



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA ST., N.W., SUITE 3100
 ATLANTA, GEORGIA 30303

NOV 23 1982

Report Nos. 50-280/82-32 and 50-281/82-32

Licensee: Virginia Electric and Power Company
 Richmond, VA 23261

Facility Name: Surry

Docket Nos. 50-280 and 50-281

License Nos. DPR-32 and DPR-37

Inspection at the Surry site near Surry, Virginia

Inspector: *D. L. Andrews* 11/22/82
 D. L. Andrews Date Signed

for *D. L. Andrews* 11/22/82
 G. N. Huffman Date Signed

Accompanying Personnel: J. L. Kenoyer, G. F. Martin, C. A. Julian, P. Brown,
 G. Bryan

Approved by: *G. R. Jenkins* 11/22/82
 G. R. Jenkins, Section Chief Date Signed

SUMMARY

Inspection on November 9-10, 1982

Areas Inspected

This routine, announced inspection involved 141 inspector-hours on site in the area of a radiological emergency exercise.

Results

In the area inspected, no violations or deviations were identified.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *W. L. Stewart, Vice President, Nuclear Operations
- *R. H. Leasburg, Vice President, Nuclear Construction
- *J. L. Wilson, Station Manager
- *J. Martin, Jr., Director of Emergency Planning
- *E. Topping, Emergency Planning Coordinator
- *G. Kane, Superintendent of Operations
- *R. Mudd, Superintendent of Maintenance Services
- *F. Cox, Emergency Preparedness Coordinator
- *S. Sarver, Health Physics Supervisor
- *O. Weyman, Security Manager
- *M. Griffin, Superintendent, Electrical Maintenance
- *R. Driswell, Quality Assurance Manager

Other licensee employees contacted included several technicians, operators, mechanics, security force members, and office personnel.

Other Organizations

- J. Asher, Federal Emergency Management Agency
- C. Price, Commonwealth of Virginia
- T. Stone, Commonwealth of Virginia

NRC Resident Inspector

- *D. Burke, Senior Resident Inspector
- *M. Davis, Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on November 10, 1982, with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Enforcement Matters

(Closed) Deficiency (50-280/82-05-39, 50-281/82-05-39). This emergency preparedness deficiency, concerning initial dose assessment, was reviewed during the emergency exercise. Licensee's corrective actions as stated in VEPCO's letter of August 20, 1982, were verified. Details, paragraph 13.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Exercise Scenario

The scenario for the emergency exercise was reviewed to determine that provisions had been made to test the integrated capability and a major portion of the basic elements existing within the licensee and local emergency plans and organizations as required by 10 CFR 50.47(b)(14), 10 CFR 50, Appendix E, paragraph IV.F and specific criteria in NUREG-0654, Section II.N.

The scenario was reviewed in advance of the scheduled exercise date and was discussed with licensee representatives on several occasions. While no major problems with the scenario were identified during the review, several inconsistencies became apparent during the exercise. These inconsistencies in the scenario caused some confusion during the exercise but did not appear to detract from the overall performance of the licensee's emergency organization. Scenario problems were discussed by VEPCO representatives during the exercise critique on November 10, 1982.

6. Assignment of Responsibility

This area was observed to determine that primary responsibilities for emergency response by the licensee have been specifically established and that adequate staff is available to respond to an emergency as required by 10 CFR 50.47(b)(1), 10 CFR 50, Appendix E, paragraph IV.A, and specific criteria in NUREG 0654, Section II.A.

The inspectors observed that specific emergency assignments had been made for the licensee's emergency response organization and there were adequate staff available to respond to the simulated emergency. The initial response organization was augmented by designated licensee representatives and the capability for long term or continuous staffing of the emergency response organization was demonstrated. The inspector had no further questions in this area.

7. Onsite Emergency Organization

The licensee's onsite emergency organization was observed to determine that the responsibilities for emergency response are unambiguously defined, that adequate staffing is provided to insure initial facility accident response in key functional areas at all times, and that the interfaces among various onsite response activities and offsite support activities are specified as required by 10 CFR 50.47(b)(2); 10 CFR 50, Appendix E, paragraph IV.A, and specific criteria in NUREG 0654, Section II.B.

