

1 **THE CHAIRPERSON:** With that preamble I'd like to start the
2 hearing today by calling upon General Electric Canada Inc.
3 for its oral presentation as outlined in CMD documents 05-
4 H25.1 and 05-H25.1A and, again, I welcome the Vice-
5 President and General Manager, Mr. Mason.
6 Mr. Mason, you have the floor, sir.

7
8 **General Electric Canada Inc.**
9 **Application for renewal of its**
10 **Licence to Operate the Peterborough**
11 **Nuclear Fuel Fabrication facility**
12
13 **05-H25.1 / 05-H25.1A**
14 **Oral presentation by**
15 **General Electric Canada Inc.**

16
17 **MR. MASON:** For the record, Peter Mason.
18 Thank you Madam Chairman, members of the
19 Commission.

20 As you have mentioned, I previously
21 presented common information about the General Electric
22 Company, its Environmental Health & Safety Standard
23 systems and our organization.

24 I would like to now move on to slide 18 of
25 21, which is specific information on the Peterborough

1 site.

2 At the Peterborough site we have an
3 assembly operation which shares a site with the Motors
4 division of our company. At this site we assemble fuel
5 bundles, taking components from our Arnprior facility and
6 the pellets from our Toronto facility, and assembling them
7 into the fuel bundles.

8 In addition, we also have a fuel handling
9 or a fuel machine design the manufacturing operation,
10 which employs a number of engineers and also assembly
11 technicians.

12 Overall, we have about 180 employees in
13 both departments of the business. We run predominantly a
14 day shift, but we also have a relatively small second
15 shift for fuel bundle assembly, and it's a five day a week
16 operation.

17 The actual campus dates back to 1892, and
18 we occupied the nuclear building in 1955.

19 If we move to slide 20 of 21 and look at
20 the radiation dose information for our business, again, we
21 can note that first of all, the average radiation dose is
22 slightly lower than what we saw in Toronto, and also there
23 has been a steady improvement in the process; again, as
24 our ALARA Committee working together with engineers and
25 management to improve our processes with the intent of

1 exposure to hazards, improving our processes and
2 procedures, and also the quality of the product that we
3 deliver our customer.

4 I think that in the Peterborough area we
5 have a long history of community involvement, and I think
6 we're well respected in the community. Thank you.

7 **THE CHAIRPERSON:** Thank you, Mr. Mason.

8 We will now move to the presentation by
9 CNSC staff. This is the presentation as outlined in CMD
10 05-H25.

11 As noted by the Secretary, 05-H25A is
12 prescribed security information, and it's not publicly
13 available.

14 I will then turn to Mr. Barclay Howden,
15 Director General of the regulation of this facility, and
16 Mr. Howden you may proceed.

17

18 **05-H25**

19 **Oral presentation by**

20 **CNSC Staff**

21

22 **MR. HOWDEN:** Thank you, Madam Chairm
23 Members of the Commission.

24 For the record, my name is Barclay Howden.
25 With me today are Ms. Adriana Nicic, Director of the

1 Organization and Management Systems Division; Mr. David
2 Werry, Project Officer in the Processing Facilities and
3 Technical Support Division; and the rest of our licensing
4 team for this facility.

5 CNSC staff has reviewed the operation of
6 General Electrics Peterborough facility, and the
7 application from GE Peterborough to renew the facility's
8 operating licence.

9 I'll now turn the presentation over to
10 David Werry to continue.

11 **MR. WERRY:** Good morning, my name is David
12 Werry.

13 CNSC staff's assessment of the licence
14 renewal application is documented in CMD 05-H25. This
15 includes a recommendation that the Commission renew the
16 proposed processing facility licence for a period of five
17 years. Our presentation will include the following
18 sections:

19 A brief overview of the facility will be
20 presented; a review of General Electric's application to
21 renew the licence -- General Electric will be referred to
22 as GE or GE Peterborough for this presentation -- A
23 discussion on GE's programs and performance during the
24 current licensing period; a summary of additional items,
25 including decommissioning plan, financial guarantee and

1 the *Canadian Environmental Assessment Act*; the overall
2 conclusions from the reviews performed and, finally,
3 recommendations from the staff to the Commission.

4 The uranium conversion facility that GE
5 operates is located in Peterborough, Ontario. The
6 facility loads fuel pellets into tubes; seals these tubes
7 by welding and assembles these tubes into CANDU fuel
8 bundles.

9 There have been two amendments to the
10 licence since the renewal in 2000. Both of these were
11 outlined in CMD 05-H25.

