



# THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

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MURRAY R. EDELMAN  
VICE PRESIDENT  
NUCLEAR

August 9, 1985

PY-CEI/OIE 0094 L

Mr. C. J. Paperiello, Director  
Division of Reactor Safety, Region III  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Perry Nuclear Power Plant  
Docket Nos. 50-440; 50-441  
50-440/85043 Noncompliance Response

Dear Mr. Paperiello:

This letter is to acknowledge receipt of Inspection Report 50-440/85043 transmitted by letter dated July 11, 1985. This report identifies areas examined by Mr. J. Jacobson during his inspection conducted June 19-21, 1985 at the Perry Nuclear Power Plant.

Attached to this letter is our response to the Notice of Violation dated July 11, 1985. This response is in accordance with the provisions of Section 2.201 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations.

Our response has been submitted to you within thirty days of the date of the Notice of Violation as you requested. If there are additional questions, please do not hesitate to call.

Very truly yours,

Murray R. Edelman  
Vice President  
Nuclear Group

MRE:sab

AUG 12 1985

Attachments

8508260216 850809  
PDR ADOCK 05000440  
Q PDR

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Mr. C. J. Paperiello

-2-

August 9, 1985  
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cc. Mr. J. A. Grobe  
USNRC Site, SBB50

Mr. D. E. Keating  
USNRC Site, SBB50

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D.C. 20555

Mr. R. F. Warnick, Chief  
Reactor Projects Branch 1  
Division of Reactor Projects  
U.S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

RESPONSE TO NONCOMPLIANCE

440/85043-01 a-d

STATEMENT OF NONCOMPLIANCE

10CFR50, Appendix B, Criterion IX as implemented by the CEI Quality Assurance Program, states in part that special processes be controlled using qualified procedures in accordance with applicable Codes, Standards, and Specifications.

Contrary to the above, the following examples of failure to control the welding process as performed by L. K. Comstock were identified:

- a. The welding procedures do not adequately control the selection of electrode (440/85043-01(a)(DRS)).
- b. The welding procedures do not reflect preheat requirements with regard to electrode selection and thickness of material (440/85043-01(b)(DRS)).
- c. The welding procedures do not control fillet weld size and heat input as required for prequalified status (440/85043-01(c)(DRS)).
- d. The welding procedures are not properly qualified with regard to position of welding, material selection, and thickness limitations. (440/85043-01(d)(DRS)).

This is a Severity Level IV violation (Supplement 2).

RESPONSE

The following response addresses separately each example identified above.

1. Example a. states, "The welding procedures do not adequately control the selection of electrode (440/85043-01 (a) (DRS))."

Corrective Action Taken and Results Achieved

Although L. K. Comstock Procedure 4.7.1 permitted the use of E6010, E7010, and E7018 electrodes for various joint configurations, the Gilbert approved installation drawings specify which type electrode (E60XX or E70XX) is to be used. All welding is performed in accordance with the applicable Gilbert drawing utilizing the applicable weld procedure specification contained in L. K. Comstock Procedure 4.7.1, thus by using the Gilbert drawing and the L. K. Comstock Procedure the proper electrode would be used.

To assure that the proper selection of electrodes was achieved, L. K. Comstock generated Inspection Report 17830 to review all weld withdrawal tabs which indicate the use of other than E7018 electrodes. No discrepancies in the selection of electrode type were found as a result of this review, and the Inspection Report is now closed.

The Construction Quality Section (CQS) issued Hold Point Letter PY-S/CON 13929 on the issuance of E6013 electrodes from the L. K. Comstock rod room. The electrode type E6010 was not included on the Hold Point Letter because, although L. K. Comstock used this rod type for procedure qualification, it was never used for production welding at PNPP. Additionally, in the Construction Quality Section Surveillance Inspection Plan, the CQS inspectors performed random overviews of the contractor's program and found the use of E60 series electrodes to be in compliance with L. K. Comstock Procedures and Gilbert Construction Drawings.

Corrective Action To Be Taken To Avoid Further Noncompliance

L. K. Comstock Procedure 4.7.1, Revision 7-5-85, now specifically limits the use of E6013 to the welding of cable tray rungs to the cable tray. L. K. Comstock Procedure 4.8.18, Revision 7-5-85, requires the L. K. Comstock inspector to verify filler metal size, type, heat and lot number, and Form #66 (weld rod withdrawal tab) number during the fit-up hold point.

Date When Full Compliance Will Be Achieved

Full compliance has been achieved.

2. Example b. states, "The welding procedures do not reflect preheat requirements with regard to electrode selection and thickness of material (440/85043-01 (b) (DRS))."

#### Corrective Action Taken and Results Achieved

Preheat has always been addressed in L. K. Comstock Procedure 4.7.1 by reference to AWS D1.1 Section 4.2. However, the specific heat input as it relates to base metal thickness was not incorporated until the revision of Procedure 4.7.1 on April 1, 1985.

Because preheat was always a requirement and documentation for acceptable preheat was to be included in the applicable hanger package, L. K. Comstock developed a checklist for hangers, conduit, and cable trays which require the document reviewer to verify whether preheat was required and, if so, to verify that it was documented. All hanger packages were reviewed to this requirement and any weld without required preheat documentation was identified on Nonconformance Reports. These document review checklists are included in L. K. Comstock Procedure 4.13.2 "Turnover Procedure".

The Construction Quality Section requested from Nuclear Construction Engineering a list by area of all embedded plates greater than 1 1/2" thick. A walkdown of plates on this list was conducted to determine if any electrical supports were welded to these plates without preheat being documented. This walkdown, documented on CQS Surveillance Inspection Report SE-3963, resulted in the issuance of eighteen Nonconformance Reports.

