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

JUL 3 1980

Report Nos. 50-250/80-20 and 50-251/80-17

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

Facility Name: Turkey Point

Docket Nos. 50-250 and 50-251

License Nos. DPR-31 and DPR-41

Inspection at Turkey Point site near Homestead, Florida

Inspector: _____ 6/27/80
N. Economos Date Signed

Approved by: _____ 6/27/80
A. R. Herdt, Section Chief, RCES Branch Date Signed

SUMMARY

Inspection on May 28-29 and June 3-4, 1980

Areas Inspected

This routine, announced inspection involved 38.5 inspector-hours on site in the areas of follow-up of IE Bulletins 79-13 and 79-17 Rev. 1 (Units 3 & 4); Feedwater nozzle welding (unit 4).

Results

Of the three areas inspected, no items of noncompliance were identified in two areas; one item of noncompliance was found in one area (Infraction - failure to follow weld electrode - procedural requirements - paragraphs 5 and 7).

DETAILS

1. Persons Contacted

Licensee Employees

*J. K. Hays, Plant Manager - Nuclear
*J. P. Mendieta, Maintenance Superintendent - Nuclear
*G. Gotch, PRN - General Office
*R. E. Tucker, Level III Examiner
*S. M. Feith, Operations Supervisor - QA
*J. O'Brien, Project QC Supervisor
*F. W. Rothermel, Project Construction Supervisor

Other licensee employees contacted included construction craftsmen, technicians, and office personnel.

Other Organizations

Westinghouse Electric Corporation (W)

*J. M. Gilkinson, Senior Engineer S/G Materials Development
D. L. Wolker, Senior Field Service Engineer - Nuclear Service Division

Bechtel Power Croporation, (Bechtel)

L. Benett, Welding Engineer
J. Gregg, Project Field Engineer

Lambert MacGill Thomas, Inc. (LMT)

E. L. Thomas, Senior NDE Specialist, Level III examiner

U. S. Testing

J. P. Long, Level II RT Examiner

NRC Resident Inspectors

*R. Vogt-Lowell
W. Marsh

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on May 29 and June 4, 1980 with those persons indicated in paragraph 1 above. The inspector identified the areas inspected which included welding and NDE of feedwater piping, review of IE Bulletin 79-13 radiographs, work observation and

record review relative to IE Bulletin 79-17 Rev. 1. The noncompliance on weld electrode control described in paragraphs 5.a and 7 was discussed in detail.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve noncompliance or deviations. New unresolved items identified during this inspection are discussed in paragraph 6.

5. IE Bulletin 79-13 "Cracking in Feedwater System Piping" (Unit 4)

a. Removal of the feedwater pipe welds found to contain cracks in steam generators (S/G) "A", "B" and "C" was in progress at the start of this inspection on May 27, 1980. This matter had been reported earlier by the licensee and was discussed in preliminary notification (PN) number PNO-II-80-94 and daily report on May 23 and 27, 1980 respectively.

The licensee discussed details of the repair plan and provided the inspector with copies of related nonconformance reports and process sheets 80-008 Rev. 2, 80-009 Rev. 1 80-010 Rev. 1 which were used to provide instructions for this repair activity. (W) provided engineering guidance and Bechtel was responsible for welding/NDE and related activities. The governing code was ANSI B31.1 (77S79). Welding procedures and welders were qualified in accordance with ASME Section IX. The governing welding specification was Bechtel's W.P.S 5177-M-53 with the following applicable appendicies: weld procedure qualifications - 11, 16 and 25; welding filler material control - 13; post weld heat treatment - 34 and 35. These and other procedures reviewed for technical content and/or code compliance included:

1. ASP-6 "Welding Control"
2. QI 9.1 Rev. 3 "Visual Inspection of Welds"
3. QI 9.3 Rev. 1 "Radiographic Inspection"

The inspector observed the crack indications in the feedwater nozzle to reducer weld of S/Gs 4A, 4B and 4C. Also the inspector witnessed liquid penetrant inspection of the 4C nozzle bore. This test showed (1) some pitting and (2) linear indications in the counterbore at the toe of the previous weld and at the throat between the 3 to 5 o'clock position, looking into the nozzle, in front of the thermal sleeve.

In all cases the crack indications appeared at the toe of the nozzle to reducer weld on the reducer side of the joint. The liquid penetrant results were relayed to (W) who subsequently provided specifics on the

method and amounts of metal that could be removed from the suspect area. In addition (W) supported RII's position that the nozzle to reducer joint be welded with an open butt weld instead of the backing ring type, proposed by Bechtel.

The inspector observed various stages of welding the reducer to pipe welds for S/Gs "A", "B", and "C"; the nozzle to reducer and pipe to pipe welds for S/Gs "A" and "C" were observed prior to the final pass. For these welds the inspector reviewed fabrication related QA/QC records, pipe material quality documents, welder performance qualifications, weld procedure qualification records and the radiographs for field weld No. 2on S/Gs "A" and "C".

Within these areas on the morning of June 4, 1980 the inspector noted the presence of a substantial quantity of low hydrogen coated electrodes scattered around the work area of Unit 4 S/G "C" feedwater nozzle. A portable rod warmer containing the same type electrodes was in this area also. In response to questioning the contractor's representative stated that this material should have been returned to the rod issue room by the craft at the end of the shift at midnight. Failure to return weld rod material to the rod room was contrary to requirements of procedure 5177-M-53 Appendix 13 "Welding Filler Material Requirements" paragraph 8.2 which states that at the end of each shift unused filler material shall be returned to the rod room and processed per Table 2, which requires that rod be returned to the rod room at the end of a work shift or after 12 hours whichever is less. The contractor representative destroyed the loose rod and took steps to have the warmer returned to the rod room.

