

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-424, 50-425
License Nos: NPF-68, NPF-81

Report Nos: 50-424/97-02, 425/97-02

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Vogtle Electric Generating Plant

Location: 8805 River Road
Waynesboro, GA 30830

Dates: February 10-14, and March 3-7, 1997

Inspectors: George B. Kuzo, Senior Radiation Specialist
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Approved by: K. Barr, Chief, Plant Support Branch
Division of Reactor Safety

Enclosure

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EXECUTIVE SUMMARY

Vogtle Electric Generating Plant NRC Inspection Report Nos. 50-424/97-02, 425/97-02

This routine announced inspection reviewed and evaluated occupational radiation protection, radioactive liquid and gaseous waste, solid radioactive waste (radwaste), and radioactive material transportation programs. Specific program areas reviewed and evaluated by the inspectors included general employee training; radiation monitoring system (RMS) equipment operability; radioactive effluent processing and release; meteorological station operations; and status of radwaste processing equipment and storage facilities. The adequacy of associated procedures and radiological controls, and staff proficiency for radioactive waste processing and transportation program activities were evaluated. In addition, selected Safety Audit and Engineering Review (SAER) audit findings and corrective actions were discussed and evaluated. Conclusions included the following:

- In general, controls for low-level radioactive waste (radwaste) and material processing and storage met Technical Specification (TS) and 10 CFR Part 20 requirements. Labels for containers of radioactive materials and waste and radiological controls for high radiation and locked high radiation areas were in accordance with 10 CFR Part 20 and TS requirements. Housekeeping was acceptable within the auxiliary buildings, radwaste processing and storage facilities. An example of a non-cited violation (NCV) of TS 5.4.1(a) was identified for failure to follow radiation protection procedures for maintaining radioactive waste processing facility dose rates within procedural limits. (Section R1.1).
- In general, RMS and meteorological equipment and systems were operable and calibrated appropriately. Corrective actions to address RMS equipment or calibration issues identified in a recent SAER audit, e.g., inadequate electronic calibrations requirements, were adequate. An unresolved item (URI) was opened regarding adequacy of the containment high radiation monitor sensitivity to meet criteria detailed in NUREG-0737, Clarification of Three Mile Island (TMI) Action Plan Requirements, Item II.F.1-3 (Section R1.3).
- Excluding an October 23, 1996, radioactive material shipment, transportation and packaging activities for radwaste or radioactive material shipments reviewed were implemented appropriately and met 10 CFR 71 and 49 CFR requirements. For the October 23, 1996 shipment, an apparent violation of 49 CFR 173.475 requirements was identified for the failure to prepare a radioactive material package for transport such that, under conditions normally incident to transportation, radiation levels on the external surface of the package exceeded 10 millisievert per hour (mSv/hr) [1000 millirem/hour (mrem/hr)] (Section R1.2). The licensee provided appropriate hazardous material (hazmat) training and implemented, as required, revised Department of Transportation (DOT) guidance (Section R5.2).
- In general, sampling, analyses and processing of a liquid radioactive waste tank for release was conducted in accordance with Operations and Chemistry procedures, and Offsite Dose Calculation Manual (ODCM)

methodology. During observation of the liquid radioactive waste tank release, a second example of a NCV of TS 5.4.1(a) was identified for failure to follow procedures regarding analysis of liquid waste tank radionuclide concentrations. (Section R1.3).

- The Engineered Safety Feature (ESF) ventilation systems were maintained appropriately and tested in accordance with TS requirements. Test results for selected ESF systems were acceptable (Section R2.3).
- General employee training was conducted in accordance with established commitments and procedures (Section R5.1)
- Counting room quality control (QC) activities associated with effluent measurements were technically adequate (Section R7.1). Audits of radioactive waste, effluent and transportation program activities were thorough and met TS, ODCM, 10 CFR Parts 20 and 71 requirements (Section R7.2).

Report Details

IV. Plant Support

R1 Radiological Protection and Chemistry Controls

R1.1 Radiological Controls

a. Inspection Scope (84750, 86750)

During numerous tours of site radiologically controlled areas (RCAs), the inspectors reviewed radiological controls associated with liquid and gaseous waste processing facilities, and with radioactive material and waste storage areas and observed general housekeeping and cleanliness. The toured areas included the auxiliary building and remote radioactive material storage and processing buildings located within the Owner Controlled Area. Radiation dose rate and contamination surveys were conducted for selected areas and storage equipment.

