



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA STREET, N.W., SUITE 2900
 ATLANTA, GEORGIA 30323-0199

MAR 18 1994

Report Nos.: 50-321/94-06 and 50-366/94-06

Licensee: Georgia Power Company
 P. O. Box 1295
 Birmingham, AL 35201

Docket Nos.: 50-321 and 50-366

License Nos.: DPR-57 and NPF-5

Facility Name: Hatch 1 and 2

Inspection Conducted: February 14-18, 1994

Inspector: D. W. Jones
 D. W. Jones

3/18/94
 Date Signed

Approved by: T. R. Decker
 T. R. Decker, Chief

3/18/94
 Date Signed

Radiological Effluents and Chemistry Section
 Radiological Protection and Emergency Preparedness Branch
 Division of Radiation Safety and Safeguards

SUMMARY

Scope:

This routine, announced inspection was conducted in the areas of Control Room emergency ventilation systems, meteorological monitoring, and post-accident sampling systems (PASS).

Results:

Two examples of one unresolved item were identified.

The licensee's failure to implement a program, in conformance with Criterion 10 of NUREG-0737 Item II.B.3, for testing all PASS equipment and procedures at a frequency which would ensure that it would be available if required, and for providing refresher training to PASS operators, constitute an unresolved item pending NRC review of subsequent licensee submittals regarding development and implementation of an administrative program to ensure the capability for post-accident sampling and analysis (Paragraph 4)

The licensee had complied with the operational and surveillance requirements for the Control Room emergency ventilation systems (Paragraph 2).

The licensee was collecting the necessary meteorological data but could have been more diligent in responding to identified problems with the meteorological data gathering equipment (Paragraph 3).

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- †*B. Arnold, Supervisor, Chemistry
- G. Barker, Superintendent, Instrumentation and Control
- †*D. Bennett, Superintendent, Chemistry
- I. Buchans, Supervisor, Instrumentation and Control
- *R. Davis, Supervisor, SAER
- †W. Duvall, Supervisor, Health Physics and Chemistry
- †*G. Goode, Manager, Engineering Support
- †S. Grantham, Supervisor, Training and Emergency Preparedness
- *J. Hammonds, Supervisor, Regulatory Compliance
- R. Harshman, System Engineer, Engineering Support
- D. Hartmangruber, Supervisor, Chemistry
- *L. Lawrence, Specialist, SAER
- *V. McGowan, Supervisor, Chemistry
- †T. Metzler, Acting Manager, Nuclear Safety and Compliance
- †*T. Moore, Assistant General Manager, Plant Operations
- *R. Ott, Supervisor, Training
- *J. Payne, Senior Engineer, Nuclear Safety and Compliance
- B. Roberts, Instructor, Training
- D. Smith, Superintendent, Health Physics
- *S. Tipps, Manager, Nuclear Safety and Compliance
- D. Woodson, Engineer, Maintenance

Other licensee employees contacted included engineers, technicians, and administrative personnel.

Nuclear Regulatory Commission

- *E. Christnot, Resident Inspector
- *T. Decker, Chief, Radiological Effluents and Chemistry Section
- †B. Holbrook, Resident Inspector

†Attended entrance interview

*Attended exit interview

2. Control Room Emergency Ventilation Systems (84750)

Technical Specifications (TSs) 3/4.12 for Unit 1 and 3/4.7.2 for Unit 2 described the operational and surveillance requirements for the main control room environmental systems. Two independent air treatment systems consisting of fans, pre-filters, high efficiency particulate air (HEPA) filters, and charcoal adsorber filter beds were required to be operable during reactor startup, power operation, hot shutdown, and

refueling operations. Action statements applicable to various modes were provided for conditions in which one or both of the systems were inoperable. The frequencies for functional testing, visual inspection, filter leak testing, air flow measurements, differential pressure measurements, and charcoal adsorption efficiency testing were specified.

The inspector toured the mechanical equipment room in which the control room ventilation systems were located. The licensee's cognizant system engineer located and identified, for the inspector, the major components of the systems. The inspector observed that the components and associated ductwork were well maintained structurally and that there was no physical deterioration of the ductwork sealants.

The inspector reviewed the procedures listed below and determined that they included provisions for performing the above operability and performance tests at the required frequencies. The acceptance criteria for the test results specified in those procedures were consistent with the TS requirements. Review of selected records of those tests indicated that they had been performed at the required frequencies and that the acceptance criteria had been met.

34SV-SUV-019-1S "Surveillance Checks"
 34SV-Z41-001-0S "Control Room Filter Train Operability"
 42SV-Z41-001-0S "Main Control Room Pressurization Logic System
 Functional Test"
 42SV-Z41-002-0S "Testing of Control Room Habitability Filter Trains"
 42SV-Z41-003-0S "Control Room Filter Train Flow and DP Measurement"

Based on the above reviews and observations, it was concluded that the licensee had complied with the above operational and surveillance requirements for the control room emergency ventilation systems.

No violations or deviations were identified.

