

y

January 11, 1983

Florida Power and Light Company
Attn: Dr. R. E. Uhrig, Vice President
Advanced Systems and Technology
P. O. Box 14000
Juno Beach, FL 33408

Gentlemen:

SUBJECT: REPORT DGS. 50-335/82-46 AND 50-389/82-75

This refers to the routine safety inspection conducted by Mr. J. R. Wray of this office on December 13-17, 1982, of activities authorized by NRC Operating license No. DPP-67 and Construction Permit No. CPPR-144 for the St. Lucie facility. Our preliminary findings were discussed with Mr. H. Roos, Quality Control Supervisor, at the conclusion of the inspection.

Areas examined during the inspection and our findings are discussed in the enclosed inspection report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector.

During the inspection it was found that certain activities under your license appeared to deviate from generally accepted industry practice and have safety significance. This item is identified in the Notice of Deviation enclosed herewith as Appendix A. Please provide us in writing within 30 days of your receipt of this letter your comments including a description of corrective actions that have been or will be taken, corrective actions which will be taken to avoid further deviation, and the date your corrective actions were or will be completed.

We have examined actions you have taken with regard to previously identified enforcement matters. These are discussed in the enclosed inspection report.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosures will be placed in the NRC's Public Document Room unless you notify this office by telephone, within ten days of the date of this letter and submit written application to withhold information contained therein within thirty days of the date of this letter. Such application must be consistent with the requirements of 2.790(b)(1).

The responses directed by this letter and the enclosures are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-511.

A-1

January 11, 1983

Should you have any questions concerning this letter, we will be glad to discuss them with you.

Sincerely,

(Original signed by VLBrownlee)

H. C. Dance, Chief
Project Branch 2
Division of Project and
Resident Programs

Enclosures:

1. Appendix A, Notice of Deviation
2. Inspection Report Nos. 50-335/82-46
and 50-389/82-75

cc w/encl:

C. M. Wethy, Plant Manager
N. Weems, Assistant QA
Construction Manager
B. J. Escue, Plant Manager

bcc w/encl:

NRC Resident Inspector
Document Management Branch
State of Florida

RII

JR May:sa

RII

KPBarr

RII

AFGibson

RII

KLendis

RII

HCDance

Alderson

APPENDIX A

NOTICE OF DEVIATION

St. Lucie 2

License No. CPPR-144

Based on the results of the NRC inspection conducted on December 13-17, 1982, certain of your activities appear to deviate from accepted industry standards as indicated below:

Section 6.2 of ANSI H509-1980, "Nuclear Power Plant Air Cleaning Units and Components", provides the accepted industry standard for storage of HEPA and charcoal filters and states that HEPA filters must be stacked no more than three cartons high unless intermediate bracing or flooring is provided to prevent the weight of the upper tier from bearing on the lower tier.

Contrary to the above, on December 15, approximately 240 HEPA filters were stacked five cartons high with obvious damage to lower tier cartons. No intermediate bracing or flooring was provided. A similar deviation was brought to your attention during Region II inspection 60-3.578-10 in April 1978.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

Report No.: 50-335/82-46 and 50-389/82-75

Licensee: Florida Power and Light Company
9250 West Flagler Street
Miami, FL 33101

Docket No.: 50-335 and 50-389

License No.: DPR-67 and CPPR-144

Facility Name: St. Lucie 1 and 2

Inspection at St. Lucie site near Ft. Pierce, Florida

Inspector:

John R. Wray
J. R. Wray

1/5/83
Date Signed

Approved by:

K. P. Bart
K. P. Bart, Section Chief
Operational Program Branch
Division of Engineering and Operational Programs

1/6/83
Date Signed

SUMMARY

Inspection on December 13-17, 1982

Areas Inspected

This routine, unannounced inspection involved 32 inspector-hours on site in the areas of HEPA and charcoal filter systems, health physics staffing and qualifications, facilities, and health physics procedures for Unit 2 and plant shielding modifications (NUREG-0737, Item 11.B.2), radwaste shipping, and licensee action on previous inspector followup items for Unit 1.

Results

Of the seven areas inspected, no violations or deviations were identified in six areas; one apparent deviation was found in one area (improper storage of safety related HEPA filters).