The inspectors determined that the licensee's onsite emergency organization was effective in dealing with the simulated emergency. Adequate staffing of the emergency response facilities was provided for the initial accident response and the interfaces between the onsite organization and offsite support agencies appeared to be adequate. The inspectors had no further questions in this area.

8. Emergency Response Support and Resources

This area was observed to determine that arrangements for requesting and effectively using assistance resources have been made, that arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made, and that other organizations capable of augmenting the planned response have been identified as required by 10 CFR 50.47(b)(3), 10 CFR 50, Appendix E, paragraph IV.A and specific criteria in NUREG 0654, Section II.C.

State and local staff were accommodated at the near-site Emergency Operations Facility. Licensee contact with offsite organizations was prompt and assistance resources from various agencies were prepared to assist in the simulated emergency. The inspectors had no further questions in this area.

9. Emergency Classification System

This area was observed to determine that a standard emergency classification and action level scheme is in use by the nuclear facility licensee as required by 10 CFR 50.47(b)(4), 10 CFR 50, Appendix E, paragraph IV.C, and specific criteria in NUREG 0654, Section II.D.

The emergency action level scheme in use by the licensee was used to promptly identify and properly classify the emergency and escalate to more severe emergency classes as the simulated emergency progressed. Licensee actions in this area were considered adequate and the inspectors had no further questions.

10. Notification Methods and Procedures

This area was observed to determine that procedures had been established for notification by the licensee of State and local response organizations and emergency personnel, and that the content of initial and followup messages to response organizations has been established; and means to provide early notification to the populace within the plume exposure pathway have been established as required by 10 CFR 50.47(b)(5), 10 CFR 50, Appendix E, paragraph IV.D, and specific criteria in NUREG 0654, Section II.E.

The inspectors observed that notifications were made promptly to State and local organizations and the content of the initial and followup messages was adequate to accurately describe the simulated conditions at the facility and provided sufficient information to allow officials to take prompt protective actions for the public. Changes in emergency status and plant conditions were relayed promptly to offsite agencies. A previous improvement item in the area (50-280/82-05-43, 50-281/82-05-43) is closed.

The public notification system was not activated during this exercise since the State was not fully participating (small scale exercise). The system is in place and operational and has been tested by full activation this year. The inspectors had no further questions in this area.

11. Emergency Communications

This area was observed to determine that provisions exist for prompt communications among principal response organization and emergency personnel as required by 10 CFR 50.47(b)(6), 10 CFR 50, Appendix E, paragraph IV.E, and specific criteria in NUREG 0654, Section II.F.

Communications among the licensee's emergency response facilities and emergency organization and between the licensee's emergency response organization and offsite authorities were good. No communications related problems were identified during this exercise.

12. Emergency Facilities and Equipment

This area was observed to determine that adequate emergency facilities and equipment to support an emergency response are provided and maintained as required by 10 CFR 50.47(b)(8), 10 CFR 50, Appendix E, paragraph IV.E, and specific criteria in NUREG 0654, Section II.H.

The licensee's emergency response facilities were activated promptly and were staffed in a timely manner. There appeared to be adequate equipment available to support the response to the simulated emergency. The licensee's Technical Support Center (TSC) is an interim facility located adjacent to the Control Room. The inspectors observed that the TSC was crowded and that the noise level became excessive at times; however, these problems did not prevent the TSC staff from performing their assigned functions in an efficient manner. The licensee is in the process of constructing a new TSC facility which, when complete, should improve the working conditions in that facility. The Operations Support Center (OSC) was observed to be crowded; however, the inspectors noted that the OSC was well-organized and operated efficiently throughout the exercise.

13. Accident Assessment

This area was observed to determine that adequate methods, systems and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use as required by 10 CFR 50.47(b)(9), 10 CFR 50, Appendix E, paragraph IV.B, and specific criteria in NUREG 0654, Section II.I.

The inspectors observed assessment of offsite consequences of the simulated emergency and monitored recommendations provided to offsite authorities by the licensee. Dose projections, accident assessments and protective action recommendations appeared to be appropriate and timely for the simulated situation. An appraisal deficiency in this area (50-280/82-05-39, 50-281/82-05-39) is closed. In addition, improvement items (50-280/82-05-40, 50-281/82-05-40, 50-280/82-05-42, 50-281/82-05-42 and 50-280/82-05-44, 50-281/82-05-44), identified during the emergency preparedness appraisal, are closed.

