also be constructed prior to the movement of contaminated
9 waste. This includes building an underpass under
10 Lakeshore Road so that contaminated waste will be
11 exclusively transported on a private road and not on
12 public routes as committed in the EA follow-up program.

13 Once the new water treatment plant is
14 commissioned, AECL will begin the other activities under
15 the requested licence. The licensed activities will
16 include excavation of the waste from the existing facility
17 and placement of that waste into the newly constructed
18 engineered mound.

19 By the end of the proposed 10-year licence,
20 construction of the mound will be complete and all of the
21 contaminated lands will be remediated and restored.

22 The 10-year implementation plan for Phase
23 II clearly segregates conventional construction work from
24 those tasks that entail handling and processing of low-
25 level radioactive waste. This division supports the

1 staged licensing approach proposed in the AECL submission
2 to the Commission and enables greater participation by
3 local contractors.

4 All conventional construction work,
5 depicted by the green bars on this chart, would be
6 governed by standards that follow Provincial construction
7 laws. This work includes upgrades, road repairs and the
8 construction of enabling infrastructure such as the water
9 treatment plant, an internal haul road and underpass.

10 The licence activities, shown in red, will
11 include interim operation and maintenance of the existing
12 Port Granby Waste Management Facility; active
13 commissioning and operation of the new water treatment
14 plant; construction and operation of the new, long-term
15 waste management facility; excavation and transfer of
16 contaminated waste from the existing Port Granby Waste
17 Management Facility to the new mound; installation and
18 operation of the East Gorge collection system that will
19 capture residual impacted groundwater following
20 remediation; and transition to the monitoring and
21 maintenance of the long-term waste management facility.

22 Throughout this schedule, environmental
23 monitoring and mitigation measures will be implemented as
24 required by the EA follow-up program.

25 Let us now take a closer look at the key

1 technical elements of the project, beginning with the
2 remediation of the existing Port Granby facility.

3 The transfer of the waste will progress in
4 designated areas over a five-year, staged construction
5 operation as shown on the slide.

6 The systematic excavation and transfer of
7 waste was intentionally planned to maximize worker safety
8 by working from higher to lower elevations. This method
9 will also allow ease of excavation as well as reduce the
10 potential for contaminated groundwater flow into areas
11 already remediated.

12 As each segment is remediated, a
13 verification protocol will be employed to verify that the
14 defined contaminants have been removed and that the PHAI
15 cleanup criteria are met and the site can be restored to
16 its natural condition.

17 The work areas south and north of Lakeshore
18 Road will be linked during construction by a dedicated
19 access road and temporary underpass that effectively
20 creates a contiguous controlled site. This will ensure
21 that transit along Lakeshore Road will not be disrupted.

22 Trucks carrying contaminated waste will
23 travel to and from the new facility through the east
24 tunnel of the underpass, shown on the right of the slide.

25 The west tunnel, shown on the left, will be

1 dedicated for other support vehicles carrying clean fill
2 material.

3 Each vehicle will be documented to account
4 for all waste transfers from the existing facility to the
5 new facility and each load will be securely covered to
6 prevent spillage or dust generation.

7 The wheel wells and underside of trucks
8 will be washed prior to travel to and from the new
9 facility to prevent contamination of the internal route.
10 Water from the truck washing will be treated at the water
11 treatment plant.

12 Now I would like to provide you with a
13 description of the mound design components and how they
14 work together as an overall system to isolate the waste
15 and protect the public and the environment.

16 The mound footprint will be approximately
17 nine hectares. The mound consists of two subsystems; the
18 cover system and the baseliner system, with the waste
19 encapsulated between the two layers.

20 The components of the engineered mound
21 reflect industry best practices for hazardous waste sites
22 and provincial regulations. Two additional layers,
23 specific to the needs of this project, have been added to
24 the cover layer of the design; a layer for radiation
25 shielding and a stone intrusion barrier designed to stop

1 burrowing animals.

2 The cover system is 2.75 metres thick and
3 includes numerous layers of natural aggregate and soil
4 materials in combination with a high-density polyethylene
5 geo-membrane and a bentonite-based geo-synthetic clay
6 liner.

7 This cover system will physically isolate
8 the waste from the environment and minimize surface water
9 infiltration. It will also provide a gamma radiation
10 shield reducing the dose rates at the surface of the mound
11 to the natural local background level.

12 The multilayer cover system also
13 incorporates a capillary drainage system that will
14 divert any water that may infiltrate through the cover
15 layer to the perimeter of the mound. The addition of this
16 redundant layer was in response to comments from the
17 municipality to minimize any water penetration to the
18 waste layer.

19 Monitoring of the capillary layer system
20 will provide the ability to measure actual performance
21 versus design specifications.

22 The baseliner system is 1.35 metres thick
23 and will consist of a composite liner system, including
24 natural clay and a high-density textured geo-membrane.
25 The combination of these layers will create a hydraulic

1 barrier between the contained waste and the native soil
2 beneath the mound and groundwater.

3 Water will be extracted from within the
4 mound through the leachate collection system in the
5 baseliner and pumped to the water treatment plant where it
6 will be processed and discharged. Piping will be used to
7 transfer the water from the leachate sumps to the water
8 treatment plant.

9 Instrumentation positioned within the mound
10 and sumps will measure the volume of leachate collected.
11 This information will be used to monitor the performance
12 of the overall containment system.

13 The water treatment plant design objective
14 is to offer enhanced protection of the Great Lakes Basin
15 ecosystem by significantly improving the removal of
16 uranium, radium, arsenic and wide-range of other
17 contaminants.

18 The operation of the new water treatment
19 plant is projected to result in a significant improvement
20 in the removal of radium and a four-to-five times
21 improvement in the removal of uranium and arsenic compared
22 to the current system.

23 The design itself is a two-stage process
24 developed from a comprehensive bench and pilot-scale test
25 program and incorporates best available technology.

1 First, a biological treatment process and
2 activated sludge membrane bioreactor will remove ammonia
3 and nitrate from the contaminated water inflow. Second, a
4 reverse osmosis process will be used to remove metal
5 contaminants such as arsenic and the radionuclides,
6 uranium, thorium and radium.

7 The plant and the associated water storage
8 pond have been sized to process and store all water
9 generated during the course of the project, including
10 events such as a 100-year storm.

11 Treated water will be discharged to Lake
12 Ontario through a new underground pipeline that will
13 extend 140 metres from the shoreline.

14 Our design is robust and includes
15 redundancies for the short- and long-term to help ensure
16 continuous operation of the plant. The design will also
17 allow us to effectively manage the large changes in water
18 volume that we expect to see over the plant's operating
19 life.

20 After the 10-year licence period, the
21 construction closed-out will be completed, which includes
22 removing the underpass and haul road, demobilizing the
23 site, and beginning the landscaping of the area
24 immediately surrounding the facility to reflect the end-
25 use concept agreed upon by the Municipality of Clarington

1 and the Government of Canada.

2 The end-use proposal prepared by an end-use
3 advisory committee recommends that the lands of the new
4 and former Port Granby facilities be landscaped to enhance
5 existing natural areas while remaining compatible with the
6 surrounding agricultural areas.

7 One of the key objectives is to conserve,
8 restore and enhance the natural heritage system that
9 supports the native plants and wildlife.

10 The health and safety of workers and the
11 public is the top priority for the Port Granby project.
12 The project-specific training, compliance and quality
13 assurance plans have been reviewed and accepted by
14 Commission staff and align with AECL's corporate programs
15 which have been previously audited by the Commission.

16 Contractors will be required to comply with
17 these compliance plans and as licence holder AECL will
18 conduct rigorous oversight of their implementation.

19 Occupational health and safety requirements
20 have been defined and specified to address the industrial
21 safety requirements of the construction areas. Noise and
22 dust will also be managed.

23 The use of personal protective equipment
24 and clothing, access barriers and dust suppressants at the
25 construction site will protect workers.

1 Radiation exposure represents a much
2 smaller hazard. The project-specific radiation protection
3 plan has been developed and will be strictly enforced.
4 Practices such as personal dosimetry, radiation zoning and
5 routine monitoring will be mandated to keep any dose
6 potential as low as reasonably achievable.

7 As well, the radioactive material
8 transportation protocols will ensure the safe transfer and
9 tracking of material.

10 The emergency plan is in place and together
11 with several supporting emergency procedures addresses
12 various scenarios that could arise on the project site.
13 AECL has engaged the local response agencies, including
14 the Durham Regional Police and Emergency Management
15 Services, Clarington Fire Department, and the Ontario
16 Provincial Police to ensure that first responders are
17 aware of the hazards and risks associated with the project
18 site.

19 These discussions will lead to protocols
20 that will establish the plans for training and drills and
21 demonstrate clear authority and accountability structures
22 in the event of an emergency.

23 In addition to our protection of the health
24 and safety of workers and the public, protection of the
25 environment is another top priority.

1 The follow-up program required by the
2 environmental assessment screening report is well
3 established. Extensive sampling and analysis of the
4 biophysical environment, including air, geology, and
5 groundwater, aquatic and terrestrial dimensions has been
6 underway for the past nine months.

7 This monitoring of current conditions
8 updates the project's baseline data prior to the start of
9 construction. The biophysical monitoring will be expanded
10 upon the issuance of a licence for Phase II and if any
11 effects are observed mitigation measures will be employed
12 or enhanced.

13 A summary of our monitoring data will be
14 posted on our website, and annual reports will be
15 published and made available to keep residents informed.

16 Socio-economic monitoring is also underway
17 as part of the environmental assessment follow-up program.
18 This program includes monitoring of community life, real
19 estate and property effects, traffic and transportation,
20 archaeological and heritage resources, and Aboriginal
21 interests such as the traditional use of land.

22 This slide provides an indication of the
23 breadth of monitoring we are undertaking and shows the
24 fixed monitoring locations for Phase II of the project.

25 Roughly 2,500 samples covering the scope of

1 the biophysical monitoring plan will be taken from the
2 fixed locations each year.

3 Portable devices will also be used to
4 supplement the monitoring program.

5 For water sampling, the orange diamonds
6 represent surface water monitoring locations, while the
7 blue dots are groundwater monitoring locations. This
8 water monitoring will be conducted on a quarterly basis.

9 Port Granby Creek, which flows into the
10 lake, will continue to be sampled at two locations;
11 upstream and downstream of the long-term waste management
12 facility.

13 For atmospheric monitoring, the red dots
14 show where passive radon monitoring stations are located.
15 At three of those locations, total dust, metals and long-
16 lived radio nuclides are measured using high-volume air
17 samplers.

18 The yellow pentagons with the dark centre
19 represent noise monitoring stations.

20 The purple square, which is located just
21 south of Lakeshore Road, is the weather station that has
22 been installed to monitor wind speed, wind direction and
23 precipitation; information that will be used for dust
24 monitoring.

25 The purple stars are the locations of

1 baseline soil monitoring and sampling for gamma radiation
2 levels as part of the geological follow-up program.

3 The terrestrial environment was surveyed to
4 record an inventory of native flora and fauna in the area
5 of the facility. This area will be re-surveyed for five
6 years after the remediation is complete to verify that
7 efforts such as re-vegetation have been successful.

8 Our construction specifications have been
9 completed and incorporate a number of mitigation measures
10 that address public concerns. Chief among these are
11 restrictions on dust and noise generation, which we will
12 closely monitor and control.

13 A comprehensive dust management plan has
14 been completed by AECL and has been reviewed by the
15 municipality and the CNSC. This plan outlines the
16 hierarchical actions that would be taken to effectively
17 and efficiently manage the generation and spread of dust
18 during Phase 2.

19 The objective will be to proactively manage
20 dust levels by employing dust prevention methods prior to
21 starting work.

22 Dust suppression measures such as road
23 watering or work stoppage will be implemented to control
24 dust and to ensure that we are meeting Ontario's ambient
25 air quality criteria guideline for suspended particulate

1 matter. Work will be halted if wind speeds exceed 36
2 kilometres per hour for more than two hours as measured at
3 the Port Granby weather station.

4 To mitigate noise, we will restrict hours
5 of work, ensure that project equipment is well maintained,
6 enforce the provincial noise regulations and use
7 designated traffic routes and speed limits.

8 To provide line-of-sight visual barriers
9 for the truck traffic that will travel on local roads to
10 the construction site, we have already planted
11 approximately 200 mature trees in close consultation with
12 property owners.

13 Further, we have updated our previous
14 traffic and transportation study and assessed the current
15 conditions of the municipal roads that will be used during
16 the project. As a result, we have designed upgrades to
17 rehabilitate roads, shoulders and other features to
18 improve safety along the route.

19 Property values are continuously monitored
20 through the property value protection program, which has
21 been in place since 2001, to protect owners within a
22 specified zone from the project-related loss at the time
23 of sale.

24 A wide variety of channels have been
25 employed to communicate with, and engage citizens about,

1 the Port Granby Project. Since 2001, this has included
2 regular briefings to elected officials and numerous Port
3 Granby discussion group meetings.

4 Consultations with First Nations and
5 Aboriginal representatives, including the Hiawatha,
6 Alderville and Curve Lake First Nations, have been
7 conducted. There have been community open houses,
8 surveys, newsletters, trade show exhibits, and numerous
9 one-on-one meetings with individual property owners in the
10 area closest to the project site.

11 Information is also readily available
12 through the project information exchange in Port Hope and
13 on our website and Facebook page.

14 The latest public attitude survey completed
15 in June of this year shows that satisfaction with living
16 in the community continues to be high. Respondents
17 assessed their knowledge about low-level radioactive waste
18 to be high, and the majority are at least somewhat
19 confident that the waste can be safely managed at the
20 proposed new facility.

21 Respondents are also satisfied with our
22 efforts to provide information on the project.

23 The top project-related concern is the
24 proximity of the contamination to Lake Ontario and its
25 effect on the environment, a concern that this project is

1 directly addressing.

2 Moving forward with the implementation of
3 this project, we will continue to communicate and consult
4 with the community and key stakeholders, with a focus on
5 those communication channels that the public attitude
6 survey shows are preferred by local residents.

7 President Binder and Members of the
8 Commission, I believe we have made a strong case in
9 support of the issuance of a 10-year licence which will
10 allow us to proceed to Phase II of the Port Granby
11 Project, implementing the outcomes of more than a decade
12 of environmental assessment, detailed planning and design,
13 and extensive community and stakeholder communications.

14 In carrying out this government priority,
15 we will protect the environment and the community for
16 generations, while meeting the obligations of the legal
17 agreement between the municipality and the Government of
18 Canada.

19 AECL, together with our partners in the
20 Port Hope Area Initiative Management Office, has a
21 qualified and dedicated team in place. We are ready to
22 proceed, keeping health, safety and the environment as our
23 top priority, while ensuring that we meet the expectations
24 of our regulator and the public.

25 We look forward to continuing to work

1 closely with local residents, the municipality, aboriginal
2 communities, key stakeholders and our regulator as we move
3 forward with the Port Granby Project.

4 Thank you. My team and I are open to your
5 questions.

6 **THE CHAIRMAN:** Thank you.

7 I'd like now to move to the presentation
8 from CNSC staff as outlined in CMD 11-H10.

9 Mr. Elder, the floor is yours.

10
11 **11-H10**

12 **Oral Presentation by**

13 **CNSC Staff**

14
15 **MR. ELDER:** Good morning, Mr. President,
16 Members of the Commission.

17 My name is Peter Elder. I'm the Director-
18 General of the Directorate of Nuclear Cycle and Facilities
19 Regulation.

20 With me at the front table today are Mr.
21 Don Howard, Director of the Waste and Decommissioning
22 Division, and Ms. Milena Kostova, Senior Project Officer
23 in that division.

24 In addition, members of our CNSC technical
25 review team are present and available to answer questions.

1 The Port Hope Area Initiative is a
2 community-based project to develop and implement a safe,
3 local, long-term management solution to historic low-level
4 waste in the Port Hope area. It includes two distinct
5 projects: the Port Hope Project and the Port Granby
6 Project.

7 This presentation is to consider the Port
8 Granby long-term, low-level radioactive waste management
9 project for which the rest of the presentation will be
10 referred to as the Port Granby Project.

11 As has been mentioned, the Port Hope Area
12 Initiative is a federal initiative sponsored by Natural
13 Resources Canada. Atomic Energy of Canada Limited has
14 been engaged by Natural Resources Canada to be the
15 proponent of this project.

16 AECL has requested a nuclear waste -- waste
17 nuclear substance licence from the Canadian Nuclear Safety
18 Commission for the Port Granby Project.

19 The Port Granby Project includes the
20 construction of the long-term, low level radioactive waste
21 management facility and remediation of the existing Port
22 Granby Waste Management Facility currently operated by
23 Cameco Corporation.

24 For the rest of this presentation, they
25 will be referred to as the new and existing Port Granby

1 facilities.

2 I will now pass the presentation over to
3 Mr. Howard.

4 **MR. HOWARD:** Good morning, Mr. President
5 and Members of the Commission. For the record, my name is
6 Don Howard.

7 During this presentation, CNSC staff will
8 provide the Commission with an overview of AECL's licence
9 request and the CNSC staff assessment of that application.

10 This presentation will include background
11 information on the Port Granby Project; information on the
12 proposed licence; the protocol for the Port Granby Project
13 licensing activities; CNSC staff assessment of the
14 application; and, finally, staff's conclusion and
15 recommendation to the Commission.

16 As previously indicated, the Port Hope Area
17 Initiative is a community based project to develop and
18 implement a safe, local, long-term management solution for
19 historic low-level radioactive waste in the Port Hope
20 area.

21 There are two parts to this project: the
22 Port Hope and the Port Granby Project.

23 The Port Granby Project is located in the
24 southeast part of the Municipality of Clarington in the
25 Province of Ontario, as indicated on this slide.

1 metres of waste were placed in the East and West Gorges
2 area, as well as in trenches in the Central Plateau area
3 of the site.

4 The trenches were excavated in the natural
5 soil and then covered by at least one metre of clean soil.
6 The low-level radioactive waste has been deposited
7 directly into the trenches. The surface cover of soil has
8 been graded and vegetated. No engineered barriers were
9 added.

10 Due to concerns with the stability and the
11 active erosion on the site, Cameco has implemented a bi-
12 annual spring and fall geotechnical inspection program at
13 the Port Granby facility.

14 The purpose of the inspection program is to
15 assess the geotechnical stability of the site and
16 determine whether remedial action is required at any
17 specific location.

18 On this slide you can see some examples of
19 the erosion affect on the site. The left picture shows
20 the erosion of the bluffs. The right picture shows the
21 relocation of the waste from trench number 54.

22 The -- following the geotechnical
23 inspections in 2008 and 2009, it was observed that due to
24 the active erosion of scrap on the north base of the East
25 Gorge, the waste in trench number 54 could be exposed.

1 CNSC staff directed Cameco to relocate the
2 waste in trench number 54. The waste was relocated over
3 top of other waste trenches in the north-east plateau
4 area. The relocated waste were placed within an above-
5 ground mound awaiting to be transferred to the new
6 facility.

7 In addition to geotechnical inspections and
8 maintenance to maintain the facility in compliance with
9 the requirements of the licence and the current
10 regulations, Cameco has completed significant upgrades to
11 the facility and water collection system in the last three
12 years.

13 Most recent upgrades on the Port Granby
14 site are the installation of a new inland discharge
15 pipeline and outfall; in total, 300 metres of high-density
16 polyethylene piping which now directs the treated affluent
17 directly into Lake Ontario.

18 The left side picture shows the new
19 pipeline drainage structure, which is the only visible
20 part of the discharge pipeline, increasing the capacity of
21 the East Gorge reservoir to avoid emergency discharge of
22 untreated water, shown at the bottom right picture.

23 Also, insulation of a new automated
24 sampling system; the Port Granby facility is currently in
25 compliance with the requirements of the Waste Nuclear

1 Substance Licence held by Cameco.

2 However, to remain in a safe condition, it
3 requires intensive maintenance and upgrade because of the
4 erosion of the bluffs and servicing groundwater contact
5 with low-level radioactive waste. The existing facility
6 is considered inappropriate for the long-term management
7 of the low-level radioactive waste.

8 The following part of this presentation
9 will be given by Ms. Kostova, who will provide background
10 information and details on the CNSC staff assessment of
11 AECL's application for the Port Granby Long-term Waste
12 Management Facility.

13 **MS. KOSTOVA:** Thank you.

14 Good morning, Mr. President, Members of the
15 Commission. For the record, my name is Milena Kostova.

16 The proposed Port Granby project includes
17 the construction of new, long-term low-level radioactive
18 waste management facility in the green-dotted line area on
19 the slide, and remediation of the existing Port Granby
20 waste management facility currently managed by Cameco
21 Corporation in the black-dotted line area on the slide.

22 The new Port Granby facility will be a
23 significant improvement over the existing facility, with
24 the waste being encapsulated in engineered barriers.

25 CNSC required that the new facility provide

1 a modern, long-term management solution for the existing
2 low-level radioactive waste.

3 AECL is the proponent and licence applicant
4 for the development of the new, long-term waste management
5 facility and the remediation of the existing Port Granby
6 facility.

7 The environmental assessment for the Port
8 Granby project was initiated in 2004. Based on the
9 project description submitted by AECL, NRCAN and CNSC
10 determined that pursuant to the requirements of the
11 *Canadian Environmental Assessment Act*, a screening-level
12 environmental assessment was required.

13 The purpose of the environmental assessment
14 -- for the purpose of the environmental assessment, NRCAN
15 and CNSC were defined as responsible authorities. Because
16 of its responsibility to provide funding for the project,
17 NRCAN assumed the leading role for the environmental
18 assessment.

19 In August 2009, following CNSC Commission
20 Hearing on the matter, it was concluded that the Port
21 Granby project, taking into account the mitigation
22 measures identified in the environmental assessment
23 screening report, would not likely cause significant
24 adverse environmental effects.

25 During the environmental assessment, AECL

1 has developed cleanup criterias for the Port Hope Area
2 Initiative in consultation with public stakeholders, the
3 Municipalities of Port Hope and Clarington, and provincial
4 and federal authorities.

5 The cleanup criteria for the key
6 contaminants of potential concern that will apply for the
7 remediation of the Port Granby Waste Management Facility
8 are presented on the current slide.

9 The Port Hope Area Initiative cleanup
10 criteria for soils were developed following protocols,
11 guidance and radioactive practice set by the CNSC, the
12 Ontario Ministry of the Environment and Environment
13 Canada. International practice was also considered.

14 Now, I would like to provide the Commission
15 with special information pertaining to the assessment of
16 AECL's application for the Port Granby project.

17 In order to define the technical
18 information required to support a waste nuclear substance
19 licence for this particular project, a protocol for the
20 Port Granby project licensing activities was developed and
21 signed by CNSC, NRCan and AECL.

22 The purpose of the protocol was to
23 establish the administrative framework and service
24 standards for the submission of the technical
25 documentation in support of AECL's application and the

1 regulatory review of the submissions.

2 AECL has submitted all technical documents
3 in accordance with the protocol.

4 For licensing purposes, the Port Granby
5 project has been divided into three distinct phases. CNSC
6 staff is proposing a 10-year licence to allow AECL to
7 complete Phase I and Phase II of the project. Phase III
8 will be a subject of licence renewal.

9 Phase I is the transition phase. During
10 Phase I, the licence will authorize AECL to take
11 possession and to manage the nuclear substances at the
12 existing Port Granby facility currently operated by Cameco
13 Corporation.

14 The transition phase is expected to take
15 approximately three years. During this period, AECL will
16 construct a new water treatment system and develop the
17 supporting infrastructure.

18 Phase II, the implementation phase, is
19 expected to take up to seven years. Phase II involves
20 construction of the new, long-term, low-level radioactive
21 waste management facility; integration of the waste from
22 the existing Port Granby waste management facility; and
23 needs remediation.

24 Phase III, the post-closure phase, involves
25 monitoring and maintenance of the long-term waste

1 management facility for the long-term.

2 A waste nuclear substance licence will
3 authorize AECL to possess, manage and store nuclear
4 substances that are required for, associated with, or
5 arise from the Port Granby activities.

6 However, the Port Granby project includes
7 operation of the existing Port Granby facility;
8 preparation of the site and construction of the new, long-
9 term waste management facility; transfer of the low-level
10 radioactive waste from the existing to the new Port Granby
11 facility and the remediation of the existing site.

12 Normally, those activities are not included
13 in an application for a waste nuclear substance licence.

14 Therefore, the CNSC staff required
15 additional technical information in support of AECL's
16 application.

17 The technical information required to
18 support a waste nuclear substance licence for the Port
19 Granby project was submitted by AECL in 12 technical
20 documents, as listed on this slide.

21 The first five documents cover areas that
22 are specific for the Port Granby project activities. The
23 remaining documents cover areas that are common for both
24 Port Granby and Port Hope projects. Therefore, they were
25 developed for the Port Hope Area Initiative.

1 The Port Hope Area Initiative documents are
2 consistent with AECL's corporate policies and programs.

3 CNSC staff have assessed them and found
4 that they meet the requirements for a waste nuclear
5 substance licence.

6 In the following slides, I would like to
7 discuss the CNSC staff assessment of the key areas related
8 to the Port Granby project activities.

9 As presented on this slide, the proposed
10 design of the new facility is an above-ground engineered
11 mound with multi-barrier system.

12 As per International Atomic Energy Agency
13 classification of radioactive waste, this type of near-
14 surface facility is suitable for disposal of low-level
15 radioactive waste with limited regulatory control.

16 The footprint of the engineered mound will
17 occupy an area approximately 410 x 230 metres. The cover
18 in the composite baseline of systems include multiple
19 natural and synthetic materials that work together as an
20 overall system to provide the required performance over
21 the 500-year design life.

22 CNSC staff considers that quality assurance
23 and control during construction, material specifications,
24 and long-term maintenance and monitoring following the
25 installation of the top cover, will ensure the systems

1 will continue to perform its design over the long-term.

2 CNSC staff assessed the detailed design
3 description report and concluded that the proposed design
4 for the long-term waste management facility will provide
5 adequate long-term containment in isolation of the waste
6 from the environment.

7 Before initiating any remedial activities,
8 AECL shall construct and commission a new water treatment
9 system. The new water treatment technology that AECL is
10 proposing is based on bench-scale studies conducted by
11 AECL. The proposed technology involves a two-stage
12 treatment process with a biological treatment stage.

13 It consists of microbial degradation of
14 ammonium in nitrate to nitrogen gas followed by reverse
15 osmosis stage for metals in radionuclides removal.

16 The objective of the CNSC staff assessment
17 of the water treatment definition report was to determine
18 if AECL has selected the best demonstrated available
19 technology that is economically achievable and capable of
20 achieving high contaminant removal efficiencies.

21 CNSC staff assessed the water treatment
22 definition and consider AECL's choice of technology
23 acceptable in that it meets the best demonstrated
24 available technology principle.

25 The new water treatment plant will be

1 constructed next to the long-term waste management
2 facility and shall be commissioned before initiating the
3 remediation of the existing Port Granby facility.

4 Once the new water treatment facility is
5 commissioned the current water treatment system, located
6 at the site of the existing facility, will be
7 decommissioned.

8 Contaminated water from both the existing
9 and the new facilities will be pumped to the new water
10 treatment plant.

11 The liquid effluent resulting from the Port
12 Granby project activities will be treated before discharge
13 to the environment. Since the Port Granby project
14 activities will be conducted in phases, CNSC staff is
15 proposing the same approach for setting the effluent
16 release limits.

17 During the continued operation of the
18 existing Port Granby facility and until the new water
19 treatment system is constructed, AECL will continue to use
20 the current water collection and treatment system located
21 on the site of the Port Granby facility.

22 For the first three years until the new
23 water treatment system is put in place, CNSC staff is
24 proposing no changes to the effluent discharge limit for
25 radium 226 which has been set at 0.37 Becquerels per

1 litre.

2 In addition, CNSC staff is stating a
3 compliance requirement for AECL to continue monthly
4 toxicity testing currently conducted by Cameco. Licence
5 effluent release limits will be established, taking into
6 consideration real operational data from the new facility
7 when they're available.

8 Based on presently available data from
9 bench-scale water treatment study, CNSC staff is proposing
10 design objectives which are included in the Licensing
11 Condition Handbook.

12 Based on the data accumulated following the
13 commissioning and operating of the new water treatment
14 system for 12 months, CNSC staff will define the effluent
15 release limits and AECL will be required to propose action
16 levels.

17 CNSC and NRCAN, the responsible authorities
18 for the environmental assessment, have determined that an
19 environmental assessment follow-up program was required
20 for the Port Granby project.

21 The CNSC has lead oversight for the follow-
22 up activities with respect to the construction of the new
23 facility and the remediation of the existing one.

24 The CNSC staff assessed the environmental
25 assessment follow-up biophysical effects monitoring plan

1 and found it acceptable.

2 AECL has already initiated monitoring
3 activities for establishing the baseline conditions prior
4 to commencing the project activities. NRCAN has lead
5 oversight for the follow-up activities on the socio-
6 economic component of the environment. NRCAN assessed the
7 environmental assessment follow-up socio-economic effects
8 monitoring plan and found it acceptable.

9 CNSC and NRCAN concluded that the
10 environmental assessment follow-up plan submitted by AECL
11 meets the requirements for monitoring the effects on
12 biophysical and socio-economic components as identified in
13 the environmental assessment screening report.

14 The radiological risk involved with the
15 Port Granby project activities is minimal. AECL have
16 estimated the doses for the workers using conservative
17 assumptions and found them ranging from 2.1 millisievert
18 per year for the operators of the excavation machinery at
19 the existing facility to 7.1 millisievert per year for the
20 monitoring technicians.

21 As shown on this slide, these
22 conservatively estimated doses are well below the
23 regulatory limit of 50 millisievert per year for nuclear
24 energy workers.

25 The application of ALARA dose reduction

1 techniques in administrative controls such as reduction of
2 exposure time, increase distance from the waste, and the
3 use of personal protective equipment, were not considered
4 when estimating the doses for the workers.

5 Through the application of these controls
6 the doses for the workers for the project should be lower
7 than the presented estimates.

8 The estimated total annual radiation dose
9 for the residents in the Port Granby area, from all
10 natural sources and the contribution from the existing
11 Port Granby Waste Management Facility, is lower than the
12 national average of 2 millisieverts per year from natural
13 sources. The incremental dose associated with the low-
14 level radioactive waste was indistinguishable from
15 background.

16 The Port Granby Project -- for the Port
17 Granby Project, all low-level radioactive waste will be
18 transported via a newly constructed private road underpass
19 between the existing and the new facilities beneath
20 Lakeshore Road. On the current slide, the proposed
21 underpass is identified in the blue, dotted line.

22 None of the low-level radioactive waste
23 associated with the Port Granby Project activities will be
24 transported on public roads. Nevertheless, the
25 transportation of the low-level radioactive waste from the

1 existing to the new facility is adherent to the CNSC and
2 Transport Canada regulations.

3 CNSC staff considered that a financial
4 assurance or commitment be provided for the long-term care
5 and maintenance of the new, long-term waste management
6 facility. This was expressed in a letter from the
7 Minister of Natural Resources Canada.

8 The CNSC, as an agent of the Government of
9 Canada and Canada's nuclear regulator, recognizes its duty
10 to consult and build relationships with Canada's
11 aboriginal groups. CNSC staff has identified 10
12 aboriginal groups as having potential interest in the Port
13 Granby Project.

14 In 2010, CNSC staff sent notification
15 letters informing the identified groups of the status of
16 Port Granby Project and the licensing process for the
17 project. No request for additional information was
18 received.

19 In August 2011, CNSC staff sent
20 notification letters to the aboriginal groups advising
21 them of the upcoming Public Commission Hearing for the
22 Port Granby Project and encouraging the groups to
23 participate in the public hearing. No interventions were
24 submitted by the aboriginal groups.

25 Should the proposed licence for the Port

1 Granby Project be issued to AECL, the ownership of the
2 existing Port Granby facility will be transferred to the
3 Government of Canada and the CAMECO Corporation's licence
4 will be revoked. CAMECO has requested that their licence
5 be revoked concurrently with the issuance of a licence for
6 the Port Granby Project.

7 The revocation of the CAMECO licence will
8 be subject to our designated officer revocation in
9 accordance with section 37(2)(d) of the *Nuclear Safety and*
10 *Control Act*.

11 This concludes the CNSC staff assessment
12 part of the presentation and I will now pass the
13 presentation back to Mr. Elder.

14 **MR. ELDER:** Thank you.

15 Based on the assessment of AECL's
16 application for a Waste Nuclear Substance Licence for the
17 Port Granby Long-Term Waste Management Facility, CNSC
18 staff concluded the applicant, AECL, is qualified to carry
19 out the activities the licence will authorize, and will
20 make adequate provisions for the protection of the
21 environment, health and safety persons and maintenance of
22 national security.

23 Note that since we drafted the CMD, CNSC
24 staff has realized that the language in one licence
25 condition -- namely 1.1 -- does not follow the standard

1 language used in licence -- with the licence condition
2 handbook. Therefore, CNSC staff will provide the
3 Secretariat with the appropriate language for this type of
4 condition to make sure there is consistency between the
5 licences. However, this does not change any of our
6 recommendations, but we'd like to put that on the record.

7 So in terms of the recommendation, CNSC
8 staff recommend that the Commission issue the Waste
9 Nuclear Substance Licence for a period of 10 years to
10 allow AECL to complete phase I and phase II of the project
11 as we have defined; that they accept the assessment of
12 CNSC staff that AECL is qualified to carry out the
13 activity that the licence will authorize; and if the
14 licence is issued, make adequate provisions to protect
15 health, safety and the environment.

16 We also -- this type of licence is normally
17 issued by a designated officer. Because of the interest
18 in the public -- in the Port Hope Area Initiative, we have
19 brought this initial licensing to the Commission, but we
20 believe that in going forward it would be more appropriate
21 to continue current practice and that the Commission
22 delegate authority to the Director General of the
23 Directorate of Nuclear Cycle and Field Facility
24 Regulations to do future licensing on this project.

25 That concludes our presentation.

1 Staff are now available to answer any
2 questions from the Commission.

3 **THE CHAIRMAN:** Thank you.

4 The way I propose to proceed from here on
5 is we're going to go through one round of questions from
6 Commissioners, then we're going to hear from intervenors,
7 and then we're going to have another round of questioning
8 from Commissioners.

9 So I'd like to start with Dr. Barriault,
10 please?

11 **MEMBER BARRIAULT:** Thank you, Mr. Chairman.

12 I guess my first question to AECL of a
13 technical nature, are we completely familiar with the
14 contents of the present repository for the nuclear
15 licence?

16 I read where there are drums buried there.
17 Do we know what's in those drums? Is there any other
18 toxic substance like PCBs or whatever?

19 **MS. MILLER:** Joan Miller, for the record.

20 There was a significant amount of
21 characterization carried out as part of the environmental
22 assessment process, and I would ask Glenn Case to provide
23 further details on that characterization.

24 **MR. CASE:** Glenn Case, for the record.

25 In 1993, there was an extensive

1 characterization program conducted at the site that
2 examined the various waste types that included the
3 neutralized raffinate, calcium fluoride, and the
4 miscellaneous types of industrial waste that are located
5 at the site.

6 We also have records of all the wastes that
7 were placed in each one of the individual trenches that
8 were excavated on the site, so we believe that we have an
9 adequate characterization of the waste that will go into a
10 long-term management facility.

11 **MEMBER BARRIAULT:** So you're comfortable
12 really that -- what's on the site?

13 **MR. CASE:** Glenn Case, for the record.

14 Yes, we are very comfortable with what's on
15 the site and what's going to be going into the new long-
16 term management facility.

17 **MEMBER BARRIAULT:** Thank you.

18 To AECL. At the peak of construction, how
19 many employees do you propose to have working in the area
20 and how many employees at the end for maintenance?

21 **MS. MILLER:** Joan Miller, for the record.

22 For the Port Hope Area Initiative
23 Management Office, as we proceed with the planned Port
24 Granby Project and Port Hope Project, we anticipate our
25 management office will have up towards 150 staff members

1 that would include AECL plus Public Works.

2 We don't have an idea, of course, of how
3 many construction workers are going to be on the sites.
4 So that's what we have in terms of numbers.

