GPU Nuclear

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Writer's Direct Dial Number:

August 12, 1982

Mr. George H. Smith, Director
Division of Emergency Preparedness and
Operational Support
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

Dear Mr. Smith:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Emergency Preparedness Appraisal 82-01

Reference: Letter dated July 12, 1982, P.B. Fiedler, GPUN,
to G.H. Smith, US NRC

In accordance with the above referenced correspondence, we are submitting our responses to Appendix A of the Oyster Creek Emergency Preparedness Appraisal dated June 11, 1982.

Should you have any questions on this subject, please contact Mr. James Knubel, Manager BWR Licensing, at (201) 299-2264.

Very truly yours,

Peter B. Fiedler
Vice President and Director
Oyster Creek

PBF:BH:lse
Attachment

cc: Mr. Ronald C. Haynes, Administrator
Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

NRC Resident Inspector
Oyster Creek Nuclear Generating Station
Forked River, NJ 08731

APPENDIX A

1. Complete the development of, and establishment of, a more comprehensive training/retraining program for all emergency response personnel which is consistent with the Emergency Plan and Emergency Plan Implementing Procedures. (Section 3.1) (CAL-3)

   Response

   A more comprehensive training/retraining program has been developed and implemented as of June 1, 1982 with one iteration of a retraining cycle scheduled to be completed by December 1982.

2. Include training in post-accident sampling and analysis of reactor coolant, containment air, and stack effluents in the training program after the implementing procedures and equipment are available. Hands-on, walk-through, and talk-through training should be a part of this training. (Section 3.1) (CAL-3)

   Response

   Classroom and hands on training of sampling team was completed on March 15, 1982.

3. Implement an effective training program, and train members of the newly defined Initial Response (Onsite) Emergency Organization and Full Mobilization (Offsite) Emergency Organization in the emergency response functions. (Section 3.2) (CAL-3)

   Response

   Training has been implemented and completed for newly defined Initial Response and Full Mobilization Emergency Organization members. Training to satisfy the requirements of the improved Emergency Plan Training Program will be accomplished by December 1982.

4. Train all personnel who will perform emergency response functions.

   Response

   Personnel will not be assigned Initial Response or Full Mobilization Emergency Functions until they have successfully accomplished all required training. Additionally, shift personnel have received the American Red Cross First Aid Standard Multimedia course of instruction.

5. Relocate the Emergency Control Center away from the control room. (Section 4.1.1.1.1) (CAL-1.a)

   Response

   The Emergency Control Center is currently situated in the Group Shift Supervisor's office. This office is equipped with the necessary communications and procedures for the Emergency Director and his immediate staff. Drills conducted this year, including the NRC observed exercise, confirmed the efficiency of this approach.

6. Upgrade the present Technical Support Center with a ventilatior system providing adequately filtered air, instrumentation to detect direct radiation and airborne contamination, a more comprehensive set of plant drawings, more comprehensive plant parameter data from the computer terminal, more space for the occupants, and better spacing of the telephones. Also, provide a copy of the results of the TSC shielding study to Region I of the NRC. (Section 4.1.1.2)(CAL-1.b(1))

Response

The TSC shielding study was provided to Region #1 by docket letter on June 17, 1982. Instrumentation to detect direct radiation and airborne contamination has been installed. A more comprehensive set of plant drawings and more spacing for occupants has been provided and more efficient spacing of the telephones has been accomplished.

As stated in the docket letter of April 1, 1982, GPU Nuclear is in the final design stages for a new TSC. It is scheduled to be completed and fully functional by February 1985. Efforts are being directed toward building the new TSC rather than upgrading the existing TSC. Therefore, a filtered air system is not planned for the current TSC.

7. Resubmit conceptual design information for a suitable TSC which meets the requirements of the Office of Nuclear Reactor Regulation, February 19, 1981, Generic Letter 81-10 concerning "Post-TMI Requirements for the Emergency Operations Facility." Also, include a schedule showing milestones and the date when the facility will be operational. (Section 4.1.1.2) (CAL-1.b.(2))

Response

Conceptual design information including installation schedule was submitted to the NRC by docket letter on April 1, 1982.

