VIRGINIA ELECTRIC AND POWER COMPANY

RICHMOND, VIRGINIA 23261

November 13, 1996

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Serial No. 96-517
NAPS/JHL/SAH R1
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNITS 1 AND 2
REPLY TO NRC INSPECTION REPORT
NOS. 50-338/96-08 AND 50-339/96-08

We have reviewed your letter of September 30, 1996, which described an exercise weakness identified during the plume exposure portion of our North Anna Power Station emergency preparedness exercise conducted on August 13, 1996. Our reply to the assessed exercise weakness is enclosed as Attachment 1.

The basis for the stated weakness does not appear to accurately reflect activities conducted during the course of the exercise. This response includes an analysis and summary of events surrounding the timely transmittal of dose assessment information to offsite authorities, and indicates an acceptable response was demonstrated. Accordingly, it is requested that the exercise weakness be rescinded.

The exercise critique process did, however, acknowledge the need to improve some aspects of our assessment process. Those areas of the assessment process identified as needing improvement are also described in Attachment 1. A task team has been established to address these concerns.

No new commitments are intended as a result of this letter. Please contact us should you have any questions or require further information related to this matter.

Very truly yours,

James P. O'Hanlon

James P. O'Hanlon
Senior Vice President - Nuclear

IE07

Attachment

200006

cc: U. S. Nuclear Regulatory Commission
Region II
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Mr. R. D. McWhorter
NRC Senior Resident Inspector
North Anna Power Station

ATTACHMENT 1

REPLY TO EXERCISE WEAKNESS
INSPECTION REPORT NOS. 50-338/96-08 AND 50-339/96-08

NRC STATED EXERCISE WEAKNESS:

NRC Inspection Report No. 50-338, 339/96-08 cites the following observation as evidence of an apparent exercise weakness:

> "However, due to errors made when inputting to the computerized dose projection model in the LEOF, the report of radiological conditions was not provided until 1:04 p.m. This failure to provide a dose assessment following the initiation of a radiological release in a timely manner was identified as an exercise weakness (IFI 50-338, 339/96008-01, Failure to provide a timely report of radiological conditions following a release)."

RESPONSE:

We believe that the basis for the weakness does not appear to accurately reflect activities conducted during the course of the emergency exercise. A detailed analysis of documentation associated with this portion of the exercise was conducted, and key utility and State responders were interviewed with regard to development and communication of related dose assessment calculations. This information was used to re-create a sequence of events which is enclosed as Figure 1.

The sequence of events begins with a simulated radiological release occurring at 1205 hours. A General Emergency was classified at 1206 hours. The first dose assessment calculation produced following the start of the release was Meteorological Information and Dose Assessment System (MIDAS) Run No. 6. MIDAS systematically averages meteorological parameters every fifteen minutes and posts this average to an internal data file. Typically, these postings occur at 7.5, 22.5, 37.5 and 52.5 minutes after the hour, prompting the user, in this case, to wait until about 1208 hours to commence dose projection calculations using the updated, averaged release information.

MIDAS Run No. 6 is time stamped at 1211 hours. This "run time" indicates the time that the user selected an accident type from the list of available options in MIDAS. Results of MIDAS Run No. 6 were the basis for the initial Report of Radiological Conditions that was transmitted to the State. The calculation was completed at about 1218 hours, and a system print of MIDAS Run No. 6 was produced at approximately 1222 hours.

Personnel then commenced a review of the results, confirming the initial Protective Action Recommendation (PAR) was bounding. This review included the Radiological Assessment Coordinator, the Recovery Manager, and State Bureau of Radiological Health representatives stationed at the Local Emergency Operations Facility (LEOF).

At about the same time, a Follow-up Report of Emergency to State and Local Governments was being produced. This report routinely provides information including emergency classification, assistance requests, event description and PARs. This report was transmitted to offsite authorities by the State and Local Communicator beginning at 1233 hours, and was completed at 1238 hours. Transmittal of the Report of Radiological Conditions to the State (MIDAS Run No. 6) was then initiated by the State and Local Communicator at 1245 hours and completed at 1250 hours.

A review of the sequence of events indicates that while the process for report transmission may be enhanced, any delay in transmittal of the first report was not excessive. The time between availability of the printed report (1222 hours) and the start of its transmittal to the State (1245 hours) was 23 minutes. During this time, the Protective Action Recommendation in effect was verified to be bounding and the content of the report was reviewed and confirmed with key responders in the LEOF. It should be noted that the Bureau of Radiological Health representative in the LEOF is responsible for defining the radiological basis for Protective Action Decisions made by the State.

