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May 17, 1983

W3I83-0168
Q-3-A35.02.01

Mr. G. L. Madsen, Chief
Reactor Projects Branch 1, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76012

SUBJECT: Waterford SES Unit 3
USNRC Inspection Report 50-382/83-13

Dear Mr. Madsen:

In accordance with the provisions of Section 2.201 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, the following information regarding the Notice of Violation identified in Inspection Report 50-382/83-13 dated April 13, 1983 is hereby submitted:

VIOLATION 1

"Failure to Follow Procedures and Provide Sufficient Design Detail for Attachment of Additional Loads to Seismic Supports for HVAC"

Criterion V of 10 CFR 50, Appendix B, requires that activities affecting quality shall be accomplished in accordance with appropriate instructions, procedures, and drawings, and that these instructions, procedures, and drawings contain appropriate quantitative acceptance criteria.

Ebasco Services, Inc. (Ebasco) Procedure ASP-IV-58, Issue D, "Attachment to Seismic Supports," requires the following:

- a. Paragraph 6.3 - The contractor is to submit a form ASP-IV-58-1 and have it approved by the Ebasco construction engineer prior to installation of attachment.
- b. Paragraph 6.4 - The Ebasco construction engineer is to maintain a log/file of all additional loads including request, sketches, and backup calculations.

Good engineering and design practices would require that additional attachments to a support, by design, would be properly detailed, noted, or referenced on the lead document.

Contrary to the above:

- a. HVAC Support F-807 had a 1-inch fire protection line attached to it that was not shown on Support Detail SMH-908 and this additional 50-pound load was not shown on the seismic support allowable chart, and there was no ASP-IV-58-1 form.
- b. HVAC Support F-821 had two 6-inch chilled water pipes and the associated support, AC-H-609, attached that were not shown on Support Detail SMH-908. The calculation sheet for F-821, dated November 18, 1981, used to determine the allowable load capacity for ASP-IV-58, did not include these loads because they were not shown on the support detail for F-821.
- c. HVAC Support F-800 had two 4-inch chilled water pipes and two associated supports, AC-H-608 and AC-H-611, attached to it that were not shown on Support Detail SMH-986. The calculation sheet for F-800, dated November 18, 1981, used to determine the allowable load capacity for ASP-IV-58, did not include these loads because they were not shown on the support detail for F-800.

This is a Severity Level V Violation. (Supplement II.E) (8313-01)"

The following response is submitted:

Corrective Action Taken and Results Achieved:

HVAC seismic support F-807 had a total allowable additional load of 788 pounds. Presently there are eleven (11) conduits and one (1) fire protection line totalling 455 pounds attached to support F-807. The additional 455 pound load represents 58% of the allowable load and is considered acceptable.

HVAC seismic support F-821 was analyzed for frequency and stress limits with the two (2) additional 6" chilled water pipes and the associated support and found to be acceptable.

HVAC seismic support F-800 was analyzed for frequency and stress limits with the two (2) additional 4" chilled water pipes and their associated supports and was found to be acceptable.

Corrective Steps Which Will Be Taken To Avoid Further Violations:

Erection of Fire Protection hangers is performed by Viking and Ebasco provides engineering and in-process quality control inspection support. A program was established whereby Viking could make attachments to seismic supports for fire protection piping and Ebasco would have responsibility for documentation. A walkdown will be made of these installations and ASP-IV-58-1 forms will be generated for existing attachments. Additionally, Viking will be directed by Ebasco to bring their program into conformance with the requirements of ASP-IV-58.

For other than Fire Protection Piping, Ebasco is analyzing the additional loads attached to HVAC and electrical cable tray seismic supports to determine that allowable loads are not exceeded.

The scope of ASP-IV-58 applies to field engineered loads only and does not include Ebasco design engineered loads. Documentation of Ebasco design engineered load attachments to HVAC duct and Electrical cable tray supports will be shown on drawing series LOU-1564-G-694 and G-695 on the related seismic support sections and details. Miscellaneous light loads such as conduits and tubing will not be shown on these drawings but will be tabulated in accordance with ASP-IV-58.