12 The facility has been ranked by CNSC staff
13 as being low to moderate. The risk associated with the
14 use of chemicals and safety analysis demonstrates that the
15 risk to the workers, the environment and the public from
16 normal operations and accident scenarios are reasonable.

17 General Electric has applied to renew the
18 Fuel Fabricating Operating licence. The Application was
19 provided in a timely fashion and CNSC staff's review of
20 the application found that it meets the application
21 requirements described in the applicable regulations. The
22 current licence expires on December 31st, 2005 and GE has
23 requested a renewal licence to be issued for a five-year
24 period.

25 General Electric is required to have

1 various programs in place with respect to the operation of
2 a nuclear facility. CNSC staff have evaluated various
3 safety areas. They are outlined on this slide and in CMD-
4 05-H25.

5 The overall assessment ratings for the
6 various programs are that they meet requirements, with the
7 exception of the Quality Management Program that has yet
8 to be fully documented and addressed. CNSC staff expects
9 this program to be fully documented later this year.

10 The latest rounds of revisions is
11 anticipated by the end of September and an onsite
12 compliance audit will follow the document review. We
13 anticipate the audit to be complete in the fiscal year.

14 Note that the information on the Security
15 Program is prescribed information and is found in CMD 05-
16 H25.A.

17 GE has demonstrated improvements in their
18 programs in their implementation in several areas during
19 the licensing period. These areas of improvement are
20 radiation protection, environmental protection and public
21 information programs.

22 Continuing on the topic of licensee's
23 performance, CNSC staff carried out a review of General
24 Electric's performance with respect to the operation of
25 the facility during the current licence term. The review

1 comprised of routine inspections that are carried out
2 quarterly; several additional inspections, including
3 emergency preparedness, radiation protection, quality
4 assurance, fire protection and physical security and also
5 review of the annual reports.

6 The inspections found some minor deviations
7 from expectations, but were such to not pose an
8 unreasonable risk to the health and safety of the persons,
9 to the environment, nor to national security.

10 There are several indicators that the
11 facility has been operated safely during the licensing
12 period. The radiation doses to the workers and to the
13 public, along with the radioactive emissions to the
14 environment, are well below the regulatory limits and
15 there have been no safety-significant events reported
16 during the licensing term.

17 CNSC staff concludes that the risk to the
18 public and workers over the current licence term has been
19 low and the overall performance of GE meets requirements.

20 The Preliminary Decommissioning Plan was
21 accepted by staff and a financial guarantee is in place.

22 General Electric has requested a five-year
23 licence period with the renewal of the licence. Based on
24 the information that has been outlined in CMD 05-H25 CNSC
25 staff is recommending a five-year licence period. CNSC

1 staff proposes that a mid-term interim report be provided
2 to the Commission midway through the licence period.

3 The Commission will also be informed if any
4 situation develops that could impair GE's ability to meet
5 its obligations with respect to protection of the health
6 and safety, and the environment, and the maintenance of
7 security and compliance with international obligations.

8 CNSC staff also concludes that an
9 environmental assessment, pursuant to the *Canadian*
10 *Environmental Assessment Act* is not required for the
11 renewal of this licence and that GE is qualified to carry
12 on the licence activities that the proposed licence will
13 authorize.

14 Further, GE has made adequate provisions
15 for the protection of the environment, the health and
16 safety of persons, the maintenance of national security
17 and measures that are required to implement international
18 obligations to which Canada has agreed.

19 In addition, CNSC staff also concludes that
20 GE is meeting regulatory requirements and, although there
21 is some minor deviations from staff's expectations on
22 certain programs, the deviations do not represent an
23 unreasonable risk to the environment, to the health and
24 safety of persons and to national security.

25 Finally, staff recommends that the

1 Commission accept CNSC staff's assessment that GE is
2 qualified to carry on the activities that the licence will
3 authorize and will make adequate provisions to carry on
4 the licence, accept CNSC staff's assessment that an
5 environmental assessment pursuant to the *Canadian*
6 *Environmental Assessment Act* is not required for the
7 renewal of the licence and approve the renewal of the
8 operating licence for a period of five years, valid to
9 December 31st, 2010.

10 This concludes staff's presentation.

11 **MR. HOWDEN:** Madam Chair, staff is prepared
12 to respond to questions. Thank you.

13 **THE CHAIRPERSON:** Thank you.

14 I am going to open the floor to questions,
15 acknowledging the comments by the Secretary earlier that
16 we will be able to use information from the earlier
17 hearing on Toronto for this hearing in Peterborough if
18 there are similar questions on matters of a more global
19 nature, but we are now of course concentrating on the
20 Peterborough facility.

