UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30303

JUL 17 1984

Report No.: 50-302/84-20

Licensee: Florida Power Corporation
3201 34th Street, South
St. Petersburg, FL 33733

Docket No.: 50-302

License No.: DPR-72

Facility Name: Crystal River 3

Inspection Dates: June 18-22, 1984

Inspection at Crystal River site near Crystal River, Florida

Inspector: for T. R. Collins — Date Signed: 7/13/84

Approved by: G. R. Jenkins, Section Chief, Division of Radiation Safety and Safeguards — Date Signed: 7/13/84

SUMMARY

Areas Inspected

This routine, unannounced inspection involved 35 inspector-hours onsite during regular hours inspecting: radiation protection program including instruments and equipment used for radiation protection of personnel; posting, labeling, and control of radiological areas; radiation work permit controls; shipment of radioactive material; liquid and gaseous radioactive effluents; respiratory protection program; previously identified inspection followup items; and licensee event reports.

Results: Violation - Failure to use pressure gauges or flow measuring devices for supplied air hoods.

REPORT DETAILS

1. Persons Contacted

   Licensee Employees

   P. F. McKee, Nuclear Plant Manager
   G. L. Boldt, Nuclear Plant Operations Manager
   P. J. Skramstad, Chemical/Radiation Superintendent
   J. R. Kraiken, Nuclear Plant Operations Superintendent
   W. M. Johnson, Nuclear Plant Maintenance Superintendent
   E. M. Howard, Director, Site Nuclear Operations
   R. Clarke, Radiation Protection Manager
   S. D. Mansfield, Nuclear Compliance Supervisor
   P. G. Hughes, Licensing Engineer

   Other licensee employees contacted included four technicians, two operators, two security force members, and three office personnel.

   NRC Resident Inspectors

   T. F. Stetka

2. Exit Interview

   The inspection scope and findings were summarized on June 22, 1984, with those persons indicated in paragraph 1 above. A violation, described in paragraph 8, failure to use and calibrate pressure gauges or flow measuring devices on supplied air hoods, was discussed in detail. Licensee management acknowledged the findings and took no exceptions.

3. Licensee Action on Previous Enforcement Matters

   (Closed) Violation (302/84-02-01) - Failure to Follow Chemistry and Radiation Protection Procedure RP-101, CH-333 and CH-301. The inspector reviewed the licensee's responses dated March 16, 1984 and April 30, 1984, and determined by his review and observation that procedural adherence was apparently being performed.

4. Organization and Management Controls (83722)

   Technical Specification 6.2.2 describes the licensee's organization. The inspector reviewed the licensee's organization as it relates to radiation protection and chemistry. The licensee has not made organizational changes which would adversely affect the ability to control radiation exposures, radioactive material or plant chemistry.

   No violations or deviations were identified.

5. Training and Qualification (83723)

Technical Specification 6.3.1 requires that each member of the facility staff meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions. Paragraph 4 of ANSI N18.1 states, in part, that supervisors not requiring a license shall have a minimum of four years experience in the craft or discipline supervised.

The licensee has recently selected a new individual for the position of Chemical/Radiation Superintendent within the health physics organization. The inspector reviewed the experience of the new Chemical/Radiation Superintendent.

No violations or deviations were identified.

6. External Exposure Control (83724)

10 CFR 20.101 specifies the applicable radiation dose standards. The inspector reviewed the computer printouts (NRC Form 5 equivalent) for January 1984 through April 1984 and verified that the radiation doses recorded for plant personnel were well within NRC limits. The inspector selectively reviewed the occupational exposure histories (complete NRC Form 4) for individuals who exceeded the limits of 10 CFR 20.101(a). The exposure histories were being completed and maintained as required by 10 CFR 20.102.

The inspector reviewed plant procedure RP-201, Personnel Exposure Documentation, which establishes the licensee's program for personnel monitoring of external dose in accordance with 10 CFR 20.202.

No violations or deviations were identified.

7. Licensee Audits and Surveillance (83722, 83723, 83724, 83725, 83726, 83278, 84722 and 86721)

The inspector reviewed Quality Programs (QP) Surveillance (Audits) of the health physics program as required by QP #244, Surveillance Program from November 1983 to December 1983. The inspector noted that the licensee has full time personnel with health physics experience assigned to the QP department to perform health physics audits.

