



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

Report No. 50-389/82-27

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

Facility Name: St. Lucie

Docket No. 50-389

License No. CPPR-144

Inspection at St. Lucie site near Fort Pierce, Florida

Inspector: B. R. Crowley
B. R. Crowley

7/20/82
Date Signed

Approved by: N. Economos
N. Economos, Acting Section Chief

7/31/82
Date Signed

Engineering Inspection Branch
Division of Engineering and Technical Programs

SUMMARY

Inspection on June 22-25, 1982

Areas Inspected

This routine, unannounced inspection involved 25 inspector-hours on site in the areas of preservice inspection (PSI), internals welding, previous inspection finding and IE Bulletins.

Results

No violations or deviations were identified.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *B. J. Escue, Site Manager
- *G. E. Crowell, Site Engineering Supervisor
- *G. Gotch, Section Supervisor Codes & Inspection - PNS
- *P. W. Heycock, PSI Site Supervisor - PNS
- *W. F. Jackson, Welding Superintendent
- *R. A. Symes, Supervising QA Engineer
- *P. P. Carrier, Power Plant Engineering - Licensing
- *T. A. Geissinger, Area QC Supervisor
- E. L. Anderson, ISI Engineer - PNS
- S. A. Collard, Metallurgist - PNS
- *E. W. Sherman, QA Engineer
- J. W. Adams, QA Engineer
- W. H. Black, QA Engineer

Other licensee employees contacted included NDE examiners and QA personnel.

Other Organizations

- *J. J. Capezza, Resident Engineer, Ebasco Services, Inc.
- *G. E. Grace, Licensing Engineer, Ebasco Services, Inc.
- G. H. Hand, Level IIA Examiner, Zetec Inc.
- J. C. Whitney, Mechanical Engineer, Ebasco Services, Inc.
- G. R. Perkins, President, NDE Engineering Consultants, Inc.
- *K. N. Flanagan, Assistant Site Manager, Ebasco Services, Inc.
- *G. H. Krauss, ESSE Project Engineer, Ebasco Services, Inc.
- J. C. Orłowski, Licensing, Combustion Engineering, Inc.
- G. L. Folks, Level II NDE Examiner, U.S. Testing

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on June 25, 1982, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings listed below.

(Open) Unresolved Item 389/82-27-01, Incorrect Weld Record For Weld FW001 on System Number CSB-0002 (Internals), paragraph 7.b.

(Open) Inspector Followup Item 389/82-27-02, RT Penetrameter Placement on Containment Penetration Welds, paragraph 10.

3. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item 389/81-07-08, Welder Not Qualified to WPS Specified on Weld Traveler. This item was examined during the RII inspection documented in report 50-389/82-19. During that inspection the inspector noted that the responsibilities for verification of welder qualification were not clearly defined. The licensee has issued revision 7 to procedure SQP-8 to clearly specify that the welding supervisor is responsible for verifying welder qualification. This item is considered resolved.

(Open) Violation 389/82-13-05, Use of Incorrect Calibration Block For PSI UT of Weld RC-123-2. Florida Power and Light Company's (FP&L) letter of response (L-82-232) dated May 28, 1982 has been reviewed and determined to be acceptable by Region II. However, when attempting to verify corrective action on site, the inspector determined that the commitment to be in full compliance by June 15, 1982, was not achieved. The letter of response stated that weld RC-123-2 would be re-inspected and the records for all primary coolant piping would be re-reviewed for such problems. At the time of the inspection weld RC-123-2 had not been re-inspected. The weld was re-inspected during the inspection and no recordable indications were found. The other primary coolant weld records had been re-reviewed. Problems similar to the one identified in the violation had been identified. However, all of these problems had not been corrected. The licensee agreed to submit another response stating the reasons for not meeting the full compliance date and establishing a new date for full compliance. This item remains open.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve violations or deviations. New unresolved items identified during this inspection are discussed in paragraph 7.b.

5. Independent Inspection Effort

The inspector conducted a general inspection of the reactor building to observe construction activities such as welding, material control, house-keeping and storage.

Within the areas inspected, no violations or deviations were identified.

6. Inspector Followup Items

- a. (Closed) Inspector Followup Item 389/82-19-02, Disposition of UT Indications In Welds RC-112-1, RC-123-1 and RC-121-6. This item was reviewed during the RII inspection covered by report 50-389/82-20. The only concern after that inspection was the need to re-inspect the indications in weld RC-112-1 from the inside surface using a 70° angle beam transducer. The 70° angle beam inspection from the inside surface and additional 45° angle beam inspections from the outside surface have

been performed and documented by the licensee. These inspections verify the size and location of the indications to be compatible with that previously indicated using beam plot corrections. Although the inspector has no further questions on the indications covered by this Inspector Followup Item, the methods used to size their indications are not necessarily applicable to future indications. Each case must stand on its own merit.