REPORT DETAILS

1. Persons Contacted

Licensee Employees

C. M. Wethy, Plant Manager
*N. G. Roos, Quality Control Supervisor
*H. F. Eucharan, Health Physics Supervisor
*H. M. Mercer, Health Physics
*W. F. Jackson, Welding Superintendent
*D. R. Cooper, Supervisor QA Engineer
*A. M. Anderson, Quality Assurance
*P. Carrier, Licensing Engineer
*L. L. Large, Health Physics
L. N. Motley, Mechanical Startup Engineer

Other Organizations

*G. E. Grace, Licensing Engineer, Ebasco

NRC Resident Inspector

S. A. Elrod, Senior Resident Inspector
*H. E. Bibb, Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on December 17, 1982, with those persons indicated in paragraph 1 above. The inspector was informed that in accordance with proposed technical specifications, the ECCS Area Ventilation filter system is no longer considered an engineered safety feature (ESF) filter system. Licensee management acknowledged the inspector's comments regarding storage of HEP filters and stated corrective action will be taken immediately.

3. Licensee Action on Previous Enforcement Matters

(Closed) Violation (335/82-33-01) Inadequate survey resulting in unauthorized disposal of licensed material. The inspector reviewed the sampling program for the sanitary waste treatment facility and stated that it appears to be adequate to prevent further releases of licensed material from sanitary sludge disposal. The inspector had no further questions.

(Closed) Violation (335/82-33-02) Failure to post radioactive material areas. The inspector reviewed the licensee's response to this item and verified that the sanitary waste treatment facility is properly posted. The inspector had no further questions.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. HEPA and Charcoal Filter Systems - Unit 2

The inspector examined each of the plant's gas treatment systems for adequacy of construction and the presence of required equipment and instrumentation. FSAR Section 6.5 lists those systems considered to be engineered safety feature (ESF) filtration systems. These included the Control Room Emergency Cleanup System, the Shield Building Ventilation System, and the ECCS Area Ventilation System. During the exit interview on December 17, 1982, the inspector was informed that the ECCS Area Ventilation System is no longer considered an ESF filter system in accordance with the proposed technical specifications. 10 CFR 50.71 requires annual updates of the FSAR to ensure that the most current description of systems, components, and analyses are included. The inspector also noted that FSAR Chapters 9 and 6 differed as to which revision of Regulatory Guide 1.52 the licensee has committed (Rev. 1 or Rev. 2). Updating the FSAR to reflect existing system descriptions and commitments on Unit 2 will be reviewed during future inspections (389/82-75-01).

At the time of the inspection, the internal components (pre-filters, HEPA filters and activated charcoal) were not installed in their filter housings. Each ESF filter system had installed a prefilter/HEPA filter common mounting frame which was continuously welded to the housing in accordance with Regulatory Guide 1.52 (C.3.e), a continuously welded adsorber bank frame, bulkhead doorway entries to the upstream and downstream side of the adsorber banks as recommended by Regulatory Guide 1.52 (C.4.c), temperature sensing devices and differential pressure instrumentation, and adequate provisions for lighting.

Regulatory Guide 1.52 (C.2.g) recommends that pertinent pressure drops across and flow rates through atmospheric cleanup systems be instrumented to signal, alarm, and record in the Control Room. The inspector noted that instrumentation exists to signal, alarm and record such readings in the Control Room. The inspector had no further questions.

The inspector noted that challenge atmosphere injection and sampling points were not installed on some systems. A licensee representative stated that the filter testing will be accomplished by an outside contractor and that the test procedure to ensure system integrity has not been approved. The inspector informed the licensee that the test procedure, including the location of all challenge atmosphere injection and sample points, will be reviewed during a future inspection (389/82-75-02).

Section 3.k of Regulatory Guide 1.52 recommends that each filter system include a deluge system for fire protection. The inspector noted that all the filter systems had provisions for water hose hookups in case of a fire, but was informed that heat buildup on the filter banks was not expected to

be sufficient to start a fire. The inspector stated that he would review the calculation of the heat buildup on the filter media during a future inspection. The inspector noted that for the ECCS Area Ventilation filter housing, the hookup for the deluge system was on the inside of the filter housing. This would require a worker to open the door to hookup the deluge system to extinguish a potential fire. The inspector stated that this appeared to be a poor design and should be changed (389/82-75-03).