3. Meteorological Monitoring Program (84750)

Section 7.3.3 of the Unit 2 Final Safety Analysis Report (FSAR) describes the operational and surveillance commitments for the meteorological monitoring instrumentation. Those commitments included continuous recording of wind speed, wind direction, and vertical temperature differences and semiannual instrument calibrations. Section 7.2.2.2 of the licensee's Offsite Dose Calculation Manual (ODCM) specified that an annual summary of the meteorological data would either be included in the Annual Radioactive Effluent Release Report or retained in an onsite file.

The licensee's meteorological monitoring program included onsite primary and back-up weather stations with monitoring instruments mounted at various elevations on the weather station towers. The meteorological data from those instruments were displayed at the weather stations and on chart recorders in the Control Room and the Emergency Operations Facility (EOF). A computerized records system was used for collecting

and reducing the continuously generated meteorological data and for producing an annual summary of the data. That system included provisions for editing the input data for consistency and eliminating spurious data points. The summarized data were used, along with the results of the annual land use survey, to update offsite dose calculation parameters.

The inspector reviewed procedure 64CH-ENV-001-0S "Meteorological Station" and determined that it included provisions for daily instrument operability checks and comparison of the meteorological parameters displayed at the weather stations to the values of those parameters printed on the chart recorders in the EOF. The inspector also reviewed selected records of performance of that procedure and determined that the specified surveillances had been performed on a daily basis.

The inspector reviewed reports for calibrations of the meteorological instrumentation which had been performed by a vendor during May and November 1993. The report for the calibration performed during May 1993 indicated that all components of the Meteorological Data Collection System (MDCS) were operating within tolerance limits at the completion of the calibration. The report for the November 1993 calibration indicated that all MDCS components were operating within tolerance limits with the exception of the digital output for two parameters from the computer used to collect and summarize the data. The vendor's report indicated that adjustments to the computer system were beyond the scope of the vendor's calibration activities. The report also included "items of note", i.e., field observations, regarding the condition of the weather station equipment. The licensee described, for the inspector, the current status of their followup actions for the items identified in the calibration report. As of the date of this inspection the problem with the digital output from the computer was still being investigated. The vendor had observed that the time was incorrect on most of the chart recorders in the EOF. The licensee indicated that their attempts to correct the problem with the chart recorders had not been successful and that the time and date were now being stamped on the charts during the daily instrument checks. The vendor had also observed that the outside cabling on the primary tower was beginning to crack due to wear and that water was entering the cable. This was the apparent cause of an intermittent problem with the indicated wind direction at the 60 meter elevation. The vendor's field notes indicated that the 60 meter primary wind direction readings were incorrect by approximately 180 degrees. The report indicated that the cable to the 60 meter elevation was repaired and the problem with the indicated wind direction appeared to have been resolved. The vendor had recommended a more permanent solution to the problem but no further action had been taken by the licensee. The inspector reviewed the records for the daily instrument checks performed during the week prior to the instrument calibrations. Those records indicated that the technicians who were performing the instrument checks had noted that the indicated wind direction at the 60 meter elevation was inconsistent with the indicated wind direction at the 10 meter and 100 meter elevations. Those records also indicated that, in accordance with the surveillance procedure, a Deficiency Card had been written to initiate corrective action for an improperly operating instrument. The

licensee indicated that a Work Request was typically issued whenever a Deficiency Card was written for an improperly operating instrument but the records for performing the work to repair the instrument were not readily available. Further review of the licensee's followup actions and records will be performed during subsequent inspections.

Based on the above reviews, it was concluded that the licensee was collecting the necessary meteorological data but could have been more diligent in responding to identified problems with the meteorological data gathering equipment.

No violations or deviations were identified.

4. Post-Accident Sampling Systems (84750)

TSs 6.16 for both units required the licensee to establish, implement, and maintain a program which would ensure the capability to obtain and analyze samples of reactor coolant, containment atmosphere, and radioactive iodines and particulates in plant gaseous effluents under accident conditions. The program was required to include training of personnel, procedures for sampling and analysis, and provisions for maintenance of sampling and analytical equipment.

By letter dated August 24, 1982, the NRC Office of Nuclear Reactor Regulation, Division of Licensing, informed the licensee that the NRC staff would be conducting a post implementation review of NUREG-0737 Item II.B.3 Post Accident Sampling System for Plant Hatch. The criteria contained in NUREG-0737 and the guidelines used by the staff to conduct the review were enclosed as an attachment to that letter. The licensee was requested to make a submittal which documented how each criterion of NUREG-0737 Item II.B.3 were satisfied. The licensee provided the requested information in letters dated January 26, February 10, and May 22, 1984. The licensee was informed by letter dated September 21, 1984 that the NRC review of the licensee's above three letters had been completed and that it had been concluded that the licensee's post accident sampling system satisfied the requirements of NUREG-0737 Item II.B.3. The licensee's letter dated January 26, 1984, provided a description of the then current post-accident sampling and analysis capabilities at Plant Hatch. In that letter the licensee indicated that the Post-Accident Sampling System (PASS) was functional but a number of tasks remained to be completed prior to declaring the system fully operational. A schedule for completing those tasks was provided in the enclosure to the letter. The enclosure reiterated each of the eleven criteria and clarifications of NUREG-0737 Item II.B.3 and provided the licensee's response to each of those criteria. Criterion 10 and the Clarification for Criterion 10 specified the accuracy, range, and sensitivity for the required analyses of post-accident samples. Clarification 10 specified the following: "All equipment and procedures which are used for post-accident sampling and analysis should be calibrated or tested at a frequency which will ensure, to a high degree of reliability, that it will be available if required. Operators should receive initial and refresher training in post-accident sampling,