During the review of the audit performed by the QP department, the inspector noted that only minor discrepancies were identified. The QP Surveillance Program appeared to be adequate. No violations or deviations were identified.

8. Internal Exposure Control (83725)

10 CFR 20.103(a) establishes the limits for exposure of individuals to concentrations of radioactive materials in air in restricted areas. This section also requires that suitable measurements of concentrations of radioactive materials in air be performed to select and evaluate the

airborne radioactivity in restricted areas and that appropriate bioassays be performed to detect and assess individual intakes of radioactivity.

The inspector selectively reviewed the results of general in-plant air samples taken during the months of April and May 1984, and the results of air samples taken to support work covered by specific radiation work permits.

10 CFR 20.103(b) requires that when it is impractical to apply process or engineering controls to limit concentrations of radioactive material in air below 25% of the concentrations specified in Appendix B Table I, column 1, other precautionary measures should be used to maintain the intake of radioactive material by any individual within seven consecutive days as far below 40 MPC-hours as is reasonably achievable. By review of records, observations, and discussions with licensee representatives, the inspector evaluated the licensee's respiratory protection program including engineering controls, MPC-hr controls, and the issue, use, and storage of respirators.

On June 20, 1984, the inspector observed two individuals sorting laundry (anti-Cs) on the 143' elevation of the Auxiliary Building. Both individuals were wearing supplied air hoods for respiratory protection purposes. The air supply to these individuals was apparently being supplied from the plant service air system through a certified air filtered system (Bullard). The inspector noted that the supplied air system did not have a pressure gauge or a flow measuring device to assure adequate air supply to these individuals as required by 10 CFR 20, Appendix A, Note h. Licensee representatives stated to the inspector that they were unaware of the requirement to have calibrated pressure gauges or flow measuring devices when using supplied air hoods for respiratory protection. The inspector informed licensee representatives that this is an apparent violation of 10 CFR 20, Appendix A, Note h, which requires calibrated pressure gauges or flow measuring devices when using supplied air hoods (302/84-20-01).

The inspector reviewed licensee's procedure RP-228, Testing HEPA Cartridges, and noted that the licensee's program for testing HEPA Cartridges to meet the 99.97% efficiency criteria was with the use of di-sec, octyl phthalate (DOP). The inspector was informed by the licensee that they also use DOP for quantitative respirator fit testing for personnel. The inspector stated that in August 1981, the NRC informed all licensee's in Information Notice No. 81-26, that DOP is a weak carcinogen and that for quantitative respirator fit testing, even though human exposures are very small during the tests, it would be prudent to discontinue the use of DOP and to substitute an available, less potentially hazardous, test agent for these tests. Corn oil, as recommended by the test equipment manufacturers, is acceptable for this use. The licensee informed the inspector that they had discontinued use of DOP after receiving the Information Notice, however, they experienced equipment maintenance problems with the use of corn oil. Licensee management acknowledged the inspector's finding and stated

they would pursue the use of corn oil as soon as possible. The inspector had no further questions.

9. Surveys, Monitoring and Control of Radioactive Material (83726)

a. Radiation Work Permits - The inspector reviewed Chemistry and Radiation Protection Procedure RP-101, which provides detailed instructions on the preparation and processing of Radiation Work Permits (RWP).

The inspector selectively reviewed active RWPs for appropriateness of the radiation protection requirements based on work scope, location, and conditions. During a tour of the plant, the inspector observed the adherence of plant workers to the RWP requirements and discussed the RWP requirements with plant workers at the job site.

No violations or deviations were identified.

b. Posting and Control of Radiological Area - 10 CFR 20.203 specifies the posting, labeling, and control requirements for radiation areas, high radiation areas, airborne radioactivity areas, and radioactive material areas. Additional requirements for control of high radiation areas are contained in Technical Specification 6.12.

During tours of the plant, the inspector reviewed the licensee's posting and control of radiation areas, high radiation areas, airborne radioactivity areas, contamination areas, radioactive material areas, and the labeling of radioactive material.

No violations or deviations were identified.

c. Radiological Surveys - 10 CFR 20.201(b) requires each licensee to make or cause to be made such surveys as (1) may be necessary for the licensee to comply with the regulations and (2) are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. The inspector reviewed supporting radiation surveys for current RWPs. During tours of the plant, the inspector observed workers properly wearing the appropriate personnel monitoring devices.