8. Locate the Operations Support Center in the Maintenance Building, as described in the Emergency Plan. Assure that it has adequate space, a communications system, personnel protection equipment and supplies, and their equipment and supplies needed for the performance of tasks during an emergency. (Section 4.1.1.3) (CAL-1.c)

Response

The OSC has been relocated to the north Maintenance Building in accordance with the Emergency Plan. There is adequate space and it is fully equipped to accomplish its purpose during an emergency.

9. Upgrade the Nearsite Emergency Operations Facility located in Building 12 of the Forked River site with equipment and supplies to allow management and technical personnel to perform emergency functions as described in your September 11, 1981 letter to the Director of the Office of Nuclear Reactor Regulation. (Section 4.1.1.4) (CAL-1.d)

Response

Radiation detection instrumentation and airborne radiological monitoring devices, both with alarms and portable air samplers, have been provided in the NEOF as well as sources to check the radiation detection equipment. Meteorological information can be remotely interrogated. Meteorological data from the Met tower is received by data link, however, as back-up, Meteorological information can also be read directly from instrumentation at the base of the Met Tower and phoned to the EACC.

A more complete set of plant drawings, schematics and diagrams has been provided. Procedures require evacuation to the FEOF when habitability limits are exceeded; therefore, respiratory protection equipment and protective clothing will not be stored at the NEOF. Decontamination of emergency response personnel will be performed onsite or at the Remote Assembly Area as appropriate. Dose calculation procedures have been updated and isopleths are no longer used.

A back-up power supply for the NEOF is under development.

10. Provide a Farsite Emergency Operation Facility which has the same capabilities as the Nearsite Emergency Operations Facility, as called for in your Emergency Plan and in your September 11, 1981 letter to the Director of the Office of Nuclear Reactor Regulation. (Section 4.1.1.4) (CAL-1.e)

Response

The FEOF has been relocated to JCP&L's Lakewood Business Office as called for in the Emergency Plan and is equipped to provide the same functional capabilities as the NEOF.

11. Install a system capable of collecting a high activity reactor coolant sample (up to 10 curies/gram) under post-accident conditions per NUREG-0737 specification. (Section 4.1.1.5) (CAL-Unresolved)

Response

As stated in our correspondence of December 24, 1981, procedures are in place for taking high activity samples with the existing system. This provided the basis for our request to defer installing the sampling systems as required by NUREG 0737, Item II.B.3 until the 1985 cycle 11 refueling outage.

12. Define and predetermine conditions under which reactor building accessibility for interim-type coolant sampling can be reasonably expected or precluded. (Section 4.1.1.5) (CAL-2.b)

Response

Normal accessibility to Reactor Building for post-accident sample is defined in sampling procedures as the individuals obtaining the sample should receive no more than 2 rem including transit dose. This level may be exceeded at the direction of the Emergency Director.

13. Determine reactor coolant radioactivity levels which can be sampled using interim-type facilities without exceeding appropriate NRC exposure criteria or EPA protective action guides. (Section 4.1.1.5) (CAL-2.b)

Response

The maximum sample activity has been approximately determined to be 80 mci/cc for reactor coolant without exceeding the 2 rem limit.

14. Provide facilities capable of collecting a containment air sample under conditions specified in NUREG-0737. (Section 4.1.1.6) (CAL-Unresolved)

Response

Our letter of December 24, 1981, requested deferral of this modification until the 1985 cycle 11 refueling outage.

15. Define and predetermine conditions under which reactor building accessibility for interim-type containment air sampling can be reasonably expected or precluded. (Section 4.1.1.6) (CAL-2.b)

Response

Normal accessibility to Reactor Building for post-accident sampling is defined in sampling procedures as the individual obtaining the sample should receive no more than 2 rem including transit dose. This level may be exceeded at the direction of the Emergency Director.