analysis, and transport. A minimum frequency for the above efforts is considered to be every six months if indicated by testing. These provisions should be submitted in revised Technical Specifications in accordance with Enclosure 1 of NUREG-0737. The staff will provide model Technical Specifications at a later date." The licensee's response for Criterion 10 indicated that factory testing had been performed to determine instrument accuracies and sensitivities, and further in situ validation testing was necessary to verify that the installed PASS achieves the necessary accuracies. That response also indicated that an administrative program was under development to ensure the capability for post-accident sampling and analysis. The program would include training of personnel, procedures for sampling and analysis, and provisions for maintenance of sampling and analysis equipment. When completed, the program would be referenced in a proposed revision to the Administrative Technical Specifications. The licensee's response further indicated that upon successful validation testing of the PASS and implementation of the above referenced administrative program, Plant Hatch would comply with Criterion 10.

Through observation of the PASS equipment and discussions with cognizant licensee personnel, the inspector determined that the licensee's program included the use of a single sampling and analytical equipment panel which was remotely operated from a control panel located in the count room. The system had the capability of collecting samples of reactor coolant and containment atmosphere from either unit and analyzing those samples with in-line measurement equipment. The in-line measurement capability included gamma spectrographic analysis of reactor coolant samples and containment atmosphere samples and conductivity, pH, hydrogen concentration, boron concentration, and chloride concentration of reactor coolant samples. The system also had the capability of collecting diluted and undiluted grab samples, under routine and post-accident conditions, for analysis by either the on-site or an off-site laboratory.

The inspector reviewed the procedures listed below and determined that they included provisions for routine operational testing of the system.

- 64CH-SAM-007-0S "Automated Sampling/In-Line Analyses of
Reactor Coolant and Containment Atmosphere"
- 64CH-SAM-008-0S "Routine Reactor Coolant Diluted Grab Sampling"
- 64CH-SAM-009-0S "Routine Reactor Coolant Grab Sampling"
- 64CH-SAM-010-0S "Routine Drywell Atmosphere Diluted Grab Sampling"
- 64CH-SAM-011-0S "Routine Drywell Atmosphere Grab Sampling"
- 64CH-SAM-012-0S "Post Accident Reactor Coolant Diluted Grab
Sampling"
- 64CH-SAM-013-0S "Post Accident Reactor Coolant Grab Sampling"
- 64CH-SAM-014-0S "Post Accident Drywell Atmosphere Diluted Grab
Sampling"
- 64CH-SAM-015-0S "Post Accident Drywell Atmosphere Grab Sampling"
- 64CH-SAM-016-0S "Post Accident Grab Sample Handling for Offsite
Shipment"

Through a review of selected licensee records for operational testing of the post-accident sampling system and through discussions with the licensee, the inspector determined that the in-line measurement equipment used to analyze reactor coolant for boron concentration, chloride concentration, pH, and conductivity had been out of service for approximately two years. The licensee's failure to implement a program, in conformance with Criterion 10 of NUREG-0737 Item II.B.3, for testing all equipment and procedures used for post-accident sampling and analysis at a frequency which will ensure that it will be available if required, has been deemed to be an issue which will require further review by the NRC.

The inspector also reviewed the System Master Plan for the Chemistry Technician Training Program. That document included the job position description, the program description and qualification requirements, the chemistry task-to-training cross reference, and the chemistry training curriculum. Through that review and discussions with licensee personnel, the inspector determined that the licensee's training program included provisions for initial training of PASS operators but did not include provisions for refresher training. The licensee's failure to implement a program, in conformance with Criterion 10 of NUREG-0737 Item II.B.3, for providing operators with initial and refresher training in post-accident sampling, analysis, and transport, has been deemed to be an issue which will require further review by the NRC.

Based on the above reviews and discussions, it was concluded that the two issues regarding the licensee's failure to implement a program, in conformance with Criterion 10 of NUREG-0737 Item II.B.3, for testing all PASS equipment and procedures at a frequency which would ensure that it would be available if required, and for providing refresher training to PASS operators, constitute an unresolved item pending NRC review of subsequent licensee submittals regarding development and implementation of an administrative program to ensure the capability for post-accident sampling and analysis (URI 50-321, 366/94-06-01).

Two examples of an unresolved item were identified.

5. Exit Interview

The inspection scope and results were summarized on February 18, 1994, with those persons indicated in Paragraph 1. The inspector described the areas inspected and discussed in detail the inspection results listed above. No dissenting comments were received from the licensee. Proprietary information is not contained in this report.

<u>Item Number</u>	<u>Status</u>	<u>Description and Reference</u>
50-321, 366/94-06-01	Open	URI - Failure to test PASS and retrain operators (Paragraph 4).