21 Dr. McDill, would you like to start?

22 **MEMBER McDILL:** Thank you.

23 My first question, I would like a
24 clarification on staff's document, page 25, the bottom of
25 page 8, "discharge of uranium into the sewer is limited to

1 500 kilograms of uranium per day" seeing as the next page
2 has it in kilograms or uranium per year at sort of the
3 order of point 2. Something is wrong.

4 **MR. DESIRI:** For the record, Paul Desiri.

5 The Peterborough plant, in contrast to
6 Toronto, only handles pellets. So the discharges to the
7 environment are negligible.

8 The limits that are in place in the licence
9 are the same as the Toronto facility and that Toronto
10 facility limit is actually 500 kilograms a day is what a
11 quantity would be required to cause one millisievert of
12 public dose.

13 **MEMBER McDILL:** That is a licence limit,
14 basically, not a functioning limit of ---

15 **MR. DESIRI:** That is right.

16 In the Peterborough plant the water
17 sampling is actually limited to sampling wash water and
18 there is a three part-per-million control level.

19 **MEMBER McDILL:** Thank you, because the way
20 it reads it certainly reads like you are holding it back
21 to that.

22 Would staff like to comment?

23 **MR. HOWDEN:** Yes, Barclay Howden speaking.

24 The description Mr. Desiri gave is
25 accurate. That is a limit that theoretically they could

1 discharge, yes.

2 **MEMBER McDILL:** Thank you.

3 My other question is also on -- relates to
4 the same page and, again without giving away any
5 commercial information, when a weld is deemed to have
6 failed on -- and you decan, that there are emissions, is
7 it possible to improve the welding process so you have
8 fewer to decan? Maybe that is the easiest way of putting
9 the question.

10 **MR. MASON:** For the record, Peter Mason.

11 I think the welding of the tube and the cap
12 is part of the process. It is an ongoing effort on the
13 part of our industrial engineers to improve that process
14 so that we have no such "leakers", as we call them.

15 But no process yet has been found to be
16 perfect, although we would like to achieve it.

17 **MEMBER McDILL:** I assume the nature of the
18 failures is voids and that sort of thing that are ---

19 **MR. MASON:** Peter Mason, for the record.

20 That is correct, in that there may be a
21 very minute leak in that weld, or a defect in how the
22 electrode came into contact with the material.

23 **MEMBER McDILL:** Has staff reviewed the
24 welding procedures and are satisfied that they are the
25 best they can be under the circumstances?

1 **MR. WERRY:** David Werry, for the record.

2 We look at a ALARA processes for that and
3 the specific requirement to look at that procedure would
4 be part of the onsite review by a quality assurance
5 specialist after documentation is completed.

6 **MEMBER McDILL:** On the basis of ALARA and
7 the onsite review you are satisfied?

8 **MR. WERRY:** David Werry, for the record.
9 Yes.

10 **MEMBER McDILL:** Thank you.

11 **THE CHAIRPERSON:** Dr. Barnes?

12 **MEMBER BARNES:** My little bit of trivia,
13 just to start, is on GE's submission page 5, second
14 paragraph from the bottom.

15 There is a word missing there "because only
16 () are processed". Could you just tell us what that word
17 might be, or phrase? It's the fifth line up from the
18 bottom of your page 5, your CMD, "because only (something)
19 are processed."

20 **MR. DESIRI:** For the record, that word that
21 is missing should be "pellets".

22 **MEMBER BARNES:** On staff CMD page 6, the
23 NEW personnel extremity dose data for the first quarter of
24 '05 is n/a. Could you just explain that? There is no ---

25 **MR. WERRY:** David Werry, for the record.

1 The n/a refers to not available and at the time this CMD
2 was prepared there was still a time lag from the full year
3 data.

4 **MEMBER BARNES:** But we get quarter one data
5 for everything else. I wonder why. Is there any reason
6 why it wasn't available, any good reason?

7 **THE CHAIRPERSON:** Perhaps this is a
8 question for the licensee, Dr. Barnes?

9 **MEMBER BARNES:** Yes, sure.

10 **MR. DESIRI:** For the record, Paul Desiri.

11 I believe it was the delay in getting the
12 results back from Health Canada.

13 **MEMBER BARNES:** That's a good reason.

14 I note that there is under the 4.5 fire
15 protection there will be now a requirement for an
16 independent third party for GE's annual compliance
17 assessment and this is further reported, I think, in the
18 new licence.

19 Could you just tell me how that independent
20 third party will be selected and does that need sort of
21 prior approval by CNSC or just the approval of the report
22 of the independent third party?

