November 21, 2000

MEMORANDUM TO: M. Wayne Hodges, Deputy Director
Technical Review Directorate
Spent Fuel Project Office
Office of Nuclear Material Safety and Safeguards

FROM: Mark A. Cunningham, Chief /RA/
Probabilistic Risk Analysis Branch
Office of Nuclear Regulatory Research

SUBJECT: SITE VISIT PLAN FOR DRY CASK HUMAN RELIABILITY ANALYSIS CONTRACTOR

Attached is a revised site visit plan for the RES contractor (INEEL) to perform the human reliability analysis of the dry cask storage process at the E. I. Hatch Nuclear Power Plant (Hatch). This plan was discussed with your staff, other members of NMSS, Region II personnel, and an NRC resident inspector at Hatch during a telephone conference on Wednesday, October 15, 2000. We have revised it based on their comments and new information for the schedule of the loading of the activities of the HI-STORM cask. Members of the SFPO Technical Review and Spent Fuel Licensing Sections have indicated that they will use this plan to obtain the cooperation of Southern Nuclear Company and the Hatch plant staff in the performance of this analysis. This plan may be revised to accommodate changes in the Hatch loading schedule.

The first visits will be scheduled around the dry run of the loading of the HI-STORM cask at Hatch currently scheduled for April 2001. Please contact Ed Rodrick (Ext. 5871) or Chris Ryder (Ext. 6102) to let us know if you or your staff have any questions or suggestions regarding this plan.

Attachment: As stated

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SITE (HATCH) VISIT PLAN

HUMAN RELIABILITY ANALYSIS (HRA) CONTRACTOR FOR DRY CASK STORAGE (DCS) PROBABILISTIC RISK ASSESSMENT(PRA)

The following is the site visit plan for the NRC contractor to visit the Hatch plant site in order to perform a human reliability analysis (HRA) of the handling aspects of the Holtec HI-STORM dry cask system. The contractor will study human reliability of the complete dry cask storage process (loading, preparation, transport (on site) and storage) of the HI-STORM cask for the purposes of assessing the risk due to this aspect of the process.

ACCESS NEEDS

The contractor will need to have access to the Southern Nuclear Plant, E. I. Hatch, located in Baxley, Georgia. The specific areas for which access is necessary are those for which visual observation of the complete dry cask storage process can be made in close proximity to the activities. These will include: the fuel handling building, all paths on which the cask will be transported to and from the onsite storage pad, and the storage pad. In addition, access for visual inspection of controls of any equipment used in the handling of the HI-STORM cask through the complete process will be necessary, although not necessarily at the time of cask handling. During the actual loading, the contractor will need to witness all activities related to the following: (1) loading of the fuel into the multipurpose container (MPC) within the HI-TRAC transfer cask, (2) HI-TRAC/MPC withdrawal from the spent fuel pool, (3) MPC storage preparation activities (including, draining, drying, and pressurizing and welding), (4) lifting the HI-TRAC/MPC and lowering it from the fuel handling building (FHB) refueling floor (level 228') to be placed atop the HI-STORM in the reactor building (RB) (level 130'), (5) transfer of the MPC from the HI-TRAC to the HI-STORM, (6) sealing the HI-STORM and removal of the HI-TRAC, (7) lifting, transporting, and placing the HI-STORM/MPC to the storage pad by the transporter.

At least one member of the NRC staff will escort contractor personnel at all times while they are within the protected area.

SCHEDULE

The contractor will need to visit the Hatch site several times as discussed below. The first HI-STORM cask is scheduled to be loaded at Hatch in the summer 2001. However, the contractor can take advantage of the dry run scheduled for April 2001 to witness the MPC, HI-TRAC and HI-STORM activities being done at that time. This visit will allow the contractor to prepare for the visit when the HI-STORM is loaded in the summer.

The timing of these visits will be coordinated with the schedule for the dry run and actual loading of the HI-STORM cask. Visits to the site are planned for April and the summer 2001:

- Before the dry run. The contractor will need to become familiar with the areas and equipment to be used for the complete process. (about 2 days)

- April 2001. The contractor will need to observe the dry run. (for the duration of the dry run)

- Summer 2001. The contractor will need to observe fuel being loaded into the MPC and transferred with the HI-TRAC to the HI-STORM, (1 week). An additional visit subsequent to this activity may be necessary to clarify remaining issues. (one day)

PERSONNEL

CONTRACTOR

- Idaho National Engineering and Environmental Laboratory (INEEL) will be the HRA contractor. Generally there will be only one person from the INEEL to visit the site, but occasionally two may be needed.

NRC

- Personnel from the Office of Nuclear Regulatory Research (RES) are responsible for overseeing the performance of the HRA analysis by the contractor personnel.

- At least one member of the NRC staff will escort the contractor personnel at all times when they are within the protected area. It is necessary for this member of the staff to have completed NRC site access training, and have unescorted access privileges to the site. Early in the contractor site activities, the initial NRC escort may need to be familiar with the Hatch site in order to facilitate contractor access to the desired areas, if plant personnel are not available.

PLANT

- It is expected that the plant staff will want to be with the contractor during their visits within the protected area to provide supervised access to the relevant areas and equipment, and answer any questions.

- Access to plant/contractor engineering, operations, maintenance and rigging personnel for information regarding all areas of the dry cask storage process is necessary to perform the HRA analysis.

MATERIALS NEEDED

In order to perform the HRA, the contractor will need the following materials:

- Plant procedures and related drawings used for the complete HI-STORM dry cask process operations, including related administration and maintenance procedures. (Hatch to provide)

- One copy each of the Topical Safety Analysis Report and the Safety Evaluation Report for the Holtec HI-STORM 100 Cask System. (NRC to provide)

LOGISTICS

NMSS/SFPO will coordinate all site visits with the schedule of the Hatch plant personnel so the presence of the NRC and contractor personnel will not impede any plant operations.

All visits to the Hatch plant will be arranged with the appropriate NRR, Region II, and NRC Hatch resident inspectors through the NMSS/SFPO project manager [(PM) (Stephen O'Connor or backup)]. In addition, the SFPO PM or other SFPO personnel will identify and arrange for the appropriate Hatch plant personnel to be available to assist RES personnel and the HRA contractor in plant access, egress, and escort, and also to facilitate communication between the HRA contractor and the necessary plant personnel as listed above.

During the analysis and upon its completion, the Hatch plant staff and management will have the opportunity to review and comment on the contractor analysis.