



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

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Report Nos.: 50-413/85-47 and 50-414/85-53

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

Docket Nos.: 50-413 and 50-414

License Nos.: NPF-35 and CPPR-117

Facility Name: Catawba 1 and 2

Inspection Conducted: October 21-25, 1985

Inspector: C. M. Hosey
G. L. Troup

11/14/85
Date Signed

Approved by: C. M. Hosey
C. M. Hosey, Section Chief
Division of Radiation Safety and Safeguards

11/14/85
Date Signed

SUMMARY

Scope: This routine, unannounced inspection entailed 30 inspector-hours onsite in the areas of the radiation protection program and radioactive solid waste program including organization and management controls, training and qualifications, facilities and equipment, audits, exposure control programs and followup of previously identified items.

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

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

J. W. Cox, Technical Services Superintendent
W. P. Deal, Station Health Physicist
*C. L. Hartzell, Compliance Engineer
G. G. Barrett, Training Supervisor
A. J. Duckworth, Radwaste Chemistry Coordinator
*R. D. Kinard, Health Physics Staff Coordinator
G. T. Mode, Health Physics Coordinator
P. N. McNamara, Health Physicist
G. L. Courtney, Health Physicist
J. T. Harris, Chemistry Supervisor
*P. G. Leroy, Licensing Engineer
F. L. Wilson, Health Physics Supervisor
C. V. Wray, Health Physics Supervisor

Other licensee employees contacted included technicians, operators, and office personnel.

NRC Resident Inspector

*P. H. Skinner, Senior Resident Inspector
*P. K. Van Doorn, Senior Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on October 25, 1985, with those persons indicated in Paragraph 1 above. Licensee representatives expressed no dissenting opinions on the findings.

The inspector described the areas inspected and discussed in detail the inspection findings. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.

3. Licensee Action on Previous Enforcement Matters

This subject was not addressed in the inspection.

4. Scope of Inspection

Prior to the issuance of an operating license for Unit 1, the facilities, equipment and programs for the health physics and radioactive waste

management programs were inspected for adequacy and conformance to licensee commitments in the Final Safety Analysis Report. The principal purpose of this inspection was to assess the programs as they relate to the licensing of Unit 2, since these programs are station-related rather than unit-related, and to determine if the previously established programs are capable of handling the additional load from the second unit.

5. Organization and Management Controls (83522, 83722)

- a. The inspector verified that administrative procedures exist assigning responsibility for the management of the health physics and chemistry program (Administrative Policy Manual for Nuclear Stations), and the program for keeping exposures as low as reasonably achievable (ALARA) (Company ALARA Manual). Administrative procedures for the ALARA Program and Respiratory Protection Program as well as the management of the health physics program are specified in the Station Directives Manual, Section 3.8. The inspector discussed the management controls and responsibilities with appropriate supervisors and verified that the responsibilities are being implemented in accordance with the company policies and the Administrative Section of the Unit 1 Technical Specifications.
- b. The inspector reviewed the organization and staffing levels for the health physics staff and discussed the current and projected levels with the cognizant supervisors. Current staffing appears adequate for the operation of the two units; however, the decision on staffing levels are acknowledged as a management function.

No violations or deviations were identified.

6. Audits

Technical Specification 6.5 for Unit 1 requires that the licensee conduct a comprehensive audit program of the radiological control program. The last comprehensive audit conducted was reviewed in Inspection Report No. 50-413/85-25. The inspector discussed the findings with licensee representatives and determined that any actions requiring followup action had been assigned to responsible individuals and the status was being tracked. The inspector had no further questions.

No violations or deviations were identified.

7. Training and Qualifications (83523, 83723)

- a. Section 6.3.1 of the Unit 1 Technical Specifications requires that each member of the unit staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971, except for the Radiation Protection Manager. ANSI N18.1-1971 requires that technicians have 2 years experience and should have a year of related training; supervisors (foremen) should have 4 years experience in the discipline he supervises. The inspector reviewed the qualifications of two health physics technicians who were rated "ANSI qualified" in the last year, of the

two, one was a health physics supervisor and one was a radwaste chemistry supervisor who have been promoted in the last year. All four individuals met the minimum requirements of ANSI N18.1-1971.