No violations or deviations were identified.

10. 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. On June 19, 1984, the licensee was preparing a shipment of low-level radioactive materials (de-watered resin) to Chem-Nuclear Systems, Inc. for burial. The inspector observed the preparation and packaging of this shipment of radioactive material. No violations or deviations were identified.

11. Licensee Event Report (LER) (92700)

(Closed) LER (302/83-36) - Failure to take radiation surveys at least once every 24 hours when the Spent Fuel Criticality Monitor (RM-G14) was out of service as required by Technical Specification 3.3.3.1. The inspector reviewed the licensee's corrective action to preclude future events of this type which included a revision to their Master Surveillance Plan, Procedure SP-443, to ensure that responsible personnel are informed, at least daily, of Action Statements pursuant to their Technical Specifications.

12. Liquid Effluents (84723)

Technical Specification 2.4.1 describes the licensee's requirements for sampling and monitoring of liquid radioactive effluents. Detailed requirements are specified in plant procedures CH-268, Liquid Radwaste Evaluation and CH-233, Liquid Calibration Effluent Monitor. The inspector examined several liquid radwaste release permits and verified that liquid discharges were made in accordance with the licensee's operating procedure and that the levels of radioactivity in the liquids were below the requirements specified in the liquid effluent technical specifications.

The inspector verified that the RM-L2 and RM-L7 effluent monitors were calibrated, functionally tested, and source checked in accordance with the technical specification requirements.

The inspector accompanied a chemistry technician to observe the sampling of an evaporator condensate storage tank (ECST). From observation and discussions, it was apparent that the sampling procedure was followed and the technician understood the procedure requirements and precautions to avoid erroneous results. The inspector also observed the technician prepare the sample for gross beta and gamma analyses.

No violations or deviations were identified.

13. Gaseous Effluents (84724)

Technical Specification 2.4.2 describes the licensee's requirements for sampling and monitoring of gaseous waste effluents. Detailed requirements are specified in plant procedures CH-269, Gaseous Radwaste Evaluation and CH-232, Gaseous Calibration Effluent Monitor. The inspector discussed the gaseous radwaste collection system and procedures for storing radioactive gases for decay prior to release. Higher activity gases are maintained in one decay tank for optimum decay prior to release. The lower activity gaseous wastes are maintained in the other two decay tanks. The inspector verified that the technical specification curie quantity per tank had not been exceeded. Waste gas decay tank batch release permits were examined.

The inspector verified that the gaseous effluent monitors (RM-A1 and RM-A2) were calibrated quarterly for measurement of radioactivity.

No violations or deviations were identified.

14. Reactor Coolant Sampling Analyses (84723)

Technical Specification 4.4.7 and 4.4.8 describes the licensee's requirements for sampling and analysis of reactor coolant. Detailed requirements are specified in plant procedure SP-702, Reactor Coolant System and Decay Heat. An examination of the records showed that samples were collected at frequencies specified by the technical specifications and the results showed values within the steady state limits. No violations or deviations were identified.

15. Posting of Notices to Workers (92706)

10 CFR 19.11 requires licensee's to post current copies of Form NRC-3, Notice to Employees", in a sufficient number of places to permit individuals engaged in licensed activities to observe them on the way to or from any particular licensed activity location. Also, 10 CFR 19.11 requires that licensees post current copies of any notice of violation involving radiological working conditions, or proposed imposition of a civil penalty within two working days after receipt of the documents from the Commission. The inspector observed the posting of current copies of Form NRC-3, "Notice to Employees" and a notice of violation involving radiological working conditions. No violations or deviations were identified.

16. Inspection Folowup Items (92701)

a. (Closed) IFI (302/83-27-03) - Communication problems between the health physics organization and the operations organization regarding actuation of radiation monitors (i.e., notifying HP technicians when an alarm has occurred) and ongoing plant evolutions (e.g., routine releases of waste gas tanks). The inspector reviewed the licensee's corrective action which included a revision to Operating Procedure OP-409, which in part requires the operations organization to notify the health physics organization any time plant ventilation system configuration is changed, so that radiological conditions can be evaluated.

b. (Closed) IFI (302/84-09-08) - Review corrective actions to resolve discrepancies between the level indicators for tanks WDT-11A and B. The inspector reviewed documentation that the level recorders were recalibrated and that these recorders were added to the instrument calibration program.