In observing the offsite radiological monitoring teams, the inspectors noted that the air sampling procedure did not provide for recording air sampler flow information. Samples routinely used are fixed flow, calibrated at 1 CFM; however, the particular sampler being used by one of the offsite teams was a variable air flow model which was set at about 1.7 CFM flow rate. The team members failed to notice this fact and used the standard 10 cubic feet in calculating radioactive airborne concentration. The inspector stated that there should be a provision written into the procedure to record air flow data since two types of air samplers are available for use. This area will be reviewed during a subsequent inspection (50-280/82-32-01, 50-281/82-32-01).

14. Protective Responses

This area was observed to determine that guidelines for protective actions during the emergency, consistent with Federal guidance, are developed and in place, and protective actions for emergency workers, including evacuation of nonessential personnel, are implemented promptly as required by 10 CFR 50.47(b)(10) and specific criteria in NUREG 0654, Section II.J.

The inspector observed that protective actions were instituted for onsite emergency workers which included periodic radiation surveys in the facility, evacuation of nonessential personnel and continued accountability of emergency response personnel.

Inplant surveys were performed periodically and the inspectors considered the survey teams well-equipped and knowledgeable in potential high radiation areas based on the sequence of simulated events. There was very little data available to provide these teams which detracted somewhat from their demonstration of capability. The lack of data was considered a scenario weakness and was discussed by the licensee during the exercise critique.

Personnel accountability required approximately one hour for completion and the inspector considered this excessive. The licensee has agreed to improve accountability techniques through procedure review and revision as necessary. A previously identified improvement item in this area (50-280/82-05-70, 50-281/82-05-70) remains open pending further corrective actions.

15. Radiological Exposure Control

This area was observed to determine that means for controlling radiological exposures in an emergency are established and implemented for emergency workers and that they include exposure guidelines consistent with EPA recommendation as required by 10 CFR 50.47(b)(11) and specific criteria in NUREG 0654, Section II.K.

The inspectors noted that radiological exposures were controlled throughout the exercise by issuing emergency workers supplemental dosimeters and by periodic surveys in the emergency response facilities. Exposure guidelines were in place for various categories of emergency actions and the inspectors considered the exposure control program adequate.

16. Medical and Public Health Support

This area was observed to determine that arrangements are made for medical services for contaminated injured individuals as required by 10 CFR 50.47(b)(12), 10 CFR 50, Appendix E, paragraph IV.E and specific criteria in NUREG 0654, Section II.L.

The inspectors observed the licensee's response to a simulated contaminated injury and observed that the first aid team responded promptly and appeared to be familiar with the techniques for handling a serious injury involving radioactive contamination. The inspector stated that more complete medical information concerning the simulated injury should be provided to the medical team in an exercise of this type to prevent delays in providing proper first aid treatment. The inspector also noted that following the removal of the simulated injured person there was no followup by radiation monitoring personnel to determine the extent of contamination within the facility which may have been spread by the treatment and transport of the injured person. A licensee representative stated that the procedure for handling contaminated injured persons would be reviewed to determine if additional guidance on contamination control should be included. This area will be reviewed during a subsequent inspection (50-280/82-32-02, 50-281/82-32-02). The simulated injury was transported to the Medical College of Virginia, which participated in this part of the exercise. The inspectors did not accompany the licensee's ambulance to the hospital and therefore made no observations of this portion of the exercise.

17. Exercise Critique

The licensee's critique of the emergency exercise was observed to determine that deficiencies, identified as a result of the exercise, and weaknesses noted in the licensee's emergency response organization were formally presented to licensee management for corrective actions as required by 10 CFR 50.47(b)(14), 10 CFR 50, Appendix E, paragraph IV.F, and specific criteria in NUREG 0654, Section II.N.

The exercise critique was conducted on November 10, 1982, shortly after the conclusion of the exercise. Licensee management, key exercise participants and NRC representatives were present. The licensee discussed areas of the exercise in which items for possible improvement were identified. The inspectors determined that the critique was comprehensive and adequately addressed weaknesses identified in the licensee's emergency response program during this exercise.