

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

REGION IV

Report No. 50-382/80-09

Docket No. 50-382

Category A2

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

Facility Name: Waterford Steam Electric Station, Unit No. 3

Inspection at: Waterford Site, Taft, Louisiana

Inspection Conducted: April 21-25, 1980

Inspector: A. B. Beach 5/21/80
A. B. Beach, Reactor Inspector
Engineering Support Section Date

Reviewed by: R. C. Stewart 5/20/80
R. C. Stewart, Reactor Inspector
Projects Section Date

Approved by: Dan McDonald 5/20/80
for R. E. Hall, Chief, Engineering Support Section Date

W. A. Crossman 5/20/80
for W. A. Crossman, Chief, Projects Section Date

Inspection Summary:

Inspection on April 21-25, 1980 (Report No. 50-382/80-09)

Areas Inspected: Routine, announced inspection of construction activities related to the review of quality records and the observation of activities for safety-related steel structures and supports. The inspection involved forty hours by one NRC inspector.

Results: In the areas inspected, four apparent items of noncompliance and one deviation were found (infraction - failure to follow procedures for the documentation of the Quality Assurance Program - paragraph 3.a.(1); infraction - failure to perform required inspections as prescribed in contract inspection procedures - paragraph 3.a(2); infraction - failure to follow contract procedures relative to the care of safety-related equipment - paragraph 3.a(2); infraction - failure to follow contract procedures relative to the care of safety-related piping paragraph 2; and deviation - use of QC inspectors who did not meet the ANSI N45.2.6 experience qualifications - paragraph 3.a(3).

DETAILS

1. Persons Contacted

Principal Licensee Employees

- *L. Bass, Project QA Manager
- B. Brown, QA Engineer
- *C. Chatelain, QA Engineer
- *T. Gerrets, QA Manager
- *O. Pipkins, QA Engineer
- *B. Toups, QA Engineer

Other Personnel

- *C. Breedlove, Project Manager, Tompkins-Beckwith
- *J. Crnich, Site Manager, Ebasco
- *I. Gore, Site QA Manager, Tompkins-Beckwith
- *R. Hartnett, QA Site Supervisor, Ebasco
- *R. Milhiser, Project Superintendent, Ebasco
- *J. Moskwa, Field QA/QC Manager, Nuclear Installation Services Co., (NISCO)
- *D. Shah, QC Engineer, NISCO
- *J. Weaver, Project Manager, NISCO

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

*Denotes those in attendance at the exit interview.

2. Site Tour

The IE inspector toured the plant areas several times during the inspection period and observed the progress of construction and the construction practices involved. One tour was made during a back shift inspection on April 23, 1980.

During this back shift inspection, the IE inspector observed three spools of Component Cooling Water Piping lying directly on the concrete flooring in the Reactor Containment Building at Elevation 0. In addition, the piping (3CC-10-13A/B-11, 3CC-10-57, and 3CC-10-33B-22-1) was not segregated from the storage of other materials. These materials included reinforcing steel, tools, pieces of scaffolding and other items apparently used by the construction trades working in the area.

Section P.9 of the Ebasco Contract Specification for Tompkins-Beckwith, Contract No. W3-NY-11, requires that the contractor abide by the guideline provisions of ANSI N45.2.2: "Packaging, shipping, receiving, storage, and handling of items for Nuclear Power Plants." Section 6.1.1 requires that during construction the possibility of damage to materials or components or the lowering of quality due to corrosion, contamination,

or deterioration be minimized. Also, Section 6.1.2 requires that items be stored on cribbing or equivalent to allow for air circulation and to avoid trapping water.

Due to the conditions observed for the applicable Component Cooling Water Piping, this is considered to be a failure to meet the contract specification and is considered to be an item of noncompliance with the requirements of Criterion V of Appendix B to 10 CFR 50, i.e., failure to follow contract procedures relative to the care of safety-related piping.