- b. The inspector reviewed the licensee's program for initial and refresher general employee radiation protection training, new employee training and transient worker training. The inspector determined that the programs are specified in a management approved document (Station Directive 2.5.1) and that records are available to identify the training status of individuals through a computer printout. The inspector selected the names of several individuals in different groups in the plant organization and verified that their training was within the specified period for retraining.
- c. The inspector reviewed the licensee's program for handling vendor and temporary workers to provide additional staffing during outages or at other times. Health Physics procedure HP/O/B/100/19 specifies the requirements for qualification and training of vendor health physics technicians.

No violations or deviations were identified.

8. Facilities and Equipment (83526, 83527, 83727)

- a. Facilities to support the health physics program are shared between the units. These facilities were previously inspected and discussed in Inspection Report Nos. 50-413/83-38, 50-413/84-41, 50-413/84-47 and 50-413/85-07. The inspector toured the equipment decontamination facility, laundry, respirator decontamination facility, instrument storage and issue room and various control points for the radiation control area (RCA). All facilities were equipped and operable.
- b. The inspector discussed any needed facility changes for Unit 2 operations with the cognizant supervisors. With the exception of changes to the RCA and the resulting addition of control points, no major changes to facilities are planned or considered necessary.
- c. The inspector reviewed the licensee's program for identifying problems with facilities, equipment or practices, and discussed changes to facilities made as the result of identified problems with several supervisors. In addition to changes made as the result of identified problems, the ALARA Committee is tasked with identifying and initiating changes to reduce personnel exposures. The inspector observed that supplemental shielding had been provided for the stack monitors to reduce the background in the event of an accident. Many of the changes discussed are considered minor but indicate that an ongoing review effort is being made. The inspector verified that when shielding or modifications were made on equipment for Unit 1 based on identified problems, the modifications were also incorporated for Unit 2 equipment.

9. External Exposure Control (83524, 83724)

- a. During tours of plant areas the inspector observed that potential high radiation areas were provided with locked barriers or doors to rooms, and supplemental shielding had been installed or supports for the installation of shielding had been installed. The inspector also checked the security of locked areas for Unit 1 equipment or systems.
- b. The inspector observed that maps of the plant areas posted at the change room area to inform workers of radiation and contamination levels in plant areas include the Unit 2 areas. Detailed postings at the entrance to rooms and areas are posted in the RCA. A licensee representative stated that similar postings would be made for the Unit 2 areas once the Unit 2 areas are incorporated into the RCA. The inspector also noted that lists of valves inside of rooms are posted outside the doors to facilitate their identification and location and reduce exposures to personnel entering the room to operate the valves.
- c. The inspector reviewed the status of the dosimetry program with the cognizant personnel. Pocket dosimeters, thermoluminescent dosimeters (TLDs) and extremity dosimeters are available and in use for Unit 1; no changes in the program are anticipated for the Unit 2 startup. During tours of the plant areas, the inspector observed posting instructions on the proper wearing of dosimetry, observed the actual wearing of devices by plant and vendor personnel, and observed personnel monitoring and recording their exposures in accordance with posted instructions.

No violations or deviations were identified.

10. Internal Exposure Control (83525, 83725)

- a. The inspector reviewed the licensee's program for internal exposure control and verified that approved procedures exist for administrative controls, air sampling, body burden analysis, and issue, control and cleaning of respiratory protection equipment. The inspector also verified that equipment is available for air sampling and evaluation of the sample media.
- b. The inspector reviewed the procedures for the issuance of respiratory protection equipment and determined that the licensee has established controls to assure that equipment is only issued to individuals who have current training and medical clearances, and is of the type they are fit-tested. The inspector also observed the handling and storage of respirators. Storage was acceptable; no respirators were stacked, all were in sealed bags to maintain cleanliness, and respirators approved for non-radiological use were identified and segregated from those approved for radiological use.
- c. The licensee has installed a new Body Burden Analyzer with a computer interface for the analysis, quantification and evaluation of internally

deposited radionuclides. The inspector verified that the licensee has approved procedures for the calibration, checks and use of the analyzer, and is conducting daily background and quality control checks using established control criteria. A licensee representative informed the inspector that the analyzer at the site was used as a screening device for periodic evaluations, and that if a significant uptake was indicated, the individual would be sent to another licensee facility for a more comprehensive evaluation and possible bioassay evaluation. The inspector had no further questions.

No violations or deviations were identified.