In discussing this matter, the licensee QA representative stated that control of weld rod has been a problem at this site and had been identified in their latest audit surveillance report which had not yet been issued. Moreover the QA representative argued that since they (QA) had identified this problem earlier, the example of procedural violation stated above and that discussed in paragraph 7 of this report should be identified as unresolved items instead of a noncompliance. (In response to questioning the QA representative agreed that neither of the specific examples cited by the inspector had been identified in the QA surveillance report.) The inspector stated that he was not aware of QA's findings prior to his own and that the examples of uncontrolled rod found during this inspection effort shows that no effective corrective action had been taken to achieve control of weld rod materials as required by the approved procedure. Failure to accomplish activities affecting quality in accordance with approved procedures is in noncompliance with Criterion V of Appendix B 10 CFR 50 as implemented by paragraph 5.1 of FPL Topical FPLTQAR 1-76. This noncompliance was catagorized as an infraction and was identified as item: 250/80-17-01, 250/80-20-01, "failure to follow weld electrode procedural requirements".

b. Visual Inspection of Welds

The new welds being fabricated on the feedwater piping were visually inspected for compliance with the aforementioned code and QI-9.1 Rev. 3, "Visual Inspection of Welds", within these areas the inspector noted that the information entered in the appropriate QC form under material traceability of components (pipe), was the material type e.g., SA-106 or A-234 instead of the heat number normally entered under other code requirements. In discussing this matter with the licensee representative the inspector stated that while identification of material type may help to show material compatibility with regards to welding, it provides no useful information needed to trace the parts to quality records now on file - hence there appears to be a breakdown in the correlation of fabrication records with quality records. In response the licensee stated and the inspector agreed that the applicable code does not require this information to be recorded but agreed to look further into the matter and discuss it further on a future RE:II inspection. This matter was identified as an inspector followup item: 251/80-17-02 "Material traceability".

6. Review of Radiographs IE Bulletin 79-13 (Unit 3)

This work effort was a followup to the on going review of radiographs taken to verify the integrity of certain auxiliary feedwater pipe welds. This matter was discussed in RII Report Nos. 50-250/79-22 and 50-251/79-22. The following radiographs were reviewed to determine whether they met applicable code, ASME Section III (77S78) NC-5000 and to the 2T sensitivity level. The radiographic procedure was identified as QI-9.3 Rev. 1. As the cracking in unit 4 was on the reducer side of the feedwater nozzle to reducer weld, only radiographs of those welds in each of the three steam generators were reviewed. Within these areas radiographic positions 5 through 7 and 12 through 20 S/G "A" nozzle to reducer weld exhibited evidence of possible linear indication(s) within the weld metal and near the fusion line on the reducer side of the joint. The licensee level III examiner concurred with this finding and agreed to look further into the matter on the next Unit 3 extended outage. This item was identified as unresolved item 250/80-20-02: "Linear Indications S/G "A" Feedwater Nozzle".

7. IE Bulletin No. 79-17 Rev. 1 Pipe Cracks in Stagnant Borated Water Systems at Power Plants (Units 3 and 4)

Visual and volumetric examinations of selected welds for evidence of intergranular stress corrosion cracking (IGSCC) in stagnant borated water engineered safeguard pipe systems was being performed by Lambert, MacGill, Thomas Inc. (LMT) under contract with FPL. The ultrasonic (UT) examination procedure used for this program was developed and demonstrated using weld specimens with IGSCC indications in the HAZ. The procedure was written to comply with ASME Code Section XI (75S77) and Appendix III of the (W75) addenda. It had been approved for use by LMT's level III examiner and the licensee representative. The procedure and field changes entitled UT-10 Rev. 7 "Ultrasonic

examination of Nuclear Coolant System Piping for Stress Corrosion Cracking" was reviewed for technical content and compliance with the applicable code above. The inspection program, system and weld selection, was under the direction of the licensee's Power Resources Nuclear (PRN) staff. QA surveillance of field activities was provided by FPL site NDE level III examiner. Welds selected in Unit 3 for observation during UT examination were as follows:

Weld No.	Size	Type	Iso	System
2	8" sch. 40	Ell-to-Pipe	IC-248A	Safety Injection
12	8" sch. 40	Ell-to-Pipe	IC-248A	Safety Injection

In addition the inspector reviewed records of completed examinations in Unit 4. Welds selected for this effort were as follows:

Weld No.	Size	Type	Line
24	8" sch. 120	Ell to Tee	8"-SI-2501R
17	8" sch. 120	Pipe to Ell	8"-SI-2501R
12	8" sch. 120	Pipe to Ell	8"-SI-2501R
10	14" sch. 140	Pipe to Ell	14AC-2501R
3	3" sch. 80	Pipe to EL1	3"-SI-2501R

Within these areas the inspector reviewed personnel qualification, quality certifications of equipment and material and, observed equipment calibration, examination and evaluation of indications.

On June 3, 1980 while the examination of the Unit 3 welds discussed above was in progress inside the lower heater exchange room, the inspector observed a can with a substantial quantity of partially used and unused low hydrogen coated electrodes. There was no evidence of on-going welding activity in this area. This is another example of failure to exercise control of welding electrodes as required by the approved procedure which in noncompliance with Criterion V of Appendix B to 10 CFR 50 discussed in paragraph 5.a. of this report.

Within the areas inspected relative to IE Bulletin 79-17 Rev. 1 no items of noncompliance or deviations were identified.