

# NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY  
WESTERN MASSACHUSETTS ELECTRIC COMPANY  
HOLYOKE WATER POWER COMPANY  
NORTHEAST UTILITIES SERVICE COMPANY  
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March 25, 1983  
AEC-MP3-305  
A03047

U. S. Nuclear Regulatory Commission  
Thomas T. Martin, Director  
Division of Engineering and Technical Programs  
Region I  
631 Park Avenue  
King of Prussia, PA 19406

Reference: (1) Mr. T. T. Martin letter to W. G. Counsil, IE Inspection No. 50-423/83-01, dated February 16, 1983.

Gentlemen:

Millstone Nuclear Power Station, Unit No. 3  
IE Inspection 50-423/83-01

From January 24-28 1983, the NRC office of Inspection and Enforcement conducted a routine safety inspection of selected areas of Millstone Nuclear Power Station, Unit No. 3. As a result of that inspection, Reference (1) was transmitted to us for response. That transmittal contains essentially two parts, Appendix A, Notice of Violation and IE Inspection Report No. 50-423/83-01.

Pursuant to the provisions of 10 CFR 2.201, Northeast Nuclear Energy Company hereby is submitting a response to the Notice of Violation, Appendix A, paragraph A. NNECO also hereby requests NRC reconsideration of this item as described later, herein.

## Violation:

As required by 10 CFR 50, paragraph 55a, pressure vessels which are part of the reactor coolant pressure boundary shall meet the requirements for Class I components of the ASME Code Section III.

Section III of the ASME Code requires that welding be accomplished in accordance with the welding procedure qualification requirements of the ASME Code Section IX.

ASME Section IX defines a change in base material from one P number to another P number to be an essential variable requiring requalification of the welding procedure.

Contrary to the above, on January 24, 1983 the inspector observed that the welding procedure and welding filler material for welding stainless steel (ASME P8) had been used to weld to a previously deposited Inconel (ASME P43) weld material without requalification of the welding procedure.

#### Discussion of the Violation:

The Notice of Violation states that a change in base material from one P number to another is an essential variable of a welding procedure, requiring requalification of the weld procedure.

The weld procedure in question was used to join the stainless steel reactor coolant pipe to the stainless steel buttering layer on the steam generator nozzle. There was no intent to join the Inconel nozzle band to the stainless steel field weld between the reactor coolant pipe and the stainless steel cladding on the steam generator nozzle. The actual weld procedure chosen and used for these field welds was qualified for joining stainless steel to stainless steel, a correct selection. Therefore, requalification of the weld procedure, as stated in the violation notice, would not have been appropriate.

The noncompliance occurred because the location of the Inconel band relative to the steam generator to reactor coolant pipe field weld was not visible to the construction personnel. This problem became evident as the Stone & Webster Quality Control personnel performing routine inspections under our Quality Assurance program evaluated these welds. It has been determined that an interoffice memorandum dated January 28, 1981 contained the following precaution; "It is important...that the welder does not carry the stainless steel across the Inconel". An evaluation of the cautionary note by the Resident Engineer's Office concluded that no control on welding activity was necessary. This conclusion was reached based on an assumption that the Inconel band width conformed closely to the 0.20 inch minimum dimension shown on Westinghouse Dwg. No. 1106 J72. This assumption was incorrect. An acid etching investigation conducted after the noncompliance was discovered revealed band widths of up to 1 inch. This incorrect assumption is the primary cause of the noncompliance.

An Inconel transition band between the stainless steel cladding and carbon steel nozzle was incorporated into the steam generator primary coolant inlet and outlet nozzle design (see Westinghouse Dwg. No. 1106J72). Deposition of stainless steel weld metal on sections of the Inconel transition band during the field welding process (Ref: Stone & Webster ASME Control Isometric Drawings CI-RCS-LP 1, 2, 3, 4 FW-4 and FW-5) may have occurred in more than one location on the steam generator primary nozzles, as evidenced by the presence of rejectable porosity and linear indications which were detected by dye penetrant testing. Stone & Webster Nonconformance and Disposition Reports 1521 and 1684 identified liquid penetrant indications. These Nonconformance and Disposition reports are currently under evaluation by Stone & Webster Engineering.

