

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-219/85-05

Docket No. 50-210

License No. DPR-16

Priority ---

Category C

Licensee: GPU Nuclear Corporation

Oyster Creek Nuclear Generating Station

Forked River, New Jersey

Facility Name: Oyster Creek Nuclear Generating Station

Inspection At: Forked River, New Jersey

Inspection Conducted: February 4-8, 1985

Inspectors: I. Cohen
I. Cohen, Emergency Preparedness Specialist

April 22, 1985
date

N. Terc
N. Terc, Emergency Preparedness Coordinator

5/8/85
date

E. Woltner
E. Woltner, Emergency Preparedness Specialist

5/8/85
date

Approved by: T. Harpster
T. Harpster, Chief Emergency Preparedness Section, RPB, DRSS

5/8/85
date

Inspection Summary: Inspection on February 4-8, 1985 (Report No. 50-219/85-05)

Areas Inspected: Routine unannounced emergency preparedness inspection of previously identified open items, training, audits and status of emergency response facilities. The inspection involved 101 inspection hours by three regional based NRC inspectors.

Results: No violations were identified.

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REPORT DETAILS

1. Persons Contacted

*R. L. Sullivan, Manager, Emergency Preparedness
*J. Sullivan, Director, Operations
*R. L. Long, V.P., Nuclear Assurance
*B. Hohman, Licensing Engineer
*J. Williams, Superintendent Program Training Manager
*D. Barss, Emergency Planner
P. B. Fiedler, V.P. and Director
G.J. Simonetti, Jr. Site Audit Manager
M. E. Reinders, Site Q.A. Lead Auditor
J. J. Rogers, Site Q.A Lead Auditor
L. Thompson, Training Instructor
D. V. Blarcom, Group Shift Supervisor
G. Cropper, Group Operational Supervisor
W. Stewart, Acting Manager Plant Operations
D. Pietruski, Group Shift Supervisor

*Indicates attendance at exit meeting.

2. License Action On Previously Identified Items

(Closed) 50-219/82-01-08 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, (Appendix A, item 2).

The inspectors reviewed documentation pertaining to this item with licensee personnel and confirmed that on August 29, 1984 a Safety Evaluation of the Post Accident Sampling system was made and NRR concluded that the Post Accident Sampling System meets the requirement of Item II.B.3 of NUREG 0737.

In addition, a letter dated November 03, 1983 from Region I to the licensee announced an inspection of the hardware and inspection of documentation demonstrating operability .

Inspection of this item will be performed by the Radiological Protection Section.

(Closed) 50-219/82-01-30 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, (Appendix A, item 11). See remarks under item 50-219/82-01-08.

(Closed) 50-219/82-01-31 Define and predetermine conditions under which reactor building accessibility for interim-type coolant sampling can be

reasonably expected or precluded, (Appendix A, item 12). See remarks under item 50-219/82-01-08.

(Closed) 50-219/82-01-32 Determine reactor coolant radioactivity levels which can be sampled using interim-type facilities without exceeding appropriate NRC exposure criteria or EPA protective action guides, (Appendix A, item 13). See remarks under item 50-219/82-01-08.

(Closed) 50-219/82-01-33 Provide facilities capable of collecting containment air samples under conditions specified in NUREG-0737, (Appendix A, item 14). See remarks under item 50-219/82-01-08.

(Closed) 50-219/82-01-34 Define and predetermine conditions under which reactor building accessibility for interim-type containment air sampling can be reasonably expected or precluded, (Appendix A, item 15). See remarks under item 50-219/82-01-08.

(Closed) 50-219/82-01-35 Complete the installation and calibration of the new stack and turbine building vent radiological gaseous effluent monitoring systems, (Appendix A, item 16). See remarks under item 50-219/82-01-08.

(Closed) 50-219/82-01-36 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 restrictions posed by direct radiation exposure from normal monitoring and sampling equipment which might have been operating under accident release conditions, (Appendix A, item 17). See remarks under item 50-219/82-01-08.

(Closed) 50-219/82-01-71 Revise 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, (Appendix A, item 27). See remarks under item 50-219/82-01-08.

(Closed) 50-219/82-01-72 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, (Appendix A, item 28). See remarks under item 50-219/82-01-08.

(Closed) 50-219/82-01-73 Develop a procedure for performing post-accident containment air sampling consistent with NUREG-0737 Section II.B.3 cri-

teria. 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, (Appendix A, Item 29). See remarks under item 50-219/82-01-08.

(Closed) 50-219/82-01/74 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, (Appendix A, item 30). See remarks under item 50-219/82-01-08.