5 When the construction work is complete,
6 we'll have to look at what are the staffing requirements
7 for the ongoing monitoring of the facility and the ongoing
8 programs that would be carried out to support the long-
9 term monitoring of the facility.

10 **MEMBER BARRIAULT:** So you really have --
11 don't have that, I guess, planning structure in place at
12 this time as to number of contract employees and then the
13 continuing number of employees working for monitoring?

14 **MS. MILLER:** So the -- Joan Miller, for the
15 record.

16 The actual contractors, when they will be
17 asked to bid on the specific projects, they would be
18 providing the number of workers that would -- they would
19 be providing to the site to carry out the work according
20 to the specifications and the schedules that we have asked
21 for.

22 For the management office, we have assumed
23 -- or estimated that we would require up to about 150
24 staff.

25 When the project then transitions over to a

1 monitoring and -- the monitoring phase, we haven't sat
2 down and determined the actual numbers of staff that would
3 be required at that point. I can assume, though, that it
4 would be significantly less because it would just be for
5 the ongoing monitoring.

6 **MEMBER BARRIAULT:** Monitoring, yes.

7 I guess the short answer is that we don't
8 know at this time how many people will be involved, other
9 than the 150 employees that AECL will have on site for the
10 planning.

11 I'm sorry, my next question deals with the
12 actual amount -- I guess, as I see it, really is that the
13 leachates will be taken off, pumped out, treated. The way
14 that I see this mound being constructed is that I would
15 assume that after a while there will be less and less
16 leachate coming down because of the moisture not being
17 able to penetrate this mound.

18 Long term: In a matter of a few years, do
19 you predict what kind of volume you would expect of
20 leachates coming off and how much treatment of this water
21 is needed?

22 **MS. MILLER:** Joan Miller, for the record.

23 We have done detailed analysis and,
24 initially, we estimate we may have to treat about 25,000
25 cubic metres a month of water. That would decrease over

1 time to less than 100 cubic metres a month.

2 And I'll pass it over to Glenn Case, who
3 can perhaps provide further details. Glenn?

4 **MR. CASE:** Glenn Case, for the record.

5 You are correct that, over time, we
6 anticipate that there will be a dramatic decrease in the
7 amount of leachate produced by the mound.

8 Through our experience and in consultation
9 with others who have constructed similar mounds, they have
10 experienced this. And we anticipate that on an annual
11 basis, less than 100 cubic metres of leachate will be
12 produced by the mound.

13 **MEMBER BARRIAULT:** Thank you.

14 So conceivably, really, at one point, this
15 mound could be basically just observed and with very
16 little leachate coming off and very little water treatment
17 required before going into the lake?

18 **MR. CASE:** Glenn Case, for the record.

19 Yes, that's correct. And just to further
20 provide information, the Fernald mound in Ohio is an
21 excellent example of this rapid decrease in the amount of
22 leachate that is produced by the mound.

23 It was one of the lessons that we have
24 learned from our conversations and our discussions with
25 them for application to our mound so that we can size our

1 facility accordingly to address that reduction in the
2 amount of leachate that's being produced.

3 Instead of having large, big pieces of
4 equipment, we can scale it down to address that over time.

5 **MEMBER BARRIAULT:** Thank you.

6 The thickness of the cover on the mound, do
7 you perceive any problem with frost in this country as to
8 disrupting the cover?

9 **MR. CASE:** Glenn Case, for the record.

10 The facility has been designed to take that
11 into consideration, the frost layer. That's why it is
12 2.75 metres in thickness.

13 That upper layer is within the zone in
14 which the frost will come and go over time and not have an
15 adverse effect on the underlying layers of the mound
16 itself.

17 **MEMBER BARRIAULT:** Thank you.

18 **THE CHAIRMAN:** Can I jump in?

19 You mentioned the other mound. How many
20 other facilities globally are there that actually have
21 done this before and got some experience with this?

22 **MS. MILLER:** Joan Miller, for the record.

23 I believe there are up to around 10 in the
24 United States. Again, Glenn Case, perhaps has more
25 details.

1 **MR. CASE:** Glenn Case, for the record.

2 As Ms. Miller said, there are a number of
3 facilities that have been completed in the United States
4 dating back to the mid-1980s. Canonsburg, Pennsylvania is
5 a mound that is in a community and it houses similar to
6 the material that we have here in the Port Granby area;
7 Weldon Springs in Missouri; Fernald, which is in Ohio. In
8 Lewiston, New York, there's a facility just on the other
9 side of the Niagara River that encapsulates similar type
10 of material.

11 In France, there is a facility that is
12 being used to house and contain low-level radioactive
13 waste that uses a similar type of an approach with an
14 above-ground mound.

15 **THE CHAIRMAN:** And how many -- I mean, how
16 much experience do they have with these and what was -- is
17 the construction roughly the same? Is the structure of
18 the mound the same? Are there any surprises? Everything
19 went according to plan?

20 **MR. CASE:** Glenn Case, for the record.

21 I think the example of everything going to
22 plan, yes, in terms of construction and the encapsulation
23 of the waste. But one of the things that they were quite
24 surprised was how rapidly the amount of leachate decreased
25 within the mound and so they -- so we have been able to

1 take advantage of the lessons learned from them.

2 There was also another facility in France,
3 Centre de L'Aube, and it's also performing very, very well
4 as anticipated as well, so ---

5 **THE CHAIRMAN:** Maybe if we go back to end
6 use, like three -- was it released? Any of those sites
7 been released for normal public use?

8 **MR. CASE:** In the case of the Fernald site
9 -- of which I'm most familiar -- they have turned the area
10 in which they've completed the remediation into a natural
11 park.

12 In the case of Weldon Springs, it actually
13 is used as a look-out. People can walk to the top of the
14 mound and look out over the surrounding area.

15 And in the case of France, it is within an
16 active facility so it has not been completed yet. So it's
17 still surrounded by a fence because it's being actively
18 developed.

19 **THE CHAIRMAN:** Thank you.

20 Dr. Barriault?

21 **MEMBER BARRIAULT:** That's all for now, Mr.
22 Chairman.

23 **THE CHAIRMAN:** Okay.

24 Dr. McDill?

25 **MEMBER MCDILL:** Thank you.

1 This project has a design life with
2 maintenance of 500 years. There are relatively few human-
3 engineered structures that are 500 years old sitting on
4 the earth right now. There are some, obviously.

5 So I think the public has an understandable
6 -- some public have an understandable scepticism of this
7 and we've just heard that the longest-lived, I guess,
8 current engineered mound, I think, we just said maybe 1980
9 so 30-ish years.

10 What are -- I realize there's a great deal
11 of documentation, but what are the engineering physical
12 tasks, the numerical tasks that allow the designers to
13 predict out to 500 years?

14 I realize I'm asking you to condense
15 volumes of information into sentences, so I realize the
16 question is a challenge, but I think it would be helpful
17 to the people for whom this will be in their backyard if
18 there is something they can wrap their heads around.

19 And I guess I'll pass that back to staff
20 after AECL gets a crack at that.

21 **MS. MILLER:** Joan Miller, for the record.

22 I won't be able to do the synthesis for
23 you, but just before I pass it back to the -- to Glenn, as
24 the project engineer, just remind everyone that the cover
25 system -- the base-liner system -- they are made of

1 natural and synthetic materials so we don't anticipate
2 significant deterioration or any deterioration of natural
3 materials, but it is a combination of both.

4 And Glenn, if you would like to provide
5 detailed information or more information on the synthetic
6 materials and the testing that's done to provide
7 information on design life?

8 **MR. CASE:** Glenn Case, for the record.

9 Building on what Ms. Miller said, the
10 important aspect is this is long-term management of the
11 facility so over the 500 years, it is long-term
12 maintenance and monitoring.

13 The facility itself is composed of, as Ms.
14 Miller said, synthetic and man-made materials. And the
15 purpose for that is so that, over the long term, our
16 natural materials will be able to continue their operation
17 for the long term.

18 A good example is clay. Clay has reached
19 its fully-weathered state and it's one of the important
20 components in the liner and in the cap system.

21 In the cap system, we are using a geo-
22 synthetic clay system which provides the life expectancy
23 of well in excess of 500 years to protect the facility
24 itself. And I think that's the key component is in terms
25 of our leachate collection systems as well, we're using a

1 stone channel as compared to piping so that, over time,
2 there is not expected to have any kind of blockage.

3 So we've certainly taken that into
4 consideration in our design with the use of synthetic and
5 man-made -- sorry, synthetic and natural materials with a
6 heavy emphasis on natural materials and the fact that
7 they're at a fully-weathered state and are anticipated to
8 last for the long term.

9 Also, testing that has been done on the
10 synthetic materials such as the high density polyethylene
11 material provides us a guarantee that it will fulfil this
12 role well in excess of 150 years and beyond. And we
13 really, after that, are relying on the clay.

14 **MR. ELDER:** Peter Elder, for the record.

15 I'll start by saying, in our view, is we
16 always assumed that it's not going to last and have been
17 doing analysis to say what could happen if there is
18 failure of certain of these components.

19 So we had extensive review during the
20 environmental assessment and in the licensing support
21 documentation to look at potential consequences of failure
22 and make sure that there weren't problems and that you
23 could identify any problems early through a well-designed
24 monitoring program.

25 But in terms of actually the confidence in

1 the liner and material, I'll ask Mike Rinker to discuss
2 that further.

3 **MR. RINKER:** Hi, I'm Mike Rinker. I'm the
4 Director of the Environmental Risk Assessment Division at
5 the CNSC.

6 We concur with what AECL was presenting.
7 The system is designed with a certain amount of
8 redundancy, relying on man-made fabrics as well as natural
9 components.

10 I'm going to ask Dr. Lange, who reviewed
11 this aspect of how you know or when you would expect
12 synthetic materials to last, how long, and how they would
13 perform over time.

14 But I would emphasize that something like a
15 liner doesn't fail overnight, it takes -- it will -- if it
16 starts to fail after centuries, it starts to fail in small
17 areas and slowly over time you would start to rely on the
18 natural materials.

19 **DR. LANGE:** Karina Lange, for the record.

20 Yes, as you noted, we only have about 20
21 years of field experience and observations, and it's
22 important to note that over that time we have observed
23 that environmental protection has been effectively
24 achieved and few significant failures have occurred.

25 That said, forecasting into the longer

1 term, such as 500 to 1,000 years, in doing that we first
2 extrapolate from current data and observations, and more
3 importantly, on some of these synthetic materials it's
4 very standard to conduct what are called "laboratory aging
5 tests."

6 So the synthetic materials are subject to
7 solutions similar to the leachate at temperatures similar
8 to the mound or a conventional landfill, and they almost
9 accelerate the aging process. So you could, for instance,
10 submerge these membranes for a period of 10 years and that
11 would be equivalent to 500 years.

12 In this situation one of the main factors
13 effecting geomembranes is temperatures. So in
14 conventional municipal waste landfill facilities we are
15 very concerned about high temperatures because this -- and
16 that would have an adverse effect on the geomembrane.

17 Because this facility has inorganics and
18 very consequential low temperatures, the geomembrane would
19 last longer or it would be predicted to last longer than
20 that of a conventional municipal waste facility.

21 There are a number of ASTM standards that
22 measure different types of material specifications of
23 these synthetic membranes and those are part of the
24 documentation provided to us by AECL.

25 **MEMBER McDILL:** Thank you.

1 Two little bit more specific questions; in
2 terms of the groundwater wells that are marked on Slide 21
3 of AECL -- maybe it could be put up -- what are the depths
4 of the wells? Is there a good three-dimensional
5 representation for monitoring?

6 **MS. FAHEY:** Christine Fahey, for the
7 record.

8 The wells that are installed in a variety
9 of locations, some single wells, doubles, quadruple and
10 even eight wells in one location, penetrate to different
11 layers of the geology. And while I'm not a geologist,
12 there's sand layers, lacustrine layers as well.

13 We have our environmental specialist
14 available in the gallery. If you would like more detailed
15 information on the exact measurements, I can ask her to
16 come forward.

17 **MEMBER McDILL:** I think -- yes, please.

18 **MS. FAHEY:** Laura Barzelatto, will you
19 please come forward?

20 **MS. BARZELATTO:** My name is Laura
21 Barzelatto, for the record.

22 Yes, the wells will be in the different
23 layers, the sandy silt layers, the top layer, then we go
24 into the secondary layer, which is the lacustrine silt
25 layer, and then we have some notus veni down to the

1 bedrock level. So we are monitoring the different levels.

2 We will have the wells in -- in the same
3 location they'll be in -- as we call them as nest. So in
4 the same spot we can have the three different layers
5 monitored as well.

6 **MEMBER MCDILL:** Does staff have anything to
7 add to that?

8 **MR. RINKER:** Mike Rinker, for the record.
9 Just to confirm that we have reviewed
10 AECL's plan for groundwater monitoring.

11 There are many levels that need to be
12 monitored in that area because of the presence of
13 different aquitards, but we've reviewed the plan and we're
14 -- and we found it acceptable.

15 **THE CHAIRMAN:** Is any CNSC plan to do any
16 monitoring -- independent monitoring?

17 **MR. RINKER:** Mike Rinker, for the record.

18 We do intend to initially shadow AECL
19 through an inspection and we have a -- we don't have a
20 detailed plan but we will be taking split samples and our
21 own samples.

22 **MEMBER MCDILL:** Thank you.

23 My next question is ---

24 **THE CHAIRMAN:** Sorry -- while we're still
25 on the same chart, can you talk to me a little bit about

1 the soil in gamma? If I understood, you're testing for
2 gamma radiation here. And why -- I don't understand the
3 location of the gamma. Why is there nothing on site?

4 **MS. FAHEY:** Christine Fahey, for the
5 record.

6 Through our discussions with local
7 residents in order to improve their confidence they asked
8 us to do baseline gamma surveys on the four residents,
9 Northeast, Northwest, Southeast, Southwest, to give them
10 confidence that there wasn't any contamination to begin
11 with.

12 And we've done this in May and provided
13 them the results that there is no contamination, and we've
14 agreed to periodically check their property so they can
15 continue to have confidence in the project.

16 **THE CHAIRMAN:** But you're not doing any
17 testing on site itself; in other words, in the actual
18 facility or near the facility?

19 **MS. FAHEY:** Oh, there's extensive on-going
20 -- the entire ---

21 **THE CHAIRMAN:** It does not show on the map.

22 **MS. FAHEY:** You're right.

23 The entire site is subject to gamma
24 monitoring.

25 **THE CHAIRMAN:** And lots of stars on site --

1 is missing here. Okay, good to know. Thank you.

2 Dr. McDill?

3 **MEMBER McDILL:** Thank you again.

4 I guess you need sort of a big purple star
5 over the whole thing.

6 The underground pipeline for the water
7 treatment to the -- and extending out into the lake, can
8 AECL talk to me a little bit about how that's made, how
9 it's installed and how it will be monitored over the many
10 years that are required?

11 **MS. MILLER:** Joan Miller, for the record.

12 I'll pass that question to Glenn Case.

13 **MR. CASE:** Glenn Case, for the record.

14 The pipeline that extends out into Lake
15 Ontario is 100 millimetres in diameter; it's high density
16 polyethylene and was recently installed by Cameco
17 Corporation.

18 Our routine monitoring involves quarterly
19 samples of the effluent in the -- at the zone of
20 discharge, and monitoring flows in the pipe and out of the
21 pipe.

22 That will be. At this point in time we
23 don't have access to the site but that's what our plans
24 are.

25 **MEMBER McDILL:** How long is each pipe

1 segment?

2 **MR. CASE:** I would defer that question to
3 Cameco Corporation because they -- and they have
4 representatives here today. They were the ones that did
5 the installation.

6 **MEMBER MCDILL:** Does staff know? I can --
7 or does Cameco want to?

8 **MR. WORKMAN:** Good morning. My name's Dave
9 Workman. I'm an Environmental Hydrogeologist with Cameco
10 Corporation.

11 It's one section of pipe and it's actually
12 250 millimetres in diameter.

13 **MEMBER MCDILL:** Thank you.

14 And my last question with respect, again,
15 to Slide 21. We have an intervenor later on today and
16 this is a very good picture of a very large area.

17 Could someone point out to me on Slide 21
18 of AECL where the Payne Farm is, please? We've got
19 pictures in various places but this is a good one to have
20 everything on. It's your Slide 21.

21 **MS. MILLER:** Joan Miller, for the record.

22 If you look at the proposed waste
23 management facility you'll see railroad tracks, and if you
24 go north of those railway tracks between Nicholas Road and
25 then the next road that's running east to west, it'll be

1 in that area, including the space between the two railroad
2 tracks just where the mouse is.

3 **MEMBER McDILL:** The closest is where the 90
4 degree-bend and the red line is, between there and the
5 railway track? That's the nearest, and the farthest reach
6 is to the northeast, up at the corner of Nichols and
7 whatever ---

8 **MS. MILLER:** Concession Road 1.

9 **MEMBER McDILL:** Thank you.

10 **THE CHAIRMAN:** Just to clarify, this
11 boundary -- orange, I think it's orange -- outline, is
12 that the government-owned property? Is that -- what is
13 this trying to depict?

14 **MR. McCAULEY:** Dave McCauley, for the
15 record.

16 The orange boundary illustrates the extent
17 of the lands that the Government of Canada will be
18 purchasing from Cameco Corporation to allow the project to
19 proceed.

20 **THE CHAIRMAN:** Okay, so it's already ---

21 **MR. McCAULEY:** It's a full package of
22 properties and it will include the area that the long-term
23 waste management facility will be sited on.

24 **THE CHAIRMAN:** But it's right now owned by
25 cm?

1 **MR. McCAULEY:** That's correct.

2 **THE CHAIRMAN:** Okay, thank you.

3 **MEMBER McDILL:** And that leads me to my
4 last question.

5 This is an administrative question. How
6 are the land transfer hand-offs going to occur? How does
7 AECL pick up the monitoring, pass off the monthly toxicity
8 testing?

9 **MR. McCAULEY:** Dave McCauley, for the
10 record. I'll address the land transfer.

11 Canada has entered into an agreement with
12 Cameco Corporation to acquire the properties illustrated
13 by the orange boundary 60 days after a licence would be
14 issued by the Canadian Nuclear Safety Commission.

15 After that time, Canada would become the
16 owner of the properties and the responsibility for
17 monitoring and managing the waste management sites on
18 those lands would be passed onto AECL.

19 Maybe Ms. Miller would like to add
20 something further?

21 **MS. MILLER:** Joan Miller, for the record.

22 We will have -- there will be a transition
23 services agreement in place so that when the lands
24 actually transfer to the Government of Canada and we
25 become the licence holder, we will continue to contract

1 Cameco to essentially operate -- continue to operate the
2 facility, carry out the monitoring, et cetera, currently
3 per the existing licensing manual and current
4 requirements.

5 Over that time, basically we shadow, we job
6 shadow with them and after six months we will resume full
7 operations.

8 **MEMBER McDILL:** Thank you.

9 And staff, do you feel the six months
10 period is sufficient for that shadowing? Will there be
11 multiple teams at all times?

12 **MR. ELDER:** Peter Elder, for the record.

13 That's the same arrangement that was put in
14 place for the Port Hope -- from the Welcome facility of
15 Port Hope and it worked quite well; there was adequate
16 time to do the handover.

17 **MEMBER McDILL:** So all the involved parties
18 have experience in making that transition and it's been
19 tested?

20 **MR. ELDER:** Right, that's correct.

21 **MEMBER McDILL:** Thank you.

22 That's all for the this round, Mr. Chair.

23 **THE CHAIRMAN:** Thank you.

24 I've got a couple of questions. Let me
25 start with some -- again, a difficult question, a generic

1 question.

2 This project has been around for a while.
3 For the public at large, could somebody -- let me start to
4 with AECL -- can you give me, again, in a -- I don't want
5 to put a time limit -- but a short, kind of succinct
6 explanation, why is it better to dig up the stuff, move it
7 over to a new site, treat it, rather than leave it where
8 it is?

9 **MS. MILLER:** Joan Miller, for the record.
10 That was reviewed extensively through the
11 period of the environmental assessment and so I'll pass it
12 back to Glenn Case who was involved in that process for
13 us.

14 **MR. CASE:** Glenn Case, for the record.
15 One thing that has been stressed in our
16 presentation is the eroding shoreline on which the
17 facility is currently located. And one of the studies
18 that we conducted as part of the legal agreement was to
19 examine the rate of bluff erosion that was occurring in
20 the Port Granby area.

21 We found that it was episodically going
22 back at a rate of about 0.3 metres per year, which means
23 for 5 years nothing may happen but suddenly you may lose 5
24 years of bluff.

25 So, for the long-term, we considered that

1 that was really not an acceptable location to maintain a
2 facility in such close proximity to the receding shoreline
3 and the receding bluffs.

4 Through an assessment of the existing
5 native soils that are located further to the north, we
6 identified a better location in which we could fully
7 encapsulate the waste rather than simply protecting it in
8 its in situ environment.

9 So over the long-term, it was better to
10 move it from where it was to a better place where we could
11 fully manage it for the long-term, as compared to having
12 to look at it or maintain it in any in situ condition.

13 The modelling that we did also showed that
14 the areas alongside of -- if we were to leave it in situ
15 would continue to erode and that we would have to
16 continually maintain the sides of the facility; not only
17 the face of it as it faced Lake Ontario, but would also
18 have to protect the sides as the shorelines on the east
19 and the west continue to recede.

20 So the long and the short of it is, it was
21 a better location to move it away from this receding
22 shoreline than to leave it and maintain it in its current
23 in situ situation.

24 **THE CHAIRMAN:** So if I understand
25 correctly, with all the risks that are involved,

1 environmental risk, if you left it where it is it will
2 contaminate Lake Ontario presumably, which is a worst kind
3 of outcome with all the risk associated with transporting
4 the stuff to a new site.

5 Did I get this kind of assessment right?

6 **MR. CASE:** Glenn Case, for the record.

7 If no corrective action were to be taken,
8 that eventually would be the situation, that's correct.

9 **THE CHAIRMAN:** First, I'd like to ask staff
10 and then I'd like to hear from Ministry of Ontario --
11 Ministry of Environment, did they actually -- and, again,
12 we may be repeating some of the things that have been
13 going on and the environmental assessment.

14 Are things good at this junction to just
15 make sure that everybody agrees with the approach here?

16 Staff?

17 **MR. ELDER:** Peter Elder, for the record.

18 So in the high-level looking at this one,
19 our concern when we looked at the options to maintain it
20 as a -- to maintain the bluffs, is it was much harder to
21 protect something that was going to be stable maintenance
22 for a long period of time, and our real concern was there
23 still remains some sort of chance of some sort of
24 catastrophic failure where the whole thing falls into Lake
25 Ontario.

1 We thought it was a much better solution to
2 move it where you have a much more stable situation and
3 any degradation you get would be very gradual. So your
4 monitoring program is more able to watch it, to monitor
5 any degradation and fix it as it happens.

6 The other one is because of the local
7 geography and the bluffs, is it's very difficult to -- our
8 experience with the current site it's much more difficult
9 to control the water flow when you've got a 35-metre bluff
10 than a relatively flat area.

11 **THE CHAIRMAN:** Thank you.

12 Ministry of Environment?

13 **MS. BROWN:** Andrea Brown, Ministry of
14 Environment, for the record.

15 It's been our experience, provincially,
16 that landfill reclamation and remediation, it does address
17 a lot of potential environmental issues and create a new
18 engineered site that can meet current standards, current
19 requirements.

20 So this is fairly common for municipal
21 landfills as well to remove waste and put waste in new
22 engineered facilities, so we also agree with and support
23 this approach.

24 **THE CHAIRMAN:** And while I got you here,
25 they are -- I notice both staff and AECL have agreed on

1 cleaning criteria for the various contamination.

2 You aware all of this and agree with the
3 criteria that have been set and the objective that have
4 been set for the cleaning?

5 **MS. BROWN:** Andrea Brown, again, for the
6 record.

7 Yes, we consulted throughout the process
8 and participated in the environmental assessment. We're
9 aware of the criteria that are proposed for the site and
10 we're in agreement with the project for this use.

11 **THE CHAIRMAN:** Okay.

12 While we got her here, anybody else want to
13 question?

14 Okay, thank you very much.

15 One kind of -- again, I'm always interested
16 in the end result, end outcome -- and you mentioned --
17 AECL mentioned that eventually, assuming everything goes
18 according to plan, the end result will be a site where the
19 radiation level is background.

20 Does anybody have an estimation when will
21 that happen? When do you expect the site to be ready --
22 maybe I'll start with institutional transfer, and when is
23 it ready for kids to come in and picnic onsite?

24 **MS. MILLER:** Joan Miller, for the record.

25 To address your question perhaps in two

1 parts.

2 First, as we construct the mound and as the
3 mound has the top layers put on it, it will be constructed
4 such that it will have background -- radiation levels at
5 the top of the mound will be at background levels as it is
6 constructed, when it's complete.

7 Then the question about end use, really,
8 and so the project is working and Natural Resources Canada
9 are working with the municipality and they will
10 collectively together determine an appropriate end-use
11 concept for this facility.

12 **THE CHAIRMAN:** But you just said that when
13 it's complete it's going to be background radiation,
14 right, that level?

15 So in other words, when the project is
16 complete -- and I'm talking about 10 years -- presumably
17 shortly after 10 years, you know, it should be open to the
18 public?

19 **MS. MILLER:** Joan Miller, for the record.

20 As the facility is licensed, so during --
21 sorry -- as the facility is constructed, so during the
22 licence period, the top of the mound will have -- will be
23 at background levels.

24 However, the actual use of the facility,
25 whether it will be open to the public, what the end use

1 will be, will be determined through consultation and
2 agreement between Natural Resources Canada and the
3 municipality.

4 **THE CHAIRMAN:** Staff, what do you think;
5 how long will ongoing monitoring and licensing will
6 continue for that site? And, again, I'm not looking for
7 great decision but just ballpark, is it going to be 10
8 years, 20 years or 100 years?

9 **MR. HOWARD:** Don Howard, for the record.

10 In our presentation we said we were going
11 to come back for licence renewal for Phase III which will
12 be the long-term care and maintenance. At that time we
13 expect to see what the end-use objective is for the
14 facility.

15 At the present time, until CNSC staff are
16 satisfied that the liquid effluents are basically being
17 reduced and things of that nature, it's hard to say at
18 this point what the future is going to hold or what the
19 regulatory oversight is going to be.

20 But if you want a number, you know, maybe
21 10, 20 years into the future to demonstrate that the
22 design, the mound, is operating as designed, so they have
23 to give some assurance that that is happening before we
24 would consider reduction of regulatory oversight or even
25 elimination of regulatory oversight.

1 **THE CHAIRMAN:** Assuming all of this
2 happens, when you talk about "institutional transfer",
3 what are you talking about?

4 **MR. HOWARD:** Don Howard, for the record.
5 Institutional transfer could be anything
6 from transfer to a provincial organization, it could be a
7 municipal oversight, it could be a number of things at
8 this point.

9 We have to remember that even in 20 years
10 from now the facility will still contain nuclear
11 substances, it's not going to decay away in 20 years, so
12 it will still have nuclear substances. So there has to be
13 a plan in place for some form of institutional control,
14 whether it's the CNSC regulatory oversight or some other
15 form of oversight or management of that site.

16 **THE CHAIRMAN:** But, again, not be belabour
17 the point, as long as nobody digs inside, presumably the
18 surface would be grassed, treed, and safe for public use?

19 **MR. HOWARD:** Don Howard, for the record.
20 Yes, that's true but we have to -- how is
21 that going to be assured is the question. How do we
22 assure nobody is going to dig into that mound? So there
23 has to be some form of oversight, whether it's at the
24 municipality level; we're not sure yet.

25 Also, we have to look at the effluent

1 coming out. Is it going to take 10 years for it to really
2 decrease to a level. If you decrease to less than 100
3 cubic -- you know -- litres per month or year, I forget
4 what the number was.

5 But I guess what we have to do is look at
6 the operation of the facility at that time as to how much
7 liquid effluent is actually coming down. Is it really
8 reducing at a level that is expected or is it less, more,
9 so basically we have to look at the situation at the time.

10 As far as CNSC staff is concerned, for the
11 foreseeable future we expect this mound to remain under
12 regulatory -- CNSC regulatory oversight and then as
13 evidence emerges then we'll look at the data that's being
14 presented and then we can make recommendations to the
15 Commission at that time.

16 **THE CHAIRMAN:** So there will have to be a
17 formal process for the CNSC to stop oversight and
18 regulation of the site?

19 **MR. HOWARD:** Don Howard, for the record.

20 Yes, they would have to provide evidence to
21 the CNSC staff to demonstrate that what they're proposing
22 is acceptable.

23 **THE CHAIRMAN:** Okay, thank you.

24 Dr. McDill, anything? No.

25 Dr. Barriault?

1 **MEMBER BARRIAULT:** Just one brief question.
2 AECL, you described that you've had
3 meetings with the property owners of the area. Can I have
4 a bit of a timeline of when and how and, I guess, the
5 outcome of some of these meetings?

6 You also mentioned about the property value
7 would be protected for these and, I guess, how do you
8 propose to do that?

9 **MS. MILLER:** Joan Miller, for the record.
10 There have been extensive community
11 consultations, public meetings, discussion groups, held
12 since the legal agreement was signed and the environmental
13 assessment process was put into place.

14 There have also been a number of one-on-one
15 meetings with property owners over the course of this
16 period. I saw some numbers -- I'll pass it over to
17 Christine in a minute -- but I saw some numbers that
18 indicated, you know, over 100 meetings in some cases with
19 one-on-one meetings with some of the property owners.

20 Port Granby discussion group I think has
21 held 13 meetings over the past 4 or 5 years. So there are
22 a number -- those discussion groups are open to the
23 public.

24 And, Christine, is there anything you'd
25 like to add?

1 about 15 minutes. We'll reconvene at 10:45.

2 Thank you.

3

4 --- Upon recessing at 10:32 a.m. /

5 L'audience est suspendue à 10h32

6 --- Upon resuming at 10:51 a.m. /

7 L'audience est reprise à 10h51

8

9 **11-H10.5 / 11-H10.5A**

10 **Oral Presentation by the**
11 **Municipality of Clarington**

12

13 **THE CHAIRMAN:** Okay, we are back. And
14 there was a small change in the agenda.

15 We figured since we are in the Municipality
16 of Clarington, it's only fair to start with the
17 presentation from the Municipality of Clarington as
18 outlined in CMD 11-H10.5 and 10.5A. I understand that
19 Mayor Foster, you'll make the presentation?

20 Please proceed, the floor is yours.

21 **MR. FOSTER:** Adrian Foster, for the record.

22 And good morning, Mr. President, Members of
23 the CNSC Panel and staff, AECL representatives,
24 intervenors, members of the public. And welcome to
25 Clarington.

1 I'm Mayor Foster from the Municipality of
2 Clarington. I'm here today to provide an intervention to
3 the CNSC on behalf of the Municipality of Clarington.

4 I have in the audience with me Counsellor
5 Woo, who is the original counsellor for the area that the
6 Port Granby site is in, as well as Frank Wu, our CAO.

7 As well, we have Janice Szwarcz, who is th
8 principal planner in the special projects ivision of the
9 planning department; Dave Hardy, lead consultant for the
10 peer review team; Faye Langmaid who is the manager of
11 special projects in the planning services department; Ron
12 Albright, manager of infrastructure and -- in the
13 engineering department; as well as Eric Tuson, municipal
14 infrastructure group, civil engineering; Paul Bowen,
15 Terraprobe, geology and hydrogeology; and Tony Van Der
16 Vooren, Amec, air quality.

17 And they are here to provide comments and
18 recommendations from the Municipality on AECL's
19 application for a waste nuclear substance licence for the
20 Port Granby long-term low-level radioactive waste
21 management project.

22 The Municipality has an agreement with the
23 Government of Canada regarding the management of low-level
24 radioactive and historic waste. The legal agreement was
25 signed in 2001 between the Municipality of Clarington, the

1 I would also like to thank you for coming
2 to the community. You've done that several times for the
3 Port Hope Area Initiative Project and we do appreciate the
4 ability for our residents and business owners and
5 operators to participate in this process.

6 By way of our legal agreement -- which
7 you've heard many times today -- between the Municipality
8 of Clarington, the Municipality of Port Hope and the
9 Government of Canada, establishes the two municipalities
10 as key stakeholders in the Port Hope Area Initiative.

11 The agreement and the cooperative work to
12 this point demonstrates the commitment of all parties to
13 both the Port Granby and the Port Hope project.

14 As key stakeholders in this initiative, the
15 Municipality of Port Hope has a vital interest in ensuring
16 the safe cleanup and long-term management of the
17 radioactive waste and contaminated soil, both in
18 Clarington and in Port Hope.

19 As such, we've consistently supported the
20 efforts of the Port Hope Area Initiative and the
21 Municipality of Clarington towards the successful
22 completion and implementation of the Port Granby project.

23 The progress to date on both the Port
24 Granby and Port Hope project is, in large part, the result
25 of the thoroughness of the work undertaken by the Port

1 Hope Area Initiative Management Office and the municipal
2 peer review teams and the positive and cooperative working
3 relationships that have existed among these parties over
4 the past several years.

5 We understand that the Municipality of
6 Clarington has completed its review of the project
7 documents and plans and it supports the project
8 proceeding.

9 Therefore, the Municipality of Port Hope,
10 as a partner, would also like to reiterate its support for
11 the Port Granby project and the application for the waste
12 nuclear substance licence being considered today.

13 Again, I'd like to thank you for this
14 opportunity to provide input to the Commission.

15 Thank you.

16 **THE CHAIRMAN:** Thank you.

17 Questions?

18 Dr. McDill?

19 **MEMBER MCDILL:** Thank you.

20 We heard earlier today that the transition
21 is going reasonably well in Port Hope. Would you like to
22 expand on that?

23 **MAYOR THOMPSON:** Yes. Linda Thompson, for
24 the record.

25 The process of transition through Cameco

1 and the Port Hope Area Initiative on the site known as the
2 Welcome Site, it is our understanding things have gone
3 very smoothly, from information we have from both Cameco
4 and the Port Hope Area Initiative, both through tours, the
5 meetings that we've held; we have had very positive
6 feedback about that transition.

7 **MEMBER McDILL:** Thank you.

8 **THE CHAIRMAN:** So did the land transfer
9 occur?

10 **MAYOR THOMPSON:** Yes, it did. As per the
11 legal agreement, the requirements were similar in regards
12 to licensing in the amount of time where once licence was
13 issued that the lands would transfer to NRCan.

14 **THE CHAIRMAN:** Sorry, I'm trying to
15 understand.

16 So did NRCan now transfer the management of
17 this thing to AECL, everything was done formally now?
18 Maybe NRCan can help us.

19 **MR. McCAULEY:** Dave McCauley, for the
20 record.

21 Yes, that's correct. We took over
22 ownership of the Welcome facility and then entered into a
23 transition services agreement with Cameco and AECL is now
24 running the -- is now running the facility.

25 **THE CHAIRMAN:** And that's the same process

1 you're planning to do for Clarington?

2 **MR. McCAULEY:** That's correct.

3 **THE CHAIRMAN:** Go ahead, Dr. McDill.

4 **MEMBER McDILL:** Are there any lessons
5 learned?

6 **MS. FAHEY:** Tom Smith is here from Cameco,
7 so he can vouch firsthand, but I believe the -- we had set
8 aside six months for the training of our new staff. And
9 Tom and Dave Workman trained the staff, administered
10 tests, and they were impressed that shorter than the six
11 months our staff had acquired the necessary skills and
12 competence required to run the Welcome Waste Management
13 Facility.

14 **MEMBER McDILL:** Does Cameco want to add
15 anything to that?

16 Perhaps you could also let us know if there
17 were any third parties who were witness to this or whether
18 it was just one to the other?

19 **MR. SMITH:** For the record, Tom Smith.

20 The six-month transition period at Welcome
21 has concluded. We feel it was a very effective transition
22 between Cameco and AECL staff.