3. Containment Steel Structures and Supports

a. Review of NISCO Quality Assurance Program Implementation and Procedures

(1) Audits

The implementation of the Quality Assurance program for the installation of the Nuclear Steam Supply System and the performance of related work as prescribed in the Ebasco Contract Specification W3-NY-18 is to be accomplished by the contractor, NISCO, in accordance with the "NISCO QA Manual - ASME, Section III," with the applicable revisions. Section 4.4.3 of this manual (Revision C, dated 6/6/78) requires that a Vendor Performance Record File be maintained in the NISCO home office under the direction of the Manager, QA, consisting of the following documents:

Vendor Performance Reports

NISCO Vendor Audit Reports

NISCO Nonconformity Reports

The Manager, QA is to forward to the Field QA/QC Manager and the Project Manager copies of the records in the Vendor Performance Record File for each vendor used at the site.

Contrary to the above, the NISCO contractor personnel stated that these records were not available at this site, and that they could not substantiate whether or not these audits were being performed. An "Approved Vendors List," dated January 18, 1980, was reviewed by the IE inspector, indicating that the subject audits were, in fact, being performed.

A review of the NISCO Manual 103.2, "NISCO Shop Audits," indicated that periodic audits of the program were being performed, but a comprehensive audit of the entire program in a twelve month period was not being performed as required by Section 15.2.2.3 of the NISCO QA Manual, "Site Audits." A review of Audits 3015-1 through 3015-17 revealed that segments of the program were being reviewed, but the total results of this segmented review

did not cover the entire program in an annual audit program as required. In addition, during this review of NISCO Manual 103.2, there was evidence of several vendor surveillance audits, but the contractor personnel could not verify whether or not these were to be a part of the Vendor Performance Record File as required.

These conditions discovered at the time of this inspection are considered to be an item of noncompliance with the requirements of Criterion V of Appendix B to 10 CFR 50; i.e., failure to follow procedures for the documentation of the NISCO QA Program.

(2) Handling and Storage

Section 5.6.3 of the "NISCO QA Manual - ASME Section III" (Revision C, dated 6/6/78) requires that the "Maintenance and Surveillance Report" be utilized to document the required maintenance services and to provide verification that these inspections are performed at the required frequency. Discussion with contractor QC personnel, however, revealed that these "Maintenance and Surveillance Reports" were no longer being used and that inspections were currently being performed on a daily basis in accordance with ES-67-CE, "General Cleaning and Housekeeping." The NISCO QA Manual had not been changed to reflect this procedural change.

Section 5.6.4 of the NISCO QA Manual delineates the storage area as the responsibility of the NISCO Field Engineer. In addition, Section 5.6.5 requires periodic inspections of the storage areas to be conducted by the Field QA/QC Manager or his designee to preclude damage to safety-related materials and components while in storage. Also, the procedure ES-67-CE requires a daily inspection and examination of the storage area for conformance to procedures in the following areas:

Adequacy of access control

Evidence of damage or deterioration

Adequacy of protection from fires, weather, and movement of equipment or other factors that may result in damage to stored items

A review of daily inspection reports by the IE inspector indicated that daily inspections were being performed, but not in the NISCO storage area. Further discussion with the contractor QC personnel revealed that daily inspections were not being performed in the NISCO storage area or the Fuel Handling Building because there had been no direction for them to do so from the Field QA/QC Manager.

In addition, Care and Maintenance Instruction No. 36 for the Flow Baffle and the Reactor Vessel Closure Head Lifting Rig requires a monthly inspection of the general condition of the equipment to ensure it meets the degree of quality required by the contract. From observation of the storage conditions, it was determined that this procedure, likewise, was not being performed by the contractor.

The failure to perform these inspections of the storage area and components as required by the NISCO QA Manual and contract procedures is considered to be an item of noncompliance with the requirements of Appendix B to 10 CFR 50.

Subsequent to this review, the IE inspector toured the NISCO storage area and observed the following:

- (a) The area was not identified nor its boundaries defined as a storage area for seismic Class I and safety-related components.
- (b) Surge Line Restraints (E8-E6-W1) were not properly stored on dunnage, while some of the dunnage was stacked on top of the restraints.
- (c) The Reactor Vessel Lifting Assembly (NISCO Drawing 1564-G-1551, P.O. 403402) did not have proper identification or identification tags.
- (d) The Flow Baffle Assembly (NISCO RIR-211, P.O. 403402) was outside of its storage container without proper protection from movement of equipment and inadequate protection from damage.

