



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

Report No.: 50-250/87-16

Licensee: Florida Power and Light Company
9250 West Flagler Street
Miami, FL 33102

Docket No.: 50-250

License No.: DPR-31

Facility Name: Turkey Point

Inspection Conducted: March 30 - April 3, 1987

Inspector:

W. P. Keinsorge

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4/16/87
Date Signed

Approved by:

J. J. Blake

J. J. Blake, Section Chief
Engineering Branch
Division of Reactor Safety

4/16/87
Date Signed

SUMMARY

Scope: This routine, unannounced inspection was conducted in the areas of housekeeping (54834B), material identification and control (42902B), material control (42940B) and inservice inspection.

Results: No violations or deviations were identified.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *C. M. Wethy, Vice President, Turkey Point
- *D. A. Chaney, Site Engineering Manager
- *E. Preast, Project Management
- *D. W. Haase, Safety Engineering Group Chariman
- C. J. Baker, Plant Manager

Other licensee employees contacted included engineers, technicians, and office personnel.

Other Organizations

D. E. Boger, Factory Mutual, ANII

NRC Resident Inspectors

*D. R. Brewer

*Attended exit interview

2. Exit Interview (30703B)

The inspection scope and findings were summarized on April 3, 1987, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.

3. Licensee Action on Previous Enforcement Matters

This subject was not addressed in the inspection.

4. Unresolved Items

Unresolved items were not identified during this inspection.



5. Independent Inspection Effort

Housekeeping (54834B), Material Identification and Control (42902B) and Material Control (42940B)

The inspector conducted a general inspection of the protected area to observe activities such as housekeeping, material identification and control; material control, and storage.

Within the areas examined no violations or deviations were identified.

6. Inservice Inspection (ISI) - Review of Procedure (73052)

The inspector reviewed procedures, interviewed licensee/contractor personnel and reviewed records to determine whether the licensee's program pertaining to ISI was complete and in conformance with regulatory requirements and the licensee's commitments, as indicated below. Unit 3, which commenced commercial operation on December 4, 1972, is in the first period of the second ten year ISI interval (February 22, 1984 to February 22, 1994). The applicable code for ISI, is ASME Boiler and Pressure Vessel (ASME B&PV) Code Section XI 1980 edition with addenda through the Winter of 1981 (80W81).

ISI is being performed by Florida Power and Light (FP&L) Company under the umbrella of the FP&L QA Program, with the exception of automated examinations of the reactor vessel which are to be performed by Southwest Research Institute (SwRI) under the umbrella of the SwRI QA Program.

a. Program Requirements

The inspector reviewed the licensee's commitments in the SAR, Technical Specifications (TS), and approved ISI program to ascertain whether ISI procedures adequately cover all areas specific in the licensee's commitments for ISI and Preservice Inspection (PSI) requirements.

b. Procedure Approval

The inspector reviewed the below listed procedures to determine whether the ISI procedures have been approved by authorized licensee personnel and by the Authorized Nuclear Inservice Inspector (ANII) where applicable.



Documents Reviewed

<u>No.</u>	<u>Title</u>
FP&L - NDE-2.2, Rev. 1	"Magnetic Particle Examination"
FP&L - NDE-3.3, Rev. 0	"Liquid Penetrant Examination Solvent Removable, Visible Dye Technique"
FP&L - NDE-4.1, Rev. 1/FC 1A	"Visual Examination, VT-1 for Welds/Bolting/Bushings/Washers"
FP&L - NDE-4.3 Rev. 0	"Visual Examination VT-3/VT-4"
FP&L - CAL-1 Rev. 1	"Ultrasonic Instrument Linearity Verification"
FP&L - CAL-2, Rev. 1	"Calibration of Magnetic Particle Equipment"
FP&L - CAL-3, Rev. 0	"Calibration Verification of Temperature Measurement Devices"
FP&L - CAL-4, Rev. 0	Qualification Procedure For "Black Light" Units and Light Meter Calibration
FP&L - PNS-QI 9.3 Rev. 2	"Nondestructive Examination Personnel Qualification and Certification"
FP&L - NDE-5.2, Rev. 2	"Ultrasonics Examination of Ferritic Piping Welds"
FP&L - NDE-5.4, Rev. 4	"Ultrasonic Examination of Authentic Piping Welds"
FP&L - NDE-5.7, Rev. 1	"Ultrasonic Examination of Reactor Pressure Vessel Studs and Reactor Coolant Pump Studs"
EP&L-AP-0190.89, Rev. January 15, 1987	"ASME Section XI Repair/Replace- ment"



c. Code Repair and Replacement Procedure Review

The inspector reviewed repair and replacement procedures indicated below to ensure that the elements of the procedures are consistent with the applicable areas of the ASME Code and the approved ISI program. The specific elements examined were:

