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ATTN: Document Control Desk
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Edwin I. Hatch Nuclear Plant
Response to Informal NRC Questions Regarding Proposed Emergency Action Levels
Associated with the Independent Spent Fuel Storage Operations

Ladies and Gentlemen:

Recently, Southern Nuclear Operating Company (SNC) and NRC staff participated in a conference call to answer informally submitted questions regarding the Plant E. I. Hatch proposed Emergency Action Levels associated with the Independent Spent Fuel Storage operation. Since the call, the staff has requested a written response to the questions. The enclosure to this letter provides the response. Each question is repeated verbatim per an associated fax from the staff, followed by the response.

Should you have any questions in this regard, please contact this office.

Respectfully submitted,

Lewis Sumner

H. L. Sumner, Jr.

JAW/eb

Enclosure: Response to Informal NRC Questions Regarding Proposed Emergency Action Levels Associated with the Independent Spent Fuel Storage Operations

cc: (See next page.)

A001

cc: Southern Nuclear Operating Company
Mr. P. H. Wells, Nuclear Plant General Manager
SNC Document Management (R-Type A02.001)

U.S. Nuclear Regulatory Commission, Washington, D.C.
Mr. L. N. Olshan, Project Manager - Hatch

U.S. Nuclear Regulatory Commission, Region II
Mr. L. A. Reyes, Regional Administrator
Mr. J. T. Munday, Senior Resident Inspector - Hatch

Enclosure

Response to Informal NRC Questions Regarding Proposed Emergency Action Levels
Associated with the Independent Spent Fuel Storage Operations

This enclosure is in response to an informal request for additional information regarding new Emergency Action Levels related to the Independent Spent Fuel Storage Installation (ISFSI). The following questions were provided by the NRR Hatch Project Manager:

NRC Question No. 1

Hatch EAL 17.1 reads as follows:

> *Loss of cask confinement boundary for any loaded spent fuel cask*
>
> *A Notification of Unusual Event exists when:*
>
> > *Direct Radiation levels outside the Independent Spent Fuel Storage Installation (ISFSI) protected area boundary exceed:*
> >
> > > *2 mrem in an hour*
> >
> > *AND*
> >
> > > *Contamination levels outside the ISFSI protected area boundary exceed the technical specification limits for spent fuel storage cask surface contamination*
> > >
> > > *OR*
> > >
> > > *Direct Radiation Readings for a Loaded Spent Fuel Cask exceed the technical specification limit for overpack average surface dose rates*

The condition of direct reading levels outside of protected area boundary does not seem to be necessary for conditions warranting an Unusual Event classification to exist. It seems that the last two conditions should be sufficient. Please provide additional information justifying why the first condition is necessary.

SNC Response

The logical connectors employed in this EAL ensure that direct radiation readings or contamination levels on any spent fuel cask (SFC) are evaluated against the offsite dose limits specified in 10CFR20.1301(a)(1) and 10CFR1301(a)(2). These initiating conditions would be discovered through routine surveillance / observation as part of the plant radiation protection program. The pairing of direct radiation on an individual SFC or contamination levels with exceeding the dose limit to a member of the public establishes the proper perspective for these conditions.

The purpose of the NOUE announcement is to notify personnel that events are in progress which indicate a potential degradation of the level of safety of the plant. The coupling of the first condition with the next two conditions is necessary because either condition alone would not necessarily indicate a "potential degradation." Either, or both, of the second set of conditions without the 2 mr in an hour reading at the ISFSI site boundary may indicate abnormal conditions but not necessarily a potential degradation of the level of safety of the plant. For example, if only the direct radiation reading Technical Specifications (TS) limits at the loaded cask were being exceeded, this would not warrant declaration of an NOUE. It is not typical to declare an NOUE on exceeding TS limits alone.

The intent of this EAL is to declare an NOUE when the 2 mr in an hour dose rate at the boundary is due to a problem with one or more of the spent fuel storage casks. A 2 mr in an hour dose rate could occur for reasons other than abnormally high radiation from a storage cask. For example, it could be exceeded at the ISFSI site boundary during transfer operations. It is, therefore, not appropriate to declare an NOUE on a 2 mr in an hour dose rate at the ISFSI site boundary alone.

Direct Radiation Levels

The initiating condition related to direct radiation readings is based on the TS limit for direct radiation readings on the spent SFC. Direct radiation readings on the overpack are limited by the cask TS 3.2.1, Overpack Average Surface Dose Rates (contained in Holtec's Topical Safety Analysis Report, NRC Docket 72-1008). The limits specified in the TS must be satisfied prior to transport of the SFC to the ISFSI. However, the TS allows the limits to be exceeded provided that appropriate analysis is performed. For purposes of providing a bounding limit and to ensure regulatory compliance for the EAL, the limits of 10CFR20.1301(a)(1) and 10CFR1301(a)(2) are applied. This EAL is intended to encompass those conditions whereby a SFSC is discovered to be in excess of the TS limits after being transferred to the ISFSI. However, this EAL will also be applicable for those cases where a SFC is located at the ISFSI with known direct radiation level readings greater than the limits specified in TS, which have been analyzed and approved as allowed by the TS.

Direct radiation readings on the overpack in excess of the TS limits could indicate a loss of control during loading operations or the cask confinement boundary or shielding has been degraded. In either case, declaration of the NOUE is warranted only when coupled with exceeding the dose limit at the ISFSI protected area boundary.

Contamination Limits

The initiating condition related to contamination levels is based on the TS limit for removable surface contamination on the SFC. Removable contamination on the surface of the overpack is limited by TS 3.2.2, SFC Contamination. The limits specified in the TS must be satisfied prior to transport of the SFC to the ISFSI. The existence of contamination levels greater than this limit at the ISFSI are indicative of either a loss of contamination control prior to transport or loss of the cask confinement boundary. Corrective action is appropriate to reduce the contamination to within the TS limits. In either case, declaration of the NOUE is warranted only when coupled with exceeding the dose limit at the ISFSI protected area boundary.

NRC Question No. 2

Hatch EALs 17.2 and 17.3 include the condition of SOS/ED judgement. Please provide additional information regarding why this condition is necessary.

SNC Response

Per the existing emergency plan, the SOS/ED has been given the responsibility to identify and classify emergency conditions prescribed by the plan. The wording of the EALs conveys the message to the observer (of the damage to the confinement boundary or shielding) to report the observations to the SOS/ED. Based on the information provided, the SOS/ED will make the determination whether or not an NOUE condition exists.

The wording provided here is consistent with the wording in other EALs already existing in the plan. The SOS/ED is familiar with the language, and the language here provides consistent direction as provided by the existing EALs.

NRC Question No. 3

Hatch EAL 17.2 includes the condition of "Cask handling." Please describe why this is an appropriate condition.

SNC Response

Cask handling, as it applies here, involves cask operations from the point at which fuel has been loaded into a cask, until such time that it has been placed into the ISFSI facility. Handling also applies if a cask has to be moved after having been placed in the facility, such as preparation for transporting the cask offsite. The Holtec TSAR describes design basis accidents, including Cask handling and Cask tip-over in sections 11.2.1 and 11.2.2. The cask handling accident is limited to drop events. However, the proposed EAL includes the "cask handling" provision to encompass drop events and any other unanticipated event that could occur during handling operations. For example, this could include operations within the spent fuel pool and cask closure operations which would not lead to a drop or tip-over, but could damage the confinement boundary or shielding.