The Date When Full Compliance Will Be Achieved:

The directive to Viking referenced above will be issued by May 20, 1983. Viking installations and Ebasco walkdowns are scheduled for completion by June 15, 1983.

Compilation of load attachments (other than Fire Protection) and subsequent Engineering analysis will be completed by August 30, 1983.

Incorporation of Ebasco Design engineered load attachments on drawing series LOU-1564-G-694 and G-695 (139 sheets) will be completed by October 15, 1983.

VIOLATION 2

"Failure to Provide Appropriate Criteria for Installation Clearance Problems

Criterion V of 10 CFR 50, Appendix B, requires that procedures, instructions, and drawings include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

Louisiana Power and Light Company Quality Assurance Manual, Section 5.2, requires that instructions, procedures, and drawings include appropriate quantitative and qualitative acceptance criteria to verify that safety-related activities have been satisfactorily accomplished.

Contrary to the above:

Louisiana Power and Light Company and contractor inspection procedures and walkdown procedures do not contain acceptance criteria for personnel performing these tasks to determine if there is sufficient clearance between pipes, supports, structures, tubing, and raceway to allow for vibration, thermal expansion, seismic event, etc. These instructions do not contain minimum clearance criteria, and, in some cases, do not even have a requirement to document satisfactory/unsatisfactory clearance/interference status, or a mechanism or trigger for informing engineering for further evaluation.

The NRC inspectors noticed numerous cases of pipe-to-pipe, pipe-to-support, pipe-to-raceway with zero-clearance throughout the power block areas.

This is a Severity Level V Violation. (Supplement II.E) (8313-02)"

The Following Response is Submitted:

Corrective Actions Taken and the Results Achieved:

Engineering design change notices have been issued to installing contractors to provide clearance criteria for future installations.

Additionally, a two-phase walkdown program is in progress by Ebasco to evaluate safety related systems for adequate thermal expansion and seismic interaction clearance. This two-phase program consists of the following:

- a. Safety related piping is being walked down to identify potential clearance problems requiring engineering evaluation.
- b. The second phase walkdown will be conducted on a building by building, area by area basis to review other safety related installations (excluding safety related piping) in order to identify potential concerns relative to seismic interactions.

Corrective Steps Which Will Be Taken To Avoid Further Violations:

As noted above, engineering design change notices (DCN) have been issued to the installing contractors to preclude occurrence of problems in future installations. The DCNs provide criteria for vibration, thermal expansion, and seismic interaction clearances. The four (4) design change notices written to implement this clarification and the date of issue are as follows:

<u>DCN No.</u>	<u>Date of Issue</u>
DCN-NY-HV-247	5-4-83
DCN-NY-E-1124	5-9-83
DCN-NY-IC-1437	5-3-83
DNC-NY-MP-804	4-29-83

Date When Full Compliance Will Be Achieved:

The present schedule for the two phase walkdown program is as follows:

- (a) Piping walkdown and follow-up engineering evaluation.

Actual start date	-	4-4-83
Scheduled completion date	-	8-30-83

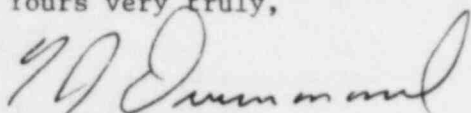
- (b) Area walkdowns for other safety related installations and follow-up Engineering evaluations

Scheduled start date	-	5-31-83
Scheduled complete date	-	8-30-83

Potential problems discovered during the walkdowns will be documented and required rework will be completed in accordance with approved Ebasco procedures.

If further information is required for this matter, please do not hesitate to contact me.

Yours very truly,

A handwritten signature in cursive script, appearing to read "F. J. Drummond".

F. J. Drummond
Project Support Manager - Nuclear

FJD/WAC/pjl

cc: E. L. Blake, W. M. Stevenson, J. Wilson (NRC)