

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION IV

Report: 50-382/81-10

Docket: 50-382

Category A2

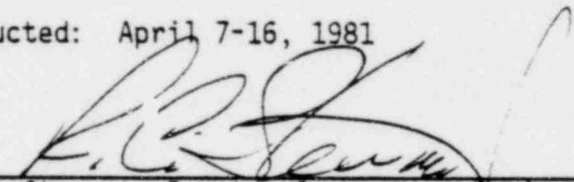
Licensee: Louisiana Power and Light Company
142 Delaronde Street
New Orleans, Louisiana 70174

Facility Name: Waterford Steam Electric Station, Unit 3

Inspection at: Waterford Site, Taft, Louisiana

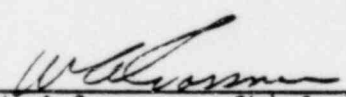
Inspection Conducted: April 7-16, 1981

Inspector:


R. C. Stewart, Reactor Inspector, Project Section 3
Reactor Projects Branch

5/12/81
Date

Approved:


W. A. Crossman, Chief, Project Section 3
Reactor Projects Branch

5/12/81
Date

Inspection Summary:

Inspection on April 7-16, 1981 (Report No. 50-382/81-10)

Areas Inspected: Routine, unannounced inspection of construction activities and observation of work activities related to the setting in place of Reactor Coolant Pump (RCP) internals; safety-related pipe supports and restraints; and the review of QA/QC records related to the fabrication of Class 3 components for the Emergency Feedwater and Component Cooling Water systems. The inspection involved 49 inspector hours by one NRC inspector.

Results: No violations or deviations were identified.

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DETAILS1. Persons ContactedPrincipal Licensee Employees

- T. Gerrets, QA Manager
- *L. Bass, Site QA Engineer
- *B. Toups, QA Engineering Technician
- *G. Pittman, QA Engineer
- *J. Woods, QC Engineer
- *R. Bennett, QA Engineer
- *B. Brown, QA Engineer

Other Personnel

- R. Milhiser, Site Manager, Ebasco
- R. Hartnett, QA Site Supervisor, Ebasco
- *L. Stinson, Manager, Site Quality Program, Ebasco
- L. Richardson, QA Supervisor, Tompkins-Beckwith (T-B)

The NRC inspector also interviewed other licensee and contractor personnel including members of the Engineering and QA/QC staffs.

*Denotes those attending the exit interview.

2. Site Tour

The NRC inspector walked through various construction and storage areas to observe construction activities in progress and to inspect the general state of cleanliness and adherence to housekeeping requirements. The tour included the Reactor Building, Reactor Auxiliary Building and the Fuel Handling Building.

No violations or deviations were identified.

3. Installation Reactor Coolant Pump (RCP) Internals

Positioning of the 1B RCP impeller assembly on the 1B Pump volute was completed by the subcontractor. This was the first of the four RCP internals to be installed. The NRC inspector observed the final lowering and final positioning of the assembly. The work activities were being accomplished in accordance with the NISCO Process Control Traveler No. 804, "installation of driver mount and rotating element subassembly" and at the direction of the Combustion Engineering site representative. Final bolt torquing and installation of the drive motor is to be done at a later date.

No violations or deviations were identified.

4. Safety-Related Pipe Supports and Restraints

a. Review Of Work Procedures

The NRC inspector conducted a review of the T-B Procedures relative to the installation of safety-related pipe support and restraints and in conjunction with the ASME, Section III, Subsection NF (Summer 1976 Addenda). The principle T-B procedures reviewed were:

TBP-24, "Hanger and Support Installation Procedures," Revision H, dated July 24, 1980.

TBP-44, "Installation and Inspection of Pipe Rupture and/or Whip Restraints and Seismic I Structural Steel," Revision C, dated May 12, 1980.

TBP-25, "Inspection of High Strength Bolts and Calibration of Inspection hand Torque Wrench," Revision B, dated November 11, 1980.

No violations or deviations were identified.

b. QC Records Review

In conjunction with the above procedures review, the NRC inspector made a random selection of completed pipe hanger and support installations to verify installation inspections were conducted and documented in accordance with procedure TBP-24, "Hanger and Support Installation Procedures."

The NRC inspector selected from the "Completed Traveler Log," The following installed hanger and/or supports for the documentation Review: System CS-ISO-14, Hangers CSRR-333, 336, 338, 339 and 418; System SI-ISO-6, Hangers SIA-165, SIRR-167, and SIHR-181. For each of the hanger and/or support assemblies, the NRC inspector reviewed the following QA/QC inspection documents:

Form GP-723-12, Revision 2, "Surveillance Report."

Form GP-723-91, "Weld Control Record."

Form GP-723-38, Revision 1, "Field Inspection Checklist."

Form GP-723-25, "Field Sketch"

Form 8009, "Weld Filler Material Issue."

No violations or deviations were identified.