23 We undertook normal operations during that
24 period, as well as had an opportunity to work with AECL
25 staff on some small upgrades to the facility, and that

1 transition was overseen by CNSC staff as well and I think
2 you can perhaps ask them for their opinions as well.

3 **MEMBER McDILL:** That was indeed my next
4 question. They would be the third party in a way.

5 **MR. HOWARD:** Don Howard, for the record.

6 Yes, the CNSC staff conduct compliance
7 inspections at Welcome. We have been observing the
8 transition between Cameco and AECL staff.

9 We have reviewed the records that AECL has
10 indicated as part of some of the records on training and
11 things of that nature. So we've been monitoring that and
12 we were quite satisfied with the transition from Cameco to
13 AECL.

14 **THE CHAIRMAN:** Thank you.

15 Questions? Dr. Barriault?

16 **MEMBER BARRIAULT:** Just a quick one.

17 During the transition, is there any
18 glitches that you've seen, any problems that arose that
19 you may be aware of?

20 **MR. HOWARD:** Don Howard, for the record.

21 Presently, during our inspections, you
22 know, because they were using the Cameco procedures as
23 they transitioned between Cameco and AECL, once AECL took
24 over completely at the site, you know, they looked at the
25 operation and did improvements and things of that nature.

1 So -- but no, we didn't identify any major
2 glitches in the transmission.

3 **MEMBER BARRIAULT:** Thank you.

4 **THE CHAIRPERSON:** I've just a question I
5 should have asked the previous Mayor.

6 Are you planning to monitor -- is the
7 Municipality planning to monitor the project? Maybe I
8 should apply it to both of you.

9 And do they -- does AECL or CNSC think that
10 they have any kind of a formal role in the project
11 monitoring here?

12 **MAYOR FOSTER:** Adrian Foster, for the
13 record.

14 Certainly we anticipate continued
15 involvement in that, for input with it in terms of
16 monitoring. Are you talking about, you know, whether it's
17 particulate or formal monitoring ---

18 **THE CHAIRMAN:** Well, it's ---

19 **MR. FOSTER:** --- or just keeping an eye on
20 things?

21 **THE CHAIRMAN:** I was thinking more you have
22 -- you know, you're doing transport engineering, municipal
23 kind of work. Some intervenors argue there should be some
24 ombudsmen. They can go and, you know, raise issues
25 outside -- both are there.

1 I'm just trying to figure out what is --
2 what you consider to be your role in this project
3 monitoring?

4 **MAYOR FOSTER:** Well, we -- you know, we'll
5 certainly be looking forward to continued involvement.

6 I might give that to Ms. Langmaid. I'm
7 sure she's the appropriate one to give you details on how
8 they see it as spinning out, but it's certainly not an
9 issue where we see an end date that we're not involved.

10 We must be involved moving forward.

11 **MS. LANGMAID:** Faye Langmaid, for the
12 record.

13 I wouldn't see us actually monitoring as in
14 doing scientific-type monitoring. What I would see us
15 doing as monitoring would be the public perception and the
16 public acceptance, and if there are any issues that come
17 forward from the public, they usually come directly to the
18 Municipality and then we intervene with AECL about those
19 issues.

20 **THE CHAIRMAN:** Are you expecting periodical
21 reports on progress, things of that nature, to be formally
22 tabled?

23 **MS. LANGMAID:** I'm sorry. I actually
24 missed the word before "reports".

25 **THE CHAIRMAN:** I'm talking about formal

1 reports from AECL, from CNSC about, you know, the project
2 is proceeding, maybe some of the data; all of those.

3 **MS. LANGMAID:** Well, for the next 10 years,
4 we would be highly involved in the ongoing construction
5 development of the project. We would know what's going on
6 on the site on a weekly, if not daily, basis.

7 So -- and then after that, we would be
8 looking at the end-use development that we have -- Council
9 has endorsed, and seeing how it was being implemented and
10 how it is progressing on from there.

11 **MAYOR THOMPSON:** Linda Thompson, for the
12 record.

13 In regards to the Municipality of Port
14 Hope, which project is somewhat different within the
15 community than Port Granby's, several components that we
16 work together with the community of Port Granby, the Port
17 Hope Area Initiative and NRCan, we do have regular
18 agreement monitoring group meetings and we meet regularly
19 with a formal schedule to ensure that any project
20 highlights are dealt with, and they will continue.

21 They have been evolved as the project has
22 evolved and -- to ensure that we address matters of
23 importance at the time of the project.

24 For the Municipality of Port Hope, we are
25 working on involvement issues in regards to Phase II, and

1 we will share lessons learned also with Clarington.

2 We have looked at things as what will be
3 required. We will continue in our community for -- we are
4 looking at a municipal expediting team to ensure that
5 issues of the Municipality are still reviewed and looked
6 at, and it's our understanding -- and the Port Hope Area
7 Initiative can speak more to the monitoring, construction
8 monitoring program -- I'm sorry, the environmental
9 monitoring program, which some is available on their
10 website already, which is a very thorough process that
11 will be available to the public to view dust and other
12 monitoring information, environmental information.

13 So while we continue to work and roll out
14 programs how the Municipality will be involved, Port Hope
15 feels very confident that both the Municipality as an
16 oversight -- not as an oversight -- but as a partner will
17 be able to provide information and receive information and
18 share that with the community.

19 Thank you.

20 **THE CHAIRMAN:** AECL, is it all built into
21 your public outreach for this project?

22 **MS. FAHEY:** Christine Fahey, for the
23 record.

24 I'm just echoing Mayor Thompson's
25 sentiments.

1 We have some formal meeting frameworks
2 whereby meetings at a strategic or senior management level
3 take place. There's also meetings of staff involved at a
4 technical level that take place regularly.

5 So these are pursuant to the legal
6 agreement requirement for ongoing consultation and
7 collaborations with the Municipality.

8 The legal agreement also requires that
9 there be a public communications program, and I would put
10 the stakeholder outreach component as part of our public
11 communications program.

12 And in this regard, one example would be
13 the Port Granby discussion group that's been mentioned a
14 few times already today, whereby we meet fairly informally
15 in the Newtonville community hall on an agenda that's
16 jointly developed in consultation with the local ratepayer
17 association whose members make up most of the participants
18 in the discussion group.

19 **THE CHAIRMAN:** Thank you.

20 Anything else?

21 Thank you very much. Thank you.

22 Next, I'd like to move to an oral
23 presentation by Ms. Jill DeCoste, as outlined in CMD
24 H10.3.

25

1 **11-H10.3**

2 **Oral Presentation by**

3 **Jill DeCoste**

4

5 **MS. DECOSTE:** Hello. I'm Jill DeCoste, and
6 I live just up the road from where this is all going to
7 take place.

8 I've been to quite a few of the meetings.
9 When I first received them, of course, I ignored them
10 because it looked like a little government letter. But
11 they started in the homes and you'd go over and get some
12 information; the locals completely in agreement that they
13 wanted the waste to stay right where it is and build up
14 the shoreline.

15 I went to multiple meetings. The same
16 opinion was expressed.

17 Some of the meetings were so heated that
18 they had to change the formats in the meetings, so I'm not
19 that surprised that you've had to have 100 meetings with
20 someone because people aren't being listened to. They're
21 being steamrollered.

22 I'd say by the amount of suits in the room
23 you guys are probably familiar with that, wear people
24 down, a lot of meetings, and that's where our locals are
25 at.

1 My background is I've done extensive work
2 on radioactive jobs. I've been the person that assesses
3 what radioactive tests are required, calculated the dose
4 for the workers involved for hundreds, perhaps thousands,
5 and also filled out exposure permits getting the correct
6 procedures and the correct signatures of approval.

7 So I just wanted to say I think I have a
8 good background on whether I thought this plan that they
9 have in place is going to work out or not. And I wanted
10 to just make it a simple little demo.

11 If you had a drywaller over and he took
12 mud, put a bit on the wall and then sanded it down, the
13 dust goes up in the air and it goes out to the extension
14 of the walls in the house. And that's where it's
15 contained for several weeks, even though you maybe only
16 sanded a little bit.

17 That dust is considered airborne, and the
18 problem with an airborne material is, it's not a fixed
19 source. It's moved and you can't control it.

20 So, typically, every job that I've ever
21 been on in a -- where there was airborne contaminants or
22 loose contamination, as we called it, it was housed in a
23 tenting facility so that there is a wall to hit, just like
24 the drywall dust got to hit, only the dust that would be
25 agitating on this excavation site would be radioactive

1 dust.

2 And those airborne particles don't have to
3 just move with the equipment digging it up. Digging it
4 up, loading it on a truck, transporting it, moving it to
5 the new site, all of those will move the particles up in
6 the air.

7 Also it will adhere to the tires, which
8 move things, so mechanical equipment is going to move it
9 around. Animals are going to traverse through there. We
10 can't control the wind, which will move it.

11 Even heating up the temperature of the
12 soil, like a nice sunny day, the water droplets that
13 evaporate up will be radioactive water droplets, and then
14 as they move forward in the cloud sites then this is
15 uncontrolled.

16 Now, loose contamination that's airborne
17 has another danger, and I'd like to contain that --
18 compare that danger to poisoning. If you had rat
19 poisoning on your shelf at home and it's in a container it
20 doesn't provide a hazard, but like the drywall dust that's
21 gotten beyond the barriers -- and since there is no
22 barriers this radioactive dust that's not contained, it
23 can be ingested and inhaled. And a dose that would have
24 been miniscule on your skin, ingested or inhaled could be
25 lethal, depends what it is, and it could be a slow process

1 and it's really untraceable.

2 So I just feel like this could lead to a
3 horrendous situation.

4 Every job I've been on has either had a
5 contained area or tented. It's had a negative pressure
6 system where it could be a temporary one where it's a
7 ventilation line that runs to a place where things get
8 filtered.

9 I heard you mention ALARA principles, where
10 people wear protective equipment. It's unfathomable how
11 much waste will be occurred with that. Like when you suit
12 up to work in this you have breathing protection, they're
13 going to have to have coveralls head to foot and booties
14 and gloves that on a very small job tends to create -- if
15 I had two workers that were working for one shift, on a
16 typical day we would have three large garbage bags full of
17 clothing just for protective gear.

18 So since you can't fathom the number of
19 workers we're going to have, I would imagine the
20 protective gear and the waste packaging will be far larger
21 volume than the waste soil itself.

22 As for the communication, at one of those
23 meetings that I was at I really only had one question. I
24 brought it to multiple people at the panel. And my
25 question was can you tell me what kind of doses they're

1 experiencing in Port Hope on a similar job they were going
2 to be working on -- not as big as this.

3 Not one of the panel had the answer. They
4 didn't know the dose at the site. They didn't know the
5 dose uptake. They didn't know expectancies. They had
6 zero information.

7 I wrote to three people. They all got my
8 phone number. No one called. I was promised by all staff
9 member I would hear within the week.

10 So I don't believe the view that you're
11 getting that the locals are happy has been communicated
12 clearly at all. I think it's been an untruth.

13 I don't really want to get into a situation
14 like Port Hope has where the contamination is everywhere,
15 and that's not just the land it's, you know, in that --
16 back then when it happened nobody didn't -- monitored, you
17 know, is it landing on the kids that are standing at the
18 school bus or the pets that are running it into the home?

19 It's just too big a project to be
20 controlled like this and I think they have to listen to
21 the locals, please leave it on site.

22 If you were -- had been meeting for
23 somebody for 100 meetings, which I didn't know until -- I
24 don't know if it's you guys or not -- but, anyways, I
25 think you'd feel un-listened to. And I know in the few

1 meetings that I've been to, maybe 10 I'm going to guess, I
2 never heard one of my voice -- communicated that I was
3 unhappy with it. I'm completely unhappy with the job
4 plan. The people are fine but the plan is bad.

5 Thank you.

6 **THE CHAIRMAN:** Thank you.

7 Questions? Dr. McDill?

8 **MEMBER McDILL:** So let's try the easier one
9 first. Is it possible to answer Ms. DeCoste's question
10 yet, the one that is apparently unanswered?

11 **MS. FAHEY:** I'm aware the question you
12 asked came at the open house at the Newtonville Community
13 Hall, which was in October of 2010.

14 The job that you're referring to in Port
15 Hope continued into the beginning of December 2010. The
16 records, of course, for any individual worker cannot be
17 released as it's a matter of privacy.

18 However, the total dose for all workers
19 involved in the trial remediation project in Port Hope was
20 eight person microSieverts. This compares with a nuclear
21 energy worker total dose limit of 50 milliSieverts.

22 Does that answer your question?

23 **MS. DeCOSTE:** Just partially, because I
24 asked for them in milligrams, which is the term we use in
25 our nuclear sites here in Canada so I'd be familiar. But

1 if you're saying eight versus 50 as the limit, we tend to
2 operate at way less than the accepted limits, one-fifth.

3 And so that's a high dose compared to what
4 I received working in a radiation station.

5 **MS. FAHEY:** Christine Fahey, for the
6 record.

7 I'd just like to reiterate the units,
8 microSieverts, whereas ---

9 **MS. DeCOSTE:** Oh, not ---

10 **MS. FAHEY:** --- the limit is milliSieverts.

11 **MS. DeCOSTE:** Okay. Thank you. I
12 misunderstood that.

13 **MS. FAHEY:** Thank you.

14 **MS. DeCOSTE:** Further to that, I asked what
15 the loose contamination was and how it was controlled.

16 **MR. CASE:** Glenn Case, for the record.

17 At the site of the trial remediation there
18 were airborne samplers that were measuring both long-lived
19 alpha as well as total suspended particulate. And the
20 levels that were measured throughout the course of the
21 work were at background levels. There was no indication
22 of any increase in long-lived alpha or suspended
23 particulate matter during the course of the work.

24

25 **MS. DeCOSTE:** Sorry, thank you for

1 answering.

2 **MEMBER McDILL:** May I ask why that question
3 had to be answered in this venue if it was a simple matter
4 of a phone call, or an email, or a letter, or a -- some
5 other means of communication?

6 **MS. FAHEY:** I can only comment -- Christine
7 Fahey, for the record -- that it was an oversight.

8 There's certainly -- there's been public
9 reports on the trial remediation project so there's
10 certainly no attempt to contain the information. It's
11 just human oversight.

12 **MEMBER McDILL:** Ms. DeCoste, you said your
13 background -- and I don't wish to push for personal
14 information -- but you're accustomed to working in rem so
15 where is that, if I may?

16 **MS. DeCOSTE:** At the Bruce site. I worked
17 on shift for quite a few years. And the highest level
18 radiation qualification you get is green and I did so many
19 outages I was called "The Green Queen."

20 **MEMBER McDILL:** Because the Sieverts has
21 been around for ---

22 **MS. DeCOSTE:** A while.

23 **MEMBER McDILL:** There's a challenge in
24 engineering and science with two differing opinions, and
25 this is one. Can you encapsulate how many people you are

1 speaking for when you say the locals? Because I'm not
2 here, I don't live here, so the locals to me is -- are you
3 talking about the rural locals around the site or are you
4 referring to a bigger group?

5 **MS. DeCOSTE:** I'm referring to -- if you
6 could see each meeting I was at -- every person that sat
7 on the local side, and some of them were as small as maybe
8 six or eight locals and some -- when we had some MPs out
9 and Bev Oda were -- had, I'm guessing, 50 -- you guys
10 would probably know the numbers better than me. If the
11 beachfront is eroding at 0.3 metres per year, is it
12 feasible to contain it?

13 Stainless steel piles won't last 500 years.
14 A berm won't survive a lot of wave action. They both have
15 to be maintained, so.

16 **MS. DeCOSTE:** True, but they changed the
17 lakefront in Toronto, moving the shoreline out. We had a
18 gentleman out presenting on that who was involved in
19 excavation.

20 And as for temporary things, I was on jobs
21 where things that were destroyed by radiation weren't
22 expected to happen and that was by very smart, trained
23 people. We saw plastics, rubbers, everything break down
24 on equipment inside areas that are exposed to radiation,
25 and these are very well trained engineers. They're not

1 stupid. It's just we don't have a long enough term
2 experience with anything that can hold up.

3 **MEMBER McDILL:** Maybe I could ask AECL or
4 NRCAN to comment again on the history of remaining --
5 having it remain where it is and the values for moving.

6 Thank you.

7 **MR. McCAULEY:** Dave McCauley, NRCAN, for
8 the record.

9 The -- in terms of the initiative,
10 basically, we worked initially with the local community
11 group to develop options for the long-term management of
12 the waste in Clarington. We -- that community group
13 developed a proposal that was then submitted and that
14 proposal, in fact, included maintaining the waste where it
15 was with some modification of the waste at that site.

16 That proposal was brought into the
17 Environmental Assessment process. It was supported by the
18 local municipality, brought through the Environmental
19 Assessment process, through which it was compared with a
20 number of alternatives and, through that process, the best
21 option -- the preferred option -- was defined as the
22 current proposal to move it in 700 metres inland in a
23 fully-encapsulated engineered mound.

24 So that Environmental Assessment was
25 reviewed by NRCAN and the Canadian Nuclear Safety

1 Commission as well as other federal authorities. And the
2 result was that, in fact, this proposal would not have
3 significant environmental effects and, therefore, it was
4 approved for further design, development and
5 implementation, subject to licensing.

6 **MEMBER McDILL:** Thank you.

7 For the sake of having it all here today,
8 why not tent, at least at the beginning?

9 **MR. CASE:** Glenn Case, for the record.

10 As part of our alternative-means process,
11 we examined looking at conducting the work within a tented
12 area, and the conclusion was that there were exposure
13 issues to the workers that would be inside the tents that
14 were too difficult to control and it was easier to do it
15 outside of a tent environment.

16 **MEMBER McDILL:** Do you and the group for
17 whom you are speaking -- if you are speaking for a group
18 or speaking for yourself, do you feel that the explanation
19 with respect to tenting has been given to you in a way in
20 which you or the community can understand it?

21 **MS. DeCOSTE:** It would be easier to not
22 have to tent it and to keep the radiation in.

23 **MEMBER McDILL:** But that wasn't my
24 question.

25 **MS. DeCOSTE:** I thought it was.

1 **MEMBER McDILL:** Have you been given an
2 explanation at a level which is understandable by the
3 community as to why tenting, if tenting were an option,
4 has been dismissed as an option?

5 **MS. DeCOSTE:** Not formally. I've asked
6 that. I've heard, "Oh, you know, it's too restrictive for
7 where the equipment could move to", but -- and, you know,
8 when you have running equipment, you have to deal with
9 exhaust also in an enclosure. But versus, you know, "We
10 don't want to work around keeping the radiation in", I
11 haven't had a substantial, logical explanation.

12 **MEMBER McDILL:** So back to this side, and
13 maybe I can ask staff also because they've been sitting
14 over there quietly.

15 Is there a succinct document that can be --
16 that is available that discusses this? And I'll pass that
17 on to staff as well.

18 **MR. CASE:** Glenn Case, for the record.

19 As I mentioned previously, during the
20 alternative-means process, which was conducted as part of
21 the Environmental Assessment, we accepted a variety of
22 alternatives to conducting the work and examined those in
23 considerable detail and provided those in an alternative-
24 means summary document which is -- which forms part of our
25 Environmental Assessment documentation that we provided to

1 the responsible authorities for the project.

2 So a review of that would provide the
3 information, I believe, that you're looking for and how we
4 dispositioned that suggestion that was brought forward.

5 **MEMBER McDILL:** Would that be of help?

6 **MS. DeCOSTE:** I'm sorry. No, I don't care
7 how uncomfortable it would be for someone to have to keep
8 the radiation in a specific area. I think you still need
9 to do that.

10 **MEMBER McDILL:** Okay.

11 Staff, would you like to comment on this?

12 **MS. THOMPSON:** Patsy Thompson, for the
13 record. I'm the Director-General at the CNSC responsible
14 for radiation protection and environmental protection.

15 In terms of the radiation-exposure issues
16 to workers who will be involved in removing the material
17 from the existing site and moving the material to the new
18 facility, detailed assessments were conducted looking at
19 the various sources of exposures to workers.

20 We looked at gamma radiation, or what's
21 called ground shine, from the material that is in place
22 currently because it's not an engineered facility so you
23 do get gamma exposure from the surface. And once you
24 start removing the surface layers, there will be gamma
25 radiation exposures.

1 The amount of dust that could be generated
2 was looked at as well as radon exposures. Those were the
3 three sources of radiation that will or could have an
4 impact on workers involved in the activities.

5 The nature of the work that will be
6 conducted is not of a type that Ms. DeCoste is familiar
7 with in nuclear power plants where there are high-
8 radiation environments, and a lot of the grinding and pipe
9 cutting and things that would generate dust and require
10 essentially venting and ventilation equipment for workers.
11 This is essentially using equipment to remove soil and
12 remove material.

13 The amount of dust to be generated is not
14 the type of fine dust that you would get in industrial
15 setting. This is essentially soil and other materials
16 that isn't airborne in the same way as you would in a
17 nuclear power plant environment where refurbishing and
18 maintenance work is being conducted.

19 But essentially, all the sources of
20 exposures specific for this site were considered and the
21 doses with no radiation-protection measures were estimated
22 and they were provided during the various presentations.

23 The highest dose estimated was seven
24 millisieverts per year; that is without any measures such
25 as distance from the work and work control programs and

1 personal protective equipment. So all of the program --
2 the Radiation Protection Program will be reviewed in
3 detail to make sure that the doses are much less than the
4 estimated highest exposure, but we're certainly not
5 talking about a high radiation environment.

6 We're talking about low-level radioactive
7 waste that is in trenches and essentially covered with
8 soil.

9 **MEMBER McDILL:** And you are confident from
10 the testing that's been done as to the contents of these
11 various gorges and trenches that nothing of any -- there
12 are going to be surprises, there always will be surprises,
13 but at this point your confidence level is very high, that
14 you understand the contents -- or the contents of these
15 trenches and gorges is understood?

16 **DR. THOMPSON:** Patsy Thompson, for the
17 record.

18 As was explained a bit earlier this
19 morning, there's lots of information on waste
20 characterization, but the radiation protection program
21 does not rely on the fact that we have a reasonable
22 understanding of what will be found.

23 The radiation protection program calls for,
24 essentially, work permits and looking at the work that
25 needs to be done and having the proper precautions for

1 what will be found on the day or the hour that the work is
2 being done.

3 So there is -- there are procedures that
4 will be required to plan the work and to make sure that
5 the workers are not entering into work with no knowledge
6 of what they will find.

7 **MEMBER McDILL:** Thank you, Mr. Chair. I'll
8 pass it on.

9 **THE CHAIRMAN:** Go ahead.

10 **MS. DeCOSTE:** Irregardless of whether it's
11 high-level or low-level radiation, once it becomes loose
12 contamination, which is what will happen as soon as it's
13 dug up, it is handled in a completely different manner.

14 And also I'd like to mention that even
15 though we think we're really advanced, new chemicals are
16 diagnosed as -- not -- are discovered as time comes on,
17 tritium, carbon-14; things that aren't expected and hadn't
18 been tested for can appear.

19 And it took a lot of years, so to assume
20 that if we spread it around it's probably okay because
21 it's loose contamination. Once it's internal, it's not
22 okay because a lot of these are alpha emitters which are
23 something that external to you tend not to damage you but
24 internally can be very dangerous.

25 So I disagree with those statements and I

1 also have a request for an additional speaker.

2 John?

3 **THE CHAIRMAN:** No, excuse me. I think the
4 time allotment already more than surpassed.

5 We've got to move on, got a long list of
6 intervenors, so thank you for your intervention and time
7 is up.

8 Thank you.

9 I'd like to move on to the next speaker and
10 the next submission is described in CMD 11-H10.7.

11 And I understand, Mr. Rudka, you're going
12 to make the presentation. Go ahead, please.

13

14 **11-H10.7**

15 **Oral presentation by**

16 **Dan Rudka**

17

18 **MR. RUDKA:** Yes, good morning, ladies and
19 gentlemen. Dan Rudka, for the record. I'm a former
20 nuclear energy worker from Port Hope. I now reside in
21 Clarington.

22 In the fall of 2008 some work was being
23 undertaken at the Port Granby storage facility involving
24 Cameco replacing a circulation tank. The tank placard
25 1789 indicated hydrochloric acid.

1 Now, as you may recall, I spoke of this
2 situation in August 2009 hearing at low-level waste
3 meeting in Port Hope.

4 At the time I showed you a picture, which
5 I'll show you again, of the tank leaking hydrochloric acid
6 from the high end of the tank.

7 Maybe the camera can put in on that a
8 little bit. I don't know how close it can get. I guess
9 he's not going to be able to.

10 You can see a mist in the top of the tank
11 coming out of a pipe. To the left, the other tank, which
12 is not even functioning as placard. If that tank is not
13 placarded, circled to the right is a sign stuck to the
14 back of the tank, it says "Caution: Chemical Unloading".

15 Now, I'm bringing this up again because
16 we're going to re-do this again. You're going to have to
17 do this tank another time and that leak went on for a
18 week, although Cameco did not state that, they said it was
19 about a day.

20 And if you'll notice the trees in the
21 background, it was a high wind. So the cloud you're
22 seeing there is quite a bit of vapour actually.

23 Thank you.

24 Now, during that week that the tank was
25 leaking along the Lakeshore Road, it was used by the

1 public, left open to runners, walkers, cyclists, car and -
2 - yes, are we paying attention. Thank you. Okay.

3 There was people all over the roadways on
4 the weekends when this tank was left open, okay.

5 They had people in the site, in the yard,
6 doing maintenance while that tank was leaking. And as I
7 told you about the only warnings, there was nothing there.

8 Now, when I presented this evidence and
9 this incident in August 2009, Mr. Smith, representing
10 Cameco, stated, "We drew the inventory from the tank --
11 existing tank down to what we thought was zero and will
12 have to look into it further".

13 Did Mr. Smith or Cameco look into it
14 further, and what was the result? What is the new plan?
15 Because as I said, you're going to have to do this again.

16 Now, Mr. Howard, from Cameco, went on to
17 further state, "Tank removal would allow the MOE
18 regulation guidelines of this type of material and any
19 release would have to be reported to the Ministry of
20 Environment".

21 Now, with no answer the Chairman of this
22 Board went on with other issues for unknown reasons. He
23 had no interest in discussing this.

24 I'd like to know, was the incident reported
25 to the Environment, Ministry of Environment, and what was

1 the result of that?

2 Considering the danger of hydrochloric
3 acid, I would certainly hope that you have it right. As I
4 say, again, you're going to be doing this at this site.

5 Should I have been surprised when the
6 Commissioner's response in the 2009 hearing or by Cameco's
7 response that day? I guess I should have been but I
8 wasn't, and that's part of the problem faced with the CNSC
9 and the industry when it comes to public concern and
10 accurate information.

11 Now, for many years, I've looked into the
12 CNSC and the nuclear industry and the environment has
13 always been a major point that Cameco and the CNSC would
14 like us to believe that they take very seriously.

15 And, at the same time, present industry
16 practices, although much improved, still leave us with
17 chemical and nuclear contamination for land, air and
18 water.

19 An example is the Welcome site, waste site,
20 the drainage pipe reaching out into Lake Ontario.
21 Although treated, it's not a solution for run-off but it's
22 simple, out of sight, out of mind theory to quell the
23 public mind on the issues with the run-off pipe from the
24 low-level waste site.

25 Now, in 2009 I told this Board for a second

1 time of concerning environment observations at the Welcome
2 drainage pipe. This was the time when the pipe was laying
3 on the shoreline, it had not been extended out into the
4 lake.

5 I asked on the second occasion that I
6 brought forward the issue that if anyone -- if I had
7 reported this to anyone -- this is the Commission asking
8 me did I report it and I replied no I had not because
9 previously I have reported this leaking circulation tank
10 to the Board and nothing was done, that I was aware of.

11 I also had my own personal exposure to
12 uranium in burden of that unacknowledged exposure and the
13 Board has done nothing but to continue avoid my issue.

14 The lady speaking before me about
15 inhalation of this radioactive material ---

16 **THE CHAIRMAN:** Are you going to get to Port
17 Granby? We are not here to discuss anything but Port
18 Granby.

19 **MR. RUDKA:** Yes, I am, sir.

20 **THE CHAIRMAN:** Well, you got 10 minutes,
21 please don't misuse it.

22 **MR. RUDKA:** Okay, the environment was the
23 subject. I started with Port Granby with this picture,
24 sir, okay.

25 Then tell me, if you guys are so

1 unconcerned about the environment, how come there's no
2 nets over the Port Granby ponds? Why are geese coming in
3 there and laying eggs or nesting in the fall? Why has
4 that been going on for years and years and years?

5 This water fowl goes off and what does some
6 people do, they hunt, they hunt geese and they're feeding,
7 possibly contaminated water fowl to their families.

8 There's no nets on there. If you people
9 were serious or Cameco was serious, there would have been
10 nets on there a long time ago.

11 Now, every time I present to this
12 Commission, I stand before you with all my problems and
13 the skin and that, you don't want to talk about any of
14 this, so -- but somehow this most obvious condition of
15 mine evades this Board and their imagination.

16 All the members of this Board are aware of
17 testing by UMARC and some of the material not even
18 licensed to be in Port Hope.

19 This Board was once directed by former
20 Chair Linda Keen to provide a resolution to my situation
21 that resulted from my employment in the nuclear industry
22 and the CNSC has done nothing.

23 The CNSC has shown no interest in learning
24 from my experience, no help ever rendered to assist me or
25 my family or what happens to those that show lesser

1 symptoms.

2 And what are the people in Port Hope facing
3 the clean-up, the radioactive waste? I would be worried
4 because after 10 years the Port Hope Area Initiative dust
5 control is a garden hose.

6 The new plan for the Port Granby site is
7 most impressive, with much thought and much planning.
8 It's unlikely that the project will come anywhere near its
9 present re-allotted budget.

10 The Port Hope site will not be large enough
11 for all the material presently proposed to go into this
12 very special landfill. Cost overrides and expansion to
13 the site seem to be inevitable and an inevitable reality
14 in moving ahead and remembering that no nuclear facility
15 has ever come in on budget.

16 Would it not be more cost effective and a
17 better plan to enlarge the proposed Port Hope facility and
18 create two sites in one area?

19 Port Granby is going to be costly. They
20 say they are moving the old site away from the lake and,
21 in truth, you're just going across the road and north a
22 little bit. The lake will still continue to erode and
23 eventually you'll be at the same position; you'll be on
24 the lakefront.

25 In 2011, so far Lake Ontario has

1 experienced 4 earthquakes, all somewhat minor, but one
2 being 15 miles off Clarington measuring 2.1 on the Richter
3 Scale. Placed more correctly, a small quake would be a
4 problem to any holding area let alone an actual nuclear
5 plant.

6 Present test models say that nuclear
7 facilities are safe in the event of certain conditions.
8 Now, if you haven't noticed, certain conditions
9 geologically and as far as the weather goes have gotten a
10 little more extreme in recent years, and I really don't
11 think that they're about to pay attention to the industry
12 and the CNSC's expectations and regulations.

13 So I wonder, has anyone ventured into how
14 much these projects at Port Granby and Port Hope are
15 really going to cost us in the end? Not what we proposed
16 10 years ago, what's happening now.

17 Has any thought been put to reduce the cost
18 of building and monitoring one large nuclear waste
19 facility in Port Hope; just one large facility? And get
20 all this material really further from the lake once and
21 for all? And does it make any sense to operate and staff
22 two facilities in the same approximate area?

23 How much of the taxpayer dollars would be
24 saved with one storage facility? Would this Board be
25 willing to reassess and re-evaluate the cost of one larger

1 facility?

2 And, on closing, that was my closing
3 initially, but you didn't want me to talk about my
4 situation and whatnot. I just want to remind you that the
5 new facility in Port Hope, they're putting in two soccer
6 fields adjacent right next to the facility, operational I
7 think this year or next year.

8 Now, those things will be running while
9 they're filling that site with how many trucks a day? The
10 trucks are going to work overtime, the dust is going to
11 migrate to the fields, and if you people are going to sit
12 there and allow soccer fields right next to this thing, I
13 mean, what are you thinking about? What about the
14 children in that town?

15 Mr. Binder, you don't like it when I talk
16 about my poor health, but what do you want? A hundred
17 people looking like me? Do you want 100 kids looking like
18 me?

19 Thank you very much, that's all I have to
20 say. I'll see you otherwise in January in Port Hope.

21 **THE CHAIRMAN:** Thank you.

22 Question? Dr. Barriault? McDill, go
23 ahead.

24 **MEMBER MCDILL:** I wonder if I could ask the
25 staff to go back in time because I believe one of the

1 Commissioners, and in fact I think it was me, asked for a
2 follow-up to this question that -- with respect to the
3 tank.

4 Maybe you could review that sequence of
5 events?

6 **MS. KOSTOVA:** Milena Kostova, for the
7 record.

8 Yes, the hydrochloric acid tank was removed
9 from the site of the existing Port Granby facility by
10 Cameco Corporation. This is considered like routine
11 maintenance at the site.

12 Before removing the tank, Cameco submitted
13 a plan for the operation to CNSC and the plan was accepted
14 by us, and they submitted as well a report after removing
15 the tank.

16 This was -- the tank was removed as part of
17 the upgrades at the facility.

18 **MEMBER MCDILL:** Thank you.

19 Does Cameco want to comment?

20 **MR. INGALLS:** Hello, Dave Ingalls for th
21 record.

22 I just want to confirm that, yes, we did
23 submit a plan for the decommissioning of the hydrochloric
24 acid tank to the CNSC and the tank was successfully
25 decommissioned following that plan.

1 **MEMBER McDILL:** So there was follow-up by
2 the Commission; there was action by cm; and the item is
3 closed?

4 **MR. INGALLS:** That is correct.

5 **MS. KOSTOVA:** That is correct, yes.

6 Actually, we observed the old and the new
7 tank which was on site ready to be placed, to replace the
8 old tank during inspection and at the following
9 inspection, we saw the new tank was already installed.

10 **MEMBER McDILL:** Thank you. Two more
11 questions if I might.

12 With respect to one site or two, I believe
13 that that is something that was decided a long, long time
14 ago. Can NRCan perhaps elaborate on that? I believe that
15 was a community based decision.

16 **MR. McCAULEY:** That's correct. Dave
17 McCauley, for the record.

18 Through our community based process, in
19 fact, the communities were unsupportive of consolidating
20 the wastes in a single facility in one of the three
21 communities that we were negotiating at the time in the
22 late 1990's. Consequently, we have two facilities being
23 built now.

24 **MEMBER McDILL:** Thank you.

25 **THE CHAIRMAN:** But just out of curiosity,

1 did anybody actually do the costing? Would it be cheaper
2 to have done it in one rather than hauling it and trucking
3 it?

4 **MR. McCAULEY:** At the time there were cost
5 evaluations of three versus one facility, and certainly
6 there were trade-offs. One would anticipate that there
7 would be economies of scale with just a single facility,
8 but it wasn't that straightforward. I don't remember the
9 results of the actual costing.

10 Nonetheless, there was not community
11 support for it and the government was basically focused on
12 a process that had that kind of support from it.

13 **MEMBER McDILL:** And staff with -- thank
14 you.

15 Does staff want to comment on that? And
16 then I have one more question concerning soccer fields and
17 the monitoring that's going on, maybe you could tackle the
18 two.

19 **MR. HOWARD:** Don Howard for CNSC.

20 I guess you're asking whether we have an
21 opinion on whether there's one site or two sites?

22 **MEMBER McDILL:** That would be the first
23 question.

24 **MR. HOWARD:** Okay. I guess, basically,
25 CNSC staff has no opinion between one or two, as long as

1 whatever you're proposing is safe and can protect human
2 health and the environment.

3 **MEMBER McDILL:** And do you want to tackle
4 soccer fields and doses with respect to the Port Hope
5 Welcome site?

6 **MR. HOWARD:** Don Howard, for the record.
7 With respect to the Port Hope project, we
8 are still working through all of the technical
9 information, we haven't received it all as of yet. So
10 we're still working through that and reviewing the
11 documentation and, obviously, our end goal is to ensure
12 that whatever facility and processes are put in place will
13 protect human health and the environment.

14 **MEMBER McDILL:** Thank you, Mr. Chair.