(Closed) 50-219/82-01-75 Review and upgrade airborne effluents sampling procedures including specific radiation protection provisions appropriate for sampling effluent streams using the design basis criteria of NUREG-0737, Table II.F.1-2, (Appendix A, item 31). See remarks under item 50-219/82-01-08.

(Closed) 50-219/82-01-78 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. Specific radiation protection concerns applicable to high activity sample analysis shall be incorporated into the procedures, (Appendix A, item 32). See remarks under item 50-219/82-01-08.

(Closed) 50-219/82-01-80 Determine the need; and, if required, develop a procedure for post-accident sampling of torus water, incorporating specific radiation protection criteria, (Appendix B, item 48). See remarks under item 50-219/82-01-08.

(Open) 50-219/82-01-37 Provide a mobile laboratory to perform reactor coolant and other pertinent analyses during emergencies, (Appendix B, item 20).

The licensee stated that they had purchased equipment to perform radio-nuclide analysis, of post-accident samples, but that it was not yet installed.

(Open) 50-219/82-01-44 Perform an engineering study of existing Area Radiation Monitors (ARM's) and Process Radiation Monitors (PRM's) to determine necessary 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, (Appendix A, item 19).

The licensee initiated an engineering study, but results of this study were inconclusive, and thus, a new study will be conducted in the near future.

(Closed) 50-219/82-01-45 Provide either a redundant power supply to the meteorological tower or develop a procedure for obtaining representative meteorological data if the tower measurements are unavailable, (Appendix B, item 26).

Procedure No. 355 - "Meteorological Tower Emergency Backup Power Supply", issued on 10/13/84 addresses this item in a satisfactory manner.

(Open) 50-219/82-01-47 Establish a supplementary meteorological tower or develop procedures to assess the possible effects of sea breeze circulations on the effluent plume transport, (Appendix B, item 28).

The inspectors noted that the study pertaining to the effect of sea breeze circulations upon the effluent plume transport had not yet been completed.

(Closed) 50-219/82-01-50 Provide a back-up power supply system for all communications equipment identified for usage during an emergency, (Appendix B, Item 31).

The licensee stated that back-up power supply systems for all communication systems were in place and that a Rolm Telephone System would be installed in the near future.

(Closed) 50-291/82-01-63 Include all methods to be used in the performance of the offsite radiological surveys in Emergency Plan Implementing Procedures, (Appendix A, item 24).

The inspectors reviewed EPIP-11, "Offsite Radiological Surveys Rev 4 issued on September 8, 1984 and noted that this new revision included methods and techniques for performing offsite radiological surveys; including determination of whether samples are taken while immersed in the radioactive plume.

(Closed) 50-219/81-01-68 Include the procedures to be followed for in-plant radiological control under emergency situations in the Emergency Plan Implementing Procedures, (Appendix A, item 26).

The inspectors reviewed EPIP-30 "Inplant radiation surveys during emergencies, issued on October 31, 1983 and noted that it satisfies the intent of the finding.

(Closed) 50-219/82-01-79 Develop a procedure or plan documenting methods and philosophy for the storage and handling of large volumes of contaminated water, (Appendix B, item 47).

The inspectors discussed with the licensee the need for establishing

methods of handling highly contaminated liquid wastes resulting from LOCAS inside and outside of the primary containment and the subsequent storage, sampling and analysis for determining disposition of the liquid wastes. This item was closed and replaced by item 83-03-02.

(Closed) 50-219/82-01-81 Assess the impact of elevated background radiation levels which could result from direct radiation from the reactor building or stack under major release conditions on the normal analytical laboratory procedures. Based on the assessment results, either revise the normal procedures or develop new procedures, (Appendix B, item 49).

The inspectors held discussions with licensee personnel and noted that the licensee is performing a study to determine the impact of increased radiation levels on normal analytical procedures.

(Open) 83-03-02 Develop means to transfer, store, sample and analyze highly radioactive post-accident liquid wastes resulting from LOCAS occurring outside the primary containment.

The inspectors held discussions with various members of the licensee staff (e.g. plant systems, licensing) and clarified the intent of this item. A new effort is underway to determine the adequacy of handling post-accident liquids wastes.

(Closed) 83-03-03 Develop and implement a procedure for implementing radiological controls during emergencies.

The required procedures to perform radiological controls during emergencies have been implemented.

(Closed) 83-09-01) Provide a copy of siren location map within the Emergency Plan.

The inspectors noted that Figure F-8 of the Emergency Plan indicated siren locations.

(Closed) 83-09-03 Provide alerting for those households within Sectors W and WNW between 5 and 10 mile radii where siren levels may be lower than 60dBC.

The inspectors verified by review of documentation that tonal radios had been distributed and information had been sent to households of the EPZ zone that may be lower than 60 dBC.