Established controls were compared against procedural requirements, Technical Specification (TS) 5.7 and 10 CFR Part 20 Subpart J requirements, as applicable.

b. Observations and Findings

Postings and physical controls to limit personnel exposure from external sources in restricted areas were in accordance with TS and 10 CFR Part 20 requirements. Administrative and physical controls for high radiation and locked high radiation areas were in accordance with TS requirements. Label information for containers of radioactive materials and waste met 10 CFR Part 20 and procedural requirements.

Excluding the radwaste processing building, dose rate and contamination surveys conducted verified proper radiological controls were implemented and corroborated current survey results. On February 11, 1997, following tours of the dry active waste (DAW) processing facility, surveys conducted on the outside surface of the facility walls identified dose rates of approximately 2 millirem per hour (mrem/hr), which exceeded the procedural limit of 0.250 mrem/hr specified in procedure, 46102-C, Operation of the Support Systems in the Dry Active Waste Processing and Storage Facilities, Rev. 2, approved March 28, 1994. The procedure requires that material stored inside the DAW storage and processing facilities must be arranged so that the dose rate on contact with facility walls is less than 0.25 mrem/hr. The inspector noted that the failure to follow procedures for maintaining dose rates within the established limits was a violation of TS 5.4.1(a). Licensee followup and root cause investigation determined that boxes of outage equipment in close proximity to the inside walls resulted in the outside wall dose rate limits being exceeded. The infrequent use of the facility and reduction in survey frequency resulted in misinterpretation by Health Physics (HP) technicians regarding completion and documentation of the required surveys. Immediate corrective actions documented in Radiological Incident Report (RIR) No. 97-003, included rearrangement of the boxes and verification that dose rates were within limits and posting of storage requirements for the facilities. In

In addition, signs were posted at both DAW processing and storage facilities specifying surveys required, and dose rate survey and survey map documents were revised and preprinted with established limits. The RIR was to be included in all shift briefings. In addition, improvements were made to survey maps and documentation for Spent Fuel Rack storage area and the Alternate Radwaste building.

c. Conclusions

In general, controls for low-level radioactive waste (radwaste) and material processing and storage met TS and 10 CFR Part 20 requirements. Labels for containers of radioactive materials and waste were in accordance with 10 CFR Part 20 requirements. Consistent with Section IV of the Enforcement Policy based on corrective actions taken prior to the end of the inspection, the DAW Processing dose rates exceeding procedural limits was identified as a non-cited violation (NCV) 50-424, 50-425/97-02-01: Failure to follow radiation protection procedures for a DAW processing facility dose rate limits.

R1.2 Radioactive Waste and Material Transportation Activities

a. Inspection Scope (86750, TI2515/133)

The inspectors evaluated and discussed the licensee's current guidance for radioactive material and waste packaging and transportation program activities. The following procedures were reviewed and evaluated against recently revised 10 CFR Part 20, 49 CFR Parts 100-179 and 10 CFR Part 71 regulations.

- 46004-C, Shipment of Radioactive Material, Rev. 13, approved April 4, 1996.
- 46100-C, 10 CFR61 Waste Classification Sampling Program, Rev. 2, approved April 4, 1996.
- 46102-C, Operation of the Support Systems in the Dry Active Waste Processing and Storage Facilities, Rev. 2, approved March 28, 1994.
- 46110-C, Shipment of Radioactive Waste, Rev. 6, Approved April 4, 1996.

Records associated with packaging and shipping of radioactive material and waste to either vendor processing facilities or directly to a licensed burial facility were reviewed and discussed with responsible personnel. The following shipment records were reviewed in detail.

- Radioactive Waste Shipment (RWS) Number (No) 96-001, Radioactive Material, Low Specific Activity, NOS. 7, UN-2912, Reportable Quantity (RQ) Fissile Exempt, containing dewatered Ion Exchange Resin (Bead) from Plant Demineralizer System, shipped March 16, 1996.

