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

OCT 16 1985

Report Nos.: 50-269/85-30, 50-270/85-30, and 50-287/85-30

Licensee: Duke Power Company
422 South Church Street
Charlotte, NC 28242

Docket Nos.: 50-269, 50-270, and 50-287 License Nos.: DPR-38, DPR-47, and DPR-55

Facility Name: Oconee Nuclear Station

Inspection Conducted: September 16 - 20, 1985

Inspector: B. K. Revsin 10/8/85
B. K. Revsin Date Signed

Accompanying Personnel: M. Poston-Brown

Approved by: C. M. Hosey 10/8/85
C. M. Hosey, Section Chief Date Signed
Division of Radiation Safety and Safeguards

SUMMARY

Scope: This routine, unannounced inspection entailed 38 inspector-hours onsite during regular hours in the area of radiation protection including external exposure control; internal exposure control; training and qualifications of personnel; radioactive materials control, posting and labeling; and program for maintaining exposures as low as reasonably achievable (ALARA).

Results: One violation - failure to label containers of radioactive material.

REPORT DETAILS

1. Persons Contacted

   Licensee Employees

   *M. S. Tuckman, Station Manager
   *R. T. Bond, Compliance Engineer
   *G. T. Powell, Health Physics, General Office
   *S. A. Coy, Associate Health Physicist
   *C. T. Yongue, Station Health Physicist
   *T. S. Barr, Superintendent of Technical Services
   C. L. Harlin, Health-Physics Coordinator
   T. L. Cherry, ALARA Supervisor
   D. Austin, Training and Safety Coordinator
   T. E. Carroll, Health Physics Supervisor
   M. L. Lynch, Health Physics Supervisor
   D. R. White, Health Physics Supervisor

   NRC Resident Inspectors

   J. Bryant, Senior Resident Inspector
   K. Sasser, Resident Inspector
   L. King, Resident Inspector

   *Attended exit interview

2. Exit Interview

   The inspection scope and findings were summarized on September 20, 1985, with those persons indicated in paragraph 1 above. An apparent violation for failure to label containers of radioactive material (paragraph 5a) was discussed in detail. Licensee management took no exceptions. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this investigation.

3. Licensee Action on Previous Enforcement Matters

   This subject was not addressed in the inspection.

4. Training and Qualifications (83723)

   a. Radiation Protection Technician Training and Qualification

      The licensee was required by Technical Specification (T.S.) 6.1.1.4 to qualify health physics (HP) technicians in accordance with Section 4 of ANSI/ANS-3.1-1978. The inspector discussed the training and qualification program with the HP Technical Associate in charge of implementation of the HP technician training program. The course outline for HP

training was reviewed and selected records of HP technicians were examined to verify that all mandatory classroom and on-the-job training had been completed. A licensee representative stated that both the HP and chemistry technician training programs would be submitted for accreditation to the Institute for Nuclear Power Operations (INPO) by December 31, 1985.

T.S. 6.1.1.5 specified that retraining and replacement of station personnel shall be in accordance with Section 5.5 of ANSI/ANS-3.1-1978. The inspector discussed the training/replacement program with the HP Technical Associate and with the Training and Safety Coordinator.

b. Basic Radiation Protection Training

The licensee was required by 10 CFR 19.12 to provide basic radiation safety training for workers with Regulatory Guides 8.27, 8.29 and 8.13 providing an outline of topics that should be included in such training. The inspector discussed the initial general employee radiation protection training (GET) with the Training and Safety Coordinator and reviewed course outlines and lesson plans that described the GET program. For annual GET retraining, the licensee stated that workers may opt to take a by-pass examination which includes an update briefing covering changes that have occurred at the facility as well as operating problems at other facilities. The inspector discussed the training tracking system with the licensee and found adequate controls in place to assure that radiation worker training was up-to-date. Selected records of plant radiation workers and outage radiation workers were examined to verify that their GET training was current.

c. Respiratory Protection Training

The licensee was required by 10 CFR 20.103 to establish a qualification program for workers who wear respiratory protection equipment. Elements of the qualification program outlined in 10 CFR 20.103 were delineated in NUREG-0041. The inspector discussed the respiratory protection training with the Training and Safety Coordinator and by review of records, verified that selected workers had completed the training.

No violations or deviations were identified.

5. Control of Radioactive Materials and Contamination, Surveys and Monitoring (83526)

The inspector observed the posting and labeling of Radioactive Materials Areas, Radiation Areas and High Radiation Areas during tours of the Auxiliary Building, Unit 3 Reactor Building, Turbine Building, Unit 3 Spent Fuel Building, Warehouse No. 5 and other areas where radioactive materials were stored within the protected area.

a. 10 CFR 20.203(f) required that each container of licensed material bear a durable, clearly visible label which bears the radiation caution symbol and the words "Caution" or "Danger, Radioactive Materials" and sufficient information to permit individuals to avoid or minimize exposures.

The inspector noted that the area adjacent to the Unit 3 loading dock was used for storage of radioactive materials. The area itself was fenced and permitted entry through two access points, a locked door for personnel entry and a gate for vehicle access. Most of the containers were wrapped in yellow herculite secured by duct tape. A licensee representative informed the inspector that the containers were incore casks used for storing used incore tubes. The inspector noted that three of the containers had no labels, four containers had labels that were sufficiently weathered to erase all markings and that three other containers had labels that were barely legible.