(Closed) (219/84-05-01) Include in the emergency plan a brief outline of the meteorological monitoring program with appropriate reference to the complete description in FSAR section 2.3.3 (revise this FSAR section as necessary).

The meteorological monitoring system is adequately described in the emergency plan.

(Closed) 219/84-05-02 State, in a letter to Region I, whether the primary and backup meteorological monitoring systems conform to the guidelines established in Regulatory Guide 1.23, Rev. 1 or justify any exceptions.

The inspectors noted that a letter had been received by Region I justifying exceptions from conforming to Reg Guide 1.23, Rev 1.

(Closed) 219/84-05-03 Adapt the standard technical specifications for the meteorological monitoring program.

The inspector held discussions with licensee personnel and noted that this item is closed.

(Closed) 84-15-01 Clarify the description of the emergency organization to include all augmentation phases. Include a sufficient level of detail to clearly delineate the command hierarchy, so that at any time there is only one Emergency Coordinator as defined in NUREG-0654. Show the lines of information flow to the Emergency Coordinator and ensure that the information pathways are convergent and somewhat restricted in the direction of convergence in order to prevent an excessive number of simultaneous information input to the Emergency Coordinator. Clarify the roles of the Emergency Director versus Emergency Support Director and indicate which is the Emergency Coordinator. Clarify what is meant by "properly relieved" in Section 5.5.1 and specify the conditions under which the Emergency Director (ED) will assume control from the Group Shift Supervisor (GSS).

Clarify table 5.3 to show how it conforms with NUREG-0654, Table B-1.

The inspectors reviewed the updated description of the licensee's emergency organization in their Emergency Plan and found it to be acceptable.

(Closed) 84-15-02 Describe expanded support facilities to be used for processing (e.g., technical and administrative briefings of incoming personnel, lodging) and sheltering additional support personnel during extended emergencies.

The inspectors noted that expanded support facilities had been described in Paragraph 7.2.5 of the revised Emergency Plan.

(Closed) 84-15-03 Review your Emergency Action Levels (EALs) for classifying emergencies and revise them as necessary so that observable indications (e.g., instrument readings, alarm annunciators) lead the user to uniquely determine a specific emergency class. Complete the development of symptom based EALs: clarifying inherent logic statements, further defining of terms and testing for completeness by ensuring the incorporation of all initiating conditions for BWRs found in Appendix 1 of NUREG-0654.

The inspector held discussion with licensee personnel and noted that this matter did not need additional review.

(Closed) 84-15-04 Add reference to Emergency Plan Implementing Procedure (EPIP) pertaining to written messages intended for the public.

The inspectors noted that section 6.7.3 of the Emergency Plan satisfied the concern.

(Open) 84-15-05 Specify organizational titles for both ends of the communication links which would be involved in initiating emergency response actions.

The inspectors noted that organizational titles for both ends of communications were not described.

(Closed) 84-15-06 The Emergency Plan does not describe means for dissemination of information pertaining to: radiation, contact for additional information, protective measures and special needs for the handicapped. In addition, a brief outline of the method used for dealing with rumor control is needed.

See response to item 84-15-04

(Closed) 84-15-07 Provide concept of operations of Technical Support Center (TSC) and the inter-relationships between the TSC and Parsippany Technical Group.

The inspectors noted that the concept of operations was incorporated in Section 7.1.2 of the Emergency Plan.

(Closed) 84-15-08 Describe means to access seismic and hydrologic data.

The inspectors noted that Section 7.6 1(j) of the Emergency Plan, described the means to access this data.

(Closed) 84-15-09 Describe provisions for portable radiological instrumentation.

The inspectors noted that Section 7.10 of the Emergency Plan described provisions for portable radiological instrumentation.

(Closed) 84-15-10 Discuss access to alternate laboratory facilities for critical radio-chemical analysis during emergencies. Section 7.6.4 incorporated a discussion to this effect.

(Open) 84-15-11 Provide information showing how the criteria of NUREG-0654, Appendix 2 is met.

The inspectors noted that section 7.6.1 j of the Emergency Plan doesn't specify how the intent of Appendix 2 of NUREG 0654 is satisfied.

(Closed) 84-15-12 Address how the equipment and supplies are sufficient to allow adequate support for the staff in the Operations Support Center.

The inspector held discussions with licensee personnel and noted that sufficient supplies were available for operational support.

(Closed) 84-15-13 Describe in the Emergency Plan:

- a. Post-accident sampling and analysis capability
- b. Radiation monitors
- c. Effluent monitors.
- d. In-plant radioiodine instrumentation.
- e. Containment radiation monitor.