- RWS No. 96-004, Radioactive Material, Low Specific Activity, NOS. 7, UN-2912, Reportable Quantity (RQ) Fissile Excepted, containing dewatered Ion Exchange Resin (Bead and Powdex) from Plant Demineralizer System, shipped September 27, 1996.
- RWS No. 96-005, Radioactive Material, Low Specific Activity, NOS. 7, UN-2912, Reportable Quantity (RQ) Fissile Excepted, containing dewatered Ion Exchange Resin (Bead and Powdex) from Plant Demineralizer System, shipped December 13, 1996.
- 96-10-002, Radioactive Material Shipment, Surface Contaminated Object 2, NOS. 7, UN 2913, containing a reactor coolant pump, dated October 13, 1996.
- 96-10-005, Radioactive Material Shipment, Surface Contaminated Object 2, NOS. 7, UN 2913, containing seven strong tight packages of Fuel Sipping, UT, Fuel Reconstitution and RCCA equipment returned to a vendor dated October 23, 1996.

b. Observations and Findings

The inspectors verified that changes to 49 CFR Parts 100-179 and 10 CFR Part 71 regulations were incorporated into the current procedures and were implemented as required. Excluding material shipment No. 96-10-006, the inspectors' reviews of shipping paper documentation verified that applicable regulatory requirements were met. As applicable, the inspectors verified the licensee was a registered user of the shipping casks and that the appropriate Certificates of Compliance and associated documents were maintained at the facility.

Notifications and licensee followup regarding package surface dose rate concerns for an October 23, 1996, shipment were reviewed and discussed in detail. On November 6, 1996, an NRC Region II (RII) Radiation Specialist was informed by NRC Region I staff of an October 23, 1996 Vogtle shipment received at the Westinghouse Waltz Mill, PA. vendor facility which contained a package having maximum surface dose rates of approximately 20 millisievert per hour (20 mSv/hr) (2000 millirem per hour [mrem/hr]), which exceeded NRC/DOT 49 CFR 173.475 package surface limits of 10 mSv/hr [1000 mrem/hr]. Subsequent discussions during November 7, 1996, teleconferences between RII and the Vogtle Radiation Protection supervisors, indicated that plant management was unaware of the identified issue. Preliminary review of Vogtle survey records for the out-going shipment documented a maximum surface dose rate of approximately 120 mrem/hr for the subject package. Review of additional survey records for the individual pieces of equipment and the transport vehicle indicated that the package contained fuel reconstitution equipment having an initial maximum dose rate of 800 mrem/hr associated with a camera stand, a one inch diameter hollow tube which had been stored in the spent fuel pool. Recorded dose rates associated with the transport vehicle were within regulatory limits. The package was part of an exclusive-use, closed transport vehicle shipment. Upon arrival at the vendor facility on October 25, 1996, measured dose rates for the transport driver's position and on the outside of the transport vehicle were within regulatory limits.

On November 11, 1996, a Vogtle transportation specialist was dispatched to the Waltz Mill, PA site to review and evaluate the identified issue. The Vogtle specialist independently verified that within a localized area on the package surface, dose rates exceeded regulatory limits of 10 mSv/hr (1000 mrem/hr) specified in 49 CFR 173.475. Further review, determined that the equipment was packaged appropriately and that elevated dose rates, up to 50 mSv/hr (5000 mrem/hr), were measured at one end of the camera stand. The investigation determined that the elevated dose rates resulted from a small, microscopic piece of crud material which had not been identified during the original surveys and was located at one end of the camera stand at the time of survey.

The licensee's root cause determination documented insufficient preparation time allocated for the task and less than adequate task distribution for work organization methods. In addition, the lack of standard policy or administrative controls were documented as an additional root cause of the event. Documented corrective actions included ensuring all Health Physics (HP) and Decontamination Technicians are trained in the requirements for removing material from the spent fuel pool and subsequently shipping the objects offsite. The vendor was also to complete cleanliness procedures regarding materials and equipment stored in the spent fuel pool. Also, the need for additional shielding of boxes was to be reviewed by the vendor.

c. Conclusions

In general, transportation and packaging activities for radioactive waste or material shipments met 10 CFR Part 20, 71.5 and 49 CFR 100-179 requirements. The licensee was implementing, as required, revised DOT guidance. The failure to prepare a radioactive material package for transport on October 23, 1996, such that, under conditions normally incident to transportation, radiation levels on the external surface of the package did not exceed 10 millisievert per hour (mSv/hr) [1000 millirem/hour (mrem/hr)] was identified as an apparent violation of 49 CFR 173.475 requirements: Escalated Enforcement Item (EEI) 50-424, 425/97-02-02: Failure to meet 49 CFR 173.475 package dose rate limits.