15 **THE CHAIRMAN:** Dr. Barriault?

16 **MEMBER BARRIAULT:** Just one brief question.
17 In the evaluation of the Port Granby site,
18 was there seismic qualification studies done for the
19 mound, and I guess perhaps AECL can answer that one.

20 **MS. MILLER:** Joan Miller, for the record.

21 There was some site-specific seismic
22 analysis carried out at the Port Granby site. The water
23 treatment plant has been designed and will be constructed
24 to meet the *National Building Code of Canada* 2005 Edition
25 for seismic requirements, wind loads, et cetera.

1 For the actual mound, there is no seismic
2 codes that apply to the construction of a mound. However,
3 with the materials and -- the general design of the mound
4 and the materials that are used which are fairly elastic
5 materials -- natural aggregate, et cetera -- we believe
6 that the mound would survive the seismic events that are
7 known to occur in this area which are relatively minor in
8 magnitude.

9 **MEMBER BARRIAULT:** So it has been looked at
10 in terms of the type and number of seismic activities?

11 **MS. MILLER:** Joan Miller, for the record.
12 Yes, it has.

13 **MEMBER BARRIAULT:** Thank you.
14 Thank you, Mr. Chair.

15 **THE CHAIRMAN:** Anybody else?

16 Mr. Rudka raised two questions, I think
17 somebody should answer.

18 First was how do you know that the site
19 will accommodate all the waste?

20 **MS. FAHEY:** Christine Fahey, for the
21 record.

22 I'll begin the answer and have Glenn Case
23 provide more detail.

24 The capacity of the mound is a little over
25 500,000 cubic metres, 518,000, and that allows for 432,000

1 cubic metres of waste allows for 432,000 cubic metres of
2 waste and a little over 85,000 cubic metres of daily cover
3 material, as every day the waste will be covered up.

4 The 432,000 cubic metres of waste includes
5 a 15 percent contingency. We've -- so they take away the
6 contingency, you're at 376,000. That number was developed
7 based on extensive borehole testing, which Glenn Case will
8 elaborate on.

9 And also the waste is very saturated as our
10 geotechnical evaluations confirmed, so we expect that you
11 won't get a lot of bulking factor because it's quite
12 moist.

13 So I'll pass it now back to Glenn Case to
14 supplement on the boreholes.

15 **MR. CASE:** Glenn Case for the record.

16 In reviewing our files that have been used
17 for the basis of the development, we go back as far as
18 1975 and 1976 with investigations that have been conducted
19 on this site -- '75, 1976, 1977, 1984, 1987, 1990, 1993
20 and 2003.

21 And during the course of these
22 investigations, over 200 boreholes were installed within
23 the site to define the extent of the contamination. And
24 most recently, the 2003 program, with some 26 holes
25 targeted in specific areas in order to confirm the volume

1 of waste.

2 So we have a very good assurance in terms
3 of the quantity of material that we need to deal with as
4 represented by a marginal contingency of some 15 percent.

5 **THE CHAIRMAN:** Thank you.

6 What about the net on the water treatment
7 pond, is that an issue? I mean, actually birds actually
8 nest over there. What's the story?

9 **MS. MILLER:** Joan Miller for the record.

10 I think Cameco should answer that question.

11 **THE CHAIRMAN:** Okay.

12 Cameco?

13 **MR. INGALLS:** Dave Ingalls, for the record.

14 We have not in the past evaluated putting
15 nets over the ponds at the Port Granby facility. The one
16 treatment pond that is having the affluent discharging to
17 the lake does undergo regular toxicity testing of the
18 affluent leaving that and it has consistently passed the
19 toxicity test.

20 **THE CHAIRMAN:** So nobody did any bio
21 testing of any of the birds that nest around?

22 **MR. INGALLS:** Not that I'm aware of.

23 **THE CHAIRMAN:** CNSC, what's your assessment
24 on that?

25 **DR. THOMPSON:** Patsy Thompson, for the

1 record.

2 I'm not aware that it has been an issue at
3 the Welcome and Granby sites.

4 It was an issue raised at some of the mine
5 sites where there are ponds for tailings management on
6 surface, and the monitoring that was done did show some
7 levels of radioactivity in the birds. And assessments
8 were done of human consumption and the doses to members of
9 the public -- it's not quite comparable to the situation
10 in Port Hope where the number of radionuclides is very
11 much reduced as well as the concentrations in comparison
12 to tailings' ponds.

13 So we would expect that if birds do spend
14 some time on the ponds that they would accumulate some
15 contamination but not to the point where it would become a
16 health hazard if someone were to hunt and eat those birds.

17 But essentially deterrent technology is
18 available and is fairly easy to install and has been
19 fairly effective.

20 **THE CHAIRMAN:** So, more interestingly, is
21 any plans to do anything in the new facilities that will
22 have some -- I understand some -- there will be some water
23 -- at least for overruns?

24 **MS. FAHEY:** Christine Fahey, for the
25 record.

1 In the short term, while we continue to
2 operate the Port Granby waste management facility while
3 we're building the enabling infrastructure, the current
4 water treatment system will be used with its ponds and we
5 were proposing in our licence application to operate that
6 existing facility as Cameco currently does.

7 In the new long-term waste management
8 facility the ponds -- the water from the south side will
9 be pumped to the north side in an equalization pond.

10 We don't have plans at this time for
11 netting but that's certainly something we could consider
12 -- you know, it hasn't been raised to our attention before
13 and it isn't part of the current design.

14 **THE CHAIRMAN:** Thank you.

15 Mr. Rudka?

16 **MR. RUDKA:** Well, I would hope you take it
17 serious on the birds because yesterday I went by and with
18 workers in there, there was over 100 geese in the one
19 pond, so, no it hasn't been addressed. It would be nice
20 if I could save the geese because I can't do much else it
21 seems.

22 **THE CHAIRMAN:** Thank you.

23 **MR. RUDKA:** Thank you.

24 **THE CHAIRMAN:** Okay, the next presentation
25 is an oral presentation by Mr. John Stephenson, as

1 outlined in CMD H10.4 and 10.4A.

2 Sir, the floor is yours.

3
4 **11-H10.4 / 11-H10.4A**

5 **Oral Presentation by**

6 **John Stephenson**

7
8 **MR. STEPHENSON:** For the record, my name is
9 John Stephenson and I'm representing the South Clarington
10 Ratepayers' Association.

11 Mr. President, Members of the Commission, I
12 ask the Commission not to grant the requested licence for
13 the proposal to move the Port Granby radioactive waste to
14 an engineered storage facility at a new location.

15 My reasons are as follows: In 2004, the
16 CNSC published Regulatory Policy P-290 which requires
17 owners of radioactive waste to assess the future impact of
18 the waste in terms of its effect on health and the
19 environment. The policy also requires that future impacts
20 on health be no greater than allowed by today's
21 regulations.

22 In 2006, the CNSC published Regulatory
23 Guidelines G-320 which assumes that long term radioactive
24 storage facilities will be licensed until a decision is
25 made to abandon the waste as in situ disposal. This

1 guideline also states that institutional controls should
2 be limited to a few hundred years because it is not
3 possible to predict the capabilities of future
4 generations.

5 Long ago, in 1987, the Atomic Energy
6 Control Board issued Regulatory Document R-104 which
7 required that the long term disposal of radioactive waste
8 should impose minimal burdens on future generations but I
9 do not see this moral responsibility in current CNSC
10 policies and guidelines.

11 I have the following concerns. Thorium-230
12 is the most important radionuclide in the waste. In terms
13 of becquerels per gram of waste, thorium-230 is five times
14 more abundant than radium-226. Thorium-230 is a hazardous
15 alpha emitter which decays with a half-life of 80,000
16 years into radium-226 which has a half-life of 1,620
17 years. Also, radium-226 decays into a string of eight
18 daughter nuclides of which four are energetic alpha
19 emitters.

20 This process means that after a period of
21 500 years, storage for every becquerel of radium activity
22 in the waste, at times zero there will be about 1.7
23 becquerels of radium-226, plus an additional 13.6
24 becquerels of mixed alpha and beta activity due to the
25 radium daughters.

1 After 1,000 years there will be 2.4
2 becquerels of radium plus an additional 19.2 becquerels of
3 its daughters in the waste.

4 The decay of thorium-230 and of radium-226,
5 will peak in about 5,000 years time at which time there
6 will be about five times more radium -- that's to say five
7 becquerels per gram -- in the waste for every one that was
8 there at times zero.

9 These facts mean that the risks associated
10 with relocating the waste increase with time both to
11 people and the environment.

12 I think that the membrane intended to
13 contain the waste in the proposed engineered mound has a
14 significant probability of catastrophic failure; possibly
15 of the order of 0.7 to 0.8 in the first 500 hundred years
16 and a probability of very close to 1 by the time 1,000
17 years has passed. The waste will eventually have to be
18 relocated.

19 The impacts on the future generation
20 undertaking this task will be greater than that affecting
21 our present community.

22 Three: When it is necessary to relocate the
23 waste, it will be significantly more radioactive than it
24 is today; therefore, a higher level of health and safety
25 precautions will be required.

1 We cannot predict the lifestyles or energy
2 capability of generations living 500 to 1,000 years in the
3 future. We know that we are now approaching the end of
4 the oil age and no new technologies promising abundant
5 energies can be seen on the time horizon.

6 It is quite likely that people living 500
7 to 1,000 years in the future will be dependent upon solar
8 energy in one of more of its forms and that gross energy
9 and the necessary financial capital will be in short
10 supply; therefore, it may not be possible for future
11 generations to relocate the waste.

12 In summary, the proposed engineered mound
13 has a limited lifetime. It is a less-than-adequate
14 solution to the problem of Port Granby's wastes.

15 Further, the mound violates an important
16 moral principle that our waste disposal practices should
17 not impose a significant burden on future generations.

18 A licence for this proposed facility should
19 not be issued. The Proponents should be asked to
20 reconsider the problem and its solution and to properly
21 address the moral principles and policies and guidelines
22 as now presented.

23 Thank you.

24 **THE CHAIRMAN:** Thank you.

25 Questions? Dr. Barriault?

1 **MEMBER BARRIAULT:** Thank you, Mr. Chairman.

2 My first question is to Mr. Stephenson.

3 What I'm hearing is that you would like to see the waste
4 stay where it is or to look at an alternate system of
5 storing this waste? I'm not quite clear.

6 **MR. STEPHENSON:** The significant point is
7 that the present proposal is less than satisfactory
8 because it imposes a significant burden, sooner or later,
9 on future generations.

10 **MEMBER BARRIAULT:** Would you suggest that
11 we leave it where it is or that we look at an alternate
12 method?

13 **MR. STEPHENSON:** The original proposal that
14 was put forward and it's incorporated into the scope of
15 the Environmental Assessment document that was produced
16 in, I think, 2002; it was correctly stated in that
17 document as in situ disposal and that is the method which
18 would be proposed by the majority of the members at the
19 Port Clarington Ratepayers Association.

20 **MEMBER BARRIAULT:** Thank you.

21 Can I ask CNSC staff to comment on this
22 proposal?

23 **MR. ELDER:** Peter Elder, for the record.

24 High level, there were alternatives looked
25 at in the Environmental Assessment so, as I said, they

1 were considered.

2 The points about costs to the future
3 generations, the radioactive decay would occur no matter
4 where the waste is so I think any solution has to take
5 into the fact that there will be this decay and build up
6 of certain isotopes whether it was in situ or moved, it's
7 the same thing.

8 As we talked about a bit this morning,
9 we're not assuming that these membranes will last forever
10 and there have been analyses about the consequences of
11 failure and how we'd do this.

12 Another one we have asked -- I know there
13 isn't a dollar amount on it, but we've asked for formal
14 recognition from the Natural Resources Canada and the
15 Federal Government that there will be ongoing costs and
16 ongoing liabilities associated with this one so that you
17 don't -- they don't do this and then walk away; that they
18 are acknowledging formally that there are ongoing
19 liabilities.

20 Maybe I can pass it to Mike Rinker to talk
21 about what the alternatives were.

22 **MR. RINKER:** Mike Rinker, for the record.

23 In general, I would look at in situ versus
24 what is proposed. There are certain advantages and there
25 are certain risks with in situ. We'll -- we had to assess

1 the current site based on extreme weather events and
2 seismic events and by leaving the waste in situ, they're
3 susceptible to those sorts of risks.

4 In addition, in situ, it would be possible
5 to put a decent cover on top, but there's no -- not the
6 possibility now to put an appropriate underlying liner.
7 So the new facility is better designed -- it's modern --
8 to encapsulate the waste both for -- to prevent
9 contamination from leaking out and prevent infiltration to
10 enter into the waste and transport it.

11 Over time, the amount of water flowing
12 through the waste will decrease substantially by order of
13 the magnitude so by the end of 500 years, the amount of
14 water in there for the amount of contaminates leeching
15 from this facility would be substantially lower. So I do
16 think that there's a number of advantages for the long-
17 term protection of future generations with the proposed
18 new facility.

19 **MEMBER BARRIAULT:** Thank you.

20 Thank you, Mr. Chair.

21 **THE CHAIRMAN:** Go ahead.

22 **MR. STEPHENSON:** The original proposal for
23 the in situ storage of the waste required three elements.
24 The first was a deep valley around the north side of the
25 site in order to cut off the supply of water that flows

1 from north to south through the site. Now, Mike said that
2 as this water seepage at various levels in the various
3 strata of the site which leads to the erosion of the
4 bluffs that was talked about earlier so -- and I should go
5 back a stage and point out that one of the principles
6 adopted by the committee asked to look at possible storage
7 options by the Clarington Municipality was that if the
8 waste can be kept dry then it can't move in the site. It
9 -- the waste can only move if it's in ionic form dissolved
10 in water.

11 So the key of the whole proposal was keep
12 the waste dry. You do that by creating a valley on the
13 north side, by covering the top of the site with a lid
14 with an impermeable membrane and by building a protective
15 barrier on the lakeside -- the Lakeshore side to prevent
16 erosion by the lake and to minimize possible -- excuse me
17 -- bluffs' subsidence.

18 **THE CHAIRMAN:** That proposal, though, was
19 considered, I assume, and for whatever reason -- I mean
20 this is experts arguing amongst experts -- it was rejected
21 and somebody -- was it considered in the assessment? Can
22 somebody reply to that?

23 **MR. STEPHENSON:** Can I comment on that?

24 **THE CHAIRMAN:** No, let somebody reply to
25 that. Just factually, was it considered?

1 **MR. McCAULEY:** Yes, it was considered in
2 the Environmental Assessment study. There were three
3 concepts that came forward from the local -- well, two
4 concepts that came forward from the community; one was
5 excavation to a mound, the other was in-situ management
6 and the in-situ-management proposal was preferred.

7 There were three sub-concepts of the in-
8 situ-management option. It went forward to Clarington
9 Council. The second of the three sub-components of the
10 in-situ management was forwarded as to be considered in
11 the Environmental Assessment review and that was
12 incorporated and reviewed against a number of other
13 options including the mound.

14 One of the major concerns in terms of the
15 in-situ management was the amount the revetment and the
16 toe berm that would have to be placed on the bluffs to
17 protect the waste from the erosion of the water and there
18 were very significant concerns expressed by the Department
19 of Fisheries and Oceans on the implications that the toe
20 berm and the constant maintenance of that toe berm would
21 have on the -- on Fisheries and fish habitat.

22 **THE CHAIRMAN:** Go ahead, you want to react?

23 **MR. STEPHENSON:** What Glenn (sic) says is
24 essentially true except that there are more complexities
25 than he's brought out.

1 The scope document, when it was written,
2 specifically stated that alternatives to the project would
3 not be considered. As I said earlier, the scope document
4 correctly stated the nature of the project which was in
5 situ disposal.

6 The problem arose because the concept of
7 demand was introduced which involved digging the waste up.
8 Now, in my mind digging the waste up is the opposite of
9 leaving the waste in situ and therefore it is an
10 alternative to the original process which should not have
11 been considered according to the scope document.

12 Unfortunately the AECL side and the
13 municipality side of the issue has decided that digging
14 the waste up and moving it was an alternative means and
15 could therefore be considered as an alternative proposal.

16 So there was this imbalance in the
17 discussions that took place and in fact I resigned from
18 the South Eastern -- South East Clarington Ratepayer
19 Committee several years ago for the simple reason that I
20 was batting my head against a brick wall.

21 The Proponent would not accept that what he
22 was doing was an alternative to the original proposal.

23 **THE CHAIRMAN:** Okay, questions?

24 Dr. McDill?

25 **MEMBER McDILL:** I'll come back to that in

1 just a sec.

2 On page 2 of 3 you make a reference to this
3 process, I think -- your first submission from August
4 22nd.

5 Sorry, is that better? I'm a short person.

6 On your document, August 22nd, the first
7 submission you made, your first intervention you made
8 reference to this process and I think that is the key
9 thing you're raising right now, is this process.

10 **MR. STEPHENSON:** Sorry?

11 **MEMBER McDILL:** The process was not as you
12 felt the process should be.

13 **MR. STEPHENSON:** That is correct.

14 **MEMBER McDILL:** You also state on that page
15 that the process contains no engineering or scientific
16 data to support the conclusions of the group. That's in
17 your third paragraph on page 2.

18 **MR. STEPHENSON:** Yes. What we're talking
19 about here is the evaluation process that was carried out
20 by the Proponent in order to determine which was the
21 preferred alternative means or the range of alternative
22 means because they covered the whole process, including
23 transportation, et cetera, et cetera.

24 Now, the point is that that was, in my
25 opinion, an undemocratic process because we were not told

1 who was on that evaluation committee. We were not invited
2 to attend to the -- attend the committee so that we could
3 hear the deliberations or even take part in the
4 deliberations.

5 And consequently what we got, in my
6 opinion, was a biased conclusion that was in favour of the
7 engineered manned facility.

8 I looked at and commented on that
9 evaluation procedure and forwarded that document in
10 writing to the Proponent and I never heard anymore about
11 it.

12 **MEMBER MCDILL:** Thank you. So I will
13 redirect this back to the -- I'm not sure whether -- I
14 guess it would be -- there are three attachments to the
15 reference, two of them are to Mr. Glenn Case.

16 Can you talk about the process, how the
17 process proceeded and where the engineering and scientific
18 data exist and how this group was not included in the
19 discussions or why?

20 Thank you.

21 **MR. CASE:** Glenn Case, for the record.

22 With respect to the inclusion of parties in
23 the environmental assessment alternatives means process
24 there were a series of workshops that were convened to
25 discuss various aspects that needed to be considered in

1 the evaluation of alternative means.

2 These included such things as health and
3 safety, protection of the environment, protection of the
4 public, economic factors and general engineering aspects
5 associated with that.

6 Based on those discussions we came up with
7 a series of scores that were applied to each one of the
8 alternative means that were brought forward in relation to
9 how the community perceived each one of those aspects.

10 And on that basis we came forward with the
11 recommendation that the relocation of the waste to a
12 facility 700 metres away from Lake Ontario was referred to
13 as the preferred concept.

14 That preferred concept was brought forward
15 to the public and was discussed, was reviewed through the
16 municipality's peer review team process and came out as
17 the preferred or the qualified concept that went forward
18 in terms of the environmental assessment work.

19 With respect to the comment earlier with
20 respect to alternatives to versus alternative means, I
21 believe we're still talking about an alternative mean of
22 long-term waste management as compared to disposal or
23 other alternatives to. The alternative is long-term waste
24 management and what are the means of long-term waste
25 management that can be applied for this waste and I

1 believe that's the basis on which we had gone forward or
2 we went forward in terms of our alternative means process.

3 **MEMBER McDILL:** So the scoring was based on
4 public opinion from these workshops?

5 **MR. CASE:** Glenn Case, for the record.
6 Yes, that is correct.

7 **MEMBER McDILL:** And whom of the public --
8 how was the public participation scored, one for one,
9 group for group, head for head?

10 **MR. CASE:** Glenn Case, for the record.

11 The analogy that I can bring forward in
12 this discussion is that if one were to assume that they
13 had these various components associated with the design of
14 a facility in terms of environmental protection, health
15 and safety, worker protection, economics, and engineering
16 and you had 100 beans where would you put your 100 beans?
17 Where would you want to put your emphasis in terms of
18 those five buckets?

19 And on that basis we -- through the
20 workshop of which lasted for well over a day, a day and a
21 half, possibly two days if I remember correctly -- we went
22 through and discussed it with the community and came to a
23 consensus with the people in attendance as to where they
24 would want to place their emphasis in terms of our
25 alternative means evaluation.

1 And in terms of protection of the
2 environment is one of the highest; health and safety, one
3 of the highest; in terms of economic it was one of the
4 lowest of the buckets that we would have had at that point
5 in time.

6 **MEMBER MCDILL:** And were there members of
7 the Southeast Clarrington Ratepayers Association present at
8 that workshop?

9 **MR. CASE:** Glenn Case, for the record.
10 Yes, I believe there were representatives
11 from SECRA.

12 Whether it had been created at that point
13 in time, I'm not sure. However, there were a wide variety
14 of local area residents that did participate in that
15 process.

16 **MEMBER MCDILL:** Thanks, Mr. Chair.

17 **MR. STEPHENSON:** Can I respond to that?

18 **THE CHAIRMAN:** Just a second, let me ask a
19 question, you can respond to both.

20 I'm still -- I'm still trying to understand
21 the physics of some of the argument. You seem to believe
22 that it's almost highly probable that you'll have to move
23 the new site, the mound, after 500 years because the thing
24 will get heated up over time, if I understood your
25 argument here about the decay and the ongoing kind of

1 daughter of the decay, daughter of itholium et cetera, et
2 cetera.

3 Given the amount that we have in here, I'm
4 trying -- somebody to explain to me, is that true, what's
5 going to happen over time in the -- under the mound? Will
6 the mound get warmer and hotter over time to the point
7 that you'll have to replace it?

8 I found that concept, if true, you know,
9 unacceptable. So something is wrong in somebody's
10 analysis here.

11 **MR. RINKER:** Mike Rinker, for the record.

12 There will be ingrowth. There will be
13 accumulation of some dodder products, but there won't be a
14 heat generated -- or there won't be a change in the
15 characteristics of that mound that would require moving --
16 removing the mound.

17 What will also happen is that the material
18 will dry up because it's isolated, and so the flow of
19 water through that material will decrease considerably,
20 and so the loadings from that facility will not increase
21 in time even though there is ingrowth of new nuclear
22 substances. The loadings from that facility will decrease
23 in time continually.

24 **THE CHAIRMAN:** So I assume you've read this
25 intervenor analysis here, so you think he's wrong in terms

1 of making -- he categorically suggests that the site will
2 have to be moved or the material will have to move one
3 more time.

4 **MR. RINKER:** I think that he's correct in
5 that there will be ingrowth and accumulation of some
6 nuclear substances, but to suggest that those nuclear
7 substances -- the release from that facility would
8 increase over time is a different question, and I do not
9 believe that the release of those nuclear substances from
10 the facility will increase in time.

11 **THE CHAIRMAN:** Over to you, Mr. Stephenson.

12 **MR. STEPHENSON:** There will be ingrowth of
13 the radioactive material. I don't believe that there's
14 sufficient radioactive material there to physically heat
15 up the mound. If the mound is sealed, the radioactive
16 materials that are released in the mound will be contained
17 in the mound, and I've quoted the numbers in my
18 presentation.

19 The issue becomes that the waste ultimately
20 will have to be moved or dealt with again in some form or
21 other, whereas, if the waste was left in situ and it was
22 properly protected on the shoreline with a deep valley on
23 the north side and a good cover over the top, then there's
24 reason to believe that that waste would stay there
25 indefinitely.

1 I should also comment that the underlying
2 material on the site, if my memory serves me correct, it's
3 several metres of impermeable till, a natural barrier to
4 the permeation of materials from the surface downwards,
5 which has been there, in my estimate, at least since the
6 Ice Age and probably longer. I don't know how old it is,
7 but it may be a deposit from the Ice Age.

8 But the point is that it has been there for
9 many thousands of years and it forms a very natural, very
10 effective barrier to the downward permeation of the waste.

11 The other comment that was raised I'd like
12 to pass over very quickly is the fact that, yes, the
13 shoreline barrier will need maintenance but it is properly
14 built. My belief is that it will require relatively
15 little maintenance over very long periods of time.

16 There was concern by the Fisheries
17 Department that it would affect the fisheries -- I'm not
18 quite sure of the word, but the environment of the lake in
19 the vicinity of the barrier. And yes, that may be true,
20 but on the other hand, it's well known that the Fisheries
21 Department will accept alternative reparations in another
22 area as an alternative to the damage that you do in a
23 specific area.

24 And of course it has to be pointed out that
25 Darlington Nuclear and Pickering Nuclear have built

1 shoreline barriers that appear to work perfectly well over
2 the 40 or so years' lifetime of the stations.

3 Shoreline barriers are not new. They're
4 used by the -- I'm not sure who, but the City of Toronto
5 has built a shoreline barrier along the railway line that
6 you can see as you go by rail from Oshawa to Toronto. So
7 shoreline barriers are not new and they can be long-
8 lasting structures.

9 **THE CHAIRMAN:** Thank you.

10 Anything else, Dr. Barriault?

11 Thank you very much. I think we are --
12 okay, we are breaking for lunch and we'll resume the
13 hearing at one-thirty.

14 Thank you.

15

16 --- Upon recessing at 12:35 p.m./

17 L'audience est suspendue à 12h35

18 --- Upon resuming at 1:34 p.m./

19 L'audience est reprise à 13h34

20

21 **THE CHAIRMAN:** Good afternoon.

22 We are ready to go for the next submission,
23 which is an oral presentation by Dr. Sahota, as outlined
24 in CMD 11-H10.6.

25 Sir, the floor is yours.

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11-H10.6

Oral presentation by

Sarwan Sahota

DR. SAHOTA: Mr. President, Members of the
Commission ---

THE CHAIRMAN: Come closer to the mic.
Thank you.

DR. SAHOTA: My name is Sarwan Sahota, and
I thank you for allowing me to speak to you this
afternoon.

I have been involved in this project from
day one. In June of 1999 the Municipality of Clarington
appointed a committee of the citizens called the Community
Advisory Committee to advise the Municipality on solving
the problem for Granby.

We met every week for six months. The
Natural Resources were represented on the Committee by Mr.
McCauley, and the Committee was allowed to hire
consultants to advise the Committee and Glenn Case became
our advisor.

And the Committee met to consider various
options and in the process we were advised by Glenn Case
that we must move the waste across the road and put in a

1 mound and the Committee was not happy with that
2 recommendation.

3 So the Committee asked Mr. Case if there is
4 any other option we have and what we -- we would like the
5 minimum movement of the waste. So we came up with a plan
6 designed by Glenn Case that the waste be contained where
7 it is with minimal movement of the waste and we put a
8 barrier on the lake and then stopped the water running
9 through the waste so that the waste will be contained.
10 And that became our unanimous recommendation to the
11 counsel that the waste be contained where it is and not be
12 moved.

13 And at that point the counsel was very much
14 in favour of the citizen participation and they took that
15 recommendation and negotiated a legal agreement with the
16 Minister of Natural Resources to leave the waste where it
17 is. That became the option.

18 And then in the process of environment
19 assessmental screening process they call it, Glenn Case
20 became the director of that, and from day one it was of
21 our feeling that the other option will -- they will try to
22 find ways of negating that, and that's exactly what
23 happened.

24 And so they did consider the waste to be
25 left where it is or to be moved and they weighed -- and

1 who was weighing the weighing, they were doing it; we had
2 no say in that.

3 Time and again we told them we are not in
4 favour of that. The Port Granby community is 100 percent
5 against moving the waste. And let me ask anybody to tell
6 me I'm wrong.

7 So what happened was part of the legal
8 agreement where the municipality get \$10 million. So at
9 the signing point, the municipality got \$10 million and
10 they started collecting interest on that 10 million.

11 And so from that point when we were against
12 the waste and they wanted to move it, the municipality
13 said good-bye to us, they became actually anti-community.
14 And at that point we decided to form what we call the
15 Southeast Clarington Ratepayers Association.

16 I became the founding president of that
17 association and we had over 100 members signed up, and we
18 consistently and persistently opposed the idea of moving
19 the waste.

20 Now why do we want do that? Why are we not
21 agreeing to the experts, the engineers?

22 I am by training a scientist and a job of
23 the scientist is to create new knowledge and that's what's
24 the science does, we create new knowledge, and the job of
25 an engineer is to use existing knowledge and apply it.

1 So the problem we had as a community is
2 that the method of storing the waste in a mound, there is
3 no science behind it. I could not find any credible
4 science to say -- and I have asked them, asked the
5 proponent time and again, give us -- show us the science
6 behind it. And there is one study they -- they gave me a
7 copy of one study from the U.S.A. and it is very shallow
8 science.

9 So a good science is when you -- one piece
10 of work is done and it is confirmed by another piece of
11 work.

12 And so, Ladies and Gentlemen of the
13 Commission, there is no science behind storing the waste
14 in a mound in a liner. And maybe 200 years, 100 years,
15 not 500,000 years as they're talking about here.

16 So that is why we were in favour of keeping
17 the waste where it is so that there is no particulate
18 which will fly around and harm the population around us.
19 And that, we were just ignored, all -- they say there were
20 many workshops, there were more experts on the workshop
21 than the people, and people who said, "We don't agree with
22 you" they just said, "That's too bad". So they said we
23 listen to you but we're not listening to you.

24 We've gone through this very painful
25 process and we are very unhappy as a community and we are

1 actually exhausted. Some of us -- some of those people
2 fighting for this area actually died. My friend, Jean
3 Payne, died fighting this cause and her family -- I'm glad
4 her family is here today to speak to you.

5 And so we are not opposing it for any
6 personal reason, we are opposing it because it is not the
7 right thing to do.

8 **THE CHAIRMAN:** Thank you.

9 Questions?

10 Dr. Barriault?

11 **MEMBER BARRIAULT:** Thank you, Mr. Chairman.

12 I guess my first question really is to
13 AECL. The intervenor states that there's been a history
14 of ruptures of these liners in the United States and, you
15 know, how does the AECL design differ from those that have
16 ruptured in the U.S., and maybe you could expand on that?

17 **MS. MILLER:** Joan Miller, for the record.

18 I'm not aware of that specific incident so
19 I will pass it to Glenn Case in a minute because I
20 understand he is familiar with it.

21 But I think I would like to point out that
22 we are using materials for this landfill that are used and
23 are sanctioned by provinces throughout Canada for the
24 management of hazardous waste materials.

25 So we're not inventing or using something

1 new, they are sanctioned for use and regulated, required
2 to be used for the management of hazardous materials.

3 For the specific design and the issue that
4 arose for the one landfill in the U.S., I believe Glenn
5 does know the details behind that.

6 **MR. CASE:** Glenn Case, for the record.

7 With respect to the failure in the United
8 States, I believe it may have been with respect to the
9 West Valley site where they had created some storage
10 facilities that in fact contained the waste but did not
11 allow sufficient leachate removal.

12 And so the leachate that was collected in
13 these facilities actually spilled out and contaminated the
14 local groundwater.

15 In this particular case, our design
16 reflects the requirement for leachate extraction from the
17 mound so as not to create that kind of a situation.

18 **MEMBER BARRIAULT:** If the liner was to
19 rupture, is there a contingency plan in place to how to
20 manage that?

21 **MR. CASE:** Glenn Case, for the record.

22 I would need to really understand further
23 in terms of the rupturing of the liner.

24 One of the key features associated with our
25 design is the elasticity of the materials that are in

1 there that have the ability to move ever so slightly in
2 the event of, say, a seismic event or, in fact, even to
3 self-heal in the case of clay, where if it's dry, people
4 think of clay cracking but when it gets wet it self-heals
5 and seals itself. Same thing with the geo-synthetic clay
6 liner that's in the cap liner itself.

7 So I don't believe there's any possibility
8 of a rupture in the sense of what we would normally
9 consider to be a rupture.

10 **MEMBER BARRIAULT:** The base of this liner,
11 would it be at ground level or below ground level?

12 **MR. CASE:** Glenn Case, for the record.

13 The liner is below ground. It's about, on
14 average, around three and a half metres below the existing
15 surface of the ground.

16 Our requirement is to actually excavate two
17 cells, take that material, stockpile it for use in the
18 future in the construction of the mound and then apply the
19 various layers of material to create the liner itself.

20 And one thing that I would like to build on
21 in terms of the selection of our site for the long-term
22 management is to take advantage of a till layer that is at
23 surface that provides -- and if I were to just quickly
24 refer back to my notes -- a natural effective barrier, and
25 those were the words that were used by Mr. Stephenson

1 shortly ago.

2 This impermeable till layer in fact is at
3 the surface in the area where we're looking to construct
4 the mound, so we want to take advantage of the native
5 soils that are there in which to construct our mound.

6 **MEMBER BARRIAULT:** Thank you.

7 Thank you, Mr. Chair.

8 **THE CHAIRMAN:** Dr. McDill?

9 Did you -- Dr. Sahota, did you have a
10 chance to read the technical reports that were produced by
11 -- by the review committee, the municipal -- some of the
12 engineering studies were done?

13 There were a lot of studies that were done
14 here that supposedly -- they were done by professional
15 engineers, by scientists, do you -- you don't believe that
16 there was science behind this?

17 **DR. SAHOTA:** There is no science behind it,
18 sir.

19 I agree they have done a lot of work and
20 consumed a lot of money but it is massaging each other's
21 back by and large.

22 **THE CHAIRMAN:** You're putting ---

23 **DR. SAHOTA:** All the money which has gone -
24 - all kinds of peer review and all that came from Ministry
25 of Natural Resources.

1 **THE CHAIRMAN:** Sorry, came from where?

2 **DR. SAHOTA:** Ministry of Natural Resources.

3 **THE CHAIRMAN:** Oh no, there were lots of
4 other. If I understand correctly, why don't you -- AECL,
5 tell us some of the scientific studies that were done,
6 engineering studies, and I think -- I'm trying to
7 understand -- you heard the Mayor of Granby -- Port Granby
8 here -- indicated they themselves had some engineering
9 studies.

10 All I'm trying to understand is did you
11 have a chance to read and review them?

12 **DR. SAHOTA:** I have, I have read everything
13 they have written. My point is all the financing of this
14 -- all the studies done by municipal people, by any other
15 person is funded by us, Dave McCauley is funded by him.

16 **THE CHAIRMAN:** And you don't think that he
17 believes in science?

18 **DR. SAHOTA:** That's why I try to explain
19 the difference in engineer and a scientist. So I'm saying
20 the -- that's the argument I had with them all these
21 years, is that there is no science behind it.

22 **THE CHAIRMAN:** Okay, I'll leave AECL ---

23 **DR. SAHOTA:** And also when they insisted on
24 going this route, we as a community asked for a double
25 liner, double-base liner. And they said no, it will cost

1 more money.

2 **THE CHAIRMAN:** Okay, just for the public
3 record, I'd like to hear the AECL -- what science was
4 scientific engineering studies and maybe for how did CNSC
5 assist on the soundness -- the soundness of some of the
6 science behind all of this?

7 AECL?

8 **MS. MILLER:** Joan Miller, for the record.
9 Just to provide perhaps some general
10 understanding, the environmental assessment report
11 included 17 volumes of technical and scientific
12 information. It was reviewed by federal government
13 scientist.

14 As well, I'm generally familiar with the
15 technical materials that are involved in the construction
16 of landfills and I know for example that there's a lot of
17 scientific work that is done at universities that support
18 the performance of these different types of membranes for
19 retaining materials, diffusivity, capillary action, et
20 cetera.

21 So, again I will pass it though to Glenn
22 Case because I wasn't involved in the environmental
23 assessment process to look at -- or provide more
24 information on the types of studies that were done to
25 support the selection of the materials for this purpose.

1 Glenn?

2 **MR. CASE:** Glenn Case, for the record.

3 Following up on what -- in then terms of
4 studies by scientific individuals, one that immediately
5 comes to mind was one that was done on behalf of the CNSC
6 by Dr. Kerry Rowe of Queen's University. And Dr. Rowe is
7 I believe one of Canada's top experts in terms of landfill
8 designs and our proposed design was submitted to him and
9 was peer-reviewed and comments given back to us and those
10 comments have been incorporated into our design. He too
11 did provide a review of the Port Hope design and we've
12 responded back to those as well. So that's one of those
13 examples of a peer-review by an external third party
14 scientific authority.