Additionally, qualification tests were performed using E6013 electrodes and E7018 electrodes on base metal of 1 1/2" and 2 1/2" thick respectively at a temperature of 34 degrees Fahrenheit with acceptable results. These qualification tests are documented on L. K. Comstock Nonconformance Reports 6267 and 6268 and CQS Surveillance Inspection Reports SE-3966 and SE-3968.

#### Corrective Action To Be Taken To Avoid Further Noncompliance

The requirements for preheat have been expanded to include low hydrogen and other than low hydrogen electrodes in L. K. Comstock Procedure 4.7.1, Revision 7-5-85. Additionally, L. K. Comstock Weld Inspection Procedure 4.8.18 was revised to require L. K. Comstock welding inspectors to verify base metal thickness and preheat requirements prior to fit-up. It should be noted that the Form #159, "Weld Inspection Checklist", contained in L. K. Comstock Procedure 4.8.18, Revision 7-5-85, now reflects the above stated requirements.

#### Date When Full Compliance Will Be Achieved

Full compliance has been achieved.

3. Example c. states, "The welding procedures do not control fillet weld size and heat input as required for prequalified status (440/85043-01 (c) (DRS))."

#### Corrective Action Taken and Results Achieved

Nonconformance Report LKC 6199 was written documenting the indeterminate status of all multiple pass fillet welds performed by L. K. Comstock utilizing Procedure 4.7.1. Concurrently, the L. K. Comstock QC Manager issued Stop Work Notification #15 on all welding performed using L. K. Comstock Procedure 4.7.1. Corrective Action Request 85-013 was written against L. K. Comstock, and Deviation Analysis Report 247 was issued by the Construction Quality Section for Nuclear Construction Engineering Section (NCES) evaluation of this condition pursuant to 10CFR50.55(e).

A post qualification multiple pass fillet test was performed per the requirements of Section 5 AWS D1.1-1975 part B, Paragraph 5.10.3, for a 5/16" weld size. The tests were performed in all positions using both 3/32 and 1/8" E7018 electrodes. The fillet weld size of the root pass was measured prior to depositing the second and third passes to verify the initial pass did not meet the required 5/16" weld size specified in Table 2.7.1.1 for single pass fillets. All first pass fillet weld sizes were 3/16" and the final fillet weld size met the 5/16" as specified by AWS Table 2.7.1.1. CQS Surveillance Inspection Report SE 3969 and Weld Procedure Qualification Reports (WPQR) A48 through A55 identify the test parameters used. These tests simulated the most severe field conditions with regard to minimum size multipass fillet welds used. All tests were acceptable and the Deviation Analysis Report was considered not to be reportable. Nonconformance Report LKC 6199 was subsequently closed. Corrective Action Request 85-013 is expected to be closed by August 16, 1985.

#### Corrective Action To Be Taken To Avoid Further Noncompliance

L. K. Comstock revised Procedure 4.7.1 to include the parameters established through these tests. Detail 15 on page 4, Attachment 1, Revision 7/5/85, reflects this change.

#### Date When Full Compliance Will Be Achieved

Full compliance will be achieved upon closure of Corrective Action Request 85-013 on August 16, 1985



4. Example d. states, "The welding procedures are not properly qualified with regard to position of welding, material selection, and thickness limitations. (440/85043-01 (d) (DRS))."

Corrective Action and Results Achieved

WPQR's concerning welding of A446 and AISI 1010 steel to A36 steel were reviewed to determine which positions were qualified. Necessary additional qualifications were then performed per Paragraph 5.10.3, AWS D1.1-1975, with both E7018 and E6013 electrodes. Those WPQR's qualified are as follows: A446-(E6013)-A71-73; A446-(E7018)-A65-A68; A526-(E7018)-A69; AISI 1010-(E6013)-A75 and A76; AISI 1010-(E7018)-A56-A59. All qualifications tests were witnessed by CQS and NCES and met Acceptance Criteria of Paragraph 5.12.1.3 AWS D1.1-1975.

Although the base metal thickness limitation was omitted from stainless steel WPQR's A37, 38, and 39, it was noted on the L. K. Comstock welder and welding operator qualification test record for the individual who qualified the procedure. The base metal thickness limitation was also noted on Herron Test Lab qualification reports dated 2-18 and 4-22-81.

L. K. Comstock Procedure 4.7.7 was in error by denoting welding through the galvanizing "as prequalified". Although the field practice was to remove the galvanizing, the L. K. Comstock Procedure and the Gilbert Construction Drawing did not require the removal of the galvanizing prior to welding. L. K. Comstock generated Nonconformance Report LKC 6269 for not having an approved WPQR for welding over galvanized surfaces with E6013 electrodes. A post qualification test for weldability of E6013 electrodes through galvanizing was performed. WPQR A-74 was generated to document the test and acceptable results were achieved. Nonconformance Report LKC 6269 was closed based on the weldability test.

Corrective Action To Be Taken To Avoid Further Noncompliance

The revised WPQR's indicating the correct welding position and the base material thickness were incorporated into L. K. Comstock Procedure 4.7.1, Revision 7-5-85, as Figures 13 and 16 of Attachment 1, and page 2 of 2, Attachment 2.

It should be noted that WPQR A-74 for welding through galvanizing was not included in L. K. Comstock Procedure 4.7.1 because the procedure was revised to state "all galvanizing shall be removed prior to welding".

Date Full Compliance Will Be Achieved

Full compliance has been achieved.