Repair: identification of the NDE method that revealed the flaw and the description of the flaw; description of the flaw removal method; procedure for weld and postweld heat treatment, if applicable, including review of procedures for welding prior to authorization of the repair and review of qualifications of welders performing the repair; provisions for using the services of an Authorized Inspection Agency when making a weld repair, as well as for having the ANI review and approve the repair procedure before its performance; description of the NDE program to be used after the repair is completed; and delineation of the scope of work and division of responsibilities between the licensee and contractor, if a contractor is used.

Replacement: provisions to verify that the replacements met the requirements of the edition of the Construction Code to which the original component/part was constructed, the provisions of later editions of that same Code, or Section III of the ASME Code, provisions to ensure that the replacements ordered as spares met the requirements of the appropriate Construction Code used for the part/component it was intended to replace, the provisions of later editions of that Code, or Section III of the ASME Code; justification, consistent with NRC guidelines, for not requiring a Code Stamp; evaluation of the suitability of the replacement prior to authorizing its installation; retention of reports and records as required by the Construction Code and ASME Code Section XI; and performance of a PSI prior to the return to service of the replacement component or part in accordance with the applicable Code.

Procedure Reviewed

AP-0190.98

d. Non-destructive Examination (NDE)

(1) Procedure Review

The inspector reviewed the procedures indicated in paragraph (b) above to determine whether requirements are specified and agree with licensee's commitments including specified or referenced acceptance levels; qualifications of NDE personnel are specified in accordance with the licensee's approved ISI program; methods of recording, evaluating, and dispositioning findings are



established and reporting requirements are in compliance with applicable Code requirements; and procedures delineate the scope of work and division of responsibilities between the licensee and the contractor.

(2) Technical Content

(a) Visual Examination

The inspector reviewed the below listed visual examination procedure to determine whether they contain information or reference to a general inspection procedure or supplementary instructions sufficient to assure that all parameters are specified and controlled within the limits permitted by the applicable Code and other additional specification requirements; all essential examination variables are defined and whether these variables are controlled within the limits specified by the applicable Code and other specification/contract requirements. Specific areas examined were: method; application; how visual examination is to be performed; type of surface condition; method or tool for surface preparation; direct or remote viewing; special illumination, instruments, or equipment sequence of performing examination; data to be tabulated; acceptance criteria are specified consistent with the applicable Code and report form or general statement to be completed.

Procedure Examined

NDE-4.1
NDE-4.3

(b) Liquid Penetrant Examination

The inspector reviewed the below listed liquid penetrant examination procedures to determine whether they contain information or reference to a general inspection procedure or supplementary instructions sufficient to assure that all parameters are specified and controlled within the limits permitted by the applicable Code and other additional specification requirements; all essential examination variables are defined and whether these variables are controlled within the limits specified by the applicable Code and other specification/contract requirements. Specific areas examined were: specified test method is consistent with applicable Code requirement; brand names and specific types (number or letter designation if available of penetrant, penetrant remover, emulsifier and developer are specified; penetrant materials used for nickel base alloys are required by procedure to be analyzed



