

*Order Paper Questions*

4. If the vent valves fail to function due to "common mode" failure would the vacuum building be incapacitated?
5. Has the AECB sufficient independent expertise to evaluate the contents of the computer codes which are used in CANDU safety analysis?
6. (a) How many computer codes are used in CANDU safety analysis (b) what are their names and functions (c) where do they originate?
7. Have any of the computer codes been modified in order to minimize discrepancies with observed phenomena?
8. Is AECL or Ontario Hydro competent to do three-dimensional transient analysis in the course of CANDU safety analysis?
9. Does AECB have the necessary expertise to independently evaluate the use of computers for control functions at the Bruce Atomic Generating Station?
10. What has been the experience with regard to the combined availability of the two computers used for control functions at the Bruce Atomic Generating Station?
11. (a) What is a power tilt and how does it develop (b) can a power tilt get out of control and, if so, what are the results (c) does the Bruce Atomic Generating Station demonstrate a tendency to develop a power tilt and, if so, at what power levels does such a tendency first manifest itself?
12. Is it possible for ballooning fuel rods to block the flow of coolant in a pressure tube and, if so, what would be the result?
13. How many seconds will elapse before a pressure tube deprived of coolant will explode assuming the reactor (a) is operating at full power (b) has just been shut down?
14. Is there any conclusive proof that an exploding pressure tube cannot precipitate similar explosions or failures in neighbouring pressure tubes and, if so, what is it?
15. Has the Lucens accident in Switzerland in 1969, in which an exploding pressure tube collapsed hundreds of other calandria tubes and totally destroyed the core of the reactor, been carefully studied because of its possible safety implications for CANDU reactors and, if so, by whom and with what results?
16. What assurances are there that embrittlement of pressure tubes due to constant or only moderate bombardment with neutrons will not weaken some of the tubes to such an extent that they may explode spontaneously?
17. (a) Are there signs posted in the area of the Pickering Generating Station indicating the nature of the dangers therein or are there simply "No Trespassing" signs in the outer and inner perimeter fences (b) are warning signs posted in English only or in both official languages?
18. Have members of the public wandered within the confines of the inner fence and, if so, on what occasions?
19. (a) What improvements in security have been undertaken since Dr. Morton Schulman made his unauthorized entry into the Pickering Plant (b) how many guards are posted at Pickering (i) by day (ii) by night (c) is there a gap at the western end of the outer perimeter fence where it meets Lake Ontario through which members of the public may and do wander freely onto the grounds at the installation?
20. What laws and regulations are in effect to keep the public outside the grounds of nuclear facilities?
21. What is the maximum credible direct impact of an airplane in terms of size and speed that one of the Pickering reactors could withstand?
22. How many grams of (a) plutonium (b) uranium exist in Canada in a pure state or in a state that would qualify it as "strategic nuclear material"?
23. What is the anticipated amount of "strategic" plutonium that will be in existence in Canada in (a) 1980 (b) 1990 (c) 2000 (d) 2025 (e) 2050?
24. Is it possible for a CANDU reactor to suffer a major release of radioactivity as a result of (a) a conventional artillery or mortar assault (b) a single well placed conventional explosive charge and, if so, approximately how many living people possess the knowledge of where to place such a charge?
25. Does the government have contingency plans for the evacuation of the Toronto metropolitan area in the event of a major radiation release at the Pickering Nuclear Power Station?
26. (a) How long would it take to evacuate the maximum credible area endangered by a CANDU failure (b) what would be the dollar cost of decontamination of such a maximum credible area?
27. (a) Has the government established guidelines for coping with nuclear blackmail (b) what would be this government's reaction to credible evidence that some person or persons in Ottawa were in possession and control of a nuclear bomb?
28. What specific plans and guidelines have been developed for decommissioning CANDU reactors and installations at the end of their useful period of service?
29. What are the anticipated total dollar costs of decommissioning the (a) Pickering (b) Bruce facilities?
30. What progress has been made in the research and development of the fuel processing capability?
31. How much has been (a) spent (b) committed toward R & D of this capability?
32. Is nuclear energy, in the government's opinion, economically viable over the long term (a) without (b) with the development of the fuel reprocessing option?
33. Are any sites in Canada now under consideration for fuel reprocessing facilities and, if so (a) what are they (b) has any land been acquired by the federal or provincial governments at any site?
34. What are the (a) costs (b) conclusions involved in re-using plutonium as reactor fuel in Canada?
35. Has any progress been made in the assessment of the environmental, public health and safety risks involved in re-using plutonium as a reactor fuel and, if so, are these risks greater when plutonium is re-used?
36. (a) Has AECL undertaken development of a second generation CANDU that can use recycled plutonium and, if so, on what date was the decision made and by whom (b) when is this second generation CANDU expected to come on line (c) what are the anticipated R and D costs of such a programme (d) how much has been (i) spent (ii) committed to such a programme?
37. In the government's opinion, is nuclear power economically viable (a) without (b) with second generation development?
38. Is it possible that a fully fuelled CANDU reactor be destroyed by sabotage, error, explosion, or earthquake and, if so, what is the government's estimate of the (a) likely (b) maximum possible, extent of nuclear contamination on the surrounding environment and the affects on public health and safety of such an event?
39. (a) Was there an accident at the Chalk River NRX facility on December 12, 1952 and, if so, what was the extent of the damage that occurred on that date and in the period immediately following (b) have the causes of the accident been traced to (i) human error (ii) mechanical failure (iii) or a combination of both (c) what were the nature and extent of the repairs (d) what amount was spent on the repairs (e) how long was the reactor shut down following the incident (f) was any leakage of nuclear contaminants involved (g) what was the minimum distance that separated significant volumes of radioactive fluids from the Ottawa River in the period until this accident was brought under control?
40. (a) Was there an accident (fire in the NRU refuelling machine) at the Chalk River NRU facility on May 25, 1958 and, if so, what was the extent of the damage that occurred on that date and in the period immediately following (b) have the causes of the damage been traced to (i) human error (ii) mechanical failure (iii) or a combination of both (c) what was the nature and extent of the repairs (d) what amount was spent on the repairs (e) how long was the reactor shut down (f) was any leakage of nuclear contaminants involved (g) what was the minimum distance that separated significant volumes of radioactive fluids from the Ottawa River in the period until this accident was brought under control (h) how many square metres around the NRU building were contaminated?
41. Has the government undertaken any correspondence with the USA regarding the accident that took place at Lagoona Beach, Michigan, in the Enrico Fermi I Reactor?

Return tabled.