23 **THE CHAIRPERSON:** I believe this is CNSC
24 requirements, so perhaps CNSC should start.

25 **MEMBER BARNES:** It's a requirement but the

1 action is really by GE.

2 So I am trying to find out how GE would
3 select that independent third party and whether they need
4 in a sense before that third party starts the work, that
5 they need the approval of staff that it's an acceptable
6 independent third party.

7 **MR. DESIRI:** For the record, Paul Desiri.

8 The contractor that we use, the consultant,
9 we do review that with -- we get input from the CNSC. In
10 the past, they haven't come out and actually recommended
11 one consultant over the other, but we have been told that
12 if we were selecting one that was known to be less
13 inadequate we would be instructed of that.

14 **MEMBER GRAHAM:** Okay, thank you.

15 In the air emission data that are reported
16 in the staff CMD 05-H25, page 8, Table 4, there is a fair
17 degree of variability in the uranium discharge to air, the
18 lower column.

19 Can I get an explanation why it is so -- I
20 know these are small amounts, but still the variability
21 between '03, '04 and '05 quarter one anyway, why was there
22 a significant increase in '04?

23 **MR. DESIRI:** I am just going to -- for the
24 record, Paul Desiri -- review what the nature of the
25 discharges are.

1 In contrast to Toronto where the powder is
2 handled in a facility and there may be filter discharges
3 of that supply, in Peterborough the only air discharges
4 that occur are during the de-canning process. This is an
5 intermittent process that is carried out as required when
6 elements are required to be examined.

7 So that is really the reason for the
8 variability. It would depend on how often de-canning
9 occurs in a given year.

10 **MEMBER GRAHAM:** And the air emission
11 monitoring, is that done entirely by sampling the stack or
12 is there any monitoring outside of the -- beyond the
13 stack?

14 **MR. DESIRI:** For the record, Paul Desiri.
15 I am going to defer this question to my
16 colleague, Henry Hann.

17 **MR. HANN:** Henry Hann, for the record.
18 No, those sample results are entirely in-
19 staff monitoring results.

20 **MEMBER GRAHAM:** And to staff, is this
21 appropriate and adequate for a plant like this?

22 **MR. WERRY:** David Werry, for the record.
23 Yes, it is.

24 **MEMBER BARNES:** I will leave it at that. I
25 have one more, but I suspect some of my colleagues might

1 ask you.

2 **THE CHAIRPERSON:** Dr. Dosman.

3 **MEMBER DOSMAN:** Thank you, Madam Chair.

4 I would just like to come back to staff's
5 CMD 05-H25 and enquire about 2004 and the doses while
6 being within regulatory limits seemed to have jumped in
7 2004, particularly as outlined on Table 3 and, to a
8 certain degree, on Table 2. I am just wondering whether
9 the company has any comment on that finding.

10 **MR. DESIRI:** For the record, Paul Desiri.

11 Could you please indicate which table you
12 are referring to?

13 **MEMBER DOSMAN:** I am referring to CMD 05-
14 H25 page 6, Tables 2 and 3, and I am just looking at
15 exposure data for 2004. There is a jump in 2004 versus
16 2003 and I am just wondering if the company had any
17 comments on that finding.

18 **MR. DESIRI:** For the record, Paul Desiri.

19 With regards to extremity dose, in 2003 the
20 program to calculate extremity doses was reassessed and a
21 new means of calculating extremity doses was implemented
22 which essentially involved changing the factors,
23 correction factors to take a result on a batch to a final
24 result. So that would explain in part the jump.

25 **MEMBER DOSMAN:** Does staff have any

1 comment?

2 **MR. WERRY:** David Werry, for the record.
3 Staff was involved in reviewing GE's
4 submission and proposal and accepted the proposal.

5 **MEMBER DOSMAN:** So does staff concur that
6 there doesn't seem to be any health issue, health and
7 safety issue involved here? That is my concern.

8 **MR. WERRY:** David Werry, for the record.
9 Yes, that is correct.

10 **MEMBER DOSMAN:** I am wondering, Madam
11 Chair, if I might just go back to quality assurance?
12 Again, the Toronto plant the quality assurance
13 documentation doesn't seem to be complete and I am just
14 wondering if the company has any comment on that matter?

15 **MR. MASON:** For the record, Peter Mason.
16 I think it's important to point out that
17 our Environmental Health & Safety and their quality
18 processes are indeed well documented. I think that where
19 there may be some misunderstanding is that in terms of
20 adequately describing those processes to match CNSC's
21 requirements, and I think that that is the work that we
22 are currently engaged in, is to make sure that our
23 documented processes are adequately referenced to the
24 CNSC's standards.