for sulfur using the method prescribed by the applicable Code; penetrant materials used for the examination of austenitic stainless steel are required by procedure to be analyzed for total halogens using the method prescribed in the applicable Code; method for acceptable pre-examination of surface preparation is specified and consistent with the applicable Code, area to be cleaned is consistent with applicable requirements, cleanliness acceptance requirements are consistent with applicable code requirements; surface area to be examined is consistent with applicable Code requirement; procedure established a minimum drying time following surface cleaning; method of penetrant application and penetration (dwell) time are specified and that the penetration time is consistent with the penetrant manufacturer's recommendation; examination surface is specified and is consistent with the applicable Code; procedures (when applicable) specify acceptable methods for removing water-washable penetrant consistent with the applicable Code; method of applying emulsifier (when applicable) and the maximum emulsification time is specified and consistent with the applicable Code; method for removal of solvent removable penetrant (when applicable) is specified; method and time of surface drying prior to developing is specified; type of developer to be used, method of developer application and the time interval between penetrant removal and developer to be used, methods of developer application and the time interval between penetrant removal and developed application specified; examination technique is specified and the permitted time interval during which the "final interpretation" is performed within the range of 7-30 minutes after developer application; minimum light intensity at the inspection site is prescribed; technique for evaluation of indications is specified, acceptance standards are included and these are consistent with applicable Code and specific contract requirement; reporting requirements are specified; and procedure requires requalification when changes are encountered.

Procedures Examined

NDE-3.3
CAL-3

(c) Magnetic Particle Examination

The inspector reviewed the below listed magnetic particle examination procedure to determine whether it contains information or references to a general inspection procedure or supplementary instructions sufficient to assure that all

parameters are specified and controlled within the limits permitted by the applicable Code and other additional specification requirements; each essential examination variable is defined and whether these variables are controlled within the limits specified by the applicable Code and other specification/contract requirements. Specific areas examined were: method - continuous; surface preparation; particle contrast, surface temperature; light intensity; coverage; prod spacing; magnetizing current and yoke pole spacing; and acceptance criteria are specified consistent with the applicable ASME Code Section and specific contract requirements.

Procedures Examined

NDE-2.2
CAL-2
CAL-3
CAL-4

With regard to the examination above, the inspector noted that FP&L - NDE 2.2 does not prohibit fluorescent magnetic particle examiners from wearing photo sensitive glasses or lenses during examinations.

The above is contrary to good industry practice and was added to the 1983 Edition of ASME B&PV Code Section XI. The licensee indicated that all corrective lense wearers, who perform fluorescent magnetic particle examinations, are monitored by the Level III to assure compliance with this industry practice.

(d) Ultrasonic Examination

The inspector reviewed the below listed ultrasonic examination procedures to determine whether they contain information or references, a general inspection procedure or supplementary instructions sufficient to assure that all parameters are specified and controlled within the limits permitted by the applicable Code and other additional specification requirements; essential examinations variables are defined and whether these variables are controlled within the limits specified by the applicable Code and other specification/contract requirements. Specific areas examined were: type of apparatus to be used including frequency range as well as linearity and signal attenuation accuracy requirements, is specified; extent of coverage (beam angles, scanning surface, scanning rate and directions) as well as the scanning technique are specified and are consistent with the applicable ASME Code and



contract requirements; calibration requirements, methods, and frequency including the type, size, geometry, and material of calibration blocks as well as location and size of calibration reflectors within the block are clearly specified and consistent with the applicable AMSE Code and contract requirements; sizes and frequencies of search units are specified and are consistent with the applicable ASME Code and contract requirements; beam angles are specified and are consistent with the applicable ASME Code and contract requirements; methods of compensation for the distance traversed by the ultrasonic beam as it passes through the material including distance - amplitude correction curves, electronic distance - amplitude correction and transfer mechanisms, if used, are specified and are consistent with the applicable ASME Code and contract requirements; reference reflectors for accomplishing transfer and the frequency of use of transfer mechanisms, if applicable, are specified and in accordance with ASME Code and contract requirements; the reference level for monitoring discontinuities is defined and the scanning gain setting specified and that these values are in accordance with the applicable ASME Code and contract requirements; methods of demonstrating penetration and coverage are established; levels or limits for evaluation and recording of indications are specified and are in accordance with applicable ASME Code and contract provisions; and acceptance limits are specified or referenced and are in accordance with the applicable ASME Code and specific contract requirements.

Procedures Examined

CAL-1
CAL-2
NDE-5.2
NDE-5.4
NDE-5.7

With regard to the examination above the inspector noted that Procedure NDE - 5.4 includes Amendment 1 which delineates the ISI requirements of ASME B&PV Code Section XI 70W70, which is no longer a requirement of FP&L - Turkey Point site. The Level III examiner indicated that the inspection and record requirements of Amendment 1 are ignored, as the working copies of procedure NDE 5.4 do not include Amendment 1. The Level III indicated that he would take the necessary action to formally delete the amendment.

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