On December 15, 1982, the inspector toured the Unit 2 warehouse with a licensee representative to observe storage and handling practices of their HEPA and charcoal filters. Section 6 of ANSI N509-1980, "Nuclear Power Plant Air Cleaning Units and Components" provides the accepted industry standard for packaging, shipping, receiving, storage and handling of filter components. Section 6.2 of the standard states that HEPA filters and adsorbers should be stored in their original cartons in an environmentally controlled area. HEPA filters must be oriented vertically and be stacked no more than three cartons (slightly over 6 ft.) high unless intermediate bracing on flooring is provided to prevent the weight of the upper tier from bearing on the lower tier. It also states that receiving and storage personnel shall be informed of the necessity of proper handling of all components, especially the HEPA filters and carbon adsorber cells. The inspector noted that although the HEPA filters were in an environmentally controlled room, they were stacked five cartons high with no bracing or flooring provided between layers and obvious carton damage was evident on the lower tiers. It also appeared, based on discussions with warehouse personnel and the storage condition of the HEPA filters, that no special instructions had been given to the personnel responsible for storage of the HEPA filters. The inspector informed licensee management that failure to store HEPA filters in accordance with ANSI N509 is a deviation from accepted industry practices (389/82-75-04).

6. Health Physics Staffing and Qualifications - Unit 2

FSAR Section 12.5.1 describes the health physics department organization and personnel qualifications. During previous inspections, it was noted that filling available positions with qualified individuals prior to startup did not appear to be a problem. During this inspection, the inspector became aware of new openings in the health physics organization due to experienced workers leaving the department for the operations department. In addition, Unit 1 fuel management engineers predict that the Unit 1 refueling outage is likely to occur at the same time as Unit 2 startup and power ascension. The inspector stated that it appeared contract help may be required to supplement the health physics staff with qualified technicians if Unit 1 is down for refueling while Unit 2 is in startup and normal hiring practices do not provide a full complement of qualified health physics technicians in time. The status of the health physics organization will be reviewed during future inspections (389/82-75-05).

7. Facilities - Unit 2

Section 12.5.2 of the FSAR describes the facilities which will be available for health physics work and access control. The inspector toured plant areas with a licensee representative and observed the areas and associated equipment. The health physics area at the access point and counting room are complete and instrumentation is in place. Emphasis was placed on observing the adequacy of the facilities for control of personnel exposure and control of radioactive contamination.

FSAR Section 12.5.2.5, states that respirators are cleaned and decontaminated along with the protective clothing in the laundry room. It also states that the equipment decontamination area is located near the hot machine shop. A licensee representative informed the inspector that none of these activities will be performed on the Unit 2 side. Equipment and respirator decontamination will be conducted at their present location in Unit 1. Also there does not appear to be any hot machine shop area on Unit 2 as this function will be continued for the plant site on the Unit 1 side. The inspector had no further questions or comments on these facilities.

FSAR Section 12.5.2.5 also discusses locker room facilities. The inspector toured the locker and change room areas for men and women and determined that personnel flow patterns appeared to be adequate to control spread of radioactive contamination. However, the inspector stated that the existing locker and change areas appeared to be too small for the number of workers expected during outages. A licensee representative acknowledged the inspector's comment and stated that work has begun on designing a new craft locker and change facility which may include increased laundry facilities as well as the craft TLD issue point. The expected completion date was not established at the time of the inspection. The inspector stated that the status of the craft locker and change facility will be reviewed during future inspections (389/82-75-06).

The inspector reviewed the laundry facilities, personnel decontamination areas (for men and women), dry waste storage building, and health physics counting room. A licensee representative stated that larger capacity washer/dryer units should be enough in combination with the Unit 1 facilities for normal operations. The inspector was informed that radwaste compacting will not be conducted on Unit 2 and that all site compacting will be performed by the existing Unit 1 compactor. The inspector verified that the sanitary waste treatment facility for Unit 2 is the site treatment facility as discussed in Inspection Report 50-335/82-33. The inspector had no further questions or comments regarding these facilities.

Controlled exhaust hoods are provided in the laboratories. Since pressurized samples and volatile chemicals may be handled in the hoods, the inspector inquired as to what steps will be taken to assure that the air flow is balanced and that the average face velocity is at least 100 linear feet per minute (based on industrial standard). A licensee representative stated

that the verification of the flow had not been accomplished but was under consideration. The inspector stated that this would be followed up during subsequent inspection (389/82-75-07).

8. Health Physics Procedures - Unit 2

Section 12.5.3 of the FSAR describes the types of procedures that will be issued. The inspector discussed the preparation and implementation of procedures for Unit 2 with cognizant licensee representatives. Existing procedures applicable to both units are designated "FP&L St. Lucie Plant". Those procedures, applicable only to a specific unit, are clearly designate "FP&L St. Lucie Unit No. 1 (or 2)". A licensee representative informed the inspector that all plant procedures have been modified to include Unit 2 and Unit 2 specific procedures have been written. The inspector reviewed the status of the plant health physics procedures and had no further questions. The inspector reviewed both Unit 2 specific health physics procedures (2-1120020 "Remote Operation of the General Atomic Radiation Monitoring System", and 2-1120060 "Calibration Check of General Atomic Area Radiation Monitors and Control Room Outside Air Intake Monitors") and had no further questions.

