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From: Jack Cushing
To: maryann.parkhurst@pnl.gov
Date: 6/7/04 8:52AM
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Mary Ann

Attached are the draft follow-up questions to Dominion's RAI responses. These are being transmitted to you and Dominion in order to support a telcon. Are you and the other team members available to support a call today 6/7/04 at 1 pm EST? If you are I will set up a bridge line. The purpose of the call is to clarify the responses.

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Draft

Follow-up Requests/Questions to Dominion's RAI Responses

1. **RAI E3.8-1 (Section 3.8.1 of ER)** - The radionuclide inventory data for the IRIS and ACR-700 plants is needed.
2. **RAI E3.8-5 (Section 3.8.2.3 of ER)** - The RAI response states that the initial core fuel loading for the PBMR is 20 MTU (2.5 MTU per reactor module), and the annual average fuel loading is 6.32 MTU/1000 MWe. The fuel design technical basis document states that 260,000 spheres are in the initial fuel loading of 2.5 MTU per reactor module with an annual reload of 18,000 spheres per module. The 18,000 fuel spheres per reload seems low. The average annual fuel reload is 6.32 MTU/1000 MWe (equivalent to 1 MTU per 165 MWe module) per the technical basis document. Provide the calculation to justify the number of spheres required for a reload.
- RAI E3.8-12 (general comment)** - Provide a transportation risk assessment for gas-cooled reactor spent fuel shipments using an acceptable methodology such as RADTRAN V.
4. **RAI E5.4.2-1 (Section 5.4.2 of ER, Radiation Doses to Member of Public)** - The RAI response provided occupational dose estimates for AP1000, ABWR, IRIS, and GT-MHR but did not provide a reference for the estimates. This information conflicts with information found in the Dominion document dated 9/27/02 entitled Study of Potential Sites for Deployment of New Nuclear Plants in the United States, which provides an upper bound value for occupational doses of 100 person-rem/y. The RAI response provides an upper value of 150 person-rem/y. Clarify which value is correct.
5. **RAI E5.4.2-2 (Section 5.4.2 of ER, Radiation Doses to Member of Public)** - In Table 5.4-1, what is the basis for the dilution factor for discharge of 10?
6. **RAI E5.4.3-1 (Section 5.4.3 of ER - Impacts to Man)** - Provide the information on how the population doses in Table 5.4-12 of the ER were calculated. The footnote to Table 5.4-12 states that 125 mrem/person-yr was used to calculate collective dose to natural background. The value seems low, NCRP Report 94 (Exposure of the Population in the United States and Canada from Natural Background Radiation) estimates dose to natural background radiation as 300 mrem/y. Explain the difference.
7. **RAI E5.4.4-1 (Section 5.4.4 of ER - Impacts to Biota)** - Table 5.4-16 has a value of 27 mrem annually to the biota from the gaseous effluent pathway. How was this value obtained?