R1.3 Radioactive Waste Analysis, Processing and Release

a. Inspection Scope (84750)

During the onsite inspection, liquid radioactive waste analysis, processing and release activities were reviewed. Evaluated program areas included equipment operability, procedural adequacy and staff proficiency.

On March 4, 1997, the inspectors directly observed and evaluated activities associated with a Unit 2 (U2), No. 9 Waste Monitor Tank (WMT 9) liquid effluent release. The review included pre-release sample collection and radiological analyses, determination of the liquid effluent radiation monitor (RE-18) setpoints, and operations associated with subsequent release to the environment.

The following procedures were reviewed and evaluated during observation of the WMT processing and release:

- Procedure 33035-C, Gamma Spectroscopy for Radiochemistry, Rev. 17.
- Procedure 34311-C, Operation of Digital Radiation Monitoring System (DRMS) Liquid Release Monitors 1(2)RE-0018)
- Procedure 34331-C, Management of DRMS Status and Parameter, Rev. 9.
- Procedure 35420-C, Monitoring of Radioactive Liquid Waste Management System, Rev. 15.
- Procedure 36015-C, Radioactive Liquid Effluent Release Permit Generation and Data Control, Rev.14.
- Procedure 37000-C, Sample Handling, Rev. 2.

Personnel observed and interviewed regarding the liquid radwaste processing and release evolutions included Operations and Chemistry staff.

b. Observations and Findings

The inspectors noted that the current procedures were adequate for sample collection preparation, analysis, set-point determination and final release documented in liquid release permit No. 97-0018-L.

During observation of the release, concerns were noted for procedural adherence and for the material condition of a radiation flow indicator (FI) used to verify the liquid waste monitor flow rates. Procedure 33035-C, Rev. 17 required a 1000 milliliter sample to be analyzed by gamma spectroscopy analysis to quantify the release radionuclide concentrations. The inspectors noted that the technician failed to accurately determine the exact volume. Evaluation of the sample used for the analysis verified that the volume did not meet the procedural requirements. Review of the gamma spectroscopy data verified that the error was conservative and for this specific case, did not affect the final set-points nor release data and dose estimates. Licensee management reviewed procedural guidance, training provided and stated that all responsible personnel would be instructed in the need for accurate sample volume for completing the quantitative analyses. In addition, the visibility of the float within Flow Indicator 2-FI-0018, was marginal. Licensee representatives stated that corrective actions regarding the flow indicator were initiated prior to the end of the onsite inspection.

c. Conclusions

In general, release of a Unit-2 WMT-9 was conducted in accordance with Operations and Chemistry procedures, and Offsite Dose Calculation Manual methodology. Consistent with Section IV of the Enforcement Policy based on corrective actions taken prior to the end of the inspection, the failure to analyze a 1000 milliliter sample for gamma spectroscopy

analysis was identified as a second example of NCV 50-424, 425/97-02-01: Failure to follow procedures in accordance with TS 5.4.1(a) for a liquid waste processing gamma spectroscopy analyses.

R2 Status of Radiation Protection and Chemistry Equipment and Facilities

R2.1 Meteorological Monitoring Program and Instrumentation

a. Inspection Scope (84750)

The inspectors reviewed the licensee's meteorological program and equipment against specifications detailed in FSAR Section 2.3.3, Onsite Meteorological Measurements Program. In addition, instrumentation and equipment operability, calibration and maintenance were verified.

b. Observations and Findings

On February 13, 1997, the inspectors observed licensee personnel performing daily checks of the meteorological data collection center (MDCC) instrumentation, located at the base of the 60-meter tower at the periphery of the plant site. The observed checks were conducted in accordance with procedure 36030-C, Meteorological Tower Monitoring and Data Control, Rev. 11. The individual conducting this surveillance was systematic and thorough.

Selected records of calibrations and surveillances performed during the past 18 months were reviewed. The records reviewed were for eight procedures associated with the meteorological monitoring system. The subject surveillances were performed correctly and within schedule, and instrumentation calibrations were completed as required.

c. Conclusions

The licensee was maintaining the meteorological equipment appropriately, and implementing the meteorological monitoring program in accordance with established procedures and FSAR commitments.