16. Complete the installation and calibration of the new stack and turbine building vent radiological gaseous effluent monitoring systems. (Section 4.1.1.7) (CAL-2.a)

Response

This modification is scheduled for completion before startup from our cycle 10 refueling outage.

17. Develop an interim type methodology to collect and analyze high activity post-accident gaseous, particulate, and iodine samples consistent with the activity levels identified in Table II.F.1-2 of NUREG-0737. Consideration should be given to any restriction posed by direct radiation exposure for normal monitoring and sampling equipment which might have been operating under accident release conditions. (Section 4.1.1.7) (CAL-2.b)

Response

The required procedures for obtaining and analyzing high activity samples were issued on or about March 10, 1982. The procedures are based on personnel not exceeding 2 rem for the entire task. This level may be exceeded at the direction of the Emergency Director.

18. Incorporate all area and process radiation Emergency Action Levels given in the Emergency Plan into the Emergency Plan Implementing Procedures. (Section 4.?.1.2) (This item was not included in the CAL.)

Response

Revised procedures EPIPs 1-5, dated March 2, 1982, address Area Radiation Monitor and Process Radiation Monitor alarms and indications under Emergency Action Levels (EALs). Further refinement of EALs will result from the area radiation monitor and process radiation monitor engineering study results. This item is scheduled to be completed by November 9, 1982.

19. Perform an engineering study of existing Area Radiation Monitors (ARMs) and Process Radiation Monitors (PRMs) to determine the upgrading necessary to the monitoring system to provide adequate accident detection and classification and post-accident radiation mapping capabilities to meet ANSI-N320. Incorporate the results of the study in the Emergency Plan and the Emergency Plan Implementing Procedures. (Section 4.2.1.2) (CAL-5)

Response

It is our understanding that the criteria of ANSI-N320 is no longer being utilized as an appropriate guidance document. Our planned modifications, which are currently underway will, however, meet the requirements of NUREG 0737 regarding high range monitoring.

20. Include in the Emergency Plan Implementing Procedures precautions, limitations, and references to other procedures used in the completion of the emergency response tasks. (Section 5.) (CAL-4.b)

Response

EPIP format has been revised to specifically direct key personnel to perform tasks and to emphasize precautions, limitations and to provide appropriate references to other procedures. EPIPs requiring revision for other reasons have been placed in the new format.

As changes become necessary, remaining EPIPs will be placed in the new format.

21. Incorporate appropriate references to the Emergency Plan Implementing Procedures in your 500 Series Procedures. (Section 5.2) (CAL-4.a)

Response

Presently, all but 2 of the 500 series operating procedures have been revised to include cross references to the emergency plan implementing procedures. The remaining two procedures are awaiting plant approval which is expected shortly.

22. Complete the revision and expansion of your Emergency Plan Implementing Procedures so that personnel are specifically directed in the completion of all required emergency response tasks. (Section 5.3) (CAL-4.b)

Response

Completed - Refer to Appendix A, #20.

23. Develop a method to determine offsite doses to the thyroid based on measured and projected radioiodine concentrations. The method should document the assumptions used, incorporate appropriate EPA-520 or ICRP models, and be made consistent with the method used by the appropriate offiste agencies. (Section 5.4.2) (CAL-4.c)

Response

EPIP #9 dated 2/23/82, has been revised to contain offsite dose methodology based on measured and projected radioiodine concentrations incorporating appropriate EPA 520 models and has been coordinated with offsite agencies.

24. Include all methods to be used in the performance of the offsite radiological surveys in Emergency Plan Implementing Procedures. (Section 5.4.2.1) (CAL-4.b)

Response

EPIP 11 has been revised to include methodology for specific tasks performed during offsite radiological surveys.

25. Include all methods to be used in the performance of the onsite radiological surveys in the Emergency Plan Implementing Procedures. (Section 5.4.2.2) (CAL-4.b)

EPIP 10 has been revised to include methodology for specific tasks performed during onsite radiological surveys.

