UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
230 PEACHTREE STREET, N.W. SUITE 1217
ATLANTA, GEORGIA 30303

Report No.: 50-302/77-10

Docket No.: 50-302

License No.: DPR-72

Licensee: Florida Power Corporation
P. O. Box 1404
St. Petersburg, Florida 33733

Facility Name: Crystal River Unit 3

Inspection at: Crystal River Site, Crystal River, Florida

Inspection conducted: June 6-10, 1977

Inspector: G. L. Troup

Reviewed by: W. E. Cline for A. F. Gibson, Chief — 6/27/77 Date
Radiation Support Section
Fuel Facility and Materials Safety Branch

Inspection Summary

Inspection on June 6-10, 1977 (Report No. 50-302/77-10)
Areas Inspected: Routine, unannounced inspection of radiation protection and radioactive waste management including licensee audit program; radiation protection training; instrument and equipment calibration and operability; respiratory protection program; solid radioactive waste disposal; and followup on previously identified items. The inspection involved 34 inspector-hours on site by one NRC inspector.
Results: Of the six areas inspected, no items of noncompliance or deviations were found in five areas; one item of noncompliance was found in one area (respiratory protection program - paragraph 4).

DETAILS I

Prepared by: W. E. Cline for G. L. Troup, Radiation Specialist - 6/29/77 Date
Radiation Support Section
Fuel Facility and Materials Safety Branch

Dates of Inspection: June 6-10, 1977

Reviewed by: W. E. Cline for A. F. Gibson, Chief 6/29/77 Date
Radiation Support Section
Fuel Facility and Materials Safety Branch

1. Individuals Contacted

*G. P. Beatty, Jr., Nuclear Plant Superintendent
*D. W. Pedrick, IV, Compliance Engineer
*J. R. Wright, Chemistry and Radiation Protection Engineer
*J. L. Harrison, Assistant Chemistry and Radiation Protection Engineer
*C. [illegible] Perkins, Health Physics Supervisor
Dr. P. Y. Daniel, Nuclear Support Specialist
T. C. Lutkehavs, Maintenance Engineer
W. A. Cross, Plant Engineer
*R. E. Fuller, Plant Engineer
P. E. Griffith, Training Coordinator

The inspector also talked with and interviewed other licensee employees, including chemistry and radiation technicians.

*Denotes those attending the exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) Noncompliance (50-302/77-4): Failure to use written procedures to perform surveillance tests required by the Technical Specifications. Corrective actions stated in FPC letter CS-77-72 of April 27, 1977 were verified to have been completed. This item is closed.

(Open) Deviation (50-302/77-8): Radioactive Solid Waste Packaging System. At the time of the inspection the licensee's reply on this item had not been received. The inspector discussed the actions being considered with licensee representatives; however, no final decision has been made concerning the system. This item remains open.

(Open) Unresolved Item 77-8/1 (50-302/77-8): Maintenance of Effluent Records. A licensee representative informed the inspector that corrective actions on this problem were in progress but were incomplete. This item remains open.

(Open) Unresolved Item 77-8/2 (50-302/77-8): Documentation of Valve WDV-857. A licensee representative informed the inspector that the required documentation was being collected to meet the established requirements for the valve but are incomplete. This item remains open.

3. Unresolved Items

No new unresolved items were identified during this inspection.

4. Respiratory Protection Program

a. Technical Specifications section 6.12.2.d requires that the licensee maintain a respiratory program which is consistent with ANSI-F88.2-1969 and which includes written procedures to assure proper training of personnel using protective equipment and written procedures to assure full effectiveness of respiratory equipment, including cleaning, decontamination and storage. Plant procedure RP-102, "Respiratory Equipment Manual" delineates the requirements for implementing the Technical Specification requirements.

b. Section 4.0 of RP-102 states in part, "retraining will be accomplished on an annual basis for all plant employees in the respiratory program . . . ." The inspector discussed the respiratory protection retraining programs with a licensee representative who informed the inspector that the retraining program is included in the radiation protection retraining conducted by the Training Coordinator. The inspector reviewed plant procedure AI-1200. "Conduct of Training" which lists the training requirments for various groups and noted that the radiation protection retraining is specified on a two-year cycle. This frequency results in a conflict between the annual respiratory protection retraining requirement in RP-102 and a bi-annual radiation protection retraining requirement in AI-1200. The inspector also noted that the retraining program for licensed operators specified in AI-1200 does not include any provisions for respiratory protection retraining although operators using respiratory protection equipment are subject to retraining in accordance with RP-102.