9. Plant Shielding Modification for Vital Area Access (NUREG-0737, Item 11.B.2 - Unit 1

The inspector reviewed the licensee's response to NUREG-0737 item 11.B.2 entitled "Shielding Modification for Vital Area Access". This item was originally discussed in NUREG-0578 as a short term TMI requirement. In response to this item, a shielding study was performed to determine what plant modifications or shielding would be required to ensure that areas requiring access following an accident would be accessible. The inspector verified that the appropriate source terms were used in the study and that the requirement for accessibility was exposure limits specified in General Design Criteria 19 and NUREG-0737. A summary of the shielding review is presented in Section 12.1.6 of the St. Lucie 1 Updated Final Safety Analysis Report. Table 12.1-11 of the FSAR lists vital areas, calculated dose rates, occupancy requirements and corresponding personnel exposures, and required plant modifications. On December 15, 1982, the inspector by direct observation, verified that the required plant modifications were completed and had no further questions. The inspector reviewed two emergency operating procedures (1-0120041, Steam Generator Tube Leak Failure; 1-0120042, Loss of Reactor Coolant) to determine if adequate procedural controls existed. The inspector noted that as corrective action to NUREG-0737 Item 11.B.2, the licensee changed some emergency safety system manual operated valves to motor operated valves controlled from a newly installed Control Room Auxiliary Console (CRAC) panel in the Main Control Room. The inspector verified that most of the procedural requirements of the emergency procedures reviewed could be performed in the Main Control Room which is continuously habitable following an accident.

However, certain procedural steps would require an operator to leave the Control Room to operate a valve stem extension outside the charging pump cubicle in the basement of the Reactor Auxiliary Building. The inspector accompanied by a licensee representative walked down the procedural steps. Based on area dose rate maps contained in health physics emergency procedures, which were calculated at 1 hour, 10 hours, 100 hours, and 1000 hours following an accident, the inspector verified that personnel could safely access the valve gallery outside the charging pump cubicles, perform their task, and receive less exposure than the limit specified in NUREG-0737 and GDC-19. During inspection 50-335/81-14, an inspector observed an emergency drill to test post accident sampling capabilities and verified that the procedural controls in combination with the additional shielding installed around the Post Accident Sampling System (PASS) was adequate to ensure that exposures to personnel taking post accident samples did not exceed the specified limits.

10. Radwaste Shipping - Unit 1

On December 13, 1982, the inspector observed licensee representatives prepare a shipping liner (CNSI 14-195H) for filling of spent resin from the solid radwaste management system. Appropriate health physics and operating practices appeared to have been taken in accordance with shipping procedures. The inspector observed the resin cask fill cap which utilizes a TV camera and level alarms to permit remote resin handling which maintains operator exposures ALARA. The equipment appeared to work as designed. The inspector noted that operators and health physics personnel participate in ALARA meetings prior to resin transfer to ensure adequate personnel protection. The inspector had no further questions regarding resin transfer operations.

The inspector reviewed the shipping papers for shipment 82-27 and discussed them with the cognizant licensee representative. The shipment contained 30.0 curies of dewatered resin, principally Co-60 and Cs-137. The LSA shipment was on a sole use vehicle. The inspector verified that instructions were given the driver and that the vehicle was properly posted. The inspector performed an independent confirmatory radiation survey of the vehicle and determined that radiation levels did not exceed the appropriate DOT and NRC regulatory limits. No violations or deviations were identified.

11. Licensee Action on Previous Inspector Followup Items

(Closed) (335/82-20-03) Moving RCA fence to include SGBTF. On May 24, 1982, the licensee submitted a report detailing certain aspects of Reportable Occurrence 335/82-16/03-6 which was discussed in inspection report 50-335/82-20. The report stated that the radiation control area fence would be expanded to include the steam generator bicdown treatment facility (SGBTF). During this inspection, the inspector verified that the RCA fence had been expanded to include the SGBTF. No violations or deviations were identified.

(Closed) (335/82-31-03) WBC shower survey program. The inspector discussed the survey program for the body analyzer shower and verified that a routine (weekly) contamination survey program has been established and incorporated into plant health physics procedures. The inspector had no further questions.

(Closed) (335/82-33-04) Review 30-day special report on unauthorized disposal of licensed material in sanitary waste treatment facility sludge. The inspector reviewed the special report submitted pursuant to Technical Specification requirements, determined that it was complete and had no further questions.