



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

November 23, 1982

Report No. 50-369/82-41

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

Facility Name: McGuire

Docket No. 50-369

License No. NFP-9

Inspection at McGuire site near Cornelius, North Carolina

Inspector: R. H. Albright 11-22-82
R. H. Albright Date Signed

Approved by: K. P. Barr 11/22/82
K. P. Barr, Section Chief Date Signed
Technical Inspection Branch
Division of Engineering and Technical Programs

SUMMARY

Inspection on November 1-5, 1982

Areas Inspected

This routine, unannounced inspection involved 29 inspector-hours on site in the areas of radioactive material shipping, radiation protection, and radwaste.

Results

Of the three areas inspected, no violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *M. D. McIntosh, Station Manager
- *T. L. McConnel, Manager Technical Services
- *M. Sample, Projects and Licensing Engineer
- *T. J. Keane, Station Health Physicist
- *T. J. Wall, Radwaste Supervisor
- *G. A. Copp, Nuclear Engineer - Licensing
- *D. Mendezoff, Licensing Engineer
- J. W. Foster, Health Physics Coordinator
- D. C. Britton, Health Physics Supervisor

Other licensee employees contacted included four technicians.

NRC Resident Inspector

- *A. Ignatonis, (Acting)

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on November 5, 1982, with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Enforcement Matters

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Use of Radioactive Material Shipping Containers

The inspector reviewed maintenance procedure MP/O/A/7550/11, "Chem-Nuclear Cask CNS 14-195H Handling, Loading, and Unloading." This procedure details the cask handling procedures, inspections and required maintenance activities. The licensee has not used this procedure previously since the first cask shipment is not expected until the next outage.

No violations or deviations were identified.

6. Respiratory Protection Training

The inspector attended the respiratory protection training class. The training covered the following areas in sufficient detail: (1) use of engineering controls rather than the use of respirators, (2) limitations and applications for respiratory protective devices, (3) MPC, MPC-hr controls and the ALARA concept, and (4) the method used to don and remove respirators. The training also notified these individuals that they could leave the hazardous area anytime they needed relief from respirator use.

The respirator fit part of the training had each individual don each type of respirator used at the station and, with each type, the individual was subjected to an irritant smoke test to determine proper fit of the respirator. Individuals donning the respirators were also shown the proper methods to test the respirators prior to entering a hazardous atmosphere. The proper method for respirator removal was also covered in the respirator fit training.

No violations or deviations were identified.

7. Instruments and Equipment

a. Respiratory protective equipment is issued from a central point by the use of a check-out system. The inspector observed the storage area for respirators ready for check-out and discussed the respirator maintenance program with technicians who perform the maintenance. Respirator storage conformed to accepted practice.

b. Survey instruments in use and those ready for check-out to individuals were observed for calibration dates. Friskers were also observed to ensure the daily response checks were performed. The inspector observed that survey instruments were response checked at the instrument issue window prior to issue to an individual. The response check determines that the instrument responds to a predetermined exposure rate when exposed to a specific source with an established geometry. The predetermined exposure rate and the source to use is noted on the instrument.

No violations or deviations were identified.

8. Internal Exposure Control

The internal exposure control program was reviewed by discussions with licensee personnel and records review. A licensee representative stated that ventilation equipment is used whenever possible instead of using respirators. Through records review the inspector determined that when required, personnel are credited with MPC-hrs. Station records indicated that the use of MPC-hrs. over respiratory protection is not frequent and that personnel who have been credited with MPC-hrs are substantially below the 40 MPC-hr per week control measure stated in 10 CFR 20.103b(2).

No violations or deviations were identified.

9. Posting of Notices

The inspector determined by observation that the licensee complies with the posting of notices requirement of 10 CFR 19.11. The licensee has conspicuously posted bulletin boards in two hallways with the current NRC-3 (Rev. 6-82) and a letter stating the location where other documents listed in 10 CFR 19.11 may be found. The entrance to the radiation control zone is through the posted hallways.

No violations or deviations were identified.