c. Section 8.4 of RP-102 specified the requirements for the storage of respiratory protection equipment. Section 8.4.2 states, in part, "equipment is to be placed in storage in plastic bags or storage cases after cleaning, inspection, testing . . . ." Section 8.4.1 states, in part, "equipment is to be packed and stored so that it will not be damaged by adjacent equipment or take a set." The inspector observed respiratory protection equipment in a locker in the health physics service room which were on a shelf marked to indicate that they were ready for use. However, none of the equipment was bagged to maintain cleanliness and all of the equipment was piled on the shelf in a haphazard manner. This method of storage did not appear to meet the procedure requirement to prevent damage or taking a set.

d. The inspector also reviewed survey records, personnel exposure files, radiation work permits and respiratory protection equipment fitting, issue and surveillance records to verify compliance with the following regulatory requirements:

(1) exposure to airborne concentrations - 10 CFR 20.103a, Technical Specification 6.12.1.a

(2) bioassay and in-vivo counting - Technical Specification 6.12.2.d.6

(3) internal exposure records - 10 CFR 20.401a

No items of noncompliance or deviations were identified in these areas.

5. Audits of Radiation Protection Program

a. The inspector reviewed reports of three audits covering the chemistry and radiation protection areas. Two audits were conducted in 1976; one was conducted in 1977. Audits were conducted by both the plant Compliance Group and the corporate Quality Program group. These audits by the plant group appeared to meet the requirements of plant procedure AI-1000, "Conduct of Compliance."

b. In reviewing the audit reports the inspector noted that each of the three audits identified as a problem area, the timely review and forwarding to the files of chemistry and radioactive waste records. Records have been accumulating for several months and have not been reviewed. A licensee management representative acknowledged that this was a continuing

problem and stated that efforts were being made to correct the situation but it was being slowed by plant operation problems. The corrective action for this item remains open on the three licensee audits.

6. Radiation Protection Training

a. Technical Specifications section 6.4.1 states, in part, "A retraining and replacement training program for the facility staff shall be maintained . . . and shall meet or exceed the requirements and recommendations of Section 5.5 of ANSI N18.1-1971 . . . ." Section 5.5.1 of ANSI N18.1-1969 states, in part, "the retraining program shall include . . . radiation safety." The details of the retraining program are contained in plant procedure AI-1200, "Conduct of Training."

b. The inspector discussed the retraining program with a licensee representative and reviewed records and schedules for the various groups which are to be trained. The Administrative section and Guard Force did not receive the retraining as scheduled in March 1977; the licensee representative stated that these groups would be rescheduled in the near future.

c. In response to the inspector's questions, the licensee representative stated the written examinations were not being administered at the conclusion of the retraining as the individuals were previously qualified by examination in the initial training and were evaluated for their knowledge and practice of radiation protection during their normal work in the radiation control area. The inspector noted that this would apply to groups such as operations, maintenance and chemistry and radiation protection but did not apply to groups such as administration or the guard force and stated that some method for evaluating these groups should be developed. This comment was acknowledged; the licensee representative stated that examinations would be considered for those groups which do not routinely work in or enter the radiation control area. The inspector had no further questions.