Regarding commitments to timeliness of notifications, Station Emergency Planning Implementing Procedure (EPIP) -2.01, "NOTIFICATION OF STATE AND LOCAL GOVERNMENTS" states, "[t]he initial Report of Radiological Conditions must be transmitted to the State EOC as soon as possible following the declaration of an emergency involving release of radioactive material and/or a General Emergency." Further, EPIP-4.30, "USE OF MIDAS CLASS A MODEL," states, "[d]ose assessments are required within 15 minutes after a radiological release."

We have considered these requirements within the context of the actual sequence of events. Given report availability at about 1218 hours (1222 for printed results) and allowing time for reviews and message preparation, we find there is about a 10 minute period between completion of the process and the start of related communications to the State Emergency Operations Center (EOC). We do not deem this time excessive given concurrent, ongoing dialogue about the results between the Radiological Assessment Coordinator, Recovery Manager and on-scene State Bureau of Radiological Health representative.

IDENTIFIED ISSUE:

The exercise critique process revealed instances of user input errors. Though unrelated to the transmittal of MIDAS Run No. 6 to offsite authorities, MIDAS Run Nos. 7 (time stamped 1223) and 8 (time stamped 1244) both reflected "errors made when inputting to the computerized dose projection model." Redundant dose assessment activities occurring in the Central EOF and in the Technical Support Center (TSC) identified these errors. As a result, personnel initiated efforts to analyze the erroneous data, correct input parameters, and generate new calculations. Neither report was transmitted to the State EOC.

The nature of these errors indicates a need for an improved understanding of the dose assessment system's bases. This issue was discussed in the post-exercise critique

and presented during the August 16, 1996 inspection exit meeting. During that meeting, we indicated that a Dose Assessment Review Task Team would be established. This effort has been initiated, and specific objectives of the team are:

- to determine the cause of the input errors
- to assess the need to provide expanded MIDAS basis training to end users
- to identify previous dose assessment performance issues for applicability
- to assess the impact of past scenario implementation issues
- to identify enhancements in MIDAS system-user interface, procedures and/or training, and
- to develop an action plan to resolve issues and implement enhancements.

CONCLUSION:

In summary, the basis for the exercise weakness, as stated in Inspection Report 50-338, 339/96-08 does not appear to accurately reflect activities conducted during the course of the emergency exercise. The inspection report indicates 1:04 p.m. as the time radiological conditions were reported to offsite authorities. This would equate to 59 minutes from the release start time. Exercise documentation demonstrates this information was communicated at 1245, about 19 minutes earlier.

We believe that a 40 minute interval from the start of the release to transmittal of the first Report of Radiological Conditions to the State is the correct duration. Further, we believe that this time frame is not excessive considering concurrent activities performed during this period. Nevertheless, we intend to investigate methods that will expedite transmittal of dose assessment results consistent with our procedural requirements of "as soon as possible following the declaration of an emergency involving release of radioactive material."

FIGURE 1

SEQUENCE OF EVENTS RELATED TO TRANSMITTAL OF RADIOLOGICAL DATA

TIME	EVENT
1205	Start of simulated radiological release
1206	General Emergency declared
1208	MIDAS 15-minute meteorological average posted to system file
1211	MIDAS Run #6 run time
1213	Report of Emergency, Message No. 8, notification start time
1216	Completed Report of Emergency, Message No. 8 (PAR transmitted to State)
1218	MIDAS Run #6 calculation completed
1220 to 1232	Radiological Assessment Coordinator evaluates and reviews information. Results reviewed with Recovery Manager, State BRH representatives in LEOF.
1221	Time dose calculation is required by EPIP-4.30
1222	MIDAS Run #6 system print
1223	MIDAS Run #7 run time
1233	Report of Emergency, Message No. 9, notification start time
1238	Completed Report of Emergency, Message No. 9
1244	MIDAS Run #8 run time
1245	Report of Radiological Conditions to the State, Message No. 1, notification start time (transmits MIDAS Run No. 6)
1250	Completed Report of Radiological Conditions to the State, Message No. 1
1255	MIDAS Run #9 run time
1345	Report of Radiological Conditions to the State, Message No. 2, notification start time (MIDAS Run No. 9)
1345	MIDAS Run #10 run time
1347	Completed Report of Radiological Conditions to the State, Message No. 2
1423	MIDAS Run #11 run time