- b. (Open) Inspector Followup Item 389/82-19-01, Issue of FP&L PSI Program and Plan Descriptions. The inspector evaluated the status of this item. The program and plan descriptions still have not been issued as FP&L documents. The licensee is considering the final format for the documents. Since it appears the final issue of these documents may not be until near the end of the PSI, the licensee agreed to evaluate the need for a "tie together" document to cover the entire PSI program and its "workings".

7. Reactor Vessel Internals (Welding) - Observation of Welding and Associated Activities

At the time of this inspection, all welding associated with reactor vessel internals had been completed. Therefore, in lieu of observation of welding, the inspector reviewed the welding records described below to determine whether reactor vessel internals welding was accomplished in accordance with applicable regulatory and code requirements. The applicable code for this welding is the ASME Boiler and Pressure Vessel Code, Section III, 1977 Edition including Addenda through summer 1977.

- a. The inspector reviewed welding and associated records for the following internals welds:

<u>System</u>	<u>Weld</u>
RFB-00001	FW 001 FW 001A FW 005 FW 005A
CSB-0002	FW 001

The records consisting of "Weld Traveler", including inspection reports; a sample of "Weld Material Requisition Reports", a sample of "Receipt Inspection Reports", and "Welder Qualification Record" were reviewed in the areas of:

- (1) Weld identification
- (2) Weld fitup and alignment
- (3) Welding material control
- (4) Use of correct welding material
- (5) Use of qualified welders
- (6) Use of correct welding procedure

- (7) Inspection of weld including required hold points
 - (8) Preheat and interpass temperature control
 - (9) Use of correct NDE
- b. During review of the above records the inspector noted the following problems for weld FW 001 on system CSB-0002:
- (1) The weld traveler did not have any welder stamp (identification) recorded. In accordance with the licensee program, in addition to identification of welders on the weld traveler, the welders of each weld are identified in the computer by inputting welder identification information from each "Weld Material Requisition Report". A review of a computer printout of this information for weld FW 001 revealed that four welders withdrew welding material for the weld. Therefore, the identification of the welder(s) is not lost when not entered on the weld traveler.
 - (2) During review of the computer printout of "Weld Material Requisition Report" information above, the inspector noted that one of the weld material control numbers was for E 7018 electrodes. A review of the actual "Weld Material Requisition Record" revealed that although the correct material description (ER 308) for the weld was recorded, the control number was for E 7018 electrodes. It appears that someone wrote down the wrong control number since all of the other information (remaining weld material descriptions, control numbers, WPS's etc.) for the welds were correct.

During the inspection, it could not be determined whether the above records problems were isolated conditions. However, the licensee stated that a 100% review of all weld travelers has just started and is expected to take several months to complete. The review would identify problems such as noted by the inspector. Therefore, until the full extent of this problem is determined, this matter is considered unresolved and is identified as item number 389/82-27-01, Incorrect Weld Record For Weld FW 001 On System Number CSB-0002 (Internals).

Within the areas inspected, no violations or deviations were identified.

8. Preservice Inspection (PSI) - Review of Procedures

The inspector reviewed the PSI procedures described below to determine whether the procedures were consistent with regulatory requirements. The PSI is being performed in accordance with the ASME Boiler and Pressure Vessel Code, Section XI, 1977 Edition with Addenda through S78 as modified by 10 CFR 50.55a.(g).

- a. The inspector reviewed the licensee's PSI Inspection Plan and the governing examination procedures for four ASME Section XI areas to determine whether proper requirements for examination categories, methods and extent of examination were specified in accordance with

ASME Section XI. The examination areas and applicable procedures were as follows:

<u>Examination Area</u>	<u>Procedures</u>
Category C-A, Items C1-10, C1-20, C1-30	NDE 5.1
Category C-F, Item C5.21	NDE 5.4 NDE 3.1 NDE 5.1
Category B-J, Item B9.11	NDE 5.4 NDE 5.1 NDE 5.11
Category B-Q	NDE 6.1

- b. Eddy current (ET) procedure NDE 6.1, revision 0, "Eddy Current Examination of Nonferrous Tubing By Multifrequency Techniques" was reviewed for technical content in the areas of:

- (1) Equipment
- (2) Test Method
- (3) Frequencies
- (4) Calibration
- (5) Reporting
- (6) Acceptance criteria

Within the areas inspected, no violations or deviations were identified.