25 **MEMBER DOSMAN:** Thank you.

1 Does staff have any comment?

2 **MS. NICIC:** For the record, Adriana Nicic.

3 What we are looking from a CNSC point of
4 view, really, while you recognize that there are systems
5 and GE has different systems in place which are addressing
6 most of the quality assurance requirements and general
7 principles of quality assurance which are common to EHS
8 system and some other requirements of CNSC staff, we are
9 really looking to a demonstration that the processes and
10 the procedures that are in place address the CNSC staff
11 requirements.

12 We are working with GE in order to make
13 sure that this happened because our focus is really on
14 health and safety and all the related processes and all
15 the equipment and other actions which support health and
16 safety. So it is a little bit of a different focus. It
17 is more encompassing.

18 So we are looking more at the application
19 of the requirements whereas the principles are the same,
20 but the domain and how they are applied, this is maybe
21 where the difference is.

22 **MEMBER DOSMAN:** Thank you. I wonder if I
23 might come back to the company end and is it that -- the
24 quality assurance requirements for the health and safety
25 issues are quite well known.

1 So I guess I find it a little surprising
2 that apparently a well-rounded company like yours would
3 not be regularly on top of the quality assurance
4 documentation and is that likely to happen more regularly
5 in the future?

6 **MR. HANN:** Henry Hann, for the record.

7 The material presented by Mr. Mason earlier
8 explained our Environmental Health & Safety Framework
9 process and built into that framework process is the
10 quality assurance requirements that we are speaking of.

11 Through a number of meetings with CNSC
12 staff, we are trying to ferret out of our corporate system
13 those specific quality requirements and match them to the
14 draft standard that CNSC has and provide the description
15 on the match in the way that will satisfy the CNSC's
16 requirements.

17 So we believe we have all of the
18 requirements built into our EHS framework system, but it
19 is a matter of doing the match to the standard, and we are
20 working through that right now.

21 **MEMBER DOSMAN:** Thank you. So I take it
22 that the company has a company-wide approach to quality
23 assurance and is computerized and all that and so I think
24 you have said that you are undertaking to ensure that you
25 can supply that kind of quality assurance information in a

1 manner that is acceptable to CNSC on a regular basis in
2 the context of your programming.

3 Do I have it right or would you like to
4 make a comment?

5 **MR. HANN:** That is correct.

6 **MEMBER BARNES:** Thank you.

7 **THE CHAIRPERSON:** Mr. Graham.

8 **MEMBER GRAHAM:** Thank you.

9 The first question I had was with regard at
10 the very outset you gave a description or a description
11 was given I guess by CNSC staff of the Buildings 21, 21-A,
12 21-B and also Building 22. Is that within an industrial
13 park?

14 **MR. MASON:** Peter Mason, for the record.
15 That is correct.

16 **MEMBER GRAHAM:** So those are the -- the
17 Building 21 and extensions A and B and 22 are the only two
18 buildings where this licence is carried -- this licensed
19 activity is carried out?

20 **MR. MASON:** Peter Mason, for the record.
21 That is correct.

22 **MEMBER GRAHAM:** Is that specific area
23 fenced?

24 **MR. MASON:** Peter Mason, for the record.
25 The entire campus is fenced and twenty-four

1 out of seven security guard.

2 **MEMBER GRAHAM:** Okay. The next question I
3 have then is with regard -- Dr. Barnes asked with regard
4 to monitoring, and I gathered that only stack monitoring
5 was done.

6 None of the parking areas -- is there any
7 monitoring or any other type of monitoring wells or
8 anything else done in any other part of the parking areas
9 or so on or in those buildings?

10 **MR. MASON:** Peter Mason, for the record.

11 I am going to defer that to Mr. Henry Hann.

12 **MR. HANN:** Henry Hann, for the record.

13 No, we do not do other environmental
14 testing, as you describe. Stack sampling is the only
15 environmental testing that we do.

16 **MEMBER GRAHAM:** Question to CNSC staff. I
17 read that -- I read that also in the paved area located to
18 the southwest side of the main plant complexes, it is used
19 occasionally for parking, transport trailers containing
20 fuel bundles. Is it necessary to do any type of
21 monitoring there or have you considered that in the past?

22 **MS. THOMPSON:** Patsy Thompson, for the
23 record.

24 In terms of your question related to the
25 need for testing in addition to stack monitoring, the

1 answer is the CNSC's assessment is that the risks posed by
2 the facility are low.