15 Four other studies that I think are
16 important -- the scientific studies that were conducted
17 relate to -- studies that were requested in the legal
18 agreement between Canada and the Municipality of
19 Clarington. One of them related to a study of the erosion
20 of the bluffs; a scientific study that was done with
21 respect to the issue of thorium-230; another one was a
22 scientific study related to the modelling of the
23 groundwater regime on the Port Granby facility site; and
24 the last one was not so much a scientific study, but a
25 study of the contingency plans that you may have to have

1 in place in the event that the in situ facility didn't
2 stand up to its long term performance.

3 So those are examples of studies that have
4 been conducted in addition to the many studies that were
5 conducted as part of the environmental assessment
6 preparation work.

7 **THE CHAIRMAN:** CNSC?

8 **MR. ELDER:** Peter Elder, for the record.

9 I'm going to pass this to Dr. Karina Lange
10 who is a PhD in geotechnical engineering.

11 **DR. LANGE:** Karina Lange, for the record.

12 I believe I'm answering the question about
13 why the single liner was chosen as opposed to the double
14 liner.

15 To start, in the original EA, in that
16 decision they looked at the quality of the leachates -- of
17 a leachate characteristics -- and the quantity to be
18 generated as well as the geology and hydrogeology of the
19 site. Those factors were considered along with a
20 contaminate transport analysis -- a long term contaminate
21 transport analysis -- through the environment and based on
22 those factors, a single liner was sufficient to provide
23 adequate environmental protection.

24 With that design we moved forward to the
25 licensing process and under this current process there are

1 a number of factors that we are following to ensure that
2 the system meets the requirements as set out in the EA.
3 For example, quality care and quality control installation
4 of the liner.

5 We have learned from examples -- as you
6 have mentioned in the past where a landfill has
7 unfortunately undergone for instance slope instability --
8 we've learned from -- over the last 20-30 years -- we've
9 learned from those examples and as a result, a number of
10 standards and laboratory test have been carried out to
11 improve the materials.

12 So part of CNSC's work is to review the
13 documents and oversee through inspections that proper
14 material specifications are followed, proper designs,
15 quality control and quality assurance is carried out at
16 the field site, and again monitoring and maintenance.
17 That monitoring -- not just instrumentation is in place --
18 but that monitoring results are -- will mean something and
19 be able to tell us what's happening at the site and if
20 there's any risk to the design.

21 **THE CHAIRMAN:** Thank you.

22 Okay, Dr. Sahota, your last words.

23 **DR. SAHOTA:** Well, my last word is I know
24 that they have consulted all kinds of people; I'm very
25 impressed with that. But in this process -- in this

1 screening process -- we asked for funding for us to hire
2 independent of them, people who could assess the studies
3 they have and we were refused. We asked the municipality,
4 they're getting -- I said, "You're getting interest on \$10
5 million every year; give us some money to get independent
6 opinion." They refused.

7 And ultimately the only way one can assess
8 who is right, who is wrong, is have a body of independent
9 scientists to say this is okay, the current science
10 supports this project or not.

11 And we asked for that and we were refused.

12 **THE CHAIRMAN:** Okay, thank you very much.

13 **DR. SAHOTA:** Thank you, thank you.

14
15 **11-H10.8**

16 **Oral Presentation by**

17 **Ganaraska Region**

18 **Conservation Authority (GRCA)**

19
20 **THE CHAIRMAN:** Our next -- the next
21 submission is an oral presentation by the Ganaraska Region
22 Conservation Authority, as outlined in CMD 11-H10.8.

23 I understand Mr. Peacock, you will make the
24 presentation? Go ahead.

25 **MR. PEACOCK:** Mr. President, Members of the

1 Commission, thank you for this opportunity to speak to you
2 regarding the Ganaraska Region Conservation Authority's
3 position on the application in front of you to permit the
4 Port Granby project to proceed.

5 In addition, the presentation provides the
6 Conservation Authority's position with respect to the end-
7 use concept developed for the Port Granby project waste
8 sites and the surrounding lands and discusses the
9 ecological attributes of implementing that plan. And it's
10 found within a report called "Ecology First, Port Granby
11 End-Use Advisory Committee Report" and that's dated March
12 of 2010.

13 In 2007, the Port Hope Area Management
14 Office, the Municipality of Clarington, and the Port
15 Granby Discussion Group established the End-Use Advisory
16 Committee. The Conservation Authority was asked to assist
17 in their work.

18 The initial focus of the committee's work
19 was to develop end-use plans for the existing and new
20 waste management facilities that would work to restore and
21 enhance the ecological and natural heritage
22 characteristics of that particular site. However, the
23 committee soon recognized that there was an opportunity to
24 enhance the local and regional natural heritage system by
25 restoring linkages between the unique wildlife habitats

1 found on the lakeshore and the north-south corridors found
2 within the Port Granby Creek itself.

3 Accordingly, the committee expanded its
4 focus to include all the land holdings in and around the
5 new long-term facility.

6 The proposal to move the Port Granby waste
7 is an important step in addressing shoreline management
8 issues in this area. The following attributes regarding
9 the Lake Ontario shoreline should be considered in your
10 decision.

11 The Lake Ontario shoreline is a bio-
12 regional corridor similar in scale to the Niagara
13 Escarpment, yet, it's more impacted by humans. It still
14 functions as edge habitat and an ecotone, which is an area
15 where two ecologies come together and these are the
16 terrestrial and aquatic ecologies of Lake Ontario and its
17 shoreline.

18 The shoreline is a unique collection of
19 forests, wetlands and successional habitats, estuaries,
20 sheltered bays, beaches and erosional bluffs to open
21 waters of Lake Ontario. These support a very unique and
22 diverse habitat.

23 The shoreline is recognized as a stop-over
24 and staging area for many migratory birds and butterflies
25 across Lake Ontario. And finally, the shoreline is an

1 area with common and unique environmental, historical,
2 cultural and social-economic values.

3 In the past, we used to manage shorelines
4 by armouring them. We did this on rivers until we
5 understood that the rivers started blowing themselves out
6 and we are just starting to learn about the lakes and how
7 we should be dealing with them.

8 And our old Lake Ontario management goals
9 at the Conservation Authority looked at armouring and
10 hardening shorelines. We are in the process of developing
11 a new Lake Ontario Shoreline Management Plan to address
12 changing management strategies for the lake.

13 The new goals would be based on the
14 protection, management and restoration of water quality
15 and quantity, the understanding of coastal geomorphology;
16 particularly near shore and littoral sediment movement,
17 terrestrial and aquatic ecosystem features and functions
18 rather than just the protection of property by armouring.

19 The proposal to move the Port Granby Waste
20 Facility off the shoreline matches well with the overall
21 shoreline goals of the Ganaraska Region Conservation
22 Authority.

23 The proposal to move the Port Granby waste
24 and, specifically, the implementation of the end-use
25 recommendations follows recommendations found within the

1 Lovekin Creek, Bouchette Point, and Port Granby Watershed
2 Plan. This area is within the Port Granby Watershed.

3 The Port Granby end-use study area is
4 located in the West Lake, Ontario watersheds of the
5 Conservation Authority, and it's these three watersheds
6 that I just mentioned that make up that West Lake, Ontario
7 watershed.

8 The plan -- the Watershed Plan was approved
9 by the Conservation Authority on April 15th, 2010. The
10 Watershed Plan contains policies that encourage the
11 strengthening of the natural heritage system by reducing
12 habitat fragmentation and by promoting connectivity.

13 The Municipality of Clarington Council
14 received that plan in March of 2010 and referred it to
15 their staff to move towards implementing it in the
16 official plan and considering it for the next review.

17 In addition, the Conservation Authority's
18 2009 Watershed Report Card gave the West Lake, Ontario
19 Watershed a grade of C due to its low percentage of forest
20 cover which is only 21.3 percent of which only 3.3 is
21 internal forest habitat.

22 As such, the establishment of additional
23 forest cover within this watershed and especially interior
24 forests supports the natural heritage objectives of the
25 Watershed Plan and the official plan of the Municipality

1 of Clarington.

2 The Port Granby area is characterized by a
3 number of significant natural features that with
4 appropriate restoration and management could provide the
5 structure for enhancing not only the local heritage --
6 natural heritage system, but being able to take that and
7 integrate it into the regional natural heritage system.

8 The Lake Ontario shoreline is an important
9 corridor of wildlife and its habitat for plants and
10 animals, especially migratory birds. Of particular note
11 is the Port Granby East Bluffs which occur along the
12 entire area that you're considering and are recommended
13 for significant natural heritage designation.

14 The shore-cliff communities found along
15 these bluffs are not found anywhere else along Lake
16 Ontario and may be unique in Ontario, and the reason I say
17 this is because the bluffs have intact not only the bluff,
18 but the cobbled shoreline, the sand shoreline and the
19 taluses that sit below them.

20 Many of the bluffs, like Scarborough
21 Bluffs, have these elements missing as we've hardened
22 those shorelines.

23 Both Port Granby Creek and the Port Granby
24 East Ravine also have been recognized as significant.
25 They currently function as important natural corridors

1 linking Lake Ontario shoreline to areas further north.
2 Their corridor functions could be enhanced by ensuring
3 that a diversity of wildlife habitats which would include
4 interior forests, wetlands and those types of habitats;
5 they could be created within the ravines and on the
6 adjacent lands as proposed in the full end-use concept.

7 The establishment of forested areas north
8 and south of Lakeshore Road would significantly enhance
9 the connectivity both within the local and also to the
10 regional natural heritage systems.

11 The end-use concept recognizes the
12 ecological significance of the site of the existing
13 facility and the importance of enhancing it in the future.

14 The Ganaraska Region Conservation Authority
15 Board supports the licence based on its endorsement of the
16 full use -- full end-use concept proposed by the End-Use
17 Committee and this was passed by a resolution by the Board
18 on May 20th, 2010.

19 This proposal recognizes the significant
20 natural heritage attributes and potential of the Port
21 Granby area.

22 Thank you.

23 **THE CHAIRMAN:** Thank you.

24 We'll open up for discussion. Dr.

25 Barriault?

1 **MEMBER BARRIAULT:** Thank you, Mr. Chairman.
2 It's an interesting proposal. That's after
3 the fact that you have the mound. I understand from your
4 presentation that you also would like to see the mound
5 landscaped in a different manner than what is proposed.
6 Have you discussed this at all? Am I correct in assuming
7 this?

8 **MR. PEACOCK:** Mr. Chair, the proposal to
9 shape the landscape like a drumlin has a lot of very
10 interesting ideas to it. One of the concepts is to flip
11 the drumlin around so that if you really knew what you
12 were doing, you'd say, "Hey, that's the wrong way around"
13 and, therefore, you'd recognize that it's a man-made
14 feature.

15 By allowing that to fit into the geology of
16 the area, you are creating the visual effect of a natural
17 system and the whole intent of the use of the lands in the
18 end-use concept and the surrounding would be to integrate
19 the whole project into the natural environment.

20 **MEMBER BARRIAULT:** Thank you.

21 **MR. PEACOCK:** So it makes sense.

22 **MEMBER BARRIAULT:** Thank you.

23 AECL, have you explored the engineering
24 possibility of this?

25 **MS. FAHEY:** Christine Fahey, for the

1 record.

2 Indeed, we were part of the supporting the
3 End-Use Committee. I have Slide 18 from my presentation.
4 I'm not sure if you're able to get it back on the screen.
5 It may just aid the discussion. Thank you.

6 So as Mr. Peacock was just indicating, one
7 of the recommendations from the End-Use Committee was
8 indeed that the mound try to blend in with the natural
9 area. So the recommendations came from the committee
10 about one month before we awarded the design contract and
11 we incorporated a change in the mound orientation such
12 that its access was changed by five degrees to align with
13 the natural contours of the topography.

14 Furthermore, the design consultant was able
15 to incorporate a finish or an aesthetic on the mound as
16 illustrated here of a natural drumlin.

17 Furthermore, you can see by the trees that
18 are surrounding the facility -- the new facility and in
19 the remediated area south of Lakeshore Road, we've
20 recognized the desire for the reforestation and the
21 connectivity that Mr. Peacock spoke about.

22 I will acknowledge that the area that is
23 shown in this slide is the 95 hectares that is required
24 for the project. Indeed, Canada will be purchasing 275
25 hectares from Cameco.

1 At this time the project is mandated to
2 incorporate as much end use as possible on the 95 hectares
3 that the project requires, and the Municipality of
4 Clarington and Natural Resources Canada have agreed to
5 separately discuss the adoption of the end-use
6 recommendations on the balance of the lands.

7 **MEMBER BARRIAULT:** Thank you.

8 Thank you, Mr. Chairman.

9 **THE CHAIRMAN:** Dr. McDill?

10 Who are you guys? I mean, what is the
11 conservatory and, you know, who do you represent really?

12 **MR. PEACOCK:** Mr. Chairman, we appear to be
13 a well-kept secret.

14 We are -- the Conservation Authority is
15 mandated by the provincial *Conservation Authorities Act* to
16 undertake a program of restoration rehabilitation and
17 management of watersheds in an area.

18 So we manage the watersheds of this area
19 through provincial statute. We have ecologists,
20 biologists, planners, hydrogeologists, hydrologists on
21 staff that work with municipalities in reviewing
22 development and coming up with remedial measures for this
23 area.

24 One of the things we have in the Ganaraska
25 is the Ganaraska Forest and one -- that was a project of

1 the Conservation Authority that retained about 10,000
2 acres and reforested the headwaters of the Ganaraska
3 River.

4 So we have a lot of history but we also
5 have a lot of energy to continue doing good work.

6 **THE CHAIRMAN:** So I gather you are really
7 looking after -- you have also some science based into the
8 environmental issue. You heard the previous intervenor,
9 for example, who argued that moving this waste would be
10 not a good idea.

11 From your perspective, you're supporting
12 the movement, but, you know, I'd like to hear your point
13 of view. What would happen if you'd taken the other
14 approach and kept it in site?

15 **MR. PEACOCK:** Mr. Chair, the -- eventually
16 you would have a huge point out into Lake Ontario and,
17 even more potentially, an island of this facility out in
18 the lake because we do erosion monitoring of the bluffs,
19 and when you talk of a .3 that's from the data that we've
20 collected over many, many years of recession rate.

21 That recession is a function of the ecology
22 of near-shore and littoral area of the lake. So the
23 sediments that come off the bluffs form the sediments that
24 are moved in the near-shore area of the lake which is the
25 productive area of Lake Ontario.

1 So it's very important that the balance and
2 the understanding of how those sediments are generated
3 from erosion and how they move is maintained, and by
4 armouring large parts of the shoreline there's some great
5 concerns that we're upsetting, in some ways, the ecology
6 of the near-shore area, which is really the nursery of
7 Lake Ontario.

8 **THE CHAIRMAN:** So you would really oppose
9 any kind of a -- at one time, we would hear there is
10 another remediation for in site -- keeping the waste in
11 site by doing some trench -- some deep trench and all
12 those things.

13 You don't think that's a real viable
14 alternative?

15 **MR. PEACOCK:** I think no matter what you do
16 the lake's going to move and it's going to continue moving
17 for hundreds and thousands of years. So it's going to be
18 challenging over time.

19 But by leaving it where it is you are going
20 to face that challenge much, much sooner and that
21 challenge is going to be very significant.

22 Right now it's armouring a front. Within
23 100 years it's armouring a peninsula. So it's a very
24 different question.

25 So the whole concept of armouring a

1 projection in Lake Ontario is something if you went that
2 way my -- you would have to have a huge amount of science
3 to support it, but I don't think that science is there.

4 **THE CHAIRMAN:** Thank you.

5 Anybody else?

6 Thank you very much.

7 We'll move now to the next submission which
8 is an oral presentation by Ms. Lawson, as outlined in CMD
9 H-10.9.

10 Ms. Lawson, the floor is yours.

11
12 **11-H10.9**

13 **Oral presentation by**

14 **Patricia Lawson**

15
16 **MS. LAWSON:** I have learned a tremendous
17 amount today and I'm extremely grateful for this forum
18 that you have conducted.

19 And just to follow on the previous speaker,
20 well over 30 years ago I was an active member of the
21 Ganaraska Conservation Authority, and I want to work with
22 Mark over this very difficult issue of the bluffs because
23 that's what I see is the next challenge for me.

24 But I want to bring up a subject that has
25 not been discussed; that is finance. I appreciate Dave

1 McCauley's hold on finance, but who in the end is paying
2 for all this -- what was it, 60 million? That is very
3 important here.

4 In the final analysis, it is the citizens
5 of Canada, and that's why a lot of this is happening, is
6 that endless resource of money.

7 I think that needs to be looked into and I
8 just -- I need wiser heads than mine here.

9 I want to comment on the statement that you
10 already have before you. I'd like instead of "lied", I'd
11 like to use the word "misled".

12 It's very much of a philosophical statement
13 I put together, but this tremendous long life of this
14 material requires a philosophical statement. It's the
15 longevity of this stuff that has us all -- it has us all
16 really trying to come to terms and, for that reason, I
17 believe that it is the best possible future ahead is to
18 leave the stuff in place; what Mr. Stephenson and Mr.
19 Sahota have much better than myself defined for you.

20 I say that because we're already in the
21 midst of upset weather conditions across our globe. We
22 have no idea of what it's going to be like in 100 years,
23 let alone 500, and these poisons last as long as that.

24 So, pretty well, that's what I've written,
25 and my own -- you see, I'm 82 and-a-half years old and

1 I've been with this from day one. In the '70s, I was on
2 the shore beneath the bluffs of the area we're discussing
3 trying to figure out because, at that time, they were just
4 going right into the -- the poisons were just flowing
5 right into Lake Ontario.

6 There's a lot that I admire about the way
7 ahead as described by AECL, but I really don't support it
8 for the reasons I've told you. And I'm going to try and
9 figure out about the bluffs better.

10 And, you know, I've written in my thing --
11 in my paper how far this went back, and simply because of
12 the fact the standards have changed dramatically over the
13 years and there would not have been -- the other key issue
14 is to listen to the local people. There would not have
15 been this need to spend all this money if Carlus Dickinson
16 had been listened to in the early fifties.

17 And then came the farmers at the new site,
18 the site we're studying now, and they went to their
19 government and nobody listened.

20 And now we're faced with this -- I've
21 forgotten how many million dollars and who's paying for
22 it, the taxpayers of Canada.

23 So that's really why I wrote what I wrote;
24 I've been there.

25 **THE CHAIRMAN:** Thank you very much.

1 Questions? Question, Dr. McDill?

2 **MEMBER McDILL:** Ms. Lawson, you've been
3 there for many years and ---

4 **MS. LAWSON:** Well I care, you know.

5 **MEMBER McDILL:** That's very clear, yes.

6 Do you think it's possible for all the
7 people in the community to agree on one solution?

8 **MS. LAWSON:** Well, I think the two
9 gentlemen who spoke to you earlier would have had the
10 community here agreeing if they hadn't been side-balled.

11 There was somebody who wanted -- the
12 authorities want it the other way. Like maybe Mr. Glenn
13 Case was involved in it and I know Glenn from way back.

14 I'd have to speak to them, you know. I
15 don't know.

16 I think it is -- to answer your question
17 straight, I think it's possible.

18 **THE CHAIRMAN:** Sorry, you just heard from
19 your friend, I assume, from the Conservation Authority,
20 who said that it's a good idea to make sure that you clean
21 up the current bluff.

22 **MS. LAWSON:** Yeah, I know.

23 **THE CHAIRMAN:** So he's of the view that for
24 the environment you need to clean it, that's the problem.

25 **MS. LAWSON:** Yeah, but I -- why -- while

1 Mark is a friend and I've worked with him, I have
2 disagreed, big time, on some issues, like the Shoppers
3 Drug Mart on the shores of the Ganaraska River.

4 We haven't agreed on everything, but
5 overall I agree and want to support the Ganaraska
6 Conservation Authority.

7 **THE CHAIRMAN:** Dr. McDill?

8 Just for the record, I want to make sure
9 that your record is as you intend it to be.

10 I have your note here from August the 27th,
11 and on page 2 it says, "I'm supportive of the present
12 application of the AECL licence".

13 **MS. LAWSON:** I know, but then when I
14 learned more and spoke to one or two friends who knew more
15 than I did ---

16 **THE CHAIRMAN:** So that's not your position
17 anymore?

18 **MS. LAWSON:** No, it's not my position, but
19 I want to say I think there are a lot of very good points
20 and that AECL and the end IBF of the mound I don't like,
21 but I do really think that they have in these -- Joanna
22 Macy's outline here -- I do think they're doing a lot of
23 what's said there, perhaps most of it.

24 Do you understand?

25 **THE CHAIRMAN:** Yes, I do.

1 **MS. LAWSON:** Thank you.

2 **THE CHAIRMAN:** Thank you very much.

3 I understand that the Payne family is
4 coming to appear here now.

5 Go ahead.

6 So while you set up, I'll read who you are
7 as I understand it.

8 You're going to make a presentation. The
9 presentation will be made by Mr. Garfield Payne, Mr. Lance
10 Payne, Ms. Shelley Payne, Ms. Jennifer Hale as outlined in
11 CMD 10.10, 10.10A, and 10.10B.

12 There's only two of you.

13 **MS. PAYNE:** There's only two of us, yes, so
14 which two do you think they are?

15 So it's Garfield and Shelley who are here
16 representing the Payne family.

17 **THE CHAIRMAN:** Thank you.

18

19 **11-H10.10 / 11-H10.10A / 11-H10.10B**

20 **Oral presentation by**

21 **Garfield Payne, Lance Payne,**

22 **Shelley Renaud (Payne) and**

23 **Jennifer Hale (Payne)**

24

25 **MR. PAYNE:** Good afternoon, Mr. Binder, and

1 fellow Commissioners. Thank you for the opportunity to
2 speak to you today.

3 I come at this problem from an historical
4 perspective.

5 The Payne's have been farming the land
6 adjacent to this dump for about 150 years. I'm probably
7 the only person in the room who was actually been stuck in
8 a tractor on the site of the land, south of the railroad,
9 in my youth to my frustration.

10 So what I would like to do is focus on a
11 couple of things. I had asked for an adjournment
12 initially and I wanted to touch on that issue. A lot has
13 come out in the way of information this afternoon.

14 I agree with Mrs. Lawson, that I have
15 learned things sitting here and I thank you for that.

16 I also want to thank Ms. Levert of the
17 Commission for the material which she sent me. The
18 problem which I was experiencing was that it was coming in
19 dribs and drabs. We were not given notice of this hearing
20 until August the 18th, and the material, as you can see,
21 came over the period from, really, the 29th of August
22 onwards in response to my four communications with her
23 about the material that AECL had filed.

24 I believe there are still a substantial
25 number of documents which would be helpful to the

1 Commission which haven't been disclosed by AECL.

2 As recently as last week I got a fax from
3 Ms. Fahey providing yet another document, a 32-page fax.

4 So that was why I was a little exercised
5 about the issue of belated delivery and I wanted that to
6 be recorded.

7 I leave it in your hands how we will
8 address it, but let me go on with the submission and then
9 we can talk about that issue.

10 Please refer to E doc 3785895 which is our
11 initial position, our submission memo to you folks.

12 I know there was some confusion and I want
13 to help Ms. McDill with the geography.

14 Part of it arises because I see that the
15 photo, our Exhibit Number 1, is turned upside down in the
16 material that's been assembled for you.

17 So this is an aerial photograph which Mr.
18 Van Der Gast of the AECL was kind enough -- so that you
19 know where you're looking, there's the existing -- can you
20 hear me all right? Not really, well I'll try.

21 The existing Port Granby dump, the lagoons,
22 the East Gorge, the West Gorge, the Payne lands. The
23 Payne farm is here north of the CN track. There's a piece
24 of cheese here in the middle; there is a stream running
25 there which I call the south branch.

1 **MR. LAWSON:** You're in the way of your own
2 picture. We can't see the picture.

3 **MR. PAYNE:** I can see it just fine, Mr.
4 Lawson.

5 But as a former teacher, you would know the
6 importance of these things, so I defer to you.

7 Thank you, Tom.

8 The lagoons at the old dump, the east
9 gorge, the west gorge, Moore's farm -- I call it Moore.
10 In the country parlance, you call it by the name of the
11 guy who bought it before you did, or lived there in the
12 previous generation. All right.

13 So here's the stream that I was telling you
14 about. Here's where the engineered mound is supposed to
15 go. Here is Elliott Road, which is being proposed as the
16 construction access road adjacent to the west side of our
17 property. Here is the north branch of Port Granby creek.

18 Here is our barn, farms, et cetera. And
19 here, obviously, is Lake Ontario and the gorges that you
20 were hearing about and discussing with Ms. Lawson a few
21 moments ago.

22 That's Exhibit P-1.

23 Our Exhibit P-2 is a photo showing the
24 areas where AECL had proposed encroachments on the land to
25 make a pullover lane here and to make a wider embankment.

1 There's an issue with respect to the slope. The proper
2 slope has not been agreed on.

3 But that would cause some -- if it's a two-
4 to-one slope, then that would be encroaching on our land
5 somewhere between seven and 10 metres in here. And this
6 is where all the traffic is supposedly coming through that
7 narrow underpass, up over the railway tracks, and into
8 this area, which is the site of the proposed new dump.

9 As I understand the material, the best way
10 to describe this site is essentially that it's a mixture
11 of radioactive and very caustic wastes, along with
12 processed wastes from the old Eldorado and Cameco
13 facilities.

14 No one knows with precision what is where.
15 You can't tell where the worms are in this apple. It's
16 been bored 15 times, according to the initial Golder and
17 Senus report, which you no doubt have or have reviewed,
18 which is called, "Report on Conceptualization of the On-
19 site Low-Level Radioactive Waste Storage Facility Designs
20 for the Port Granby Waste Management Facility June '99" by
21 Golder and Associates and Senus, and excerpts of this are
22 Exhibit 16 in our brief.

23 And in particular, I want to direct your
24 attention to Chapter 4, parts which I have reproduced for
25 you deal with the results of 15 boreholes being drilled at

1 that time. And the materials of particular concern are
2 described in 4.2.3, which is the extremely caustic pH 13
3 to 14 materials, making it hazardous and corrosive to
4 skin. The sludge comprises a -- consists of calcium
5 fluoride, calcium hydroxide, potassium fluoride and
6 potassium hydroxide.

7 I'm not sure if you're familiar with the
8 NIOHS, National Institute of Occupational Health and
9 Safety/CDC handbook, but it has a good description of the
10 materials and the harmful nature of them.

11 I can produce that later.

12 Anyway, my concern is simply that you have
13 a mixture here of caustic and radioactive materials. No
14 one knows what's going to be in any given dump load that's
15 being hauled out of this site to the proposed area at the
16 north end of that parcel.

17 One thing we do not have and which would
18 have been helpful is Cameco and Eldorado's records of any
19 toxic incidents relating to this dump, whether to humans
20 or to animals. There is some family history about some
21 cattle being adversely affected once they got on by
22 accident onto the property.

23 My concern relating to this combination of
24 caustic and radioactive material is that it is proposed to
25 be hauled in dump trucks covered with a tarpaulin.

1 The first problem with that is pH 13, 14
2 materials is the equivalent of lye, and I don't think
3 these tarpaulins, which supposedly will cover up these
4 truckloads, are going to last very long if they happen to
5 be sitting on a load of 13 to 14 pH materials which is
6 wetted.

7 We're told that the material as it comes
8 out of the ground is going to be quite wet and it may well
9 get environmental wetting.

10 We've heard about this mound supposedly
11 being designed with a 500-year lifespan, and yet I do not
12 see in any of the materials that a prototype testing has
13 been done to show what is the survivability of the liner
14 materials, which are the synthetic liner materials, the
15 HDPE and the Geotextiles.

16 I believe Ms. Lange mentioned that there
17 was some -- or the Commission mentioned that there was
18 some data on that but it hasn't been produced, and we're
19 -- we think you ought to be inquiring, has this material
20 been subjected to freeze/thaw cycles, has it been
21 subjected to extremes of temperature, to radiation, to the
22 caustic exposure, to wind and weather exposure and to
23 biological processes of decay.

24 We have a great concern that this material
25 is -- once this is done, it's supposed to last 500 years

1 and it would be too late when it's all filled and you
2 discover you have a problem. Wouldn't it be better to try
3 and design your prototype airplane before you take
4 passengers?

5 We have a serious concern about the AECL's
6 comments about water flow into and out of the proposed
7 mound. As I said to you, I have personal experience of
8 water flowing from the west -- from the eastern boundary
9 of that site towards the west. You can see on the first
10 drawing that I gave you that there is a stream track
11 there.

12 We have another water concern, which is
13 that it appears from information provided by Mr.
14 Vandergast of AECL by his letter of March 11th to us that
15 there was only one sample taken from Port Granby Creek or,
16 as I call it, Elliott Creek, and that was south of the
17 Lakeshore Road in the Village of -- or the Hamlet of Port
18 Granby.

19 That is nowhere near our lands, and you'll
20 see that that is the basis for one of the bullet points in
21 our submission memo to you, that we wanted baseline
22 testing done adjacent to our lands so that if we ever
23 discover water in our -- or arsenic or uranium or radium
24 or caustic materials in our water we have a record of what
25 was there prior to dump construction.

1 I want to also direct you to the water
2 table gradient, which is referenced in one of the
3 documents that Mr. Vandergaast attached to his letter.

4 There was a gradient, and it tends to flow
5 from the east to the west and northwest. If you're not
6 familiar with that diagram, I can produce it for you.

7 Would that be of interest, or shall I move
8 on?

9 **THE CHAIRMAN:** No, it's on the way. Go
10 ahead.

11 **MR. PAYNE:** All right. Of course, as you
12 see from that diagram, our property is immediately north
13 and northwest of the mound that is being proposed.

14 I produced Exhibit 4 to you in our brief.
15 There's a letter to Ms. Levert conveying that to you. Let
16 me see if I can find the Edoc reference number.

17 That would be Exhibit 4 to the September
18 7th letter, I believe.

19 **THE CHAIRMAN:** Could you please consider
20 that we have read all this material?

21 **MR. PAYNE:** Yes.

22 **THE CHAIRMAN:** You don't have to go -- and
23 please go to the point of your submission.

24 **MR. PAYNE:** Right, all right.

25 My point there is that this site, by

1 analogy to Trenton, Ontario, where there are accurate
2 records of rainfall, could be exposed of winds up to 154
3 kilometres per hour which will make dust control very
4 difficult.

5 AECL -- going back to the Elliott Road work
6 -- AECL proposes modifications there but there has been no
7 agreement, as I understand it, on the footprint or on the
8 slope of the proposed embankment. And we're concerned
9 about erosion onto our land and we certainly haven't
10 agreed to these requests from AECL for encroachment or
11 slope design.

12 Regarding the water, I'll come back to one
13 point, which is it appears from the material we've been
14 provided with that there were only two boreholes on the
15 north half-mile boundary of the AECL lands, immediately
16 south of our farm. We had requested in our brief that
17 there be more because we want to be assured that there's
18 no migration of contaminants from this site into our lands
19 and the stream immediately to the north of the CN tracks.

20 I think though that's the gist of my
21 submissions.

22 To summarize, looking for more baseline
23 testing; we need a clarification of what the encroachment
24 is; and we need more boreholes and air contamination
25 monitoring so that we are immediately aware of any

1 migration of these caustic and radioactive dusts from the
2 proposed activities.

3 Thank you, that's my presentation.

4 **THE CHAIRMAN:** Okay. Thank you.

5 Questions, comments?

6 Dr. Barriault.

7 **MEMBER BARRIAULT:** Thank you, Mr. Chairman.

8 I guess my question is to AECL. Is there
9 any planned encroachment on the Payne property?

10 **MS. MILLER:** Joan Miller, for the record.

11 As I said in our presentation, that to
12 ensure the safe transport of materials into the long-term
13 waste management facility, we do need to upgrade the
14 Elliott Rd and Concession Road 1.

15 The design of those roads is complete from
16 our perspective but we are now working with the
17 municipality to ensure that their requirements for road
18 design are taken into account.

19 And whether or not there will be
20 encroachment or whether or not there are other -- what is
21 available to us depending on the final design of the road
22 will, of course, be dealt with through consultation with
23 Mr. Payne and the municipality.

24 **MEMBER BARRIAULT:** Thank you.

25 I guess the next thing really is the issue

1 of pre-construction testing of the water tables, I
2 understand, and the soil on his property.

3 Is that planned; is that proposed?

4 **MS. MILLER:** Joan Miller, for the record.

5 We have been carrying out baseline data as
6 a follow-up to the environmental assessment work and just
7 prior to construction. So we did show in the presentation
8 where we had a number of monitoring points; we're
9 collecting baseline data.

10 I will need to revert to the experts to see
11 specifically how we have selected some of those points and
12 what was behind the program that we have, what we have
13 obtained.

14 However, I would like to say that we are
15 opened to and we have offered to other residents if they
16 want their wells tested, we're happy to test them. So
17 that offer is and has been on the table.

18 With respect specifically to the baseline
19 program though, perhaps I'll ask one of the colleagues --
20 Gary, if you could answer that, please?

21 **MS. BARZELATTO:** Laura Barzelatto, for the
22 record.

23 We've commenced baseline monitoring based
24 on our EA follow-up plan which was submitted to the CNSC.

25 In that plan we've chosen several points

1 for aquatic, groundwater and terrestrial and surface water
2 testing and, as well, air testing. And it was all based
3 on the baseline studies that were done for the
4 environmental assessment study report.

5 So we are basically taking the same points
6 and comparing the data from 2002, 2004 to today's data in
7 our studies.

8 **MEMBER BARRIAULT:** Thank you.

9 So do you plan on doing more extensive
10 studies or is that it for now?

11 **MS. BARZELATTO:** What we've suggested is,
12 based on our baseline, we will look at the results and if
13 further studies are required, we will recommend or
14 continue studies, yes.

15 **THE CHAIRMAN:** Ms. Payne?

16 **MS. PAYNE:** I'll do that. So a quick
17 question, how do we get access to those baseline reports
18 so that we have a starting point going forward?

19 **THE CHAIRMAN:** AECL?

20 **MS. FAHEY:** Christine Fahey, for the
21 record.

22 The EA follow-up program plan requires that
23 we file reports, so we will make them available when the
24 reports are produced.

25 In our earlier presentation I think Ms.

1 Miller made this morning, we indicated that the follow-up
2 baseline program commenced nine months ago, as we're
3 required to initiate it one year prior to construction so
4 that the data is fresh for being able to make objective
5 determinations of project effects.

6 So the surface water monitoring program
7 commenced in the summer. I'm not sure if we've done one
8 or two campaigns so far but it's seasonal, it's done on a
9 quarterly basis. So we're ---

10 **THE CHAIRMAN:** So is it available to the
11 Paynes? Is it posted?

12 **MS. FAHEY:** The data is not posted at this
13 point. We can certainly produce the Port Granby Creek
14 results, well testing -- sorry, somebody -- go ahead,
15 Buddy.

16 **MR. TAYLOR:** Buddy Taylor, for the record.
17 We are just finalizing our first report on
18 the baseline studies that we've been doing for the last
19 nine months and that will be available soon.

20 **THE CHAIRMAN:** Go ahead, Dr. Barriault.

21 **MEMBER BARRIAULT:** No, that's all, Mr.
22 Chairman. Thank you.

23 **THE CHAIRMAN:** Just a follow-up on this.
24 Is there any other neighbour of that
25 proximity to the site?

1 Forget about the radiological stuff for a second.

2 **MS. FAHEY:** There's two different items on
3 the table here.

4 With respect to the access for the clean
5 construction materials to the new long-term facility, the
6 transportation route was studied extensively and
7 determined as part of the environmental screening report
8 back in 2006; that the way to minimize disturbance on the
9 community of Port Granby was to bring the materials down
10 Elliott Road.

11 So the design for Elliott Road, which may
12 include a small amount of encroachment on the property
13 held by the Payne family, would have to be negotiated in
14 consultation with the municipality who is the authority
15 for municipal road design and construction.