R2.2 Radiation Monitor System Installation and Calibration

a. Inspection Scope (84750)

The inspectors reviewed and evaluated the adequacy of installed process and effluent Radiation Monitoring System (RMS) detectors, particulate and iodine samplers, electronics, sampling lines and flow meters, as applicable, to meet FSAR commitments and to implement Offsite Dose Calculation Manual (ODCM) and 10 CFR Part 20 requirements. The evaluation included, as applicable, RMS equipment walk-downs with comparisons against configuration control documents, design changes and vendor design specifications, as appropriate. Further, the installed sample line bend radii and piping specifications were evaluated against recommendations detailed in American National Standards Institute (ANSI) N13.1-1969, American National Standard Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities. General comparisons were made between radiation monitor local and remote readout data, where possible.

Approved guidance and resultant data for selected RMS detector calibrations were reviewed and discussed. For each detector reviewed, source calibration packages were reviewed, evaluated and discussed with licensee representatives. The following RMS detectors and associated electronics were included in the review: Unit 1 Waste Liquid Effluent Monitor (RE-18); Steam Generator Sample Liquid Process Monitor (RE-19), Steam Generator Sample Liquid Process Monitor (RE-21) Plant Vent Wide Range Monitor (1RE12444C); Containment High Range Monitor (RE-0005).

The RMS source calibration guidance and results were evaluated against applicable sections of the FSAR, Technical Specification (TS) and ODCM requirements. In addition, guidance for the containment high range monitor was compared against special calibration requirements specified in NUREG 0737, Clarification of Three Mile Island (TMI) Action Plan Requirements, Table II.F.1-3 Containment High Range Monitors (CHRM's).

b. Observations and Findings

For the RMS equipment reviewed, no significant issues regarding design specifications, installed system equipment and sample line configurations, and operating parameters were identified. Housekeeping practices associated with RMS equipment skids, cabinets and general areas were appropriate.

From direct observation of RMS equipment and discussions with responsible personnel, operability of selected monitors was verified. Comparison of selected monitor remote and local readouts did not identify any significant discrepancies. Sample flow rates were within limits specified within vendor manuals. In addition, the inspectors verified that corrective actions were in progress regarding degraded heat trace conditions identified in Safety Audit and Engineering Review (SAER) audit No. OP05-97/03 dated February 7, 1997.

Excluding the containment high range monitor, no calibration concerns were identified. Surveillances were conducted at the required frequencies and the reported results were acceptable. For the containment high range monitor calibration data, the inspectors noted that the source strength, approximately 17 Roentgens per hour (R/hr) used to conduct the *in situ* calibration exceeded the 1 -10 R/hr range specified in NUREG 0737, Table II.F.1-3. Initial review of FSAR commitments and discussions with licensee representatives indicated that no exception was taken from meeting the requirements of NUREG 0737, Table II.F.1-3, nor was an analysis of changes from the FSAR commitments available. Review of vendor calculations and documents indicated that the stronger source strength was selected to minimize interference from system noise. The inspectors noted that additional NRC review of vendor calculations and data for the installed containment high range monitors to meet sensitivity requirements would be conducted.

c. Conclusions

The RMS equipment was designed, installed, and operated appropriately. Maintenance issues regarding heat tracing degradation identified during a recent SAER audit were being tracked and corrected by the licensee. The adequacy of the containment high range monitor to meet FSAR

requirements based on the calibration source concerns was identified as an unresolved item (URI) 50-424, 425/97-02-03: NRC review and evaluate 17 R/hr source strength and installed containment high range monitor to meet NUREG 0737 sensitivity and calibration requirements.

R2.3 Engineered Safety Feature (ESF) Ventilation System

a. Inspection Scope (84750)

The inspectors verified implementation of Engineered Safety Feature (ESF) ventilation systems filter testing surveillances required by TS 3.7 in accordance with TS 5.5.11 test requirements. In addition, the material condition of selected ESF filter ventilation systems was observed during system walk-downs. Equipment walk-downs were conducted and the most recent surveillance results reviewed for the following ESF ventilation systems.

- Unit 1, Piping Penetration Area Filtration and Exhaust - Train A
- Unit 1 Control Room Emergency Filtration Room - Trains A & B
- Unit 2 Control Room Emergency Filtration Room - Trains A & B

b. Observations and Findings

The material condition of the ESF equipment and cleanliness of associated areas was adequate. From reviews of maintenance work orders, the inspectors verified that selected equipment issues noted during licensee walk-downs or routine surveillances were identified, tracked and completed in a timely manner.

From review of licensee records, the inspectors verified that ESF 18 month surveillances were conducted at the specified frequency. Test results for the high efficiency particulate air (HEPA) filter, in place charcoal adsorber and laboratory analysis of charcoal adsorber material met established TS acceptance criteria.

c. Conclusions

The ESF ventilation systems were maintained appropriately and tested in accordance with TS requirements. Test results for selected ESF systems were acceptable.