3 If you look at the releases of uranium from
4 the Peterborough facility and compare them to the Toronto
5 facility they are almost two orders of magnitude lower.
6 The monitoring that is done in Toronto indicates that
7 levels of uranium in soils are natural background, so
8 there is no accumulation. And so there is little benefit
9 to doing this kind of monitoring at Peterborough when the
10 releases are two orders of magnitude lower.

11 So from a health and safety point of view
12 and protection of the environment, stack monitoring is
13 sufficient to ensure compliance with the regulations, but
14 also control on the plant operation.

15 **MEMBER GRAHAM:** Thank you.

16 Another question I have is with regard --
17 how close are residential areas to this whole facility?

18 **MR. MASON:** Peter Mason, for the record.

19 I would say on the west side, it is General
20 Electric car parking, no residential area. To the north
21 side, there is a road with residential accommodation
22 across the road from the campus, but a considerable
23 distance from the nuclear area.

24 **MEMBER GRAHAM:** Thank you. Back, I think,
25 if my recollection is correct, back in 2004, Peterborough

1 experienced some severe flooding, excess rain over a
2 period of a couple of days and we saw on the news severe
3 flooding.

4 Was any flooding -- did the flooding affect
5 any part of your campus?

6 **MR. MASON:** Peter Mason, for the record.

7 It did. In fact, in Building 21 where we
8 carry on the assembling operations, we had several inches
9 of water in the factory floor and also our shipping and
10 receiving well was flooded.

11 We sampled the water in the collection area
12 of the shipping and receiving well. It was found to be
13 non-detectable sort of quantities and the water was
14 discharged by pump to the sanitary sewer.

15 **MEMBER GRAHAM:** Does the CNSC staff care to
16 comment further as to the condition where the flooding
17 was?

18 Was it in an area that could have -- I
19 guess my question would be could the floodwater have been
20 in areas where they were manufacturing and, if so, how
21 would you have addressed that? Would it have been a
22 significant developmental report or were you on site
23 monitoring at that time? That is to CNSC staff.

24 **MR. WERRY:** David Werry, for the record.

25 CNSC staff were involved at the time and

1 notified by GE of the flooding issue. They were aware in
2 conference calls and participated in the analysis process
3 and, at this point, the discharge water was clean enough
4 that it was allowed to be discharged, or the chosen path,
5 and given the level of the situation, it was not necessary
6 for an SDR.

7 **MEMBER GRAHAM:** But as a lay person, just
8 for clarification, if the flood water comes up and there
9 is two inches of water within a building, it must have
10 come in somewhere. As the water drops, if it had been
11 found to be contaminated in any way, how would you have
12 contained it within the building to treat it rather than
13 it flowing out the same way it came in? I just don't
14 follow that.

15 **THE CHAIRPERSON:** I think that is a
16 question for the licensee.

17 **MR. MASON:** Thank you, Madam Chair. Peter
18 Mason, for the record.

19 I think there are two parts to the answer.
20 First of all, if we look at the manufacturing process, the
21 only area where we have any exposure of nuclear material
22 is where we actually assemble the pellets into the tubes.
23 At any given time, those pellets give off very minute
24 uranium powder, if any, and there are at any given time --
25 the very worst situation would be there would be six trays

1 of approximately 13 kilograms of material.

2 So there would be very little contamination
3 light to come off of that, and the fact that the water
4 only rose to two to three inches, at no time did it come
5 into contact with any of the equipment just by nature of
6 the level of it.

7 Our storm water floor drains have all been
8 welded over to prevent any type of spill from going into
9 the storm water drains, and the water drained into the
10 shipping and receiving well where -- it was tested before
11 it was disposed of to the sanitary sewer.

12 **MR. HANN:** Henry Hann, GE Canada, for the
13 record.

14 I just want to add something to that. I
15 was called in on the emergency call tree that morning, and
16 when I arrived at 5:30 in the morning in the specific area
17 and the only area where uranium pellets exist or are
18 available, there was only about an inch of water because
19 some floors are at different elevations than others. So
20 what we did was we used shop vacs and collected the water
21 and then tested and disposed of it.

22 There were other areas in our manufacturing
23 area where the floor was elevated a little higher that
24 didn't get any water on it. And the worst case was a
25 couple of inches.

1 **MEMBER GRAHAM:** The question to CNSC staff
2 is has there been any models run by the -- I know this is
3 once in I don't know how many years a flood like this, but
4 it reached the levels it did.

5 Are there any models that show that it
6 could have gone higher in future or in historic values --
7 in historic records that water could have been higher than
8 this in another storm at another time?

9 **MR. WERRY:** David Werry, for the record.
10 No, I am not aware of the model that we
11 have run at the time, but I will certainly check and
12 update the Commission.

