NRC FORM 699 (9-2003) U.S. NUCLEAR REGULATORY COMMISSION

CONVERSATION RECORD

DATE: 06/23/2006

TIME: 9:30am

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU: Thomas Matthews

TELEPHONE NO.:

ORGANIZATION: Omaha Public Power District (OPPD)

SUBJECT: Discussion of Issues Associated with 6/9/06 OPPD Exemption Request Related to Fort Calhoun's Use a Light Weight Transfer Cask for an Upcoming Dry Fuel Storage Campaign

TYPE OF CONVERSATION:
- [ ] VISIT
- [ ] CONFERENCE
- [x] TELEPHONE
  - [x] INCOMING
  - [ ] OUTGOING

SUMMARY *(Continue on Page 2)*

Omaha Public Power District (OPPD) Attendees: Bernie Van Sant, Tom Matthews, and Rich Jaworski.

NRC Attendees: Shana Helton, Elizabeth Thompson, and Joe Sebrosky

Transnuclear Inc., (TN) Attendees: Jim Axline, Robert Grubb, UB Chopra, Prakesh Narayanan

The purpose of the phone call was to resolve questions that the staff had regarding OPPD's exemption request dated 6/9/06 (see ADAMS ML061650157 for the exemption request).

The staff's 6 questions and OPPD's responses are provided below.

1. Have prior TN applications used a methodology for estimating transfer cask dose rates that involved reporting average, instead of maximum, dose rates? Specifically, which application(s) used such methodology, and did the application(s) involve the same method of angular averaging as was used to obtain the proposed limits for TS 1.2.11 (see pages 11 and 12 of Attachment 1 of the exemption request)?

OPPD answer: TN typically calculates a maximum dose rate

2. Page 12 of Attachment 1 of the exemption request cites a dose rate of 53 rem/hr on the surface of the transfer cask loaded with 24 kW fuel. Is this dose rate the maximum dose rate, or an average of some sort (angular averaged, etc.)?

OPPD answer: The 53 rem/hr dose rate is a maximum dose rate. The NRC staff indicated that a request for additional information may be written on this issue because OPPD's exemption request indicates that the 53 rem/hr dose rate is compared to a 13 rem/hr average dose rate. OPPD's response indicated that the 13 rem/hr dose rate was inadvertently characterized as an average. It is actually a maximum dose rate.

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ACTION REQUIRED

None - for OPPD
NRC to determine if any question needs to be documented in a request for additional information

NAME OF PERSON DOCUMENTING CONVERSATION: Joe Sebrosky

SIGNATURE:

DATE: 6/26/06

ACTION TAKEN

Not applicable - if a request for additional information is needed it will be documented in a separate correspondence.

TITLE OF PERSON TAKING ACTION

SIGNATURE OF PERSON TAKING ACTION

DATE

CONVERSATION RECORD (Continued)

SUMMARY *(Continue on Page 3)*

3. In TN's calculation NUH06L-0500, how do the dose rates in Table 8 (p. 34 - 95.871 rem/hr), Table 14 (p. 46 - 53.249 rem/hr) and Table 23 (p. 88 - 53.249 rem/hr) for configuration B differ? One says the surface dose rate for the configuration B transfer cask is 95.781 rem/hr, the other says 53.249 rem/hr. Likewise, how do the dose rates in Table 15 (p. 47 - 86.691 rem/hr) and Table 30 (p. 92 - 86.691 rem/hr) differ from the dose rate given in the table on page 95 of Appendix W (138.019 rem/hr)?

OPPD answer: The 95.9 rem/hr and 53 rem/hr dose rates are for normal conditions. The 95.9 rem/hr dose rate is calculated without taking credit for the aluminum rails that are provided in the 32PT dry shielded canister (DSC). The 53 rem/hr value was calculated taking credit for the aluminum rails in the 32PT DSC. \

The 86.7 rem/hr and 138 rem/hr dose rates are for accident conditions. The 86.7 rem/hr value was calculated assuming only water is removed from the neutron shield (the steel inner and outer shell for the neutron shield remain intact and provide shielding). The 138 rem/hr value assumes the complete loss of the neutron shield including the water and about 1/2 inch of steel.

4. On page 95 of attachment 2 of the exemption request section W.11.1.4 evaluates the loss of the neutron shield. There is a statement in this section that "since the trailer shield is not important to safety, the analysis conservatively assumes that all the trailer shielding is lost." Has this statement been evaluated against the criteria in 10 CFR 72.48(c)(2)(v) - create a possibility for an accident of a different type than any previously evaluated in the FSAR? What is the basis for OPPD not requesting an exemption from 72.48(c)(2)(v)?

OPPD answer: Yes, OPPD and TN evaluated the loss of the trailer shielding against the criteria in 10 CFR 72.48(c)(2)(v) and determined that this did not create the possibility for an accident of a different type than any previously evaluated in the FSAR. TN considers the loss of the trailer shielding to be the same type of accident as the loss of neutron shielding accident scenario. TN stated that in both cases the shielding that is inside the structural steel (including the structural steel itself) for the transfer cask is assumed to remain intact for a drop accident. The shielding outside of the structural steel for the transfer cask is assumed to be lost (i.e., the neutron shield and the trailer shielding). TN did evaluate in its 72.48 the loss of the neutron shield and transfer cask shielding against the criteria in 72.48(c)(2)(iii) - result in more than a minimal increase in the consequences of an accident previously evaluated in the UFSAR. TN and OPPD determined that the loss of the neutron shielding and the loss of the trailer shielding did not trip this criteria.

5. "Are the relative errors reported in TN calculation 1121-0505 given in percent or fraction amounts? See Tables 8 - 11."

OPPD answer: The MCNP runs provide results in percent amounts, which were reported in TN calculation 1121-0505.

6. Page 11 of Attachment 1 of OPPD's exemption request provide a table regarding the axial dose rate measurement configuration. This table notes that the automated welding system with integral shield are in place and included in the axial shielding. Page 6 of TN calculation NUH06L-0502 Revision 0 notes that the welding operation takes place when the DSC is partially filled with water with the top portion of the fuel assembly, including the active fuel region, remaining dry and the presence of temporary shielding (steel and NS-3) in the axial direction. Is the temporary shielding in the axial direction discussed on page 6 of TN calculation NUH06L-0502 the automated welding system with integral shield mentioned on page 11 of attachment 1 of OPPD's exemption request?

OPPD answer: Yes

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