R5 Training and Qualifications in Radiation Protection and Transportation

R5.1 General Employee Training

a. Inspection Scope (83750)

The inspectors reviewed the licensee's program for providing General Employee Training (GET), also known as Badge Training, for personnel permanently or temporarily employed at the Vogtle facility.

b. Observations and Findings

The licensee's program for GET was addressed in plant procedure 00700-C, General Employee Training, Rev. 18, approved January 17, 1997. To obtain unescorted access and dosimetry for the Protected Area and selected Vital Areas, employees were required to receive formal initial training and annual retraining in plant overview, emergency preparedness, fire protection, industrial safety, quality assurance, security, and radiation protection, and to pass a written examination covering those various areas. Approximately 55 percent of the 110-page initial GET handbook provided to employees was devoted to radiation protection matters. A different handbook (73 pages) was provided for employee study as part of annual retraining, with approximately 50 percent of its content dedicated to the subject of radiation protection. Prior to Revision 17 of procedure 00700-C in October 1995, each employee was required (on a triennial basis) to read the GET handbook, and to so certify in writing, before attending the retraining. Employees were encouraged and expected (but not required) to review the GET retraining handbook before attending the annual training.

The inspectors discussed the GET program with cognizant licensee management, and reviewed selected lessons plans, particularly with regard to the area of Radiation Protection (RP). The inspectors scrutinized training records for a total of 12 employees selected from Operations, HP/Chemistry, and Security. No discrepancies were identified in the GET records of these licensee personnel for the period 1987-1996.

c. Conclusions

The licensee was effectively administering its GET program in accordance with established commitments and procedures.

R5.2 Hazardous Material Training

a. Inspection Scope (86750, TI 2515/133)

The training provided to meet the requirements of 49 CFR Part 172 Subpart H were reviewed and discussed with licensee representatives. Further, training details provided to staff regarding implementation of recent Department of Transportation (DOT) changes to 49 CFR Parts 100-179 were evaluated.

From discussion with responsible staff members, the inspector evaluated the training effectiveness regarding recent DOT changes implemented for 49 CFR Parts 100-179.

b. Observations and Findings

From review of training records, the inspectors verified that staff members involved in handling and packaging of radioactive materials were receiving hazardous material (hazmat) training at the required frequencies. From review of training material presented to staff in November 1996, the inspectors verified that recent DOT changes to shipping and packaging requirements were provided to responsible

personnel. Applicable hazmat training was provided to HP staff in June 1995 and in December 1996. The most recent training was conducted as part of the corrective actions for the issue involving improper packaging and transportation of surface contaminated object (SCO) material detailed in Section R1.2. Additional training regarding the new DOT regulations is scheduled. From discussion of shipping procedures and records, the inspectors determined that responsible licensee representatives were knowledgeable of the recent DOT changes.

c. Conclusions

Hazmat training provided to personnel handling radioactive materials was conducted at the appropriate frequency, and included recent changes to DOT regulations. The training provided was effective.

R7 Quality Assurance (QA) in Radiation Protection and Chemistry Activities

R7.1 Radiological Measurement Quality Control

a. Inspection Scope (84750)

The inspectors reviewed implementation of the counting room quality control (QC) activities to meet the intent of Regulatory Guide (RG) 4.15, Quality Assurance for Radiological Monitoring Programs (Normal Operations) - Effluent Streams and the Environment. Specifically, the results of the 1995 and 1996 inter-laboratory cross-check radiological analyses were reviewed and discussed with cognizant licensee representatives. Also, the inspectors reviewed and discussed composite sample preservation to maintain sample representativeness.

b. Observations and Findings

All individual inter-laboratory analyses were within the established acceptance criteria. No regulatory concerns nor negative trends were identified from review of the counting room tritium and gamma-spectroscopy QC performance data. Licensee methods for preservation of composite samples were appropriate.

c. Conclusions

Sample preservation, and gamma spectroscopy and tritium inter-laboratory cross check QC activities were implemented appropriately and met the intent of RG 4.15.