Acid etching of steam generator outlet nozzles, subsequent to field welding, has revealed the Inconel deposition to be non-uniform with erratic boundaries, as evidenced by a width variance of over 100%. The manufacturing sequence and technique were such that Inconel band boundary positions are not conclusively known, as stated in Westinghouse letter NPE-83-62, dated January 31, 1983; "The Inconel band thus has no exact position...".

Prior to the NRC Inspection several activities had taken place as part of Stone & Webster's Quality Control system to evaluate and determine corrective action for the apparent encroachment of stainless steel on the Inconel band. Four Nonconformance and Disposition Reports (Nos. 1684, 1882, 2007 and 2047) were issued prior to the NRC inspection, to document porosity and linear indications in the general vicinity of the stainless steel weld material/Inconel transition band boundaries. A fifth N & D Report (No. 2072) was issued subsequent to the NRC inspection, to document additional porosity and linear indications in the stainless steel/Inconel boundary region. Subsequent acid etching of inlet and outlet primary nozzles has been performed on each of the four steam generators to more clearly define the boundaries of the Inconel transition band and stainless steel field weld. A Westinghouse representative has been requested to assist Stone & Webster in evaluating the evidence produced by the acid etching. Disposition of the five N&D reports awaits final evaluation of the evidence discussed above.

#### Corrective Action:

Corrective action has been implemented by Stone & Webster to avoid further violations. A change to the piping installation specification (Ref. E&DCR F-P-13514) has been made to require:

- (a) Acid etching of similar field welds on the pressurizer nozzles, prior to commencement of welding. The acid etch process will clearly identify the location of Inconel.
- (b) A reference line will be established in relation to the Inconel boundary, and will be identified on the nozzles prior to welding, to serve as a welding guide and quality control inspection tool.
- (c) Field Quality Control will inspect the welds and will identify non-conformances to the Engineers through the Nonconformance and Disposition system.

Control of special instructions, cautionary notes or requirements is an unresolved item (50-423/83-01-02) pending NUSCO review and definition of required corrective actions.

#### Compliance:

We are unable at this time to specify a date on which corrective actions will be completed on the stated violation, since this will be resolved by our progress on the Nonconformance and Disposition reports. We will provide periodic updates on our progress to this end.

According to NRC General Statement of Policy and Procedure for Enforcement Actions (10CFR2, Appendix C) published in the Federal Register Notice (47FR9987) dated March 9, 1982; "In determining the specific severity level of a violation involving willfulness consideration will be given to such factors as the position of the person involved in the violation (e.g., first line supervisor or senior manager), the significance of any underlying violation, the intent of the violator (i.e., negligence not amounting to careless disregard, careless disregard, or deliberateness), and the economic advantage, if any, gained by the violation. The relative weight given to each of these factors in arriving at the appropriate severity level will be dependent on the circumstances of the violation". It is also stated in the NRC Enforcement Policy that, "NRC will not generally issue a notice of violation for a violation that meets all of the following tests:

- (1) It was identified by the licensee;
- (2) It fits in Severity Level IV or V;
- (3) It was reported, if required;
- (4) It was or will be corrected, including measures to prevent recurrence, within a reasonable time; and
- (5) It was not a violation that could reasonably be expected to have been prevented by the licensee's corrective action for a previous violation".

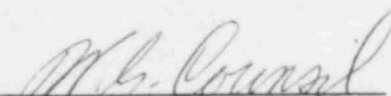
Northeast Nuclear Energy Company believes that this established policy should have been applied, and requests reconsideration of the appropriateness of the notice of violation. Northeast Nuclear Energy Company requests that the NRC inform us of the results of its reconsideration of this matter. As stated previously, the corrective actions taken will preclude occurrences of this type.

We trust these corrective actions satisfactorily respond to the violation cited in Reference (1).

Based on a March 21, 1983 telephone conversation between our Mr. J. Majewski and your Mr. E. Greenman we are submitting our response to this violation on or before March 25, 1983.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

  
W. G. Counsil  
Senior Vice President