5. ASME Code Class 3 Components - Documentation Review

LP&L applied for a Construction Permit for the Waterford Unit 3 facility in December 1970. Major components for the Nuclear Steam Supply System were ordered consistent with the application date and anticipated licensing and construction schedule for the Waterford Unit 3 Project. LP&L received a Construction Permit for the Waterford Unit 3 Project in November 1974. As described in the Waterford PSAR, Waterford components were ordered to be designed and fabricated in accordance with ASME Code Requirements in effect on the date of the applicable purchase orders. In addition, the Waterford 3 FSAR, Sections 1.8.126 and 3.22 states in part that the Waterford 3 Project meets the intent of Regulatory Guide 1.26 (June 1975) and that, although the N-Symbol is not required, Quality Group C (ASME Safety Class 3) components have been purchased only from suppliers who possess the proper ASME Certificates of Authorization and that the licensee's Quality Assurance Program ensures that an inspection equivalent to that performed in conjunction with an N-Stamp is imposed on Safety Class 3 components.

In a meeting during the week of September 29, 1980, between the NRC Mechanical Engineering Branch Representatives and LP&L/EBASCO Representatives, held in the Ebasco New York Offices, the cognizant NRC Representatives expressed a concern regarding the adequacy of the licensee's QA Program inspection requirements being equivalent to that obtained by an otherwise ASME, Section III, authorized inspection agency.

In order that the licensee demonstrate the QA Program inspection requirements were equivalent to the ASME, Section III, Class 3 requirements for component fabrication, the NRC representatives requested the licensee provide QA/QC inspection records for the emergency feedwater and component cooling water system components for an NRC review.

During this inspection the NRC inspector conducted a detailed review of documentation relative to the licensee's Quality Standards applied to the fabrication of Quality Group C (ASME Code Class 3) components for the Emergency Feedwater and Component Cooling Water systems.

The following tabulation summarizes the pertinent fabrication documentation records retained by the licensee that reflect equivalent ASME requirements:

EMERGENCY FEEDWATER SYSTEM

<u>CONTACT NO.</u> <u>VENDOR</u>	<u>N. CERT. NO.</u>	<u>EXP. DATE</u>	<u>MANUF. DATE</u>	<u>CMTR'S</u>	<u>CODE DATA REPORTS</u>	<u>IN PROCESS INSP.</u>	<u>DOC. REV.</u>
PIPING NY 403433 Dravo	N1320	3/1/82 (3/1/79)	1975-1980	Yes	*No	Yes	Yes
VALVES NY 403461 Anchor Darling	N-1742/NPT 743 N1712	4/25/83 5/20/80 4/15/80	8/77 / 5/78	Yes	*No	Yes	Yes
NY 403488 Pacific	N1202/NPT 1203	8/4/81	1977	Yes	*No	Yes	Yes
NY 403501 Velan	N649 N1738	6/19/76 5/3/83	1975	Yes	*Some	Yes	Yes
NY 403505 TRW Mission	N1137	6/16/78	1976	Yes	*No	Yes	Yes
FEEDWATER PUMPS NY403431 Bingham- Willamette	N1654	2/28/80	5/77	Yes	*No	Yes	Yes
TURBINE DRIVE HEAT EXCHANGER NY403431 Bingham- Willamette Turbine (for above)	842	8/6/77	10/2/75	Yes	Yes	Yes	
INSTRUMENTS NY403502 Rosemount	None	NA	1979	No/C of C Req'd	*No	Yes	Yes
NY403565 Vickery Simms	None	NA	5/19/78	Yes	*No	Yes	Yes
NY403470 BIF	N2038	3/17/81	Material Not Received				
NY403485 ITT Barton	N1957	12/9/80 10/1/83	Material Not Received				

*Equivalent Code Data Reports Provided by Ebasco. "Quality Compliance Report" and "Release for Shipment," Form #1305. (1 of 5)

COMPONENT COOLING WATER SYSTEM

<u>VENDOR</u>	<u>N. CERT. NO.</u>	<u>EXP. DATE</u>	<u>MANUF. DATE</u>	<u>CMTR'S</u>	<u>CODE DATA REPORTS</u>	<u>IN PROCESS INSP.</u>	<u>DOC. REV.</u>
<u>PIPING</u>							
<u>SPOOLS</u>							
Dravo NY-403433	N-1320	3-01-82 (3-01-89)	1975-1980	Yes	*No	Yes	Yes
<u>ACCESSORIES</u>							
Pathway Bellows NY-403452	H-106	5-05-74	6-1977	Yes	*No	Yes	Yes
	N-1834	2-19-77					
	N-1835	5-19-80					
Vickery Simms NY-403565	None	N/A	1978	Yes	*No	Yes	Yes
<u>MATERIAL</u>							
McJunkin WP3-3887 WP3-2558 WP3-2018 WP3-2134 WP3-1235	N-1029/ N-1029-1	3-03-81	4/78 Date	Yes	*No	Field Purchases Bought to Class 2 ASME, Winter 1977 and Summer 1978	Yes
Guyon WP3-2095	N-934-2	1-06-81	1979	Yes	*No		Yes
Gulfalloy WP3-1234	N-1241	10-27-78 10-27-81	1978-1979	Yes	*No		Yes