R7.2 Licensee Self-Assessment Activities (84750, 86750)

a. Inspection Scope (84750, 86750)

During the inspection period, the following Safety Audit and Engineering Review (SAER) audit reports and associated checklists were reviewed and discussed with cognizant licensee representatives. Specific radioactive

waste, transportation, effluent monitoring and chemistry, Radiation Control (RC); and radioactive waste (radwaste) processing, packaging and transportation program activities required by TS, 10 CFR Part 20, and 10 CFR Part 71 were reviewed and discussed with licensee representatives.

- SAER Audit of Radioactive Waste Control - OP05-97/03, dated February 7, 1997.
- SAER Audit of Radioactive Waste Control - OP05-96/17, dated July 1, 1996.
- SAER Audit of Plant Chemistry - OP04-96/28, dated September 12, 1996.
- SAER Audit of Plant Chemistry - OP04-95/25, dated November 20, 1995.
- SAER Audit of Radioactive Waste - OP05-95/16, dated October 23, 1995.

b. Observations and Findings

The audits met required frequencies and addressed ODCM, effluent, Chemistry, RC, radwaste and transportation program guidance and implementation. Both compliance-based and performance-based audit techniques were used to identify documented strengths, issues, weaknesses and recommendations. The inspectors verified from review of audit checklists and discussions with responsible personnel that the audits included review and followup of previously identified items.

From review of audit team participants and discussions with licensee management, the inspectors determined that audit teams included experienced individuals from outside of the Vogtle facility.

c. Conclusions

Audits of the radioactive waste, effluents and transportation program activities were thorough and comprehensive, and met TS, 10 CFR Part 20, and 10 CFR Part 71 requirements.

VI. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of the licensee management on February 14, 1997. The licensee acknowledged the findings presented.

The inspectors noted that no proprietary information would be contained in the report.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

B. Beasley, General Manager
 R. Brown, Training and Emergency Preparedness Manager
 R. Carter, Supervisor, Safety Audit and Engineering Review
 S. Chestnut, Manager, Operations
 J. Gasser, Assistant General Manager Operations
 K. Holmes, Maintenance Manager
 I. Kochery, Health Physics Superintendent
 M. Kurtzman, Supervisor, Health Physics and Chemistry Training
 A. Parton, Chemistry Superintendent
 M. Sheibani, Supervisor, Nuclear Safety and Compliance
 C. Tippins, Jr., Nuclear Specialist

INSPECTION PROCEDURES USED

IP 83750:	Occupational Radiation Exposure
IP 84750:	Radioactive Waste Treatment, and Effluent and Environmental Monitoring
IP 86750:	Solid Radioactive Waste Management and Transportation of Radioactive Materials
TI 2515/133:	Implementation of Revised 49 CFR Parts 100-170 and 10 CFR Part 71

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-424, 425/97-02-01	NCV	Failure to follow radiation protection procedures for a DAW processing facility dose rate limits (Section R1.1) and for a liquid waste processing gamma spectroscopy analyses (Section R1.3)
50-424, 425/97-02-02	EEI	Failure to meet 49 CFR 173.475 package dose rate limits (Section R1.2).

50-424, 425/97-02-03 URI NRC review and evaluate 17 R/hr source strength and installed containment high range monitor to meet NUREG 0737 sensitivity and calibration requirements (Section R2.2).

Closed

50-424, 425/97-02-01 NCV Failure to follow radiation protection procedures for a DAW processing facility dose rate limits (Section R1.1) and for a liquid waste processing gamma spectroscopy analyses (Section R1.3)

LIST OF ACRONYMS USED

ANSI	American National Standards Institute
DAW	Dry Active Waste
DOT	Department of Transportation
ESF	Engineered Safety Feature
FSAR	Final Safety Analysis Report
Hazmat	Hazardous Material
HP	Health Physics
MDCC	Meteorological Data Collection Center
mrem/hr	millirem per hour
mSv/hr	millisieverts per hour
NCV	Non-cited Violation
ODCM	Offsite Dose Calculation Manual
QA	Quality Assurance
QC	Quality Control
R/hr	Roentgens per hour
radwaste	Radioactive Waste
RCA	Radiologically Controlled Area
RG	Regulatory Guide
RIR	Radiological Incident Report
RMS	Radiation Monitoring System
RP	Radiation Protection
RQ	Reportable Quantities
RWP	Radiation Work Permit
RWS	Radioactive Waste Shipment
SAER	Safety Audit and Engineering Review
TMI	Three Mile Island
TS	Technical Specification
URI	Unresolved Item
VHRA	Very High Radiation Area
VIO	Violation