

From: David Diec, *NLR*
To: Glenn Kelly; Goutam Bagchi; Jason Schaperow; Joseph Staudenmeier; Kathy *NLR + RCS*
Gibson; Robert Palla; Vonna Ordaz
Date: Tuesday, March 06, 2001 05:08 PM
Subject: Questions to ask the international community on SFP

Folks,

In addition to a list of questions Diane sent, below are my thoughts. Feel free to suggest changes.

David

- 1) Has there been any plant shutdown permanently? If yes, how many and how long have they been shutdown?
- 2) If the plant shut down permanently, is the pool full or partially full with spent fuel?
- 3) What is a storage capacity of SFP at a decommissioning plant?
- 4) What are the current regulatory requirements put in place to ensure the capability of decommissioning plants to provide SFP cooling, leaks detection, pool level indication and makeup?
- 5) What are the current designs (high density or low density) of spent fuel racks? How would they impact the spent fuel during a loss of pool cooling at decommissioning plants.
- 6) Do you reprocess spent fuel? If Yes, how long would the spent fuel be remained in the pool before being transported to the reprocessing facility?
- 7) How long will the spent fuel be remained in the pool at the decommissioning plants?
- 8) Do you have an interim spent fuel storage program? (i.e., dry cask storage) What are the requirements associated with spent fuel dry cask?
- 9) What are the structural design criteria used to design the SFP? (seismic design classification, minimum temperature for evaluation of thermal stress from loss of cooling events).
- 10) What emergency preparedness and safeguards are required for decommissioning plants? What are the bases for these requirements?
- 11) If risk assessment has been performed for a decommissioning plant, what are the accident initiating events, the worst case accident scenarios, and the likelihood and consequence of spent fuel uncover? Is the risk assessment performed plant specific or generic?
- 12) Are exemptions (i.e., emergency preparedness, safeguards, insurance,...) granted for decommissioning plants? What are they and the bases for these exemptions?

CC: Charles Tinkler; Diane Jackson; George Hubbard; Glenn Tracy; Timothy Collins

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From: Diane Jackson
To: David Diec; Glenn Kelly; Goutam Bagchi; Jason Schaperow; Joseph Staudenmeier; Kathy Gibson; Robert Palla; Vonna Ordaz
Date: Tuesday, March 06, 2001 02:13 PM
Subject: Re: Additional information from international community on SFP

Here are some that I have thought of... Please add or modify as anyone sees fits.

Diane

- 1) Have plant-wide risk assessments ever included the spent fuel pool? If so, please explain.
- 2) Has a risk assessment been performed on any spent fuel pool, either generically or on a specific plant? If so, please explain.
- 3) What accidents are considered for the spent fuel pool at decommissioning plants?
- 4) Are beyond design basis accidents considered for any regulation? If so, what are the accidents.
- 5) Has the source term from spent fuel, particularly the percentage of ruthenium, ever been investigated? If so, what source term would be used?
- 6) Have heavy load drops (100 tons) in the spent fuel pool or on the wall of the pool been analyzed? If so, please explain.
- 7) Has a threshold been established, either deterministic or risk value, for what would be considered a hypothetical event? If so, what is the threshold and the reasoning for it?
- 8) Has any work been performed on zirconium-air oxidation? If so, please explain.

>>> David Diec 03/06/01 01:35PM >>>

We are in the process of seeking additional information from the international community on SFP risks at decommissioning plants. This effort is in response to the question raised by Commissioner McGaffigan at the recent Commission briefing.

Please forward me a list of questions, if any, in the areas of EP/Safeguards, thermal hydraulics, seismic, and risks and consequences. I plan to forward the consolidated list of questions to Mike Cullingford by EOB Friday 3/9/01.

CC: Charles Tinkler; George Hubbard; Glenn Tracy; Timothy Collins