26. Include the procedures to be followed for in-plant radiological control under emergency situations in the Emergency Plan Implementing Procedures. (Section 5.4.2.3) (CAL-4.b)

Response

EPIP 30, Post-Accident In-Plant Radiation Measurement, has been written to define methodology and techniques necessary for radiation measurements after an emergency condition has occurred.

27. Revise your procedures for performing post-accident reactor coolant sampling using interim-type equipment. This revision should include, but not be limited to, consideration of the following: personnel radiation exposure limits, dosimeters to be used by personnel, radiation level of coolant that may be sampled, points where sampling should be terminated due to radiation levels, determination of path of travel to and from sample location, sample size, and sample labeling. (Section 5.4.2.4) (CAL-2.b)

Response

The interim procedures for performing post-accident reactor coolant sampling were revised on or about March 10, 1982. Although sample labeling is not specifically addressed in the procedure, the sample containers in the emergency kits are color coded and identified as to sample type.

28. Develop procedures to address the analysis of high activity coolant samples consistent with criteria detailed in Section II.B.3 of NUREG-0737. Such procedures should include specific radiation protection provisions to assure personnel whole body and extremity limits are not exceeded, should provide for use of adequate shielding from elevated post-accident background direct radiation exposure rates, and should identify proper disposition of samples following analysis. (Section 5.4.2.5) (CAL-2.b)

Response

The interim procedures for analyzing high activity samples for radionuclides and boron were issued on or about March 10, 1982. The procedures are currently being revised to address all of the precautions described above. Procedures to analyze the remaining parameters described in Section II.B.3 of NUREG 0737 will be developed in parallel with the installation of the post-accident sampling modifications.

29. Develop a procedure for performing post-accident containment air sampling consistent with NUREG-0737, Section II.B.3 criteria. The procedure should include specific provisions for collecting particulate, iodine, and gas samples, specific instructions for the safe handling of highly radioactive samples, a sketch of the sampling location and equipment, and assignment of responsibility for performance of planning activities consistent with positions defined in the Emergency Plan organization. (Section 5.4 2.6) (CAL-2.b)

Response

Interim procedures for performing post-accident containment air sampling were issued on or about March 10, 1982.

30. Develop procedures for analyzing containment air samples under the post-accident conditions specified by NUREG-0737, Section II.B.3 and Table II.F.1-1. Such procedures should incorporate specific personnel radiation protection requirements. (Section 5.4.2.7)(CAL-2.b)

Response

Interim procedures for analyzing containment air samples under post-accident conditions were issued on or about March 10, 1982. The procedures to analyze containment air sampling under the conditions of Section II.B.3 and Table II.F.1-1 of NUREG 0737, will be developed in parallel with installation of the post-accident sampling modifications.

31. Review and upgrade airborne effluent sampling procedures incorporating specific radiation protection provisions appropriate for sampling effluent streams using the design basis criteria of NUREG-0737, Table II.F.1-2. (Section 5.4.2.8) (CAL-2.b)

Response

Interim procedures for sampling airborne effluent were issued March 10, 1982.

As identified in Item No. 15, the radiological gaseous effluent monitoring system is scheduled for completion before startup from our Cycle 10 refueling outage.

32. Develop procedures for the analysis of high activity airborne stack effluent samples under post-accident conditions. Procedures must address analysis of radioiodines and particulates as a minimum and meet the criteria of NUREG 0737, Table II.F.1-2. Specfic radiation protection concerns applicable to high activity sample analysis shall be incorporated into the procedures. (Section 5.4.2.9) (CAL-2.b)

Response

Interim procedures for the analysis of high activity airborne stack effluent samples under post-accident conditions were issued on or about March 10, 1982. As described in Item No. 31, the radiological gaseous effluent monitoring system is scheduled for completion before startup from our Cycle 10 refueling outage. Procedures to analyze samples taken from this system will be developed in parallel with the modification.