11. Procedures (83524, 83525, 83526, 83724, 83725, 83726)

- a. The inspector discussed the schedule for the issuance of health physics and radwaste chemistry procedures for Unit 2 with the cognizant supervisors. The individuals stated that these procedures were previously issued for the station rather than for a unit and would be applicable to Unit 2 operations as well as existing operations for Unit 1.
- b. The inspector reviewed the procedure indices, procedure status print-outs, and books of procedures and determined that approved procedures had been issued for such areas as access and exposure control, surveys and sampling, radiation work permits, instrument calibration, respiratory protection, dosimetry, and solid waste operations which are applicable to both Unit 1 and Unit 2. The inspector had no further questions.

No violations and deviations were identified.

12. ALARA Program (83528)

- a. In Section 12.1 of the FSAR the licensee described the corporate program for ensuring that occupational radiation exposures are As Low As Reasonably Achievable (ALARA). The corporate policy and assignment of responsibilities are contained in the company ALARA Manual, which is approved by the Vice President - Nuclear Production and the Vice President - Design Engineering. Additional policies are contained in the Administrative Policy Manual for Nuclear Stations. These corporate policies and responsibility for implementation are documented in Station Directive 3.8.1, ALARA Program.
- b. Responsibility for implementation of the program at the station is assigned to the Station Health Physicist. Support is provided by the ALARA Planning Supervisor and assigned technicians. An ALARA Committee has been appointed which is composed of members from each of the various groups in the station organization (Projects, mechanical maintenance, operations, etc.) The committee is charged to meet at least quarterly, and to review the actions of the ALARA Program,

identify areas which need action, and to assist in the resolution of problems, review of changes, and job planning.

- c. A mechanism for identifying ALARA problems or areas where exposures could be reduced by some action is provided through the ALARA Problem Report. This allows individuals to contribute to the program, and to focus the attention of responsible individuals to the problems. The inspector had no questions on the program. Review of the implementation will be during subsequent inspections.

No violations or deviations were identified.

13. Solid Wastes System (84522)

- a. The installation and review of the solid waste system was discussed in Inspection Report No. 50-413/84-10. The system is shared between the units; no new equipment was installed specifically for Unit 2.
- b. A Process Control Program was established for all of the licensee's nuclear stations. The program for Catawba is incorporated into this program. No changes were made due to the scheduled startup of Unit 2. Operating procedures which had been issued for Unit 1 will apply to Unit 2, as they were written as station procedures.
- c. Test procedure TP/O/B/1500/11 was prepared and performed to determine that the Unit 2 ion exchangers could be sluiced to the solid waste system. The inspector reviewed the completed test procedure and verified the proper review and approval of changes; identification and correction of deficiencies; completed results and retest as appropriate following deficiency correction or modification. The remainder of the solid waste system had previously been tested prior to the Unit 1 startup.
- d. The inspector discussed the offsite disposal of solid wastes with the cognizant supervisor, and was informed that a contract for disposal is in existence for the station. No contract changes or modifications are necessary to provide these services for Unit 2. The inspector had no further questions.

No violations or deviations were identified.

14. Review of Inspector Followup Items

- a. (Open) IFI 413/84-41-01, Snubbers in High Radiation Areas. A station Problem Report has been submitted to Design Engineering to reanalyze the snubbers so they could be treated as supports, and thus not require inspection in accordance with Technical Specifications 3.7.8. Other alternatives are also being evaluated. The review is intended to be complete before the first surveillance period.

- b. (Closed) IFI 413/84-43-02, Instaliation of Sample Collection Sink for Waste Samples. In order to reduce the potential for spills, and to provide a central sample point, a new sample sink was installed under NSM 50049. Sample lines from various sample points in the NB, WS and WL systems were piped to the sink, and the drain was piped back to the WL system. The sink is presently in use. The inspector had no further questions.
- c. (Closed) IFI 413/85-07-01, Evaluation of Respiratory Protection Training Examination Results. The evaluation of the examination results following respiratory protection training, and the establishment of minimum scores will be implemented for both radiological and non-radiological respiratory protection by January 1986. A licensee representative informed the inspector that all of the nuclear stations are participating in the preparation of a question bank, and that the new program will start for all of the stations. The inspector stated this items is closed for record purposes based on the commitment to start by January 1986, and the implementation will be inspected during a subsequent inspection.
- d. (Closed) IFI 413/85-25-01, Revision of FSAR. Revision 13 to the FSAR included changes to Table 12.3-1, which reflects new radiation zones and access requirements.