Section P.9 of the Ebasco Contract Specification for NISCO Contract No. WE-NY-18, requires that the contractor abide by the guideline provisions of ANSI N45.2.2, "Packaging, Shipping, Receiving, Storage, and Handling of Items for Nuclear Power Plants." Section 6.1.1 requires that during construction the possibility of damage to materials or components or the lowering of quality due to corrosion, contamination, or deterioration be minimized. Section 6.1.2 requires that items such as piping be stored on cribbing or equivalent to allow for air circulation and to avoid trapping water. Section 6.3.3 requires that all materials be identified with proper protection from movement of equipment.

Due to the storage conditions observed, this is considered to be a failure to meet the contract specification and is considered to be an item of noncompliance with the requirements of Criterion V of Appendix B to 10 CFR 50, i.e., failure to follow contract procedures relative to the storage of safety-related equipment.

(3) Quality Control Inspector Qualifications

The qualification of NISCO QC inspector personnel is to be accomplished in accordance with NISCO Procedure ES-116-2, "Qualification and Certification of Inspection Personnel." After a review of this procedure, the IE inspector reviewed records relative to the qualification of the NISCO QC inspectors being utilized at the site.

Section 4.2 of NISCO Procedure ES-116-2 delineates that there shall be three levels of qualification: Level I, Level II, and Level III. It further states that a Level I individual shall have sufficient training and experience to properly perform the necessary inspections, and shall be responsible to a Level II, or a Level III inspector. A Level II inspector shall be qualified to direct and carry out inspections in the method certified, while a Level III inspector shall be capable of interpreting specifications and codes.

Contrary to the above, it was discovered that a "QC technician" was performing inspections (normally performed by Level I and Level II QC inspectors) in accordance with ES-67E, "General Cleaning and Housekeeping," and ES-148, "Welder Surveillance." ES-67E provides an inspection and surveillance procedure for housekeeping and ES-148 provides a method of verification that Code and contract requirements are being adhered to in the welding operations and provides a means of documenting these inspections. The site QC records indicate that QC technicians have been performing these inspections since approximately June 1979, and that the QC technicians did not meet the levels of qualification for a Level I QC inspector at the time of their employment, since they did not satisfy the one year work experience requirement.

In addition, during this review, the IE inspector was given records for an individual's Level II Quality Control Inspection Certification. The individual's qualification records indicated that he had been originally hired as a QC technician, and after approximately one year and six months in that specific capacity, had received certification as a Level II inspector, and had performed back shift inspections on his own without any assistance. His experience record did indicate he had successfully completed all of the necessary proficiency training.

Table 17.2-1, of the LP&L FSAR, "LP&L Quality Assurance Program Guidance Documents," references Regulatory Guide 1.58, "Qualification of Nuclear Power Plant Inspection, Examination, and Testing Personnel." This regulatory guide endorses ANSI N45.2.6, "Qualification of Inspection, Examination, and Testing Personnel for the Construction Phase of Nuclear Power Plants" and also requires (per Section 3.1.2) that a candidate, to be considered for certification, be a high school graduate with four years of inspection or testing experience. Even though it also allows variation

from the education and experience requirements specified, one NISCO Level II inspector is qualified only to the Level I expertise. This inspector had been utilized as a Level II inspector even though he did not meet the work experience guidelines.

The utilization of inspectors without specified experience qualifications appears to deviate from the licensee's commitment in Table 17.2.1 of the FSAR.

b. Review of Quality Records For The Polar Crane Ring Girder

The IE inspector reviewed Ebasco Specification LOU 1564.717, Rev. 10, "Steel Containment Vessel." The following records were then reviewed for girder assembly 67-A of the polar crane support assembly:

CBI Daily Fabrication or Stores Release Report, dated 7/19/76

Test Reports (Ref: Heat-Slab Numbers 180, 181, 182, 183, 184, and 185)

Test Certificates from Lukens Steel Company

MPT Inspection Reports, File 7.4

CBI Detail Checklist, dated 6/6/77

Welding Material Authorization and Release Report

Mill Certifications for Welding Material

Records of Nondestructive Examination Performance

Non-Conformance File 71-2426, 8.6.1

All of the records reviewed were found to be in accordance with the Ebasco Specification LOU 1564.717, Revision 10, and with Chicago Bridge and Iron Drawing No. 67, Revision 8, dated November 3, 1975.

No items of noncompliance or deviations were identified.

4. Exit Interview

The IE inspector met with the licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on April 25, 1980.

The IE inspector summarized the scope and the findings of the inspection.