



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30303

JUL 24 1984

Report Nos.: 50-369/84-19 and 50-370/84-16

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

Docket Nos.: 50-369 and 50-370

License Nos.: NPF-9 and NPF-17

Facility Name: McGuire 1 and 2

Inspection Dates: July 9-13, 1984

Inspection at McGuire site near Charlotte, North Carolina

Inspector: G. R. Jenkins
for J. R. Wray

7/24/84
Date Signed

Approved by: G. R. Jenkins
G. R. Jenkins, Section Chief
Division of Radiation Safety and Safeguards

7/24/84
Date Signed

SUMMARY

Scope: This routine unannounced inspection involved 32 inspector-hours on site in the areas of health physics organization and staff qualifications, solid radwaste management, transportation of radioactive materials, ALARA program, and licensee action on inspector identified items.

Results: No violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*M. D. McIntosh, Station Manager
*T. L. McConnell, Superintendent of Technical Services
*T. J. Keane, Station Health Physicist
*D. Rains, Superintendent of Maintenance
*D. Mendezoff, Licensing Engineer
*C. J. Martiner, Health Physics
R. P. Michael, Station Chemist
J. W. Foster, Health Physics Coordinator
T. Wall, Radwaste Chemistry Coordinator
G. Singletary, I&E Engineer
J. C. Correll, Health Physics

NRC Resident Inspectors

*W. T. Orders, Senior Resident Inspector
*R. C. Pierson, Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on July 13, 1984, with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Inspection Findings

(Closed) Violation (369/82-35-01) Dosimetry records for previous quarters when records are not available. The inspector reviewed the licensee's response to the violation dated November 5, 1982, and verified that the problem exposure file was corrected and that documented random file auditing has begun on a routine basis.

(Closed) Violation (369/83-32-03) Failure to post construction entrance with documents required by 10 CFR 19. The inspector toured the construction entrance and verified that the required documents had been posted properly.

4. Organization, Management Controls and Qualifications (83722 and 83723)

The inspector reviewed changes made to the licensee's organization, staffing level and lines of authority as they relate to radiation protection and radioactive material control and verified that the changes should not adversely affect the licensee's ability to control radiation exposures, radioactive material or plant chemistry.

Technical Specification 6.3.1 requires that each member of the facility staff meet or exceed the minimum qualification of ANSI N18.1-1971 for

comparable positions, except for the Station Health Physicist (Radiation Protection Manager) who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975.

Paragraph 4.5.2 of ANSI N18.1 states that technicians in responsible positions shall have a minimum of two years of working experience in their specialty. The inspector reviewed the experience and training records for selected health physics technicians currently working at the station.

Paragraph 4.3.2 of ANSI N18.1 states that supervisors not requiring a license shall have a minimum of four years experience in the craft or discipline supervised. The inspector reviewed the experience and training records for a newly appointed health physics supervisor and coordinators.

Regulatory Guide 1.8, September 1975 states that the radiation protection manager should have a bachelor's degree or the equivalent in a science or engineering subject, including some formal training in radiation protection and at least five years of professional experience in applied radiation protection. At least three years of the professional experience should be in applied radiation protection work in a nuclear facility dealing with radiological problems similar to those encountered in nuclear power plants.

The inspector reviewed resumes of the newly appointed Health Physics Coordinator, the first line supervisors, and technicians, and discussed with a cognizant licensee representative the qualifications of the Station Health Physicist. No violations or deviations were identified.

5. Solid Radwaste Management (84722)

The inspector reviewed the licensee's solid radwaste program for compliance with the regulations and Technical Specifications. The requirements for a Process Control Program are contained in Technical Specification 6.13. Technical Specification 6.9.1.7 and (and 10 CFR 50.36(a)) require periodic reports of solid waste (as defined in 10 CFR 61) shipped offsite during the report period. These reports include volume, curie content, principle radionuclides, waste types, container type, and solidification agent if applicable. Technical Specifications 6.8.1.e and 6.5.2.9.k, require written procedures for and biennial audits of the Process Control Program respectively. Plant Procedure OP/O/B/6200/39 describes the site Process Control Program. Health Physics procedures listed in paragraph 6 provide details to comply with the requirements of 10 CFR 61, 10 CFR 71, 49 CFR, and burial site criteria.

The inspector reviewed applicable procedures and Technical Specification required reports. No violations or deviations were identified. Radwaste shipping records for 1984 shipments were selectively reviewed for compliance with procedures and regulations. The inspector verified that waste manifests were prepared pursuant to 10 CFR 20.311, that wastes were classified in accordance with 10 CFR 61.55 and that the waste met the characteristics of 10 CFR 61.56 for those records reviewed. The licensee has audited this function in accordance with 10 CFR 61.55, 10 CFR 61.56 and 10 CFR 20.311(d)(3). The inspector observed packages prepared for

shipment marked with the class of waste pursuant to 10 CFR 20.311(d)(2). No violations or deviations were identified.