The inspectors noted that the above were described in Section 7.6.1, 7.6.3, 7.6.4 and 7.10 of the Emergency Plan.

(Closed) 84-15-14 Describe how different radioisotope distributions which result from different accidents are measured (see Table 3 of NUREG-0654) and taken into account for dose assessment evaluations.

The inspectors noted that the capability for detecting and using radioisotopic distributions were addressed in Section 7.6.1 of the Emergency Plan.

(Closed) 84-15-15 Specify means to notify and alert individuals within the owner controlled area.

The inspectors noted that Sections 7.5.2 1 and 7.5.2 2 specified alarms and means to alert individuals within the owner controlled area.

(Closed) 84-15-16 Summarize your radiation protection program during emergencies, defining the various elements involved (e.g. personnel dosimetry, instrumentation) and making reference to EIPs for further details.

Sections 7.7, 7.8, and 7.10 of the Emergency Plan summarized and defined the various elements involved in radiation protection during emergencies.

(Closed) 84-15-17 Add the Southern Ocean County Hospital as your selected location for treating contaminated/injured personnel.

The new revision of The Emergency Plans, Paragraph 6.6.4 identified the Southern Ocean County Hospital.

(Closed) 84-15-18 Outline the criteria required for entering into a recovery phase and how this will be coordinated with Local, State and Federal Agencies.

Section 9.0 of the Emergency Plan adequately outlines criteria required for entering into a recovery phase.

(Closed) 84-15-19 Indicate whether emergency exercises will be conducted under various weather conditions, and on different work shifts. In addition, indicate that official observers will evaluate and critique the exercises.

The inspectors noted that Section 8.1.2 of the Emergency Plan satisfied this concern.

(Closed) 84-15-20 Indicate that Independent Review Reports will be retained for five years.

The inspectors noted that Section 8.4 of the Emergency Plan specified that reports would be retained for 5 years.

3. Status of Emergency Response Facilities

The inspector held discussions with licensee personnel to determine when all emergency response facilities would be fully functional so that an appraisal may be scheduled. It appears that the facilities will not be fully functional until early 1987.

4. Knowledge and Performance of EP Duties (Training)

a. References

IE Inspection Procedure 82206.
 10CFR 50.47 (b) (15).
 NUREG-0654, Section II.0.
 Emergency Plan Section 8.1.
 EPIP-11, Emergency Radiological Surveys Offsite.
 EPIP-2, Emergency Direction.

b. Scope of Review

The inspectors held discussions with licensee training personnel, reviewed the referenced portion of the emergency response plan, lesson plans, training attendance records, drill reports and examinations. In addition, the inspectors conducted walk-throughs with operation personnel who would initially assume the role of Emergency Director until relieved and attended a training course given to off-site monitoring team members.

c. Findings

The inspectors noted that the training to emergency response personnel is provided as outlined in the Emergency Plan, and that in

general the knowledge level of the personnel was acceptable. However, the following weaknesses were identified:

- a) Operations personnel who would assume the role of Emergency Director were not fully knowledgeable about their responsibilities which could not be delegated as outlined in EPIP-2, Emergency Direction.
- b) Operations personnel could not readily find a logic diagram which appears as an attachment to an EPIP which is necessary to develop protective action recommendations for the potentially affected public.

These weaknesses were isolated in nature and the licensee is reviewing their procedures and training to determine if any changes are necessary. This area will be reviewed in a subsequent inspection. (50-219/85-05-01):

5. Licensee Audits

a. References

10 CFR 50.54 (t)
 IE Inspection Procedure 82210
 Emergency Plan Section 8.4
 License Audit Report S-06-84-02

b. Scope of Review

The inspectors held discussions with licensee quality assurance personnel, reviewed the referenced audit report and supporting audit check lists and noted that an independent review of the Emergency Preparedness Program is being conducted every 12 months in accordance with 10 CFR 50.54 (t). Also noted was that appropriate licensee actions were taken to implement recommendations identified by the auditors.

c. Findings

During the review of the referenced audit report, the inspectors noted:

- a) The audit report did not document changes to the Emergency Preparedness Program although Section E of the report was identified as "Emergency Worker Protection/Changes to the Emergency Program".
- b) The audit report did not include an evaluation of the adequacy of the interface with State and local governments which should be made available to the appropriate State and local government as stated in 10 CFR 50.54 (t).

The licensee is reviewing this area to determine the reason for the omissions. This item will be reviewed in a subsequent inspection.
(50-219/85-05-02)

6. Exit Meeting

An exit meeting was held on February 8, 1985 with attendees identified in paragraph 1.0. Licensee personnel were informed of the scope and findings of the inspection.

At no time during the course of this inspection was written material provided to the licensee by the inspectors.