13 **MEMBER GRAHAM:** Thank you.

14 My last set of questions are with regard to
15 fire protection and the use of local fire departments and
16 so on.

17 Is Peterborough operating with the
18 municipal fire department or a volunteer fire department?

19 **MR. WERRY:** David Werry, for the ---

20 **MR. MASON:** Peter Mason, for the record.

21 It's a municipal fire department, and we
22 carry on similar activities with the Peterborough fire
23 department as we do in Toronto in terms of annual
24 evaluations and also regular training for new fire
25 department employees.

1 **MEMBER GRAHAM:** Do you have a full
2 concurrence and agreement with the fire department that
3 they will come to the facility at any time to fight any
4 type of hazardous blaze?

5 **MR. MASON:** Peter Mason, for the record.

6 That is correct. Due to the nature of the
7 nuclear material there in pellet form, the risk is very
8 low.

9 **MEMBER GRAHAM:** No, but I did read
10 somewhere in the presentation that there are -- that
11 helium is used, that there are some alcohols and some
12 other types of gases that are used in testing, so there
13 are other things other than uranium or uranium-related
14 materials.

15 Is there agreement and also is training for
16 fire departments to handle those types of materials
17 because in your testing area, if I can find it, it went
18 into the specific materials that might be hazardous more
19 than just the nuclear ones.

20 **MR. MASON:** Peter Mason, for the record.

21 That is correct, and we inform and work
22 with the fire department in terms of identifying hazardous
23 materials within the plant other than the nuclear
24 material.

25 **MEMBER GRAHAM:** One further question with

1 regard to fire protection of CNSC staff: During the 2004
2 inspection you addressed or related to 16 action notices
3 and two recommendations of which one action notice still
4 remains open. Were any of these 16 action notices of
5 serious nature or are they just -- were they just
6 housekeeping action notices?

7 **MR. WERRY:** David Werry, for the record.

8 The action notices were minor in nature and
9 housekeeping, of which they addressed them and responded
10 to staff.

11 **MEMBER GRAHAM:** Just the one outstanding
12 one which remains open, when do you feel that that will be
13 closed?

14 **MR. HANN:** Henry Hann, for the record.

15 That deals with an organic material
16 dispensing room to fire code, and that's for our isopropyl
17 alcohol drum. We have one drum on site, and we have
18 constructed the room and we have submitted an application
19 for the C of A permit, and it really depends on how
20 quickly we can get that C of A through the MOE.

21 **THE CHAIRPERSON:** Dr. Barnes.

22 **MEMBER BARNES:** I couldn't resist, just the
23 question on the sprinkler systems since just as a follow
24 up on fire protection, so should there be a fire, and
25 sprinklers, where does that water accumulate, in the

1 basement again?

2 **MR. MASON:** Peter Mason, for the record.

3 We don't have a basement in that facility.
4 The water would be on the factory floor. It would drain
5 to the lowest areas, and then it would have to be tested
6 and disposed of.

7 **MEMBER BARNES:** But you just told us that
8 you have sort of welded all the storm exit locations,
9 right, for I guess a good deal of the plant. So it would
10 presumably accumulate in the -- is it a single-story
11 facility?

12 **MR. MASON:** Peter Mason, for the record.
13 It's a two-story building, but the manufacturing is on the
14 ground floor level.

15 The water would tend to drain towards the
16 lowest area, which is the shipping and receiving area.
17 There may be small puddles left after that drained, but
18 there has been no concern in terms of requiring total
19 containment of the water from the sprinkler system.

20 **MEMBER BARNES:** Does the second story have
21 a sprinkler system?

22 **MR. MASON:** Yes, it does.

23 **MEMBER BARNES:** So is staff satisfied with
24 this as a mechanism?

25 **MR. HOWDEN:** Barclay Howden speaking.

1 In the issue of containment, this was
2 identified as an issue in 2004 because the modern fire
3 codes require containment.

4 However, being an old building when these
5 issues arise there is other ways of addressing it, and one
6 is to build in containment. Other things are to assess
7 the risk associated with a facility should there be
8 firewater going through the facility.

9 Our assessment at the time was that the
10 potential to have contaminated water leaving the facility
11 is very low. That doesn't mean that fire water could
12 leave the facility. Contaminated fire water would leave
13 the facility.

14 We spoke with our fire specialist this
15 morning who is unfortunately not here at the moment, and
16 he indicated since we are going to be doing an update for
17 you on the GE Toronto facility on containment, that we
18 would offer you the details of our assessment on the GE
19 Peterborough with regard to containment, because it's
20 easier for us to write and put it into context for you, if
21 you wish.