6. Transportation of Radioactive Material (86721)

10 CFR 71.5 requires that licensees who transport licensed material outside the confines of its plant or other place of use, or who deliver licensed material to a carrier for transport, shall comply with the applicable requirements of the regulations appropriate to the mode of transport of the Department of Transportation in 49 CFR Parts 170 through 189. 10 CFR 71.91 specifies records that the licensee is required to maintain for each non-exempt shipment of radioactive material.

The inspector selectively reviewed radwaste shipping records for 1984. The records appeared to be complete. The licensee maintained records of certificates of compliance for shipping casks they are authorized to use. The inspector verified that the licensee maintains current copies of licenses for those licensees to whom they ship radioactive material. No limits specified by the certificate were exceeded.

Records indicate that the licensee has properly selected appropriate packaging, adequately filled, loaded, marked, and labeled shipments, and monitored radiation and contamination levels of the packages and vehicles prepared for transport. The inspector verified that the licensee had established and maintains adequate management control of radwaste shipments including audits and training of personnel.

The inspector reviewed the following plant procedures for the preparation, documentation and shipment of radioactive material:

HP/O/B/1004/01	Receipt and Opening of Radioactive Material Packages
HP/O/B/1004/02	Preparation and Shipment of Radioactive Material
HP/O/B/1004/03	Determination of the Waste Classification for Radioactive Waste Offered for Shallow Land Burial
HP/O/B/1004/04	Preparation and Shipment of Mechanical Radwaste Filter Media
HP/O/B/1004/09	Preparation and Shipment of Processed Radwaste Materials
HP/O/B/1004/10	Preparation and Shipment of Dry-Active Radwaste Materials
HP/O/B/1004/11	Preparation and Shipment of Radiography Devices
HP/O/B/1004/13	Receipt of Shielded Cask for Shipment of Radioactive Waste
HP/O/B/1004/14	Preparation and Shipment of Dewatered Resins

The inspectors verified that the procedures were consistent with regulations and changes to the procedures were properly made pursuant to Technical Specifications.

On June 15, 1984, the licensee received an 8-120 cask from Chem-Nuclear Systems Incorporated. Loose surface contamination was discovered on an external surface of the package in excess of 22,000 dpm per 100 sq. cm. The cask was decontaminated and returned to service. The inspector reviewed health physics actions surrounding this event and had no questions or comments. The inspector verified that the Region II Office was properly notified of this event pursuant to 10 CFR 20.205(b)(2).

No violations or deviations were identified.

7. ALARA Program (83726)

10 CFR 20.1c states that persons engaged in activities under licenses issued by the NRC should make every reasonable effort to maintain radiation exposure 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 Stations will be ALARA, and Regulatory Guide 8.10, Operating Philosophy for Maintaining Occupational Radiation Exposures ALARA.

The inspector reviewed the plant ALARA manual which establishes the program for keeping occupational exposures ALARA and discussed the administrative aspects of the program with licensee representatives. Station personnel responsibilities and organization is defined. An ALARA committee is described with representation from all major plant departments. Based on discussions with licensee representatives and review of records, the inspector concluded that the program has adequate corporate and site management support.

The inspector discussed the ALARA goals and objectives for the current year with licensee representatives and reviewed the man-rem estimates and results for the current year.

The estimated 1984 man-rem exposure figure is 577. As of June 30, 1984, the actual exposure is approximately 5% less than estimated. In 1983, an exposure of 643 man-rem was estimated with final TLD figure of 471 man-rem realized. The increase from 471 man-rem to an estimated 577 man-rem is because Unit 2 operation began in August, 1983 and the first Unit 1 refueling outage was scheduled in 1984. The estimated solid radwaste generation for 1984 is 20,000 cubic feet. As of June 30, 1984, 7877 cubic feet has been generated, which is more than 20% less than expected at this time. In 1983, the licensee projected 25,000 cubic feet of solid waste, with a goal of 15,000 cubic feet, and realized 8877.5 cubic feet solid waste generated following an extensive volume reduction program.

No violations or deviations were identified.

8. Licensee Action on Previous Inspector Identified Items (92701)

(Closed) (369/82-27-01) Personnel Contamination Trends. Section 11.3, "Personnel Contamination Monitoring and Decontamination" contains instructions on recording personnel contaminations. The inspector reviewed two quarterly reports for 1984 summarizing contamination instances generated by the station for the General Office. Based on review of records and discussions with cognizant licensee representatives, the inspector concluded that trending of personnel contaminations is taking place and adequate management attention to this area is being applied.

(Closed) (369/82-35-01) Addition of routes to sample panels in emergency procedures. The inspector reviewed emergency procedures HP/1&2/B/1009/15, "Unit 1 (and Unit 2) Nuclear Post-Accident Containment Air Sampling System Operating Procedure" and verified that routes through expected low dose rate zones are specified.

(Closed) (370/83-01-03) Review final testing of area radiation monitoring system. The inspector reviewed completed pre-operational test procedure TP/2/A/1600/01, "Radiation Monitoring System Functional Test". The final system test was performed from December 22, 1982 through May 13, 1983. The completed procedure was reviewed and approved by licensee management on May 19, 1983.