10. External Exposure Control

The inspector reviewed the licensee correlation and investigation program for TLD and pocket dosimeter (PD) totals. The General Office health physics staff has established a program to investigate TLD and PD differences. The program establishes acceptable and unacceptable margins for agreement of TLD and PD measurements. The margins vary with the amount of exposure. For example, margins of agreement are wide at lower exposure and decrease to $\pm 25\%$ at 280 mrem. The $\pm 25\%$ agreement margin means that the PD totals should be within $\pm 25\%$ of the TLD measurement in order to be acceptable. If the TLD and PD measurements do not fall within the acceptable margins, the General Office health physics staff performs a quality control check on the TLD and requests the plant to perform a drift check and source check on the individual's pocket dosimeter (each person entering the radiation control zone is assigned a PD). If the TLD passes the quality control check, the TLD measurement is used even though the PD also meets acceptance criteria. No further investigation is performed. The inspector stated that the licensee should determine an exposure value above which more concern for the discrepancy between TLD and PD measurements would cause a more in depth investigation to be performed in order to determine the reason for the discrepancy and to determine if an adjustment to the TLD measurement is required for a more accurate exposure history. Investigations of this nature should be documented. Licensee management acknowledged the inspector's concerns. The inspector stated to licensee management that this area will be reviewed during a future inspection (82-41-01).

11. Radioactive Liquid Effluent

- a. Technical Specification 4.11.1.2 requires that cumulative dose contributions from liquid effluents be determined in accordance with the Offsite Dose Calculation Manual (ODCM) at least once per 31 days. The licensee currently performs this calculation using a simplified calculation described in the ODCM. The simplified calculation assumes that Cs-134 and Cs-137 yield 90% of the dose from liquid effluents. The licensee has not experienced failed fuel so the Cs-134 and Cs-137

releases are less than minimum detectable. This simplified calculation was based on data in the FSAR. The ODCM states that this is acceptable until operational data is gained. A licensee representative stated that the General Office is revising the ODCM to base the calculation on isotopes actually found in the station liquid effluents. The ODCM revision will be reviewed during a future inspection (82-41-02).

- b. The Semi-Annual Effluent Release report for the period January to June, 1982, submitted September 7, 1982, was revised by a letter to the NRC dated September 21, 1982. The report was revised due to a change in the accepted bioaccumulation factor for P-32 from $1.0 \text{ E } 5$ to $3.0 \text{ E } 3$. Technical Specification 6.9.1.9 requires that the assessment of radiation doses published in the semi-annual effluent release report shall be performed in accordance with the ODCM. The ODCM should therefore have been changed to reflect the new bioaccumulation factor for P-32 prior to revision of the January to June 1982 Semi-Annual Effluent Release Report. The licensee is preparing a change to the technical specifications which would delete reporting requirements for P-32. The NRC agrees with dropping P-32 from the reporting requirements. The inspector stated that the ODCM should be revised prior to next use to either change the P-32 bioaccumulation factor or to delete its use in reporting offsite doses. However, the ODCM revision must agree with the station technical specification reporting requirements at the time of use. This area will be reviewed during a future inspection (82-41-03).

12. Solid Radioactive Waste

- a. Technical Specification 4.11.3.1 surveillance requirement states that the solid radwaste system shall be demonstrated operable at least once per 90 days by: a. Operating the solid radwaste system at least once in the previous 92 days in accordance with the process control program (PCP) or b. by verification of the existence of a valid contract for solidification to be performed by a contractor in accordance with a process control program. The inspector verified that this surveillance requirement was being met by review of surveillance records and the PCP. The licensee fulfills part b. of the surveillance requirement by contracting with a vendor for radwaste solidification services. Initially the inspector found, by discussion with a vendor representative, that the current revision to the vendor PCP was not onsite. A current revision to the vendor PCP was obtained for the site prior to the inspector leaving the site. The PCP has not been used at this facility since the radwaste solidification system has not been operated.

No violations or deviations were identified.

- b. Technical Specification 6.12.1 requires that the PCP shall be approved by the Commission prior to implementation. The inspector determined that the licensee has received approval of the vendor PCP. The determination was made by calling the NRC Effluent Treatment Systems Branch.

No violations or deviations were identified.