9. Preservice Inspection - Observation of Work and Work Activities

The inspector observed the PSI activities described below to determine whether these activities were being performed in accordance with regulatory requirements and licensee procedures. See paragraph 8 above for the applicable code.

- a. Personnel qualification records were reviewed for 2 level II-MT, 1 level I-ET, and 1 level IIA-ET examiners.
- b. The inspector observed in-process eddy current (ET) inspection, including calibration and demonstration of ET signals from all calibration reflectors, of the following steam generator tubes:

"B" Generator - R43L45, R45L45, R47L45, R49L45, and R51L45

"A" Generator - R81L45, R83L45, R85L45, R87L45, R89L45, R91L45, and R93L45

The inspections were compared with applicable procedures in the following areas:

- (1) Availability of and compliance with approved NDE procedures
 - (2) Use of knowledgeable NDE personnel
 - (3) Use of NDE personnel qualified to the proper level
 - (4) Records of inspection results
 - (5) Use of proper equipment
 - (6) Frequencies
 - (7) Calibration
 - (8) Tube coverage
 - (9) Acceptance criteria
- c. All PSI magnetic particle (MT) inspections had been completed prior to this inspection. The inspector reviewed MT records for welds MS-28-FW-4A and 28-1-SW-5 in zone 63. The records were compared with applicable procedures in the areas of:
- (1) Compliance with approved NDE procedures
 - (2) Use of NDE personnel qualified to the proper level
 - (3) Recording of inspection results
 - (4) Examination method
 - (5) Contrast of dry powder particle color with background and surface temperature
 - (6) Examination overlap and directions
 - (7) Pole spacing
 - (8) Yoke lifting power
 - (9) Acceptance criteria

Within the areas inspected, no violations or deviations were identified.

10. IE Bulletins (IEB's)

(Closed) 80-BU-08, Examination of Containment Liner Penetration Welds. On September 29, 1980, Florida Power and Light Company (FP&L) submitted a final response (L-80-323) to IEB 80-08. During a sight inspection (see report 50-389/80-15) the RII inspector raised several questions regarding interpretation of information included in the response. Subsequently, on December 1, 1980, FP&L submitted additional information (L-80-394). In summary, the additional information provided a listing of all penetrations, sketches showing the welds in question, and summarized the NDE required. In addition, the information indicated that no backing bars were used and radiographic (RT) inspection was required for all welds addressed by the Bulletin.

In order to verify that the requirements of the Bulletin had been met, the inspector randomly picked the penetrations listed below for review:

<u>Penetration Number</u>	<u>System</u>	<u>Size</u>	<u>Type</u>	<u>Field Weld</u>	<u>Vendor Dwg.</u>	<u>Field Dwg.</u>
4	Feedwater	45" X2.25"	I	FW-3	2298-1995 1996, 1997 1998	FSG-2298- M-148 Shts 1-4
27	Charging	2" Sch. 160	III	FW-3	2998-2007	"
36	Cont. Spray	6" Sch. 160	III	FW-3	2998-2013	"
69	Safety Injection	3" Sch. 160	III	FW-3	2928-2929	"

In order to verify that the vendor welds and field welds addressed by the Bulletin were non-backing bar type welds and were RT inspected the inspector reviewed the following for the above penetrations:

- a. Field Weld "Weld Travelers"
- b. RT film for field welds - reviewed for the presence of backing bar and general weld quality
- c. Field drawings
- d. Vendor drawings
- e. Field WPSs
- f. "Tube Turn Weld Control Record" for vendor welds

During review of the RT film of Weld FW 3 on penetration 36, the inspector noted that the penetrameters had been placed on the weld or in the area of interest for view 23-35. The ASME Code, Section V, and the licensee's procedure allow placing the penetrameter on the weld where required by geometry or other conditions to obtain density relationship between penetrameter and the area of interest. For the weld in question, placement of the penetrameter in the area of interest did not appear to be required to obtain proper density. This problem was found near the end of the inspection and it could not be readily determined whether placement of the penetrameter on the weld was justified. Therefore, this matter was identified for followup during a future inspection as inspector followup item 389/82-27-02, RT Penetrameter Placement on Containment Penetration Welds.

Based on review of the licensee's response and review of the above records, IEB 80-08 is closed.

Within the areas inspected, no violations or deviations were identified.