16 **THE CHAIRMAN:** So to the Paynes, have you
17 approached the municipality? I'm trying to understand how
18 those kind of -- I'm talking about the non-radiological
19 thing, I'm talking about transportation and access.

20 There must be a normal process, a municipal
21 level to resolve those differences of opinion, let's put
22 it this way.

23 **MS. PAYNE:** So what I have done is I've
24 spoken to the municipality on this particular topic and
25 the discussion about the slope or the -- you know, the

1 access from Elliott Road.

2 We had some initial discussions that --
3 especially back in January with AECL that they -- this was
4 uncertain as to the slope. Our discussions with
5 Clarington said that they would prefer a two-to-one slope
6 because maintenance after the end of this project would be
7 -- that's their minimum requirements. Ideally it's three-
8 to-one.

9 So we had been going forward thinking that
10 that was going to be the recommended requirements or a
11 recommendation to AECL which would mean, as my brother
12 said, a seven-to-10 metre encroachment on our property.
13 So that is still to be determined.

14 It is ideally the -- what I'm told, the
15 best slope is a two-to-one slope as opposed to a much
16 stricter slope.

17 So we have had those conversations but have
18 not had any final discussion on what it's going to be.

19 **THE CHAIRMAN:** Dr. McDill?

20 **MEMBER McDILL:** Thank you.

21 I'm just wondering if the Mayor is still
22 here to talk to that. Perhaps a municipal staff member
23 could come forward and talk about that. That's why I
24 didn't ask the question earlier. Here we go.

25 **MS. SZWARZ:** My name is Janice Szwarcz. I'm

1 the Principal Planner with the Municipality of Clarington.
2 I act as a Project Coordinator for the Municipality.

3 I will defer to the engineering staff for
4 the detailed answers, but the issue of land requirements
5 for Elliott Road are under discussion with the Payne's.
6 There is an option at the CN level crossing of providing
7 just a one-to-one slope on the east side where there would
8 be an encroachment onto the Payne's land. The one-to-one
9 slope would be, in fact, to prevent the necessity of
10 encroaching onto the Payne's property.

11 We have indicated to the federal government
12 that we would prefer to have a two-to-one or a three-to-
13 one slope installed at the beginning of the project so
14 that it would meet our municipal design requirements.
15 However, it's not, in our parlance, a showstopper, and
16 provided that it is provided at the end of the project
17 when the road is returned to the municipality then we
18 would be satisfied with that.

19 **THE CHAIRMAN:** Go ahead.

20 **MS. PAYNE:** I'd just like to make a comment
21 that if we know that two-to-one is something you need at
22 the end of the day why not start off with it at that point
23 in time? That's my only comment to that.

24 **THE CHAIRMAN:** I'm trying to understand
25 what is our role in all of this. It sounds to me like a

1 little debate among local about a road.

2 **MS. PAYNE:** Okay.

3 **THE CHAIRMAN:** It's not to deal with safety
4 of some of the -- what's being transported. We will get
5 into this in a minute.

6 So I assume that the three parties, the
7 federal and the municipal and AECL got to sit together --
8 and the Payne's -- excuse me -- four parties have to sit
9 down and resolve this. It sounds to me like it should be
10 resolvable and it should not be -- it's not an issue that
11 we can actually resolve here, if I understand, but it's
12 always interesting to see what this project is causing.

13 So why don't we turn into some of the --
14 actually, is there anything else you want to follow up on,
15 please? I'm talking about the road -- the Elliott Road.

16 From the Payne's, what accommodation are
17 you looking for? I mean, I'm not trying to be -- I'm not
18 trying to do -- to start the negotiation, but, I mean, you
19 say you're open to reasonable proposals here. Is that
20 what you're trying to say here?

21 **MR. PAYNE:** I think it is going to take
22 your intervention, sir. It would be much appreciated if
23 you can act as the mediator in this process.

24 **THE CHAIRMAN:** Be careful what you wish
25 for.

1 **MR. PAYNE:** Well, you sounded so
2 reasonable, I was going to take you up on it.

3 The things we're talking about are outlined
4 in the submission to you. There are a number of other
5 factors and other things that we thought would be prudent
6 and desirable and sensible.

7 I can't imagine we're going to have a great
8 debate about the size of the fencing or the spacing of the
9 gates, but it seems like the Elliott Road is a very
10 important road; that the stress has been put on it by
11 AECL; that this is how they want the materials to come in.

12 It's going to be gated off, which will
13 cause some interruption to or interference with our
14 farming activities. It will essentially turn the road
15 into a construction highway rather than a bucolic little
16 road on the west side of our farm, so ---

17 **THE CHAIRMAN:** But I thought AECL in their
18 presentation already taken into account and promised to
19 deal with some of those issues ranging from barriers to --
20 noise barriers, to trees and all that stuff. Did I get it
21 right?

22 Okay, Dr. Barriault, over to you.

23 Dr. McDill?

24 **MEMBER MCDILL:** I'll take that.

25 My other question was with respect to air

1 monitoring, and AECL's Slide 21 has two air quantity --
2 quality, rather, monitors. The prevailing winds probably
3 switch morning and afternoon with the water, but what
4 direction of the prevailing winds?

5 **MS. FAHEY:** Christine Fahey, for the
6 record.

7 During the construction season, which will
8 extend for about eight months, the prevailing winds are
9 from the northeast towards the southwest, toward the lake.

10 **MEMBER McDILL:** So there should be very
11 little circulation of contaminants onto the farm; it
12 should all be going away towards the lake?

13 **MS. FAHEY:** Christine Fahey, for the
14 record.

15 That's what the wind rose data indicates.

16 **MEMBER McDILL:** Nevertheless, there is air
17 quality monitoring there that does address the
18 intervenor's concern about monitoring air near the
19 property?

20 **MS. FAHEY:** Yes. Again referring to Slide
21 21 that you cited, there's a -- in the middle of the
22 property where the long-term waste facility will be,
23 there's a red dot, and that is a high-volume air sampler.
24 That will be one of the perimeter monitors.

25 There is also a high-volume air sampler on

1 the eastern/southeastern side and down on the south side
2 by Lakeshore Road.

3 In addition, there's all kinds of portable
4 monitoring around the perimeter.

5 **MEMBER McDILL:** And will that monitoring be
6 real time?

7 **MS. FAHEY:** The monitoring will be a
8 combination of things. Whenever there's work, on the days
9 of work, 24/7, there will be total suspended particulate
10 as well as PM2.5 and long-lived radionuclides will be
11 captured on those filters.

12 The handheld monitors, which we've recently
13 trialled over the last five months on the Port Hope
14 project, will give real time particulate or total dust.

15 **MEMBER McDILL:** So if something does happen
16 that requires reporting the real time monitors should pick
17 it up, and then what happens? Supposing this happens. I
18 realize it hasn't happened in Port Hope or Welcome. So
19 supposing that happens, what will be the process?

20 **MS. FAHEY:** Thank you very much. Christine
21 Fahey, for the record.

22 The dust management plan, which we've
23 produced and submitted to the regulator and have been
24 reviewed by the peer review team, in fact, identifies four
25 levels of dust monitoring and control.

1 So even before any work is started the
2 contractor is required to use the weather station, which
3 has been installed right at the site, to predict or
4 forecast what the winds will be and make a determination
5 if it's even safe to begin work.

6 They can also dampen the surface that
7 they're going to excavate if need be.

8 Workers will also have awareness training
9 so that they can be particularly keen on looking for any
10 visual dust and reporting it.

11 During the work itself, there will be the
12 high-volume air sampling, that I just previously spoke
13 about, at the perimeter, as well as handheld monitoring by
14 not only AECL but an independent dust monitoring
15 contractor, and the contractor itself is required to do
16 dust monitoring right at the workplace.

17 So there will be plenty of early indication
18 if there is a dust issue and opportunity to redress the
19 situation. That could include watering. It could include
20 -- if it's on the travel road that goes under the
21 underpass it could be vacuum sweeping or watering that
22 road. It could be more improved windscreens, or it could
23 be shutting down the work for the day.

24 **MEMBER MCDILL:** And would it include
25 notifying the local residents?

1 **MS. FAHEY:** There is a requirement if the
2 wind hits a certain threshold to report it immediately,
3 and we can certainly establish some kind of reporting with
4 the municipality in agreement with the residents to when
5 those situations occur.

6 **MEMBER MCDILL:** And the intervenor made one
7 comment about originally 15 boreholes in the 1999 Golder
8 study. You made mention this morning of substantially
9 more. So how much -- again, just because it's the
10 afternoon and we have different people in the room, can
11 you describe again the characterization of the site, in
12 general terms?

13 **MS. FAHEY:** Christine Fahey, for the
14 record.

15 I believe the 15 boreholes that Mr. Payne
16 referred to were specifically in support of the report
17 commissioned by the Municipality of Golder that led to the
18 in situ stabilization approach to waste management.

19 But as Mr. Case outlined this morning, the
20 borehole examination of the existing Port Granby site goes
21 back into the '70s, and while I can't remember all of the
22 dates -- do you have them handy Glenn -- I believe he
23 named various campaigns through the '70s, '80s, '90s and
24 even 2003 that led to over 200 boreholes that together
25 provide a composite picture of the waste characterization

1 and delineation.

2 **MEMBER McDILL:** Mr. Case, just because
3 again the audience has changed from morning to afternoon.

4 **MR. CASE:** Glenn Case, for the record.

5 In going through the information that we
6 have on hand and that we have used in our design work, the
7 earliest information was 1975, 1976, 1977, 1984, 1987,
8 1990 and the 1993 study that was conducted to assist in
9 the citing taskforce work that was underway at that time,
10 and 2003 that was done to assist us in our design work.

11 During that period of time more than 200
12 boreholes were installed on the property to characterize
13 the waste and specifically drilled in specific trenches in
14 order to characterize the different types.

15 Also during that period of time there's
16 been an ongoing inventory of the actual waste that were
17 placed in the individual trenches.

18 **MEMBER McDILL:** That would be based on
19 documentation from Eldorado and others?

20 **MR. CASE:** Glenn Case, for the record.

21 That's correct; information that was
22 collected by Eldorado at the time when they were managing
23 the site.

24 **MEMBER McDILL:** Thank you, Mr. Chair.

25 **THE CHAIRMAN:** Thank you.

1 Anything ---

2 **MEMBER McDILL:** I think the intervenor
3 wanted to say something.

4 **MR. PAYNE:** Yeah, may I make a couple
5 points in relation to that? We have no record of what Mr.
6 Case is talking about. We have asked for the Stantec
7 radionuclide report which is referenced in the 9th of
8 September letter to Milena Kostova by Mr. Taylor. We have
9 not been provided with that document, perhaps it shows
10 what Mr. Case is saying, maybe it does, maybe it doesn't.

11 So we have not been given that information
12 and that comes back to my preliminary point this morning
13 about the handicap we're under here in trying to respond
14 to things when we don't have the information.

15 We have wind direction information from
16 Trenton. I have no information from Ms. Fahey or anyone
17 at AECL about this supposed wind direction a few were
18 talking about. Here we have a reputable organization
19 preparing data in Trenton. It shows for nine of 12 months
20 the prevailing direction is southwest.

21 Your point was a fair one, this is a
22 coastal site so essentially you get onshore breezes in the
23 morning and you have that circulatory effect.

24 That's all I wanted to address -- oh,
25 pardon me, one other point; in AECL's material there is a

1 conflict on the length of life of this liner. The
2 submission from AECL, page 4-7, states that the Geo-
3 Synthetic Research Institute standard GM-3 and O-Reg,
4 Ontario Reg 23298, the latter recognizes a minimum service
5 life of 150 years for GMs used in a primary base liner
6 configuration.

7 There's nothing in this report to tell us
8 where the other 350 years of lifespan comes from since
9 this is put out as a 500-year design project, and we don't
10 know anything about those standards to say whether they
11 contain radioactive and caustic materials of the kind that
12 you find in this particular dump or where and how these
13 standards were developed.

14 So subject to my initial point about the
15 release of information, Mr. Binder, that's all I have.

16 I don't know how you want to deal with the
17 request we have made for an adjournment to permit
18 additional information which is coming out in the midst of
19 this hearing. I'm in your hands.

20 **THE CHAIRMAN:** Well, we always assume that
21 many of those documents are available, should be
22 available, so we'll take this under consideration, under
23 advisement.

24 Staff, do you want to talk a little bit
25 about some of the documentation that we are talking about

1 or is it not any document that we are -- that the CNSC is
2 in possession?

3 **MR. ELDER:** Peter Elder, for the record.

4 This is all documentation that's in our
5 possession but the ones that have been -- is AECL
6 documents, they're marked AECL proprietary.

7 So our normal process in such a case is to
8 go back and ask AECL is there part of it can you release,
9 is it releasable and we've been going through that
10 process.

11 So I guess the question would be back to
12 AECL on why they think some of those documents are not
13 publicly available.

14 **THE CHAIRMAN:** So are they now documents
15 that -- do we know which document are missing that you
16 would like to see right now?

17 In other words, ---

18 **MR. PAYNE:** No, we don't know definitively
19 because the letter I referred to, to Ms. Kostova said
20 specifically that there were things AECL was thinking
21 about. I referenced the Stantec report on the
22 radionuclide inventory of the Port Granby site. That
23 would be one. But there may well be others.

24 **THE CHAIRMAN:** We don't know what we don't
25 know.

1 **MR. PAYNE:** No.

2 **THE CHAIRMAN:** The question is -- the
3 question is, are there any outstanding document from AECL
4 that should deal with the Payne's request?

5 **MS. MILLER:** Joan Miller, for the record.

6 So we have released 21 of the 46 requested
7 documents. All of the documents were references in our
8 Commission Member Document.

9 There are some documents that were prepared
10 under contract to Public Works Government Services as part
11 of the detailed design, the detailed design report, and we
12 have to review and we have some concerns that that may --
13 releasing that detailed design report may impact the
14 tendering process.

15 But all of the information from the design
16 is in the information that has been provided. So we're
17 happy to answer any questions that come out of that.

18 We've also provided the various
19 environmental monitoring and protection plans that relate
20 specifically to this project. We have been requested to
21 provide our corporate documents on the actual programs
22 that we have and which -- in which the plans then support
23 those programs are consistent with the regulations and the
24 applicable laws.

25 I haven't had the opportunity to see

1 whether or not we actually release those complicated
2 programs.

3 Again, the plan specific for this project
4 should have sufficient information and we'd be happy to
5 have any and respond to any questions.

6 **MR. PAYNE:** Can I just go back to one issue
7 which was the testing that was referenced by Ms. Lange
8 (phonetic) of the geothermal and geo-HDPE membrane. We've
9 never seen any results of the accelerated aging test that
10 should have been done on this material to know whether
11 truly it is going to last 50 years, 20 years, 200 years,
12 500 years. That would be an important additional
13 document.

14 **THE CHAIRMAN:** CNSC, do we have all -- is
15 it something that staff did internally or is it something
16 that was done by a third party?

17 **DR. THOMPSON:** Patsy Thompson, for the
18 record.

19 My understanding is we can make this
20 document available to the intervenors for their reference.

21 **MS. MILLER:** This was accelerated ASTN
22 standard testing, so it would come under an ASTN standard
23 which is...

24 **MS. FAHEY:** And the GRI Geo-Synthetic
25 Research Institute but similar to ASTN. But also it's

1 widely published in peer review journals such as journal -
2 - Geo-Environmental Geo-Technical Engineering Journals.

3 **THE CHAIRMAN:** Okay, thank you.

4 **MS. PAYNE:** Just one last quick thing; that
5 we could be notified on a distribution list for any of
6 these baseline testing reports so that we are made aware
7 as opposed to having to go out and be more -- you know,
8 searching through documents, that's my request.

9 **MS. FAHEY:** Christine Fahey, for the
10 record.

11 Yes, the Payne's are already on our mailing
12 list and receive everything we send out. So we'll make
13 sure they get the report.

14 **THE CHAIRMAN:** Okay, thank you.

15 Just -- I'm told that -- just to set the
16 record, the notice -- I'm trying to understand. Kelly why
17 don't you explain what ---

18 **Ms. MCGEE:** Mr. Payne indicated that the
19 notice was only available on August 18th and just to set
20 the record straight, in fact, the notice was published on
21 July 11th, and July 20th.

22 So I just -- we just don't want the record
23 to indicate that the notice was published on August 18th
24 when in fact it was published in July.

25 **THE CHAIRMAN:** Thank you very much. Thank

1 you.

2 **MR. PAYNE:** Just to clarify that point, my
3 point was that that's the date I received it. It wasn't
4 as a party affected and adjacent landowner I would have
5 thought that that might have been sent to us individually
6 rather than getting it willy-nilly on the 18th of August.
7 That was my point.

8 It didn't make it in 60 days before today's
9 date.

10 **THE CHAIRMAN:** Well, our process is that we
11 publish it to everybody at the same time simultaneously.

12 We don't have kind of a mailing list of our
13 favourite stakeholders, so to speak.

14 **MR. PAYNE:** Our name is on the South
15 Clarington East Ratepayers Association ---

16 **THE CHAIRMAN:** I know, but we -- but our
17 notice is to the public at large.

18 **MR. PAYNE:** Yes.

19 **THE CHAIRMAN:** Everybody.

20 **MR. PAYNE:** It did not come to my attention
21 until the 18th of August.

22 **THE CHAIRMAN:** Okay, thank you.

23 **MS. MILLER:** Excuse me.

24 I just want to point out that the program
25 discussion group meeting that was held on May 4th, we did

1 identify at that time that there would likely be a licence
2 hearing in August or September.

3 **THE CHAIRMAN:** Thank you.

4 Okay. The next submission is an oral
5 presentation by Mr. Mahoney as outlined in CMD H10.11.

6 Mr. Mahoney, the floor is yours.

7
8 **11-H10.11**

9 **Oral Presentation by**

10 **Gerry Mahoney**

11
12 **MR. MAHONEY:** Thank you, Mr. Chairman.

13 My name is Gerry Mahoney. I'm a resident
14 of Port Granby, and I appear before the Commission today
15 representing myself and my family and our Association, the
16 Southeast Clarington Ratepayers' Association. I'm the
17 current president of our Association.

18 While we have approximately 100 members, in
19 effect, we represent about 30 families that live within
20 the immediate area of this project, that is, within a
21 kilometre or two of this construction project that's about
22 perhaps to start.

23 So I'm here today on behalf of my
24 neighbours, friends and the Association and to start the
25 meeting as we do in all of our consultative meetings with

1 our friends from the Port Hope office, our firm and long-
2 term declared position is that we ask and we firmly
3 request that the site not be moved.

4 And I'd just like to give you that position
5 to start off with. We ask that it remain *in situ*.

6 To us, it's not logical to any of my
7 neighbours to move the waste from its current site across
8 the road and now have two waste sites; the existing waste
9 site, the new waste site.

10 The existing waste site, we're told, will
11 be remediated over time. We ask how long that is, and we
12 can't get an answer because it seems nobody knows.

13 They're going to excavate an area, as Mr.
14 Case told me, about the size of the World Trade Centre
15 site; 500,000 cubic feet will be removed and excavated and
16 moved across the road.

17 What's going to happen to the current site?

18 We know for the very foreseeable future the
19 two pools that are there to cleanse the run-offs will
20 remain.

21 And the Chairman asked earlier today, "When
22 will we have children playing on the site?" A good
23 question. I did not hear an answer to that. I did not
24 hear an answer.

25 I heard that well, we have membranes here,

1 we have membranes there and blah, blah. I'm asking, our
2 neighbours are asking -- we live there, we have families
3 there -- when will children be able to play on the old
4 site, the current site?

5 And if we can't have an answer to that, why
6 are we going to have two messed-up sites? So we start off
7 with that.

8 So I'll ask that to be considered and just
9 leave that thought with you.

10 And I'm here on behalf of our Association
11 to ask the Commission for two provisos within the licence.

12 And the first is, should you consider
13 granting a licence as a result of this hearing, we ask you
14 to consider our community and the critical importance of
15 on-site monitoring.

16 We are the people who are going to be
17 affected by 500,000 cubic feet or cubic metres of earth
18 being moved over five years. It's down the road from us.
19 It's virtually in sight of us. For five years, we're
20 going to have construction.

21 We're going to have who knows what dug up.
22 We're going to have prevailing winds off the lake.
23 Everybody knows that. We live there. We know how strong
24 the winds are. So, of course, there's going to be
25 airborne contaminants.

1 When we suggested at one of the community
2 meetings, and we suggested it in summertime, about tenting
3 -- this issue was addressed earlier -- the response was,
4 "We can't have our workers in an environment like that
5 because it's frankly dangerous because of the airborne
6 particulates and contaminants. We don't know what will
7 happen."

8 Well, we can't tent it, but it's going to
9 be in the air. So what we do ask is a critical part of
10 the Commission is that we ask for on-site monitoring of --
11 we ask for, and if I may, I'm going to read this.

12 In a meeting on July 25th of '05 at Dr.
13 Sahota's house, our neighbour, your Dr. Ron Stenson from
14 CNSC attended that meeting. And Mr. Stephenson and myself
15 attended as well.

16 At that time, we requested an on-site full-
17 time monitor from CNSC attend that, attend the site. Mr.
18 Stenson said, "You know, it's a very thoughtful question.
19 We -- I'm going to suggest that the appropriate time to
20 ask that question is in front of the CNSC Hearing."

21 That is today. Here we are.

22 And I, on behalf of our neighbourhood, on
23 behalf of our Association, are asking -- we're asking for
24 full-time person from CNSC.

25 Mr. Stenson said, "You know what, you have

1 to be realistic here. Because of their budgets, we would
2 suggest -- I would suggest you ask for a person that would
3 be shared between the Port Hope and the Port Granby site,
4 that they would go back and forth. They may have to
5 travel from Ottawa, but yes, they would arrive two or
6 three days during the construction period."

7 So here I am, number one, formally
8 requesting that a proviso within the granting of the
9 licence, Members please, as Mr. Stenson suggested, we're
10 requesting it, that we do have full-time monitoring.

11 Barring someone from CNSC, within our own
12 community recently established is a new university. We're
13 very proud of it here in Durham, the University of Ontario
14 Institute of Technology.

15 They're setting up a whole department
16 that's going to service the nuclear industry. You may
17 well be aware of it. And it's going to work with the
18 Pickering and Durham and the Darlington sites.

19 They have graduate students who are looking
20 for this kind of work.

21 Our friends from the Port Hope office have
22 suggested there's work for everybody in this budget, and
23 invite us to come and participate in contract quotes, et
24 cetera.

25 So perhaps our friends here from the

1 Commission might consider inviting the University of
2 Ontario Institute of Technology to participate in the
3 monitoring should CNSC not be able to come down.

4 They're an impartial third party. It's
5 wonderful experience, and the knowledge they gain for both
6 sides, I think, has synergies there.

7 Our second request is that, if I may, we
8 ask that the licence include -- we were part of these
9 hundreds of meetings that we referred to earlier. We were
10 there and we weren't paid, unfortunately, to be there, but
11 we were there.

12 And one of the understandings, one of the
13 agreements we had throughout this is that of course
14 there's going to be conflicts throughout this process of
15 five years of construction. There will be need -- and
16 here's our request -- there will be need for resolution of
17 those conflicts.

18 And what has been agreed to, and should my
19 friends here not remember it, I have the minutes of that
20 meeting that I can add and send to the Commission. And I
21 just want it in the licence as a proviso.

22 What was agreed to is that an independent
23 third party, an ombudsman, if you like, would be available
24 should there be a dispute that cannot be resolved between
25 Clarington, the low-level office, and our Association,

1 that is, our immediate neighbourhood.

2 That person, as we agreed to with our
3 friends here, would be a person of stature within the
4 Clarington community, an objective third party.

5 So might we have that in the proviso or
6 something within the licence granting should we -- you
7 gentlemen and ladies prefer to go ahead on this thing?

8 And I appreciate, and we all do, very much
9 your time and your patience, and thank you.

10 **THE CHAIRMAN:** Thank you.

11 Who wants to start? Dr. Barriault?

12 **MEMBER BARRIAULT:** I'll start.

13 I guess the first question, really, is to
14 AECL, and the duration of the remediation of the existing
15 site.

16 Will that happen within a 10-year period or
17 before that?

18 **MS. MILLER:** Joan Miller, for the record.

19 As indicated in the CMD and also in the
20 presentation, the actual construction of the new mound
21 will be complete in eight years.

22 If you'll recall, we have a 10-year plan
23 and we start around year 3.

24 So from a radiation safety background
25 perspective, the mound is being constructed so that the

1 radiation level at the surface of the mound is the same as
2 background. So if that was your only consideration, there
3 is no reason that people couldn't access it.

4 However, obviously that needs to take into
5 account the end-use requirements, some licensing
6 requirements, et cetera.

7 **MEMBER BARRIAULT:** I'm sorry. I think what
8 he was asking is the time for the remediation of the
9 existing site as it is now, the bluff.

10 Is that correct?

11 **MS. MILLER:** Joan Miller, for the record.

12 So the remediation will occur as the new
13 site is built up and there will be -- so the soil will be
14 remediated over that eight-year timeframe. And then we
15 will continue to monitor, collect the groundwater from
16 that area and have it treated.

17 I'd have to check with Glenn Case to see
18 when we are -- if we have a timeframe for when that
19 property may be released or accessed.

20 Glenn?

21 **MR. CASE:** Glenn Case, for the record. The
22 system is referred to as the East Gorge Groundwater
23 Collection System and it is part of the design to collect
24 groundwater until such time as it no longer requires
25 processing and we estimate that that'd be a few tens of

1 years before it will have achieve that point in time.

2 **MEMBER BARRIAULT:** So what I'm hearing is
3 that we really don't know.

4 **MR. CASE:** The removal -- Glenn Case, for
5 the record.

6 Following up on what Ms. Miller said, the
7 remediation of the site in large part involves the
8 relocation of the 432,000 cubic metre of soil.

9 **MEMBER BARRIAULT:** That is correct.

10 **MR. CASE:** When that is removed and the
11 clean backfill is placed in site -- on the site, then it
12 is acceptable for use. It is background levels that will
13 be on that site except for a very small catch basin in the
14 bottom of the southeast corner of the East Gorge that will
15 be collecting ground water seeping under the ground and
16 being pumped back through.

17 **THE CHAIRMAN:** Okay, I really would like to
18 -- in layman language, okay, let me try to understand what
19 you just said.

20 So you're going to dig up the waste, the
21 existing waste now, move it somewhere else. What are you
22 going to refill -- what are you going to replace the waste
23 with? I assume with clean dirt. I assume once you finish
24 ---

25 **MR. CASE:** Glenn Case, for the record.

1 That's correct, we have some 150,000 cubic
2 metres of clean material that needs to be placed back into
3 the facility to appropriately grade it so that the
4 drainage runs in the appropriate way and that we are able
5 to potentially use the site in the future.

6 **THE CHAIRMAN:** You're still using
7 potential. By the time you finish putting all those 150
8 cubic metres of clean dirt, presumably, it's available for
9 use. What am I missing?

10 **MR. CASE:** That is correct.

11 **THE CHAIRMAN:** So that's -- I'm talking
12 about 10 years, you wanted 10 years? Sounds to me like in
13 10 years when they finish the excavation and putting all
14 this stuff, maybe it's 12 years. I'm talking about -- he
15 said tens of tens, again on a small part.

16 **MR. CASE:** I initially heard over 100.

17 **THE CHAIRMAN:** I'm trying to translate
18 here. I think he's saying on a small part of the site
19 they -- maybe you can correct.

20 **MS. FAHEY:** May I?

21 **THE CHAIRMAN:** Go ahead.

22 **MS. FAHEY:** Christine Fahey, for the
23 record.

24 The sites that we're going to be
25 remediating is 18 hectares, so only a portion of that site

1 will have the East Gorge Collection System that will be
2 flushing for possibly 10, 20 years to get rid of the
3 residual impact to groundwater. I don't see any reason,
4 unless the CNSC sees a reason, that the majority of that
5 acreage or hectareage can't be released for use.

6 I see the East Gorge Collection System
7 needing to be protected and fenced, but I'm expecting that
8 the majority of that site south of Lakeshore Road can be
9 made available for the community to hike on or be part of
10 the waterfront trail.

11 **THE CHAIRMAN:** CNSC, I don't want to put
12 you on the spot here but hypothetically after excavation
13 and fill, does it sound reasonable?

14 **MR. ELDER:** Peter Elder, for the record.

15 That is the intent of going -- cleaning up
16 to those criteria and if you put new soil on top there
17 would be no hazard for using that current site. With
18 provision again is that there is some residual groundwater
19 that may be contaminated that you may have to treat for a
20 longer period of time.

21 And that's where the uncertainty would be,
22 is how long you have to treat that small amount of
23 groundwater.

24 **THE CHAIRMAN:** Okay, thank you.

25 Dr. Barriault?

1 **MEMBER BARRIAULT:** Next question dealt with
2 the issue of oversight by the CNSC and I guess I'd like to
3 address this to CNSC; is some measure of oversight
4 possible?

5 **MR. ELDER:** There will definitely be some
6 measure of oversight. We are looking at various
7 possibilities, we have site inspectors that are based in
8 Darlington. We are looking at the possibility of
9 potentially adding another site inspector at the
10 Darlington office who would be able to look at these waste
11 facilities on a regional -- on an almost daily basis.

12 So this is something that has been in the
13 back of my mind for a number of years, and as we get
14 closer to saying -- have some more certainty on when the
15 actual construction -- construction in terms of moving of
16 the radioactive waste not, you know -- is to set up a
17 compliance program that takes into account the actual
18 activities in this. And we know we are going to have to
19 have a very routine presence for the Port Hope project.

20 So we're looking at various options,
21 whether that's an office in Port Hope, additional
22 inspector at our Darlington office, or sending someone
23 down from Ottawa. But we are working through those
24 options and definitely there will be -- whether it's
25 daily, I can't promise daily but on a routine, you know,

1 legal agreement, yes the legal agreement does include
2 provision for a complaints process and one was established
3 within the time period that was required after the legal
4 agreement was signed.

5 More recently the environmental assessment
6 indicated, and then the screening report indicated that it
7 -- once the project is implemented there would be a two-
8 stage complaints process that would be established for the
9 implementation phase and that's something that we're
10 working with the municipalities now on defining.

11 In terms of -- I mean, the legal agreement
12 is really -- the underpinning of the legal agreement is a
13 lot of consultation and communication with municipalities
14 and the local stakeholders, and I know that already there
15 is a Port Granby discussion group that I understand is
16 quite effective and is an avenue for SECRA to make their
17 concerns known to the management office.

18 We also have regular meetings with
19 Clarington and as we go forward into the implementation
20 phase we'll be working on the consultation framework that
21 we'll be establishing in the community.

22 But there are no plans now for an ombudsman
23 role. We feel that the various other opportunities for
24 communication really would address that need.

25 Thank you.

1 **THE CHAIRMAN:** You don't feel that your
2 local municipality can, in fact, do their -- carry on the
3 responsibility of an ombudsman?

4 **MR. McCAULEY:** Mr. Chairman, we'll work
5 closely with them. We do have in the minutes of a
6 consultative meeting a firm agreement for -- there is a
7 two tier as referred to their system in place.

8 I, perhaps, misused the term ombudsman but,
9 should the first tier not resolve the situation my
10 understanding, and I do have it and I'm happy to send it
11 to the Commission to add to the agreement, a clear
12 agreement from our friends in Port Hope that an
13 independent person from the Clarington community would be
14 an arbiter and a final decision would be transferred to
15 that person should the first tier not be met.

16 That's my understanding.

17 **THE CHAIRMAN:** Okay.

18 **MR. McCAULEY:** Thank you, sir. Thank you,
19 Commission.

20 **THE CHAIRMAN:** Thank you very much.

21 It looks like we need a break for 15
22 minutes so it is quarter to four, yes? Okay, thank you.

23 --- Upon recessing at 3:28 p.m./

24 L'audience est suspendue à 15h28

25 --- Upon resuming at 3:46 p.m./

1 L'audience est reprise à 15h46

2

3 **THE CHAIRMAN:** Okay, we're ready to go.

4 The next submission is an oral presentation
5 by Ms. Frances Brooks, as outlined in CMD 11-H10.12.

6 Ms. Brooks, the floor is yours.

7

8 **11-H10.12**

9 **Oral presentation by**

10 **Frances Brooks**

11

12 **MS. BROOKS:** Thank you. And I want to
13 thank the Commission for listening to everything through
14 this very long morning and afternoon. We appreciate you
15 listening and hearing our concerns.

16 I'm going to speak to the community
17 concerns regarding this project. And when I talk about
18 residents it's a compilation of input from 20 residents
19 who have spoken to me, and my own concerns regarding this
20 project going forward.

21 The residents feel and acknowledge that
22 there have been numerous public meetings but the
23 perception among us is that they've been held to pacify
24 concerned residents into believing that public input into
25 the location and containment of the nuclear and

1 accompanying industrial waste was going to have impact or
2 consideration into the end result.

3 Rightly or wrongly it is felt by the
4 residents that the decision for location and movement of
5 radioactive waste has been decided many years ago by the
6 federal government when they arranged with Cameco to
7 purchase land north of the current site.

8 Radioactive waste, industrial waste, no one
9 wants this waste in their community and it has been
10 imposed on our small, as you have acknowledged, sparsely
11 populated local community.

12 The residents see no benefit to their
13 immediate local community from having this waste remain
14 here. Many residents feel that it should remain where it
15 is, and yet we acknowledge that where it is at the present
16 time is not a safe containment. We would all be very
17 happy if the waste were to vanish from our community and
18 not be here at all.

19 We are going to have a significant negative
20 impact through a decade of construction. There is the
21 potential for harm to health, property, property values
22 and the economic stigma of a nuclear waste site in the
23 community.

24 The host money that Clarington is receiving
25 shows no indication that any of it will be used to benefit

1 the immediate community in which the waste site is
2 proposed.

3 The relatively small number of resident and
4 properties who are most impacted by this proposed
5 construction of the nuclear waste site, are having an on-
6 going struggle and fight to have proactive safeguards put
7 in place for their health and property.

8 We feel the requests are reasonable and
9 very minor given the scope of financing and years devoted
10 to this project. Yet the government bureaucracy and
11 employees of the Port Hope Area Initiative Management
12 Office are perceived as blocking and delaying residents'
13 requests.

14 The construction will increase the profile
15 of the waste site among people who pass through our
16 community, and there are many. It is going to generate
17 increase airborne contaminants. There is no way to avoid
18 that. It happens in any construction site. The potential
19 is for toxins to become airborne, enter the water system
20 and the ecosystems.

21 There is historical information on nuclear
22 waste. However, while not in its infancy, in the long-
23 term scheme of things it's in the toddler phase and there
24 is still much that we do not know.

25 At one time elements like lead, arsenic,

1 asbestos were thought to be safe and we now know that they
2 are not.

3 It's in all of our best interests to
4 protect ourselves to whatever extent is currently
5 possible.

6 With the construction the timeline is
7 lengthy, and the potential for decrease in workers
8 compliance is highly likely just due to human nature.

9 A question that has arisen through the
10 construction, is there a level at which airborne
11 contaminants is cause to shut down the work and if so who
12 monitors, who decides and who notifies the community?

13 Requests have been made for environmental
14 protection, such as berms and trees, to assist in reducing
15 the transfer of airborne particles and reduce noise
16 effects.

17 Some of these requests have been
18 implemented while others have been indefinitely postponed
19 with the Port Hope Area Initiative Management Office
20 citing further studies are needed and further collection
21 of data.

22 Yet the information provided to residents'
23 document that AECL and Clarington Council feel that all
24 studies have been completed satisfactorily.

25 Residents have requests such as HEPA

1 filters for their furnaces and air conditioning units
2 prior to the start of construction.

3 Air conditioners have been requested by
4 some residents as they feel that the potential for harm
5 for airborne contaminants and construction dust will lead
6 them to keep their windows and doors closed rather than
7 open, as is many of our habits, because we're in the
8 country and we like the fresh air. This leads to the need
9 for air conditioning if we're going to have to keep our
10 windows and doors closed. We do not want to be in the
11 heat.