A survey data sheet posted next to the personnel door indicated dose rate on the bottom of one of the containers was 250 mR/hour. In general, dose rates on the containers appeared to vary between 12-50 mR/hr. Dose rate on the containers indicated that they contained greater than the quantity of radioactive material specified in 10 CFR 20, Appendix C.

The inspector noted that housekeeping in the area was such that on September 16, 1985, two security persons were observed exiting the area using the containers of radioactive material to maintain their balance as they exited through the debris.

Failure to label containers with a durable, clearly visible label bearing the radiation caution symbol and the words "Caution" or "Danger, Radioactive Material" and which provided sufficient information to permit individuals to avoid or minimize exposures was identified as an apparent violation of 10 CFR 20.203(f) (50-269, 270, 287/85-30-01).

b. 10 CFR 20.203 requires the posting and control of radiation areas and high radiation areas.

During plant tours, the inspector examined radiation and contamination survey results outside selected rooms and cubicles. The inspector performed independent radiation surveys of selected areas using NRC equipment and compared them to licensee survey results. The inspector reviewed surveys performed in conjunction with Radiation Work Permit (RWP) Nos. 740, reactor coolant pump work, and 764, control rod drive mechanism gasket replacement. Alpha, beta and gamma survey results were reviewed. The inspector noted that selected locked high radiation areas inside the Auxiliary Building were maintained as required by 10 CFR 20.203.

No violations or deviations were identified.

6. External Occupational Dose Control and Personal Dosimetry (83724)

The licensee was required by 10 CFR 20.202, 20.201(b), 20.101, 20.102, 20.104, 20.402, 20.403, 20.405, 19.13, 20.407 and 20.408 to maintain worker's radiation exposure below specified levels and to keep records of and make reports of such exposures. The inspector reviewed licensee requirements for extremity monitoring and multibadging with licensee representatives and reviewed the methodology used by the licensee to capture this dose data by the computer system. The daily computer printout of cumulative radiation worker exposure was examined and it was determined that no worker had exceeded any regulatory limit. Selected records of personnel working on RWP Nos. 740 and 764 were examined to verify completion of a Form NRC-4.

No violations or deviations were identified.

7. Internal Exposure Control and Assessment (83725)

The licensee was required by 10 CFR 20.103, 20.201(b), 20.401, 20.403 and 20.405 to control uptakes of radioactive material, assess such uptakes and keep records of and make reports of such uptakes.

During plant tours, the inspector observed the use of temporary ventilation systems and respirators. The inspector reviewed respiratory protection training, respirator fit testing, and medical qualifications of selected individuals involved in RWP Nos. 740 and 764. The inspector reviewed the MPC-hour records for the month of September 1985 and verified that no personnel had exceeded 40 MPC-hours in one week. Air sample results for RWP Nos. 740 and 764 were examined.

No violations or deviations were identified.

8. Maintaining Occupational Doses ALARA (83728)

10 CFR 20.1(c) specified that licensees should implement programs to keep worker's doses as low as reasonably achievable (ALARA). The recommended elements of an ALARA program are contained in Regulatory Guide 8.8, "Information Relevant to Ensuring that Occupational Radiation Exposure at Nuclear Power Plants Will Be ALARA," and Regulatory Guide 8.10, "Operating Philosophy for Maintaining Occupational Radiation Exposures ALARA."

The inspector discussed the ALARA goals and objectives for 1985 with the ALARA HP Supervisor. As of September 18, 1985, the actual collective exposure was 1155 man-rem as measured by self-reading dosimeter (SRD). The estimated exposure for the year was projected to be 1098 man-rem as measured by thermoluminescent dosimeter (TLD). The licensee stated that the TLD dose usually approximated 85 percent of the SRD dose, but nonetheless, expected to exceed their 1985 projection. The reason specified for the overrun of the 1985 goal was the unexpected maintenance and repair work performed on one reactor coolant pump (RCP) and the control rod drive mechanism gasket replacement during the Unit 3 refueling outage.

The estimate of collective dose for the Unit 3 outage was 320 man-rem and as of September 18, 1985, the actual man-rem were 313 as determined by SRD. The estimate for the RCP work had been 40 man-rem, but as of September 18, 1985, the accumulated total had already reached 48 man-rem and the licensee was still experiencing problems in the reassembly of the pump.

No violations or deviations were identified.

9. IE Information Notices (92717)

The following IE Information Notices were reviewed to ensure receipt and review by appropriate licensee management.

85-46, Clarification of Several Aspects of Removable Radioactive Surface Contamination Limits for Transport Packages

85-42, Loose Phosphor In Panasonic 800 Series Badge Thermoluminescent Dosimeter (TLD) Elements

85-57, Lost Iridium-192 Source Resulting In the Death of Eight Persons in Morocco

85-07, Contaminated Radiography Source Elements

85-43, Radiography Events at Power Reactors

85-06, Contamination of Breathing Air Systems

84-56, Respiration Users Notice for Certain 5-Minute Emergency Escape Self-Contained Breathing Apparatus

85-48. Respirator users Notice: Defective Self-Contained Breathing Apparatus Air Cylinders

85-60, Defective Negative-Pressure, Air-Purifying, Full Facepiece Respirators