COMPONENT COOLING WATER SYSTEM

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<u>VALVES</u>							
Fisher Controis NY-403483	N-1387	5-19-79	1978-1979	Yes	*No	Yes	Yes
Pacific NY-403488	N-1202 NPT-1203	8-04-81	1977	Yes	*No	Yes	Yes
Velan NY-403501	N-649	5-20-77	1976	Yes	*No	Yes	Yes
	N-1738	5-03-80	1977	Yes	*No	Yes	Yes
TRW Mission NY-403505	N-1137	6-16-78	1976	Yes	*No	Yes	Yes
Loneragan NY-403512	N-1443	8-09-79	1979	Yes	Yes	Yes	Yes
Jamesbury NY-403539	N-1228	10-27-78	1977	Yes	Yes	Yes	Yes
Masoneilan NY-403606	N-1836	8-19-80	1980	Yes	Yes	Yes	Yes
<u>PUMPS</u>							
Babcock & Wilcox NY-403482	N-1152	12-31-78	1976-1977	Yes	*No	Yes	Yes

COMPONENT COOLING WATER SYSTEM

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<u>HEAT EXCHANGERS</u>							
Struthers Wells Corp. NY-403504	N-668	1-28-77	1976-1977	Yes	Yes	Yes	Yes
Combustion Engineering NY-403402 (9101978)	N-621	5-03-76	12-10-73	Yes	Yes	Required by C. E.	
Combustion Engineering NY-403402 (9102793)	N-562	1-09-76	7-30-73	Yes (Maintained by vendor)	Yes		
Cooper Bessemer Ny-403517	N-1422	6-25-79	1976-1977	Yes	Yes	Yes	Yes
<u>TANKS</u>							
Buffalo Tank Co. NY-403532	N-1346	3-01-79	1977	Yes	Yes	Yes	Yes
<u>COOLING TOWERS</u>							
Zurn Industries NY-403528 (Wet Cooling Towers)	N-1555	11-08-79	3-29-78	Yes	*No	Yes	Yes
Hudson Products NY-403479 (Dry Cooling Towers)	N-1564	11-26-79	1977-1978	Yes	Yes	Yes	Yes

COMPONENT COOLING WATER SYSTEM

<u>VENDOR</u>	<u>N. CERT. NO.</u>	<u>EXP. DATE.</u>	<u>MANUF. DATE</u>	<u>CMTR'S</u>	<u>CODE DATA REPORTS</u>	<u>IN PROCESS INSP.</u>	<u>DOC. REV.</u>
<u>INSTRUMENTS</u>							
Magnetrol NY-403489	N-1605	1-10-80	5-16-77	Yes	Yes	Yes	Yes
Pyco (Thermocouples) NY-403499	None	N/A	1978	Yes	*No	Yes	Yes
Rosemount NY-403502	None	N/A	1978	Some-C of C Req'd	*No	Yes	Yes
Mercoid NY-403550	None	N/A	1979	No-C of C Req'd	*No	Yes	Yes
Vickery Simms NY-403565	None	N/A	9-1977	Yes	*No	Yes	Yes
BIF NY-403470	N-2038	3-17-81	Material not rec'd				

With reference to the asterisk noted above, it should be pointed out that although the standard ASME "Code Data Report," which is normally provided by an Authorized Inspection Agency, was not utilized. The Ebasco "Release for Shipment No. 1305," "Quality Compliance Report," and the "Quality Assurance Plan For Vendors," with accompanying attachments, are observed to be equal to the ASME Code Data Reports.

In addition to the above, the NRC inspector made a comparative review of the duties of the Authorized Nuclear Inspector (ANI) (NCA-5200) versus the Ebasco Vendor Inspectors implementation requirements and the qualifications for the ANI (ANSI N626) versus the Ebasco Inspector qualification requirements. The NRC inspector observed that the Ebasco Vendor Inspectors' implementation requirements are comparable to those of the ANI and that the Ebasco Vendor Inspectors' qualification requirements are more demanding than the ANI Qualifications (per paragraph 4.0 of N626).

The NRC inspector made a comparative cross check of 18 items regarding ANI duties as defined in the ASME Code versus Ebasco duties and implementation requirements. The inspection duties and activities of Ebasco were observed to be comparable to that of the ANI.

The NRC inspector observed that the documentary evidence supplied by the licensee demonstrates an inspection program for Quality Group 3 (ASME Class 3) components that is equal to, or, better than ASME Code Requirements during the period of fabrication and delivery.

No violations or deviations were identified.

6. Exit Interview

The NRC inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on April 16, 1981. The NRC inspector summarized the purpose and the scope of the inspection and the findings.