12 Upgraded windows have also been requested,
13 again, to help keep the airborne dust and contaminants out
14 of our homes as much as possible and to protect our
15 health.

16 This project will without doubts in
17 residents' minds negatively impact our local area and
18 community. We're very concerned about our wells and water
19 being affected through the construction process. We
20 request independent and regular monitoring of well
21 functioning and water quality with the feedback being
22 given to the residents in a very timely manner.

23 We also request that this monitoring
24 continue a minimum of two years post-construction, as all
25 of the leachate will still be coming out of the

1 construction zone.

2 Health impacts are a major concern for the
3 residents. The effects of stress, on-going and continuous
4 periods of noise in an area that is not known for noise is
5 a concern. Low level and sharp high frequency noise have
6 been documented through medical research to have negative
7 health effects.

8 Protection of our properties is also high
9 in our concerns, not only from the effects of construction
10 and potential for harm from contaminants, but also the
11 stigma of having a nuclear waste site become more
12 prominent due to the construction and the visualness of
13 the construction.

14 The Property Value Protection Plan needs to
15 continue post-construction, and perhaps part of the host
16 money could be set aside to offset any losses from
17 property sales in the community due to the waste site. In
18 that way area residents have the potential to benefit from
19 some of the hosting money.

20 It's very important to the residents -- and
21 this has been spoken -- brought up with Mr. Mahoney --
22 that there is a person who will be available and able to
23 be contacted by the residents when any concerns arise.

24 This person will need to have the
25 responsibility and authority to monitor, adjust or cancel

1 work on the site and to be able to do so without delay.
2 This person will also need to be available to residents to
3 discuss concerns and provide responses.

4 In working through Clarington Council or
5 government we often get responses, "That's not my job.
6 That's not my area of concern. You need to talk to so and
7 so. No, they're on holidays right now. No, someone's not
8 available."

9 We need to have one person who is the
10 conduit through which we can address all of our concerns.

11 The residents feel the safety of the
12 site is also important, both during the construction
13 process and once construction is completed; appropriate
14 fencing, monitoring, regeneration, replanting vegetation
15 of both sites to ensure the safety and integrity of the
16 mound and water ponds.

17 We have spoken about the site blending into
18 the current geographical and topographical area and also
19 the rural character of the area with the re-treeing,
20 vegetation, whatever is appropriate to lessen the visual
21 impact of the site.

22 Removal of the construction roads and
23 tunnel under Lakeshore Road is also, we understand, part
24 of what will happen with the site because we do not want
25 those roads to remain, they're not part of our community

1 and they leave open the potential for liability and
2 accidents and problems with ATVs and other off-road
3 vehicles using those.

4 We also continue to be concerned that there
5 is no long-term storage solution generated by nuclear
6 energy production and that there will be continued
7 generation of harmful waste materials.

8 It is our understanding and we have been
9 reassured many times, however, I would like it in the
10 public record, that only the historic waste currently in
11 the Port Granby site will be moved and contained in the
12 proposed new mound, with no future additions of any type
13 of waste in the future.

14 I would again like to remind this hearing
15 panel that the local residents who are daily impacted by
16 this site and the proposed construction of a new site in
17 the local area would prefer that the waste be in
18 appropriate containment. We're also requesting that our
19 very reasonable proactive measures to protect our health
20 and properties be implemented without delays.

21 The federal government has a wonderful
22 opportunity to make this nuclear waste containment site or
23 sites and their support and treatment of the residents
24 impacted by the sites an exemplary model for other
25 governments and regulatory bodies to regard as the gold

1 standard and not just to input previous construction
2 practices.

3 Thank you very much for listening to our
4 concerns.

5 **THE CHAIRMAN:** Thank you.

6 Questions? Dr. McDill?

7 **MEMBER MCDILL:** For the last intervenor I
8 asked the question concerning who would stop the
9 construction or the activities if the moment to moment
10 monitoring which has a variety of techniques being used
11 were to indicate that something should happen; did that
12 satisfy you? Did the answer to that question satisfy you?

13 **MS. BROOKS:** No, it wasn't a satisfactory
14 answer. We feel that there really needs to be an onsite
15 full-time monitor because things can happen very quickly,
16 you can have winds come up very quickly, other things
17 could happen on this site, they could dig into something
18 that was unexpected, and there needs to be someone
19 available immediately to make the decision whether to go
20 ahead with construction, to stop construction, to delay
21 it, whatever might happen.

22 **MEMBER MCDILL:** Okay, so I'll direct that
23 over to AECL. One of the hand-held monitors which is
24 being held in the hand of a human indicates that something
25 is awry, what is then the process?

1 **MS. FAHEY:** Christine Fahey, for the
2 record.

3 The hand-held dust monitors do 15-minute
4 grab samples at the perimeter. So one sample on a border
5 -- on a perimeter -- pardon me -- it may indicate that
6 there's a high level but it may not be at a threshold. So
7 there will be AECL monitoring independent dust monitoring
8 -- sorry -- the independent dust monitoring contractor and
9 the Public Works hired contractor.

10 If there is thresholds reached and our dust
11 management plan sets out four different levels of
12 thresholds which would be quite complicated to explain
13 right here, that there would be a triggering action
14 required. Whether it's measured by AECL, the independent
15 monitor, by the contractor, Public Works hires the
16 contractor and they can direct them to shut down the work.

17 So that's how the authority rests with
18 Public Works who engages the contractor, but there are a
19 number of parties who are watching over the air quality at
20 many different locations on the sites.

21 **THE CHAIRMAN:** Wait a second. But I --
22 okay, talk to me about wind. I thought that the answer
23 was the moment wind reaches -- I don't know the particular
24 number, 30 ---

25 **MS. MILLER:** Joan Miller.

1 Thirty-six (36) kilometres an hour.

2 **THE CHAIRMAN:** --- it automatically --
3 somebody -- there's a procedure that work stops right
4 away.

5 **MS. MILLER:** Correct.

6 **THE CHAIRMAN:** Is that correct?

7 **MS. MILLER:** That is correct.

8 **THE CHAIRMAN:** So it's onsite and everybody
9 knows what the rules are?

10 **MS. MILLER:** That is correct.

11 **THE CHAIRMAN:** Dr. McDill?

12 Does that satisfy, by the way?

13 **MS. BROOKS:** Yes, that's fine. Thank you.

14 **THE CHAIRMAN:** Okay.

15 Dr. McDill?

16 **MEMBER McDILL:** And one of your other
17 questions was monitoring of the wells during and post-
18 construction. AECL has said that it's prepared to monitor
19 any wells for -- is there any time limit on that?

20 **MS. FAHEY:** We already have a voluntary
21 program established around the Welcome waste management
22 facility. Cameco actually initiated it and we've
23 continued that program with the residents who live closest
24 to Welcome.

25 So we offered at the Port Granby discussion

1 group in May for residents who are interested in having
2 their wells tested, regardless of the direction of the
3 water flow, if they would like to register we'll do a
4 complimentary well analysis once a year.

5 **MEMBER McDILL:** Does that answer that point
6 of your ---

7 **MS. BROOKS:** May I ask a question?

8 **MEMBER McDILL:** Please.

9 **MS. BROOKS:** We have had our well tested
10 and it's been three weeks since we've heard anything from
11 the testing. We've had our soil tested and it's over a
12 month we have not received any results. I'm wondering how
13 long it takes to get these results.

14 **MEMBER McDILL:** I'll just pass that right
15 over.

16 **MS. FAHEY:** Christine Fahey, for the
17 record.

18 All the analysis is done by independent
19 laboratories. Based on my experience at the Welcome site
20 it was over a month before the data came back for the
21 residential wells.

22 With respect to the gamma surveys, I
23 believe you already have the results of the survey that
24 was done in May.

25 Yes, our communications people confirm the

1 gamma survey results have been communicated to the
2 residents.

3 **MS. BROOKS:** Is that for the soil?

4 **MS. FAHEY:** Christine Fahey, for the
5 record.

6 The subsurface soil sampling analysis is
7 still underway.

8 **MEMBER McDILL:** Maybe the communications
9 person should be closer to a microphone.

10 **MS. FAHEY:** Christine Fahey, for the
11 record.

12 I'm told that it takes six to eight weeks
13 to get the results from the subsurface soil analysis.

14 **THE CHAIRMAN:** When you say "communicated"
15 how is it communicated? I mean, is it put on a web?

16 **MS. FAHEY:** Christine Fahey, for the
17 record.

18 In the case of the four residents who are
19 at the purple stars that were in the earlier Slide 21,
20 there was direct communication. In this case I'm informed
21 that the resident -- perhaps not Mrs. Brooks, but her
22 partner was provided with the information.

23 **THE CHAIRMAN:** But why aren't you putting
24 all of this on a web that there's never any question about
25 who gets it, who doesn't get it. It's public data isn't

1 it?

2 **MS. FAHEY:** I'd have to look into that from
3 a privacy perspective. These individual property owners
4 volunteered ---

5 **THE CHAIRMAN:** We're talking about -- we're
6 talking about water ---

7 **MS. FAHEY:** No, we're talking, I believe,
8 about ---

9 **THE CHAIRMAN:** Private. I see, okay, I
10 take it back.

11 But the normal -- the public -- you know,
12 monitoring all the wells, et cetera, are you planning to
13 put all of this on a web so everybody can access it?

14 **MS. FAHEY:** Again, I would have to seek the
15 permission of the individual property owners if they would
16 like their well results to be published publicly.

17 With respect to all of the wells that are
18 established as part of the environmental ---

19 **THE CHAIRMAN:** That's what I mean.

20 **MS. FAHEY:** --- biophysical, we have
21 published the work that was done during the EA study
22 report period, and as my colleague confirmed, the nine
23 months of -- the refresh of the baseline report will
24 shortly be made available. So we'll happily distribute
25 that.

1 **THE CHAIRMAN:** CNSC staff, what -- some of
2 this measurement that's going on, how much of it will be
3 subject to proactive disclosure?

4 **MR. ELDER:** Peter Elder, for the record.

5 AECL has a public information plan that has
6 -- did say they are going to put this -- make this
7 information available to the public.

8 I know in some of the ones, the work
9 they've been doing in Port Hope, they've been very public
10 disclosure -- and I think in some cases daily measurements
11 -- available on the website. So they have been very
12 active on giving the information to the public.

13 **THE CHAIRMAN:** So in the annual reports
14 that will come in front of the Commission about this
15 particular project, will some of this data be available at
16 least in the annual report?

17 **MR. ELDER:** The annual report, the standard
18 rule is the annual reports that they send to us are
19 available on the website -- on their website.

20 Yes, so it will be available.

21 **THE CHAIRMAN:** Okay, so whatever we get --
22 the CNSC gets -- presumably will be available on the
23 website and I assume AECL will also release a lot of this
24 information if I understand correctly?

25 **MS. FAHEY:** Christine Fahey, for the

1 record.

2 I'd like to confirm that the residents have
3 indicated in the public attitude surveys that they would
4 prefer to get hard copies of the reports as opposed to
5 electronic, so we will honour their preferences and give
6 them the hard copy of the report.

7 **THE CHAIRMAN:** I'm saying you should do
8 them both because you're not going to get a consensus even
9 on that one.

10 Go ahead.

11 **MS. BROOKS:** If I may make another comment.

12 The water testing from the wells is water
13 that we use on a daily basis. We're consuming it. We're
14 using it in our properties. It seems to me to take a long
15 time if there is a problem with the water sample that
16 could be harmful to us that three to four or plus more
17 weeks is a long time to wait to find out that there's a
18 problem.

19 **MEMBER McDILL:** How fast is the turning
20 over in Port Hope right now for individual residents with
21 their wells now that you're actively in the process?

22 **MS. FAHEY:** So we've done it once ---

23 **MEMBER McDILL:** Once.

24 **MS. FAHEY:** --- since we became the licence
25 holder and we did that on December-January time period.

1 So we're coming up soon on the next time of sampling the
2 wells if the residents wish to volunteer.

3 **MEMBER McDILL:** So you sample -- if a
4 resident volunteers, you sample how often?

5 **MS. FAHEY:** We sample once a year ---

6 **MEMBER McDILL:** Once a year.

7 **MS. FAHEY:** --- consistent with the
8 practice that Cameco had done for quite some time.

9 I'd just like to reiterate, though, that
10 there's all kinds of well sampling being done between the
11 work site and the residential properties, so there's ample
12 opportunity for early warning.

13 **MS. BROOKS:** One last question. With
14 respect to the construction road and the tunnel, what's
15 the long-term plan for those?

16 **MS. FAHEY:** Christine Fahey, for the
17 record.

18 The municipality has requested that the
19 tunnel be considered a temporary structure and being
20 removed as part of the Phase II Project.

21 **MEMBER McDILL:** (off mic) answer your
22 question?

23 **MS. BROOKS:** Yes, I have just one final
24 comment to make, if I may?

25 As Mr. Payne would probably know and anyone

1 else who farms, when the waste is being removed, it's like
2 a manure pile. The best stuff is at the bottom and that's
3 where the concentration of waste is going to be the
4 strongest and we're requesting that all of the waste be
5 removed, not just down to a certain level that would fit
6 into the mound.

7 We hope that the mound has been designed to
8 fit all of the waste that will be removed and not just to
9 a certain level because the strongest concentration is
10 going to be at the very bottom of the excavations.

11 Thank you.

12 **THE CHAIRMAN:** I have only one question.

13 You've talked about this Property Value
14 Program and can AECL remind us, how long is the program
15 going for? Is it going to go to the end of the life of
16 the project and then what?

17 The intervenors are suggesting an extra
18 five years. Is that a reasonable request?

19 **MR. McCAULEY:** Dave McCauley, for the
20 record.

21 The Property Value Protection Program will
22 last until two years after the closure of the facility and
23 during those two years, we'll monitor property values to
24 see what the situation is and then make our decisions
25 based on that.

1 **THE CHAIRMAN:** What do you mean by "the
2 closure" of the project?

3 **MR. McCAULEY:** So once the facility is
4 closed, once the cap is put on and the work is completed
5 and we go into a monitoring and maintenance phase, then
6 for two years into that phase we'll be monitoring property
7 values and assessing what the situation is.

8 **THE CHAIRMAN:** So you will have the ability
9 to determine, at that time, whether you want to extend or
10 not?

11 **MR. McCAULEY:** That's correct.

12 **THE CHAIRMAN:** Okay, thank you.

13 Thank you. Going ---

14 **MS. BROOKS:** One more comment. The
15 residents feel that due to the nature of our area -- it's
16 a rural area, properties do not turn over in the same
17 manner that they turn over in an urban area -- that it
18 needs to be a longer process because properties just do
19 not turn over that fast in the area and so we would
20 request that monitoring continue for a little bit longer
21 than two years.

22 **THE CHAIRMAN:** Thank you.

23 The next presentation is an oral
24 presentation by Cameco Corporation, as outlined in CMD
25 H10.13 and .13A.

1 Mr. Ingalls, I guess you're making the
2 presentation. Go ahead, please.

3
4 **11-H10.13 / 11-H10.13A**

5 **Oral presentation by**

6 **Cameco Corporation**

7
8 **MR. INGALLS:** Thank you very much.

9 Good afternoon, Dr. Binder, and Members of
10 the Commission. For the record, I am Dave Ingalls,
11 Director, Regulatory Compliance and Licensing at Cameco's
12 Fuel Services Division. With me today is Tom Smith and
13 Dave Workman.

14 I am here today to present an oral
15 intervention in support of the application from Atomic
16 Energy of Canada Limited or AECL, for a Waste Nuclear
17 Substance Licence for the Port Granby Waste Management
18 facility.

19 The Port Granby facility is located along
20 the north shore of Lake Ontario approximately 80
21 kilometres east of Toronto. The 18-hectare secured site
22 is situated within a rural area.

23 The site received low-level radioactive
24 waste from the former Eldorado Nuclear Plant located in
25 Port Hope, Ontario from 1955 to 1988. The facility was

1 closed to the receipt of waste in 1988 and since that
2 time, Cameco Corporation has managed the facility.

3 The buried waste materials at the site were
4 produced after 1955 when relatively high purity uranium
5 concentrates were processed at Eldorado. The site
6 contains approximately 204,000 cubic metres of low-level
7 radioactive waste comprised of processed and other
8 contaminated waste.

9 The waste has been deposited in trenches
10 that were excavated in the natural soil and then covered
11 by at least one metre of clean soil. The surface cover of
12 soil has been graded and vegetated.

13 The property consists of a relatively flat
14 plane which terminates abruptly in steep bluffs falling
15 approximately 35 metres to the shore of the lake. An
16 approximate 20-metre wide area extends from the base of
17 the bluffs to the lake. Two deep valleys known as the
18 East and West Gorges cut through the bluffs on either side
19 of the site and extend about a hundred and seventy metres
20 into the central plateau. Groundwater generally flows --
21 follows the ground surface topography and flows from the
22 northeast to the southwest.

23 Interceptor drains located north of the
24 waste-storage area collect surface runoff and groundwater
25 flowing onto the site before they reach the waste. This

1 uncontaminated water is diverted around the waste and
2 discharged to Lake Ontario. Water that enters the waste-
3 storage area is collected in the east and west reservoirs
4 for treatment.

5 As a licensee, Cameco has invested more
6 than \$2 million in this facility over the last five years.
7 For example, the aboveground storage tanks that are used
8 in the treatment process and hydrochloric acid tank and
9 containment structure were replaced in 2008.

10 During the 2008 geotechnical inspections,
11 it was observed that the active erosion scarp on the north
12 face of the East Gorge was in close proximity to waste
13 trench number 54.

14 A plan was developed by Cameco to remove
15 the buried waste located in trench number 54 to preclude
16 an inadvertent exposure of waste should further erosion
17 occur in this area. This plan was submitted to, and
18 accepted by, the CNSC. The remedial work was completed in
19 2009 safely and without incident.

20 A new pipe for treated effluent was
21 constructed in 2010 and 2011. This work included
22 installation of a high-density polyethylene pipe, a
23 digital flow meter and an automated sampler.

24 Cameco has operated the facility in a safe
25 and environmentally responsible manner in accordance with

1 the terms of its operating licence for more than 20 years.
2 As required, we have invested in ongoing maintenance and
3 technology upgrades of the facility.

4 Cameco has worked cooperatively with
5 personnel from AECL, Port Hope Area Initiative and Natural
6 Resources Canada. Regular access has been provided to the
7 site for visits and projects with AECL.

8 We experienced a seamless transition of the
9 licensed facilities at the Welcome Waste Management
10 Facility to AECL in 2010.

11 A similar transition of the Port Granby
12 Waste Management Facility is anticipated and we are
13 committed to maintaining our established relationship with
14 AECL, the Port Hope Area Initiative and Natural Resources
15 Canada.

16 Cameco is fully supportive of AECL assuming
17 the licence for the Port Granby Waste Management Facility.
18 Cameco will continue to operate the facility for a period
19 of time following the issuance of the licence to AECL,
20 although AECL will have management responsibilities as the
21 licensee.

22 Cameco will also train designated personnel
23 from AECL to ensure a smooth transition. Beyond the
24 initial transition period, Cameco will continue to provide
25 the services of sampling, analysis and chemical unloading

1 to AECL.

2 In conclusion, Cameco is fully supportive
3 of the granting of a new licence to AECL for the operation
4 and remediation of the Port Granby Waste Management
5 Facility.

6 This concludes our presentation. Thank you
7 for the opportunity to present this positive intervention.

8 **THE CHAIRMAN:** Thank you.

9 Question? Dr. Barriault?

10 **MEMBER BARRIAULT:** Just one brief question.

11 The weather station installed by AECL was
12 done when? How long has that been there?

13 It's on your Slide 10.

14 **MR. SMITH:** For the record, Tom Smith.

15 We believe it to have been installed in the
16 fourth quarter of 2010.

17 **MEMBER BARRIAULT:** Thank you.

18 **THE CHAIRMAN:** On your Slide 7, looks like
19 you're doing some dashed generating activity. All I'm
20 trying to figure out is did you actually monitor? What is
21 that you released? What's the content? What's the
22 characterization?

23 In other words, were you -- what did you
24 find on your local ---

25 **MR. INGALLS:** Dave Ingalls, for the record.

1 Yes, we did have a comprehensive monitoring
2 plan in place for the excavation of that material from
3 trench number 54 and I'll pass it on to Tom Smith to
4 provide you some more details.

5 **MR. SMITH:** Tom Smith, for the record.

6 We put into play an occupational health and
7 safety program and as well as an environmental monitoring
8 program.

9 During the period of time that we undertook
10 this excavation of trench 54, we did have a high-volume
11 air sampler in the proximity of the excavation and results
12 obtained during the project range from 0.01 to 0.05
13 micrograms uranium per metre cubed of air.

14 Cameco's investigative level of free
15 uranium air by comparison is one microgram uranium per
16 cubic metre. So, basically, background or just slightly
17 above.

18 **THE CHAIRMAN:** There was no other
19 radioactive substance? You just measured for uranium?

20 **MR. SMITH:** The uranium is the only
21 radioactive substance of any significance at the Port
22 Granby Waste Management Facility.

23 **THE CHAIRMAN:** So you didn't feel like
24 anybody has to wear some special gear, et cetera?

25 **MR. SMITH:** For the record, Tom Smith.

1 We all had our appropriate PPE on, we were
2 badged, we measured dose for the period and we were not
3 sure initially in excavation how it would go, so we all
4 wore respirators.

5 But these air results confirmed that,
6 frankly, we would have not needed those but we did it as a
7 precautionary measure.

8 **THE CHAIRMAN:** So do you foresee that as
9 you dig deeper, the nature of the airborne will be
10 different or more or less the same?

11 **MR. SMITH:** For the record, Tom Smith.

12 Actually, as they go down deeper they
13 should encounter wetter waste which wouldn't give rise to
14 any airborne.

15 **THE CHAIRMAN:** So in your view that was a
16 pretty safe activity?

17 **MR. SMITH:** Absolutely.

18 **THE CHAIRMAN:** Staff, were you monitoring
19 all of this?

20 **MS. KOSTOVA:** Actually, the removal of the
21 waste from trench 54 was directed by the CNSC staff. We
22 directed Cameco to remove the waste because they were
23 close to exposure.

24 And before starting the operation of
25 removal, Cameco submitted a health and safety --

1 occupational health and safety plan to us that we approved
2 and we also conducted inspections during the operation.

3 CNSC staff was tested for respirators as
4 well but we checked the data, the gamma rates on the site
5 during the excavations, and there was no need of wearing
6 respirators.

7 **THE CHAIRMAN:** So there were no surprises
8 and, as a result of this, the airborne and, you know, this
9 is not a bad little test of some of the hypotheses that
10 goes in the excavation here, isn't it?

11 **MS. KOSTOVA:** Yeah, it could be seen as a
12 trial excavation there.

13 Yeah, they have air monitoring installed
14 close to the excavation site and Tom just gave you the
15 results of the monitoring -- the range of the uranium
16 concentration there.

17 **THE CHAIRMAN:** Okay, thank you.

18 Anybody else?

19 Thank you very much.

20 By the way, you guys have been running this
21 for how long?

22 **MR. INGALLS:** Twenty (20) years.

23 **THE CHAIRMAN:** Are you sad to let it go?

24 (Laughter/Rires)

25 **MR. INGALLS:** Dave Ingalls, for the record.

1 We've been operating it for over 20 years
2 and we're fully supportive of the transition to AECL.

3 (Laughter/Rires)

4 **THE CHAIRMAN:** Thank you.

5
6 **11-H10.14**

7 **Oral Presentation by**

8 **Charlie Trim**

9
10 **THE CHAIRMAN:** The next presentation is an
11 oral presentation by Mr. Trim as outlined in CMD H10.14.

12 Mr. Trim, the floor is yours.

13 **MR. TRIM:** Thank you. For the record, my
14 name is Charlie Trim.

15 Mr. President and Members of the
16 Commission, for the records I was born, raised and lived
17 some seven kilometres due north of the Hamlet of
18 Newtonville which is not too far from the site.

19 My email and presentation provides a short
20 summary of why I'm interested in the safe storage of the
21 low-level radioactive waste at Port Granby.

22 And it is radioactive waste, not nuclear
23 waste, and I think that's been talked about throughout the
24 day but, in reality, it's radioactive waste we're dealing
25 with.

1 The legal agreement signed between the
2 federal government and the Municipality of Clarington was
3 signed in good faith. The sole purpose of this agreement
4 was to establish and create a safe, proper, long-term
5 solution to deal with the waste at Port Granby dumpsite.

6 The municipality hired the services of a
7 notable, well-respected peer review consulting firm to
8 ensure that the municipality's and the general public's
9 position was protected, and in my opinion that was money
10 well spent.

11 The general public in Clarington has had
12 various opportunities over the years to gain -- learn and
13 gain the facts regarding this project; open houses, the
14 Port Hope Area Initiative office, Clarington council
15 meetings, mail-outs and the Local Citizens Committee
16 Group.

17 This project has taken several years to
18 reach this point. Much effort by government agencies and
19 municipal staff have resulted in an open, fair approach to
20 the information available pertaining to the project.

21 I must state my appreciation to Clarington
22 staff who have been involved in this process to date.
23 Frank Wu, our Chief Administrative Officer, Faye Langmaid,
24 Project Manager, Planning Services Department; Janice
25 Swarz, Senior Planner, Planning Services Department, a

1 lady that can find a needle in any haystack at anytime.

2 For the years this mixture of radioactive
3 waste has seeped into Lake Ontario. With the changing
4 weather patterns the bluffs have had erosion activities,
5 thus creating uncontrollable waste leaking into Lake
6 Ontario.

7 And Mark Peacock from Ganaraska
8 Conservation Board talked about that very issue and I sat
9 on the Board for 13 years and Mark's knowledge was very,
10 very helpful.

11 Great fear of this situation has existed
12 for many years among the nearby and local residents. As
13 such, they have had great concerns regarding their
14 personal health, their family health and their property
15 value.

16 The project has offered a high technical
17 solution to the mixed waste presently stored on the
18 shoreline of Lake Ontario. There have been many, many
19 excellent reports from experts regarding the safe storage
20 recommendations as approved by the Municipality of
21 Clarington.

22 This is what the residents wanted and this
23 is why the Clarington Council entered into the legal
24 agreement with the federal government. A safe, proper
25 long-term solution to deal with the low-level waste at

1 Port Granby, it's that simple.

2 I'll read it again: A safe proper long-
3 term solution to deal with the low-level waste at Port
4 Granby.

5 As a local and regional counsellor for the
6 Municipality of Clarington and the Region of Durham for
7 the past 13 years -- I'm retired now -- I have been
8 involved in this process, representing the municipality at
9 many meetings, including those open to the public, and I
10 am in agreement that a licence for a 10-year period for
11 this project is not only necessary but it is essential.

12 Thank you.

13 **THE CHAIRMAN:** Thank you.

14 Questions?

15 Since you've been involved so long here how
16 do you explain -- you heard today some people who would
17 disagree I guess with what you have just said. How do you
18 sort of account for this or explain it?

19 **MR. TRIM:** I explain it that, first of all,
20 no one agrees completely. We don't ever have 100 percent
21 agreement. That's everyone's right to agree, disagree,
22 whatever, for their own reasons.

23 But my point is that that waste is sitting
24 there and has sat there and has leaked into Lake Ontario,
25 and we all know the pollution that the Great Lakes have

1 had but that's starting to change and by doing something
2 with the low-level waste at Port Granby then this helps
3 with the improvement.

4 People have the right to say you should
5 have turned left when you turned right or vice-versa,
6 that's okay. And I want to commend the Chair of the
7 Southeast Clarington Ratepayers Association, Mr. Gerry
8 Mahoney who spoke earlier, an excellent, excellent good
9 common-sense and a good leader.

10 And you have to listen to people in that --
11 the system, I believe is working. The solution, if it's
12 approved, will certainly be a benefit and it'll be just a
13 matter of time before people realize that.

14 **THE CHAIRMAN:** Thank you. Thank you very
15 much.

16 **MR. TRIM:** Thank you.

17 **THE CHAIRMAN:** The next submission is an
18 oral presentation by the Municipal Peer Review Team of the
19 Municipality of Clarington as outlined in CMD 10.15/
20 10.15A.

21 And I understand, Mr. Hardy, you will make
22 the presentation.

23 **MR. HARDY:** That's correct.

24 **THE CHAIRMAN:** Go ahead.

25

1 **11-H10.15 / 11-H10-15A**

2 **Oral presentation by**

3 **Municipal Peer Review Team,**

4 **Municipality of Clarington**

5
6 **MR. HARDY:** Mr. Binder, Commission Members,
7 staff and guests, I'm going to be presenting the comments
8 of the Municipal Peer Review Team of Municipality of
9 Clarington.

10 I'm going to begin by introducing the
11 people on the panel with me. I'm again Dave Hardy. I'm
12 the Director of the Municipal Peer Review Team for
13 Clarington and for Port Hope. I'm also a Specialist in
14 the socio-economic environment and a registered
15 professional planner.

16 I have, to the far left, Paul Bowen;
17 Specialist in Geology and Hydrogeology, Professional
18 Engineer; to my near left, Dr. Tony Van Der Vooren who is
19 an Atmospheric Scientist and to my right, Mr. Eric Tuson
20 who is a Professional Engineer in Civil Engineering.

21 The purpose of my presentation is to
22 provide the comments and recommendations of ourselves, as
23 a municipal peer review team on AECL's application for
24 waste nuclear substance licence for the Port Granby
25 project.

1 I'm going to go through who the peer review
2 team is, the techniques we use to do the peer review, and
3 then I'm going to conclude by going through some of the
4 issues and comments we have specifically and then draw a
5 final conclusion.

6 The peer review team was and is led by
7 Janice Szwarcz, our municipal staff lead, a principal
8 planner with Clarington. I've introduced myself with
9 Danya Al-Haydari who's also a Project Manager. We are
10 responsible for not only socio-economic but land use,
11 environmental planning and policy.

12 I introduced Eric Tuson; Civil Engineering,
13 Municipal Infrastructure Group; Paul Bowen; hydrogeology
14 from Terraprobe. Dr. Van Der Vooren, Atmospheric Science
15 from AMEC.

16 We have Dr. Robert Murphy, PhD in Health
17 Physics, Arrow Line Services. Chris Ellingwood, biologist
18 and terrestrial and aquatic and avian biology with Niblett
19 Environmental; Milo Sturm, a professional engineer,
20 specialist in coastal engineering with Shoreplan
21 Engineering and Dr. Murray Finkelstein, PhD and MD and
22 medical doctor, has a PhD in Physics and PhD in
23 epidemiology and he's our medical professional that has
24 been assisting the peer review team.

25 I present the whole team just to give a

1 breadth of the resources that we've brought to the peer
2 review.

3 We wanted to make sure that our methodology
4 of doing the peer review was rigorous. Our job was not to
5 do these studies but to review the studies that
6 represented to us for review.

7 We wanted to make sure that in addition to
8 being rigorous we were scientific in our review, so we
9 wanted to make sure that the purpose of the work was
10 clearly stated, that the Proponent has understood the
11 cumulative impacts, that if there are uncertainties of the
12 studies and if there are certainties that they're openly
13 and clearly and objectively stated.

14 Want to ensure that the conclusions were
15 supported by the data in the research that was undertaken
16 and that when mitigation measures are proposed that these
17 will function to address the effects over the life of the
18 project.

19 We also looked at gaps arising from our
20 examination of the issues to determine whether areas where
21 perhaps we do disagree, make sure that we're looking at
22 the applicable federal and provincial and local standards
23 and regulations and guidelines and, at the end of the day,
24 we would come up with a recommendation to the Municipality
25 of Clarington.

1 I would add that in no instance were we
2 coerced at all. We gave our opinions without pressure or
3 favour, independently.

4 Our work to date has focused on -- it
5 actually started with the environmental assessment --
6 actually, earlier than the environment assessment, looking
7 at some of the initial concepts brought forward by the
8 community. We then reviewed and were part of the full
9 environmental assessment process, reviewed all the
10 documents, including the 17 major documents supporting,
11 and then all the support documents that have come up
12 through the licensing process.

13 We were involved with all the community
14 discussion groups and end-use meetings as well as -- with
15 local residents as well as with the Port Hope Area
16 Initiative Management Office.

17 We had an insight to the detailed design
18 and contractual documents that are the basis of the bid
19 process. We reviewed those documents at 33, 66, and 99
20 percent and 100 percent stages, so to that level of detail
21 knowing what information would be going out to contractors
22 with those bids for the project.

23 We concluded after that extensive review
24 that the Port Hope Area Initiative Management Office has
25 satisfactorily addressed the issues arising.

1 I won't go into detail over the documents
2 reviewed. Sufficient to say that there are dozens and
3 dozens of documents, and we've thoroughly reviewed every
4 single one of them and, in fact, provided thousands of
5 comments.

6 I'll conclude my presentation by providing
7 a brief overview of selected issues that we addressed over
8 the course of our review and the conclusions that we've
9 drawn.

10 We appreciated that hydrogeology was quite
11 important and we looked carefully at the design of the
12 facility, the new enhanced facility design.

13 There has been some discussion today of
14 whether double or single liner and the integrity of the
15 mound design and so on. We, as a peer review team,
16 identified opportunities that the mound design -- initial
17 mound design could be strengthened and to provide greater
18 redundancy to protect the natural till deposit.

19 We recommended that a capillary layer be
20 added to the cap and, in response, Port Hope Area
21 Initiative Management Office developed the enhanced
22 facility design that provided that layer.

23 So the detailed design document now, we
24 checked that; it does reflect the revised designed and
25 we're satisfied with the integrity that it -- of the mound

1 as it's been depicted in the specifications and the
2 drawings.

3 I won't go through the capillary barrier
4 system, since that was presented this morning by Joan
5 Miller.

6 You heard about the current existing waste
7 management site. We were interested in how the flushing
8 of that site would work and, at the end of the day, is the
9 site safe for public use. And so we assessed the design
10 of the long-term remediation and how flushing of
11 groundwater contamination would work, the target end
12 state, the clean-up criteria that would be applied.

13 We, following discussions with the Port
14 Hope Area Initiative Management Office, were satisfied
15 that the containment -- contaminant levels following the
16 clean-up and the time requirements for flushing are
17 sufficient and that the site will not be used for
18 residential uses.

19 We'll be pleased to provide more details in
20 the question period.

21 We looked at the natural environment as
22 well, and several other presenters have gone through the
23 site plan and air photos, so I won't do that in detail.

24 We looked at effects of flora and fauna,
25 effects on streams and wildlife, the restorative

1 consideration for the peer review team. We held very
2 early that dust should not be detected beyond the site
3 fence line, and it should not be leaving the site so it --
4 in our view, it's not a matter of monitoring what dust has
5 left the site. It should not leave the site.

6 We have focused on dust as a pathway for
7 contaminants. We are pleased that there is a dust
8 management plan in place and have looked at it thoroughly.

9 We are pleased that there's an exclusion
10 zone, and it's been enhanced by a trigger system. And
11 overall, we're satisfied with the dust management plan.

12 Again, on questioning, we can provide more
13 comments of our -- how we've arrived at our conclusion,
14 but as you can see from the diagram, we believe that the
15 dust monitoring and management is robust.

16 As you can see, there's a prime contractor
17 monitoring followed by independent dust monitoring,
18 followed by AECL administrative controls. And that's all
19 well in -- I guess well-contained within the overall
20 boundary of the site, so to the effect of not having dust
21 leave the site.

22 I conclude with one or two points.

23 We reviewed the project's transportation
24 requirements and the need to upgrade municipal roads.
25 We've talked about Elliott Road as a haul route, for

1 example, and we looked at the implications for community
2 and municipal interests.

3 Overall, we're satisfied that the issues
4 can be resolved and -- with respect to transportation.

5 We looked at potential human health and
6 safety effects and pathways of contamination, toxic
7 substances, contaminants and radiation. Our review of the
8 documentation, we concluded that the process is sound for
9 human health and safety protection, particularly focusing
10 on the radiation protection plan as the licensing
11 document, so we've concluded it's satisfactory and
12 addresses radiation protection.