7. Instruments and Equipment

a. The inspector reviewed the instrument calibration records for various types of radiation survey meters (such as Eberline model E-120 and model RM-14 count rate meters and PNC-4 and PNR-4 neutron survey instruments) and verified that they had been calibrated in accordance with plant procedure RP-206 and had been calibrated at the required frequency. The inspector

also observed approximately ten instruments in use or ready for issue and verified that the calibration stickers were current. The inspector also verified by checks of the instruments that the batteries were useable.

b. The inspector reviewed the calibration records for the self-reading dosimeters to verify that they had been calibrated in accordance with plant procedure RP-213 and that they had been calibrated at the required frequency. The inspector selected six dosimeters by serial number from the radiation control area access log and reviewed the calibration records. Of the six selected, the records for the current calibration could not be located by the inspector. A licensee representative reviewed the records and was able to locate the records which indicated that the dosimeters were calibrated at the required interval. The inspector provided licensee representatives with comments regarding the maintenance of calibration records; the current records are difficult to review and the calibration history of a given dosimeter is difficult to find and follow. These comments were acknowledged; a licensee representative stated that the records would be reviewed and changes made to the records to permit ready verification of calibrations.

c. Personnel radiation exposure is measured using thermal luminescence dosimeters (TLD's), which are sent to a contractor for reading. Plant procedure RP-216 establishes a program for checking on the contractor's performance. The inspector reviewed the records and verified that the check program had been implemented, checks were performed at the required frequency and the results were within the acceptance criteria. The inspector had no further questions.

8. Decontamination Room

a. The status of the equipment decontamination room was discussed in IE Report No. 50-302/77-2. Details II, paragraph 8.c. It was discussed that the equipment had been received on site but was not installed and that the required services (electrical power, water, etc.) had not been installed. The inspector discussed the status of the decontamination equipment installation with licensee representative and was informed that the equipment was inoperable as the required services have not yet been installed.

b. Plant procedure AI-600, "Conduct of Maintenance," paragraph 1.10 requires that equipment or parts be decontaminated prior to being moved to the Hot Machine Ship for maintenance. A licensee

representative informed the inspector that when equipment or parts have required decontamination, it has been performed using temporary facilities or by wiping down the part. The inspector discussed this condition with a licensee management representative and stated that the use of temporary facilities appeared to be inadequate for a major maintenance outage and steps should be taken to make the decontamination room operable. The licensee management representative acknowledged these comments and stated that action would be initiated to activate the decontamination room. No schedule was specified for the completion of the decontamination room.

9. Solid Radioactive Waste Disposal

a. Technical Specification section 6.10.1.g requires that records of radioactive shipments shall be retained for at least five years. The inspector reviewed the packaging and disposal records for the shipment of radioactive solid waste and discussed the disposal with the cognizant supervisor. To date no radioactive solid waste has been shipped by the licensee; consequently, no records were reviewed.

b. The licensee has been disposing of concentrated radioactive liquid waste by transfer to contractor for solidification. The licensee representative informed the inspector that custody of the material is transferred to the contractor prior to solidification; the contractor then solidifies the waste and is responsible for making all shipments and disposals of the solid waste. The inspector reviewed the plant records and verified that records for the transfer of the liquid were retained and copies of the shipping papers for the contractor's shipments were also on file. The inspector had no further questions.

10. Procedures for Control of Primary to Secondary System Leakage

Primary to secondary system leakage has occurred at several nuclear power plants, resulting in the radioactive contamination of the secondary plant and the release of radioactive material from the plant through the secondary systems. The inspector discussed the problems at other plants regarding the identification and control of release paths in secondary systems with licensee representatives and reviewed plant procedures EP-104, "Steam Generator Tube Failure" and AP-103, "Radiation Monitoring System Alarms." The inspector provided comments to a licensee representative concerning these procedures. A licensee representative stated that these procedures would be reviewed for the possible inclusion of additional corrective

actions and that the secondary systems and procedures would be reviewed to identify potential discharge paths and the appropriate actions to be taken to preclude uncontrolled radioactive releases in the event of a primary to secondary system leak.

11. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on June 10, 1977. The inspector summarized the purpose and the scope of the inspection. The licensee representatives made the following comments in response to certain of the items discussed by the inspector:

a. Acknowledged the statements by the inspector concerning the item of noncompliance concerning the repiratory protection program and stated that the storage conditions would be corrected and the retraining requirements clarified. (paragraph 4)

b. Stated that examinations would be considered as part of the radiation protection retraining for those groups who do not routinely enter the radiation control area. (paragraph 6)

c. Stated that calibration records for self-reading dosimeters would be reviewed for possible changes. (paragraph 7)

d. Acknowledged the statements concerning the decontamination room and stated that action would be initiated to activate the room.