22 But we view that right now as low risk and
23 a low-priority issue, but we can provide further details,
24 if you wish.

25 **MEMBER BARNES:** Sure, I understand it's low

1 and I guess the chance of it happening is also low.
2 Nevertheless, we need to look at that as a rare -- a
3 potential rare event.

4 From what I think I heard, the storm drain
5 outlets on most of the plant have been sealed and that any
6 sprinkler water with some possible contamination, because
7 it is coming from the second floor through the floor,
8 right, so presumably it is potentially passing through
9 uranium pellets that are on tables or whatever and then
10 eventually accumulating on the floor of the ground floor.

11 Then, we are told that it will generally
12 find its way for the most part into the shipping and
13 receiving area but, presumably, that has a drain that
14 isn't sealed.

15 So I am not quite sure how that water would
16 be retained in the shipping and receiving area. Wouldn't
17 it simply start to flow into the storm sewers?

18 **MR. MASON:** For the record, Peter Mason.

19 Two things. First of all, in terms of the
20 water coming through the second floor, indeed from the
21 ground floor sprinkler system, at any given time, there
22 are only, as I mentioned earlier, only six trays of
23 uranium pellets exposed. If we poured water over a tray
24 of uranium pellets the contamination coming off of there,
25 I think, would be almost immeasurable.

1 The second point, in terms of the water
2 draining to the lowest area, which would be the shipping
3 and receiving area, there is no drain in that for proper
4 reasons, actually. We don't want it to go to the drain
5 until it has been tested and then we would pump it into
6 the sanitary sewer once it had been tested and confirmed
7 to be free of contaminants because we are not only
8 concerned with nuclear contaminants but also, as I believe
9 Mr. Graham mentioned, also other hazardous chemicals
10 within our manufacturing process.

11 **MEMBER BARNES:** Okay. Thank you.

12 **THE CHAIRPERSON:** Further questions? Yes,
13 Dr. Dosman.

14 **MEMBER DOSMAN:** Thank you, Madam Chair.

15 I have a question of the company with
16 regard to safety culture. I take it that there are not
17 only employees on site in the nuclear fabrication, there
18 are other employees on the same site doing other things
19 for GE like there is a larger -- the nuclear workers are
20 in the context of a larger workforce on site; am I right
21 in that?

22 **MR. MASON:** For the record, Peter Mason.

23 You are right. It is a large campus with
24 three businesses, GE businesses; GE Nuclear, of course; GE
25 Motors and GE Hydro. There are, I think, some 800

1 employees in GE Motors and we share the same campus.

2 But we also share the same corporate
3 Environmental Health & Safety System, rigours, evaluation,
4 et cetera.

5 **MEMBER DOSMAN:** Well, then -- thanks for
6 that clarification in that context. How do the
7 Occupational Health and Safety Committees work;
8 specifically, is there a separate Health and Safety
9 Committee for the area involving nuclear workers?

10 **MR. HANN:** Henry Hann, for the record.

11 We have two Health and Safety Committees in
12 the -- two unions, sorry, that are represented by Health
13 and Safety Committees.

14 The one is the Canadian Auto Workers, and
15 it is one committee for the entire plant. The other union
16 is the technician union, and we have a separate committee
17 for that technician union, mainly because our business has
18 most of the technicians within the campus.

19 **MEMBER DOSMAN:** May I inquire, would the
20 Health and Safety Committee composition adequately address
21 the health and safety concerns of those workers onsite who
22 are handling nuclear materials?

23 **MR. HANN:** Henry Hann, for the record.

24 What we did to address that is a number of
25 years ago we had our EA associates come in and do a

1 federal/provincial safety legislation comparison, and then
2 they ran a training session for all of our health and
3 safety members on both the federal and provincial
4 requirements.

5 Then, we also ran radiation protection
6 training, and also ALARA training classes for the Health
7 and Safety Committee members that are assigned to our
8 building.

9 **MEMBER DOSMAN:** Thank you for that
10 information, but it doesn't quite get at the question that
11 I'm after.

12 Does the Health and Safety Committee, which
13 would be responsible or which would be interested in the
14 health and safety of nuclear workers, contain
15 representatives from amongst the workers exposed to
16 nuclear materials?

17 **MR. HANN:** Yes, it does. Members of our
18 business are on the Joint Health and Safety Committee.

19 **MEMBER DOSMAN:** Thank you.

20 **THE CHAIRPERSON:** Further questions?

21 Mr. Secretary.

22 **M. LEBLANC:** Merci.
23