13 I'll conclude by saying that since 2002, as
14 a peer review team, we've provided thousands of comments
15 on design, construction, management, and long-term
16 operation. We are pleased that AECL has responded to all
17 the concerns raised.

18 We do agree with the CNSC staff conclusion
19 that AECL is qualified to manage the long-term waste
20 management facility and complete the activities that will
21 be authorized by the licence.

22 At the end of the day, we support the
23 issuance of the waste management substance licence, and I
24 would be pleased to answer any questions, as my team
25 members as well.

1 decades. I would say 20 to 30 years is the prediction,
2 but I would not be surprised if it was somewhat longer
3 than that timeframe.

4 **MEMBER BARRIAULT:** Thank you.

5 Thank you, Mr. Chair.

6 **THE CHAIR:** Dr. McDill?

7 **MEMBER MCDILL:** Thank you.

8 Today we've heard from a number of
9 intervenors, one of whom distinguished between the science
10 and the engineering that was going on here.

11 Have they approached you? Have you shared
12 your knowledge with them? If they come to you and say "I
13 don't understand" or "I can't get access to the
14 whatchamacallit -- study on whatchamacallit" will you
15 share; will you speak to them?

16 **MR. HARDY:** Dave Hardy, for the record.

17 **MEMBER MCDILL:** Have you?

18 **MR. HARDY:** We attend the discussion groups
19 and certainly are very forthright in sharing our opinion
20 there with the residents listening to us. We provide in
21 public all our reports that we provide to the
22 municipality. So they're public and shared with the
23 residents as well.

24 And we have had, in addition, individual
25 discussions with residents, going out and talking to

1 residents on the site; have also had a separate session
2 with residents to share the concerns and our conclusions
3 about the information we're looking at.

4 **MEMBER McDILL:** And you consider yourselves
5 independent of the municipality?

6 **MR. HARDY:** We are retained by the
7 municipality. We -- sorry -- Dave Hardy.

8 We're retained by the municipality. The
9 municipality has not asked us to -- I guess direct our
10 opinion one way or another. We are -- they gave us
11 freedom to state and ask any questions, address any areas
12 that we felt were important to address. In that sense
13 we're independent.

14 **MEMBER McDILL:** And in rough figures, how
15 many hours of research have gone into what you have done?

16 **MR. HARDY:** Dave Hardy.

17 We don't do original research. We ---

18 **MEMBER McDILL:** Sorry, into the studying of
19 the research that you have done.

20 **MR. HARDY:** It -- over close to a 10-year
21 period, I'd say thousands and thousands of hours. It's
22 very -- we've intensively looked at every single document
23 over that period.

24 **THE CHAIRMAN:** Did you say years? When
25 were you appointed?

1 **MR. HARDY:** About 2002.

2 **THE CHAIRMAN:** So you've been on this
3 mission, if you like, for the last nine years or so?

4 **MR. HARDY:** Yes, I enjoy every benchmark
5 and gate that we get through.

6 **MEMBER MCDILL:** We've had several
7 intervenors comment that they would like to have somebody
8 independent. And I realize we have independent monitoring
9 going on, contracted monitoring going on.

10 Is this a role that you could see
11 yourselves moving into?

12 **MR. HARDY:** Dave Hardy.

13 I believe when the residents were talking
14 about independent it would be somebody who could be closer
15 to the site while the construction was underway and had --
16 I guess a quicker ability to address any issues that might
17 have arised.

18 Certainly, in terms of looking for an
19 independent technical comment or some information that
20 helps to inform that concern or issue, we could certainly
21 be there after on the basis of the municipality requesting
22 us to look at issues.

23 We have on many times been asked by the
24 municipality to look at issues raised by residents and
25 we've done that and certainly provided that information so

1 that -- to the municipality, and then from there back to
2 the residents.

3 **MEMBER McDILL:** Thank you, Mr. Chair.

4 **THE CHAIRMAN:** Dr. Barriault?

5 We have heard a couple of times that -- in
6 your presentation -- let me try it differently. When you
7 were briefing those advisory committee or citizen
8 committee, did any of them say, "We don't believe your
9 science. We don't believe that you know. What is she
10 talking about? It's not based on any evidence," et
11 cetera, et cetera.

12 How do you deal with that?

13 **MR. HARDY:** Dave Hardy.

14 Yes, of course. In the early days we had a
15 group of well-informed residents who advanced a comment or
16 a concept for the management of waste. They understood
17 what the issues were and can be praised for bringing this
18 concept across the start line.

19 At that point then we had a full
20 environmental assessment come in and take a look at the
21 concept, and several other concepts as well.

22 The weight of the evidence that we saw, the
23 facts that we had and the scientific analysis that we
24 looked at for all the areas that were talked today, led us
25 to that -- the best decision would be to move it across

1 the road in a permanent long-term management facility.

2 So that was our evidence. The residents
3 may not agree with that because it's not the initial
4 concept, but we came to that conclusion.

5 **THE CHAIRMAN:** When was this -- when did
6 you reach this conclusion?

7 I mean, I'm trying to understand the kind
8 of the timelines here.

9 **MR. HARDY:** Yes. Dave Hardy.
10 Once the initial concept of in situ
11 management of the waste was advanced, the municipality
12 accepted that and wanted to look very carefully at that.
13 So they commissioned four studies, a study on thorium,
14 groundwater protection, shoreline protection and
15 contingency.

16 Once those four studies were completed it
17 came -- and this is before the environmental assessment
18 was under full swing -- but it became quite apparent that
19 the -- if -- first of all, that there were numerous risks
20 that we could see. There was no liner. It would be just
21 a cap. There is slope subsidence we've seen. There was
22 surface water that was becoming and could be a long term
23 issue at the site recorded active management. There was
24 lake erosion and potential for seismic events.

25 So all those were adding up to us, because

1 they were adding up -- and the fourth study was a
2 contingency study. What happens if the in situ storage
3 wasn't working as it should? Well the contingency was to
4 move it to another site.

5 And so it became apparent to us, with all
6 those risks with the opportunity to move the site that was
7 the logical solution for us to come to as a peer review
8 team.

9 **THE CHAIRMAN:** My last question is that --
10 so now that you are an expert on this field, I presume,
11 after nine years reading everything to be read about this,
12 are you convinced that a solution for the waste site and
13 the structure is such that it will last forever; it's not
14 going to be needed to be moved again?

15 **MR. HARDY:** Dave Hardy.

16 It would be presumptuous of me to say
17 forever. We've looked at ---

18 **THE CHAIRMAN:** The idea is that we don't --
19 the idea is that we're not going to consider moving it
20 again.

21 **MR. HARDY:** In many, many generations 500
22 years is what the target was or many hundreds of years.

23 I'd also like my panel members to also
24 provide their comments.

25 But I'm confident that looking at the

1 science of the liner, the design of the facility, the
2 monitoring and mitigation that this will last for the
3 several hundred years that it's designed to.

4 And I'd like -- perhaps my colleagues, if
5 they wish to.

6 **MR. BOWEN:** Paul Bowen.

7 Yes, an important component of the overall
8 landfill design is that there are many parallel levels of
9 redundancy, both in the cap or the cover and in the liner,
10 so that the design doesn't depend on any one component,
11 whether it's a synthetic liner or a clay liner.

12 There are these levels of redundancy that
13 come into play so that I believe it will readily last
14 several hundred years.

15 In addition, particularly with the cover
16 there's the opportunity to do maintenance or upgrading as
17 required. And at the end of the day, it's the cover
18 perhaps that is the most important component in, first of
19 all, physically isolating or containing the material, and
20 second of all, preventing any significant amount of water
21 from leaching through it.

22 So the cover is obviously at the ground
23 surface and for that reason can be maintained, if
24 necessary, in order to maintain the integrity, rather, of
25 the landfill over the long term.

1 So I think it's a suitable design for the
2 lifespan that we're looking at.

3 **THE CHAIRMAN:** Anybody else?

4 **MR. HARDY:** I think that's fine.

5 **THE CHAIRMAN:** Okay. Okay, well thank you
6 very much.

7 **MR. HARDY:** Thank you.

8 **THE CHAIRMAN:** The next submission is an
9 oral presentation by the Canadian Nuclear Association, as
10 outlined in CMD 10.16.

11 And I know that you are not Ms. Carpenter,
12 so please identify yourself and go ahead.

13

14 **11-H10.16**

15 **Oral Presentation by**

16 **Canadian Nuclear Association**

17

18 **MS. KLEB:** Good afternoon, Mr. President,
19 Commission Members and members of the local community. My
20 name is Heather Kleb and I'm an environmental scientist
21 and the Director of Regulatory Affairs at the Canadian
22 Nuclear Association. To my left is Kathleen Olson, our
23 Director of Communications and Media Relations. And we
24 are here today to speak on behalf of the 71,000 people who
25 work in Canada's nuclear industry.

1 Everyone who works in our industry, be they
2 managers, scientists, technicians or construction workers,
3 not only work in the communities that are home to our
4 industry but live there too.

5 Ensuring the health and safety of our
6 communities, of all Canadians and the environment is
7 therefore our first and most important priority.

8 For this reason the CNA and all of its
9 members support AECL's application for a ten-year waste
10 nuclear substance licence for the Port Granby long term
11 low-level radioactive waste management project.

12 We believe that granting this licence is in
13 the best interest of the Port Granby community and in the
14 best interest of Canadians.

15 Please allow us to elaborate on why we
16 support the granting of this licence.

17 The Canadian nuclear industry's commitment
18 to public safety and environmental stewardship includes
19 the safe storage of low-level radioactive waste generated
20 over the course of a nuclear fuel cycle.

21 Currently, low-level radioactive waste
22 material is being stored in a safe and stable condition at
23 the Port Granby Waste Management facility. However,
24 there's an undisputed need for a solution that will ensure
25 the safe management of the material in the long term.

1 This was recognized as early as 1980 when
2 the Atomic Energy Control Board, then the predecessor of
3 the Canadian Nuclear Safety Commission, issued a
4 decommissioning order for the Port Granby Waste Management
5 facility.

6 The 430,000 cubic metres of low-level
7 radioactive waste are located in a series of trenches and
8 ravines along the Lake Ontario shoreline. However, the
9 shoreline is slowly eroding which means that leaving this
10 material at its current location is clearly not an option
11 in the long term.

12 Protecting the health and safety of
13 Canadians and ensuring the continued protection of our
14 environment requires the low-level radioactive waste to be
15 moved from its current location to a facility that will
16 ensure its safe and stable storage for the long term.

17 While the purpose of this project is to
18 protect the health and safety of Canadians and to protect
19 the environment, the project also has some socioeconomic
20 benefits for the region.

21 For example, over the five-year
22 construction period, AECL will spend over \$42 million or
23 8.4 million per year. Some of this money will be used to
24 pay employees who will in turn spend some of their income
25 on local goods and services and create additional business

1 activity. During the peak of the construction period, the
2 project will create at least some 29 new jobs.

3 However, once the facility is set-up, there
4 will be a small staff of highly skilled employees in
5 charge of maintaining the facility in a safe and stable
6 condition.

7 These numbers may not be on par with other
8 major infrastructure projects but let me remind you that
9 this is not a make-work project. While economic benefits
10 are certainly important, they're not the driving factor.

11 The primary purpose of the project is to
12 ensure that the health and safety of Canadians and their
13 environment are protected in the long term.

14 That said, the Canadian nuclear industry
15 does play an important role -- positive role -- in
16 Canada's economy and society. The Canadian nuclear
17 industry is a 6.6 billion per year industry and
18 contributes 1.5 billion in annual tax revenues and creates
19 1.2 billion in export revenues.

20 We see ourselves as an integral part of the
21 communities that host our operations because we work and
22 live in these communities. For this reason, we do not try
23 to impose solutions but instead work with our neighbours
24 to find solutions that meet the needs of everyone.

25 We therefore want to draw your attention to

1 the fact that the design concept of the Port Granby
2 project was proposed by the local community; the
3 Municipality of Clarington offered to host this project;
4 community members contributed to the development of the
5 conceptual designs and we're only recently consulted on
6 the development of the proposed end-use of the waste
7 management facility.

8 While the need for the Port Granby project
9 cannot be denied, a long term solution needs to be found
10 one way or another. The fact that the local community
11 contributed to the development of the current design of
12 the project is a testament to how the nuclear industry
13 works to engage our host communities in discussions on our
14 operations.

15 But while local support is clearly vital to
16 the success of this project, what about the ability of
17 AECL to implement and manage it in the long term?

18 AECL's record speaks for itself and clearly
19 shows that it is more than capable of living up to the
20 demands of this important task.

21 In 1992, AECL cleaned up about 42,500 cubic
22 metres of low-level radioactive waste from several sites
23 in Fort McMurray, Alberta.

24 In 1995, AECL removed approximately 9,000
25 cubic metres of waste from about 60 residential properties

1 in Scarborough, Ontario.

2 In 2000, AECL cleaned up about 5,000 cubic
3 metres of waste in Surrey, British Columbia.

4 And more recently, AECL removed
5 approximately 867 cubic metres of waste from Tulita,
6 Northwest Territories.

7 AECL has more than 30 years experience in
8 successfully removing and managing low-level radioactive
9 waste and is therefore, in our opinion, uniquely qualified
10 to carry out this work.

11 Not only has AECL been entrusted to carry
12 out such work in the past, they were also recently issued
13 a licence for the clean-up of about 1.2 million cubic
14 metres of low-level radioactive waste in the neighbouring
15 Municipality of Port Hope.

16 The need for the Port Granby project, the
17 local involvement in the project and the unique ability of
18 AECL to successfully implement and manage this project
19 should be sufficient reason to grant AECL a 10-year waste
20 nuclear substance licence for the Port Granby long term
21 low-level radioactive waste management project.

22 At this time we would be pleased to answer
23 any questions. Thank you.

24 **THE CHAIRMAN:** Thank you.

25 Dr. Barriault?

1 **MEMBER BARRIAULT:** Thank you, Mr. Chairman.
2 The CNA is funded and made up by who? You
3 mentioned 71,000 employees in nuclear industry.

4 **MS. KLEB:** Heather Kleb, for the record.
5 We have approximately 100 members
6 consisting of -- representing 70,000 employees working,
7 exploring and mining uranium, generating electricity,
8 advancing nuclear medicine and other associated jobs in
9 the nuclear industry.

10 **MEMBER BARRIAULT:** Is it a compulsory
11 association or a voluntary association and how does it
12 work?

13 **MS. OLSON:** Kathleen Olson, for the record.
14 It's a voluntary ---

15 **MEMBER BARRIAULT:** Okay.

16 **MS. OLSON:** Not every nuclear company or
17 firm is a member, many are and we're gaining new members
18 all the time.

19 **MEMBER BARRIAULT:** Okay, thank you.

20 Thank you, Mr. Chairman.

21 **THE CHAIRMAN:** This is to AECL, I should
22 know this but I just -- please tell us about all those
23 experiences in moving in Fort McMurray and in Scarborough;
24 how are those related in terms of experience and outcome
25 to this project?

1 **MR. CASE:** Glenn Case, for the record.

2 I participated in those clean-ups so I
3 believe I can provide you with some insight. The clean-
4 ups that are referred to in the Northwest Territories in
5 Tulita as well as Fort McMurray in northern Alberta, are
6 at the initial stages of the pitchblende that was coming
7 to Port Hope for processing for the extraction of radium
8 and uranium.

9 So we were dealing with similar types of
10 materials, ore that had been spilled on the ground,
11 collecting it and putting it into a long term waste
12 management facility in Fort McMurray.

13 And in the case of Tulita, actually
14 packaging it and shipping it for offsite waste management.

15 In the case of the facility in Toronto, in
16 Malvern, it was a radium processing operation that had
17 disposed of its waste in a variety of locations that were
18 inadvertently spread throughout a subdivision during its
19 construction in the 1970s. Through a soil -- sorting soil
20 processing operation and monitoring of various properties
21 we were able to consolidate that material into a mound
22 that's currently located in the northern part of Malvern.

23 I would also draw attention to recent
24 clean-ups that we have done in Port Hope itself in
25 expectation for the siting of a long term waste management

1 facility, where over the period of 1988 to 2003 we have
2 done a series of consolidations and then gathering
3 inventories of waste into a better configuration so that
4 it's more amenable for its eventual removal. And a number
5 of those sites are actually licensed by the Canadian
6 Nuclear Safety Commission.

7 So AECL has over 30 years' experience, or
8 close to 30 years' experience, in terms of dealing with
9 not only waste within Port Hope that's from uranium and
10 radium refining operation, but from the initial stages of
11 actually the pitchblende itself coming from the mine site.

12 **THE CHAIRMAN:** Were any of those sites, you
13 know, the same kind of composition of waste and required
14 excavation of the same kind of manner in which you will
15 proceed here?

16 **MR. CASE:** Glenn Case, for the record.

17 The materials that we were dealing with in
18 Port Hope are similar to the types of waste that we have
19 at the Port Granby site in terms of processing residues.

20 The wastes in the other communities tend to
21 be more of the refined product, the end product, or the
22 ore itself before it had been produced.

23 So we have a range of experience in terms
24 of actually excavating, concerns about dust, worker
25 exposure, et cetera, and have applied all of those

1 techniques to safely clean up those sites and put them
2 into proper management.

3 **THE CHAIRMAN:** And have you run into any
4 health and safety issues in any of those sites?

5 **MR. CASE:** Not -- Glenn Case, for the
6 record.

7 Not health and safety issues, but a wide
8 variety of health and safety factors that we had to take
9 into consideration working in the north, even putting
10 materials on barges. So we had working in open water
11 concerns, dealing with having to train workers in these
12 remote communities because it's -- there's not a lot of
13 equipment or manpower available.

14 So dealing with local communities and
15 explaining it to them how the work can be successfully
16 completed and then actually having them conduct the work
17 with the proper personal protective equipment that we've
18 provided, and training.

19 So no real health and safety issues, but a
20 wide variety of experiences that we're able to bring to
21 this project.

22 **THE CHAIRMAN:** Thank you.

23 Mr. Barriault? Thanks a lot.

24 We are now moving to the written submission
25 portion of this hearing. Kelly?

1 **MS. MCGEE:** The first written submission is
2 from Mr. Lou Rinaldi, MPP for Northumberland Quinte West,
3 as outlined in CMD 11-H10.17.

4 **THE CHAIRMAN:** Any comments?
5 Thank you.

6 **MS. MCGEE:** The next submission is from Mr.
7 Donald R. Wiles as outlined in CMD 11-H10.18.

8 **THE CHAIRMAN:** Dr. Barriault.

9 **MEMBER BARRIAULT:** Yes, Mr. Chairman.
10 Mr. Wiles really mentions the use of gypsum
11 as a layer in the bottom of the mound as a protective
12 barrier to precipitate the radium into radium sulphate.

13 Has that been explored at all as an option
14 to adding a further level of blockage to the escape?

15 It's in the third paragraph of the second
16 page.

17 **MR. CASE:** Glenn Case, for the record.

18 We have not examined the use of crushed
19 gypsum mixed in the lower layers, as we believe that the
20 clay layers that are incorporated in the design will
21 provide adequate defusive barrier.

22 **MEMBER BARRIAULT:** Okay, thank you.

23 **THE CHAIRMAN:** Sorry. What are you saying?
24 Are you saying that you've no need to consider it or you
25 should consider it or you will consider it?

1 **MR. CASE:** Glenn Case, for the record.

2 At this time, we could examine the
3 feasibility of doing this, and we'll take that under
4 consideration.

5 **THE CHAIRMAN:** Okay, thank you.

6 Anybody else? Next.

7 **MS. MCGEE:** The next submission is from the
8 Port Hope and District Chamber of Commerce as outlined in
9 CMD 11-H10.19.

10 **THE CHAIRMAN:** No. Okay, thank you.

11 **MS. MCGEE:** The next submission is from Mr.
12 John R. O'Toole, MPP for Durham, as outlined in CMD 11-
13 H10.20.

14 **THE CHAIRMAN:** Anybody? Question?

15 Just an observation, I think, that I think
16 we discussed this many times here, but I assume just again
17 for -- to react to this written submission, the last
18 paragraph says that the removal of Port Granby material to
19 a safer site nearby must be accompanied by continued
20 consultation with the public and continued long-term
21 monitoring.

22 Right? I want to hear AECL.

23 **MS. MILLER:** Joan Miller, for the record.

24 That's correct. And so our consultation
25 program and our long-term monitoring program have been, I

1 think, defined today as part of our submissions.

2 **THE CHAIRMAN:** Thank you.

3 **MS. MCGEE:** The next submission is from Mr.
4 Brian M. Ikeda as outlined in CMD 11-H10.21.

5 **THE CHAIRMAN:** Dr. McDill?

6 **MEMBER MCDILL:** Two questions, and I think
7 they're to staff.

8 This intervenor makes reference to limits
9 for the concentration or activities of nucleides in the
10 environment and also the issue of institutional or
11 administrative controls that may fail at some point long
12 way off.

13 So perhaps the staff would comment on
14 those?

15 **MR. ELDER:** Peter Elder, for the record.

16 I think in our presentation we give a point
17 of view on the limits is that we don't want to confine
18 ourselves to limits until we have a good idea of what the
19 technology is capable of. So, definitely, when that new
20 water treatment plant comes into effect, we will be coming
21 back with appropriate limits and action levels for it.

22 And I think Mike Rinker would like to add
23 something.

24 **MR. RINKER:** Mike Rinker, for the record.

25 I just want to clarify one point, is I

1 believe the intervenor's talking about environmental
2 levels, so as opposed to effluent limits, but limits in
3 the environment which the province sets. And we would
4 regulate the facility to ensure that the facility wouldn't
5 release substances that would exceed that.

6 **DR. THOMPSON:** Perhaps if I could?

7 The radiation protection program that CNSC
8 staff has accepted does have action levels and
9 administrative control levels for radon, long-lived
10 radioactive dust in the environment to take measures in
11 terms of protecting workers. And there are a number of
12 monitoring stations around the site that will validate the
13 results of the environmental assessment in terms of
14 exposures to members of the public.

15 So there are *de facto* action levels that we
16 would expect the licensee to respond to to make sure that
17 the estimates and the predictions made during the
18 environmental assessments will be complied with.

19 **MEMBER MCDILL:** And the second part with
20 respect to the pumping?

21 Although detailed engineering does not
22 necessarily be useful to AECL's concept of foreclosing the
23 sluice -- I guess I have to come back to AECL as well at
24 some point when -- some undetermined point in the long
25 distant future when presumably we still have a government

1 of Canada.

2 **MR. ELDER:** Well -- Peter Elder, for the
3 record.

4 I think we discussed this a bit this
5 morning as well, something that -- I mean, we don't assume
6 the Government of Canada is going to be there, but we kind
7 of -- when we're doing analysis, but we look at it -- I
8 think one of the issues we've had here, and there was some
9 discussion this morning about how fast those water rates
10 will come down and that really determines how soon you
11 start looking at can you go to a passive control system.

12 So again, this is something where we will
13 need to get experience and to see how the system is
14 actually working after it's got to a more stable state and
15 to see what sort of design would be appropriate. I think
16 your design solutions will be different depending on your
17 volumes and I don't think you'd want to bind yourself
18 unless you really believe your modelling. We prefer to
19 see what your actual measurements are and then design that
20 in the future.

21 **MEMBER McDILL:** And is that where AECL
22 stands as well?

23 **MS. MILLER:** Joan Miller, for the record.

24 Yes, that would be correct. I think the
25 one thing one would also want to consider is the final

1 end-use of the facility or of the lands and whether or not
2 one would need to go to a passive system if it was
3 necessary, for example.

4 **MEMBER McDILL:** Thank you.

5 **THE CHAIRMAN:** Sorry, I'm just trying to
6 understand. Is it automatically that you'll have to -- is
7 it a given that you'll have to go to a passive -- you're
8 not going to have the pumping station going on forever?
9 Did I -- I think this intervenor is making the point that
10 when you get into decommissioning you may have a passive
11 water, you know, system.

12 This is on the second page, one, two, the
13 third paragraph, the last -- the one before the last
14 sentence.

15 **MS. MILLER:** Joan Miller, for the record.

16 So we will have to gain the operational
17 experience to see for -- we're looking at two sites;
18 right, the existing site and then the new site. So the
19 existing site over time -- and we heard mention that it
20 may take 20 or 30 years and then what happens after that,
21 I think, would need to be -- we would need to look at the
22 operational experience.

23 It's similar for the long-term waste
24 management facility. We need to monitor that. We need to
25 see how the amount of water being collected decreases. We

1 need to look at whether or not we need to maintain an
2 operational system versus whether or not a passive system
3 is something that one can move to. I don't think we've
4 explored that at this point in time.

5 **THE CHAIRMAN:** But I think if I had to
6 guess what the intervenor is aiming at, you are designing
7 a facility now for at least 500 years and, therefore, you
8 should think about a passive system that will kick in
9 somewhere in the process and maybe have it affect your
10 design now, I'm guessing.

11 **MS. MILLER:** Joan Miller, for the record.
12 I think we'd need to look at it because it
13 does depend on the amount of water and what we expect.

14 **THE CHAIRMAN:** Right.

15 Dr. Barriault?

16 **MEMBER BARRIAULT:** Just a brief point
17 that's been recurrent today and the intervenor, Dr. Ikeda,
18 refers to that we should have perhaps more information on
19 the website, on the internet that he could have had access
20 to in looking at this. He goes on to state that there is
21 a lot of information, but there could have been more and
22 it's been a recurrent point that perhaps we could have
23 more transparency on the internet as to some of the
24 discussion. That's all, just an observation.

25 Thank you.

1 **THE CHAIRMAN:** I've one last question here.
2 I'm trying to understand; indirectly, who outside the
3 facility on the roads, who is monitoring what's going on?
4 Like, the intervenor is saying that somebody should look
5 at cleaning the tunnel and the roadway. Who does that?
6 Who's monitoring? Is it CNSC, AECL, Ministry of
7 Environment of Ontario?

8 **MR. HOWARD:** Don Howard, for the record.
9 Basically, when we're transporting
10 radioactive material from the old site to the new site on
11 this private road and with the underpass, I think AECL
12 will be required to do some monitoring on that road and,
13 you know, to ensure. Once they get to the end of the life
14 and they've transferred all of the material, basically,
15 they will have to verify that there is no contamination
16 before they decommission that section of the road.

17 During our Compliance Program, CNSC staff
18 will be going in and doing some verification as well to
19 ensure that there is no contamination.

20 **THE CHAIRMAN:** But I think the intervenor
21 is saying that it's one place where you can get
22 concentration and contamination is in the tunnel -- the
23 roof of the tunnel, if I understand correctly. Who
24 monitors that, for example?

25 **MR. HOWARD:** Don Howard, for the record.

1 The expectation is that AECL will have a
2 comprehensive monitoring program that will look at the
3 complete road, tunnel, walls, roof, floor -- whatever you
4 want -- that will -- they'll have a robust monitoring
5 program and as I indicated, the CNSC staff will have a
6 compliance program where we will go in and do independent,
7 ad hoc verification as well.

8 **THE CHAIRMAN:** Okay, thank you.

9 Anything else on this? Thank you.

10 **MS. MCGEE:** The next submission is from the
11 Clarington Board of Trade and the Office of Economic
12 Development as outlined in CMD 11-H10.22.

13 **THE CHAIRMAN:** Question? Thank you.

14 **MS. MCGEE:** The last submission is from the
15 Durham Nuclear Health Committee as outlined in CMD 11-
16 H10.23.

17 **THE CHAIRMAN:** That's, again, a question.
18 We haven't heard much from this Commission, the Medical
19 Office. Can somebody tell me how involved were they in
20 this project over the years? Anybody know?

21 **MS. HARROD:** For the record, Judy Harrod,
22 Stakeholder Relations Officer.

23 All we provide -- have provided since the
24 start of the Port Hope Area Initiative regular updates to
25 Durham Nuclear Health Committee. They meet approximately

1 every six to eight weeks and every other meeting, they
2 invite the Port Hope Area Initiative to provide members
3 with an update on the Port Granby Project, which we do.

4 **THE CHAIRMAN:** So they -- presumably, this
5 agency should interact with some of the people who felt
6 that this is maybe an unsafe activity. I mean, I'm trying
7 to understand how active they were in pointing out any
8 safety issues; were they being reported?

9 **MS. HARROD:** For the record, Judy Harrod.
10 Brian Devitt, who is the Secretary of
11 Durham Nuclear Health who was here today attending -- I
12 guess he's left -- attends the Port Granby discussion
13 group meetings -- he chooses to do so; it's very helpful.
14 And the community representative, which changes
15 periodically but also attends voluntarily, so that they
16 are -- they become part of the Port Granby discussion
17 group, ask questions, as any citizen member would, and
18 contribute in that way.

19 **THE CHAIRMAN:** Okay.

20 **MR. STEPHENSON:** If I may comment, I was a
21 member of the Durham Nuclear Health Committee for five
22 years until about four years ago and during that time, I
23 can say that the Durham Nuclear Health Committee listened
24 to reports from the Proponent on a regular basis and also
25 comments from the Municipal Council.

1 The reports generally were informative as
2 to what was happening, where the project was going and for
3 the most part, the Durham Nuclear Health Committee
4 accepted those comments with very little feedback.

5 **THE CHAIRMAN:** Okay, thank you. Thank you
6 very much.

7 Okay, so now we come to the round you've
8 all been waiting for. That's the last round from outside.

9 No more questions?

10 Dr. Barriault, I'm sure you're going to
11 have some. Have to go back to the beginning here.

12 **MEMBER BARRIAULT:** No, I'm sorry, I hate to
13 admit it but they've all been answered, Mr. Chairman.

14 Thank you.

15 **THE CHAIRMAN:** Okay, bear with me a minute.

16 One question, all the -- I understand
17 there's going to be a lot of contractors that are going to
18 be engaged by AECL, they will be treated according to as
19 nuclear workers; is that correct, subject to all the
20 regulatory requirement for such workers?

21 **MS. MILLER:** Joan Miller, for the record.

22 Yes, they will be treated as nuclear energy
23 workers.

24 However, just to clarify, that the
25 contractors are actually in the contract centre being put

1 in place by Public Works and Government Services Canada.
2 They have a role in a project as being responsible for
3 implementing the major contracts.

4 So they will put in place a tendering
5 contract, there will be contractors then on the sites. We
6 have provided input to and have reviewed the
7 specifications for those contractors and they will be
8 classified as nuclear energy workers. There are
9 requirements for them to have a dosimetry plan, dosimetry
10 program that is acceptable to the CNSC.

11 We will provide oversight that our
12 specifications are being met.

13 **THE CHAIRMAN:** I know that there's somebody
14 from Public Works -- is Public Works aware of the
15 requirement nuclear workers has some specific regulatory
16 requirement? And just because Public Works doesn't get
17 you off the hook.

18 **MR. PALMETER:** I finally get to talk. Tim
19 Palmeter, for the record; I'm with Public Works Canada.

20 We've been working very closely with AECL
21 since 2008, to work on the project requirements that need
22 -- licensing and EA mitigation measures that need to be
23 incorporated into our specifications.

24 And yes, we're very aware of these
25 requirements and they are included in our specifications.

1 **THE CHAIRMAN:** Dr. Barriault?

2 **MEMBER BARRIAULT:** I'm sorry, Mr. Chairman,
3 I just found two unanswered questions.

4 This is to AECL, is there a chance to
5 compress the timeline from 10 years, say, to seven or six
6 because the -- what I see, at least from observation from
7 discussion today is that one of the areas of
8 contamination, obviously, it's going to be dust and the
9 sooner we get the job done I would assume the less dust
10 we'll have. I don't know if that makes sense or not. So
11 is there any chance in compressing the timeline?

12 **MS. MILLER:** Joan Miller, for the record.

13 We would have to look into that. The
14 environmental assessment does place requirements on the
15 working hours for noise, et cetera. We can only move
16 waste during the summer or spring weather, fall weather.

17 We also have made assumptions that we only
18 have, say, one excavator doing the work in the area at a
19 time. So whether or not, you know, one can do two, that's
20 something I think we would only move to if we gained
21 experience and saw whether or not there was any
22 opportunity for advancing the schedule.

23 But right now that's our best estimate
24 based on those assumptions.

25 **MEMBER BARRIAULT:** And I guess my next

1 question is that if any new development came in technology
2 over the period of 10 years, which is a long time, would
3 those be implemented or would you be sticking to the
4 original proposal period?

5 **MR. PALMETER:** Tim Palmeter, for the
6 record.

7 The specifications are written as with the
8 technology we have today. If something were to come
9 along, a contractor proposed a better way that met all the
10 licensing requirements and all the mitigation measures, it
11 could be considered through a change process that we've
12 developed in the management office.

13 **MEMBER BARRIAULT:** Thank you.

14 Thank you, Mr. Chairman, that's all.

15 **THE CHAIRMAN:** Okay. In AECL Table 4.3,
16 this is at page 4.6, can you explain to me -- I'm trying
17 to understand what does it mean, "sites without
18 development and with development constraint"?

19 **MR. CASE:** Glenn Case, for the record.

20 In the development of the clean-up criteria
21 for the Port Hope Area Initiative we looked at two
22 scenarios in accordance with the legal agreement
23 requirements; one was for current and foreseeable
24 unrestricted use so that a property could have gardens, a
25 home, drinking water supplies, et cetera, and that's what

1 that criteria represents, is current and foreseeable
2 unrestricted use.

3 The other one, in terms of development
4 constraint, represents situations where there may not be
5 the full opportunity to have unrestricted use, for
6 example, at a landfill site.

7 In the case of the Port Granby facility it
8 was going to be -- it will be owned and maintained in
9 perpetuity by the federal government; it will not have the
10 full range of potential pathways. It will not have houses
11 on it, it will not have groundwater wells that are drawing
12 potable water, et cetera. So therefore your criteria do
13 not have to be as stringent as they are for a current and
14 foreseeable unrestricted use scenario.

15 **THE CHAIRMAN:** Okay, but either one of
16 those criteria are still safe. What I'm trying to always
17 get from, you know, a bottom line, when should me, as a
18 public, start worrying about the safety?

19 They're all -- most of the radioactive
20 material here are within -- way within the 1 millisievert
21 that's changed into the impact on the health, right?

22 **MR. CASE:** Glenn Case, for the record.

23 The clean-up criteria that have been
24 developed for the Port Hope Area Initiative are based on a
25 .3 millisievert annual incremental dose.

1 **THE CHAIRMAN:** Okay, where -- where is that
2 all kind of fall in big lights shown in those things?

3 **MR. CASE:** Glenn Case, for the record.

4 That is in our clean-up criteria document
5 which was developed in 2006.

6 **THE CHAIRMAN:** I know, but, I mean, every
7 time you guys come up with one of those -- and those goes
8 to staff also -- this clean-up criteria, those particles
9 per gram is meaningless without getting down to what is
10 the impact on the environment and people. I'm talking
11 about the fraction of millisievert which is the only
12 really meaningful kind of limit that -- from a safety
13 perspective that we look for.

14 So one more time, in terms of the
15 millisievert unit, what do those criteria means and I'm --
16 some of them we may have to have toxicity criteria on
17 health, you know. So are those available somewhere so
18 people can look at them?

19 **MR. CASE:** Glenn Case, for the record.

20 On page 4-5, at the last paragraph for
21 radioactive COPCs each criterion was developed in such a
22 way as to limit the dose to persons to 0.3 millisieverts
23 per annum.

24 **THE CHAIRMAN:** Great. I'm glad it's here;
25 I missed it. I would have liked to have seen it at the

1 top of the table, that's all I mean.

2 Okay. Anything else?

3 Thank you all for being very patient with
4 us here and thank you for answering our questions.

5 We will now -- I guess is there anything I
6 need to say here?

7 This concludes the hearing -- I've said
8 that I think.

9 Kelly, go ahead.

10 **MS. MCGEE:** This brings to a close the
11 public portion of this hearing with respect to this
12 matter. I propose that the Commission confer with regards
13 to the information that they have received today and then
14 determine if further information is needed or if the
15 Commission is ready to proceed with a decision.

16 We will advise accordingly.

17 **THE CHAIRMAN:** Thank you.

18 --- Upon adjourning at 5:34 p.m./

19 L'audience est adjournée à 17h34

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