



# THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

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Dalwyn R. Davidson  
VICE PRESIDENT  
SYSTEM ENGINEERING AND CONSTRUCTION

August 20, 1982

Mr. A. Schwencer, Chief  
Licensing Branch No. 2  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Perry Nuclear Power Plant  
Docket Nos. 50-440; 50-441  
Confirmatory Item - No. 15  
Preservice Inspection Program

Dear Mr. Schwencer:

This letter and its attachments are provided in response to your letter dated June 15, 1982, and the Perry SER confirmatory item number 15 regarding preservice inspection (PSI) program.

Preservice examination plans for piping in the High Pressure Core Spray (HPCS), Low Pressure Core Spray (LPCS), Reactor Recirculation (RRS), Reactor Water Cleanup (RWCU), and Reactor Core Isolation Cooling (RCIC), systems have been submitted to the staff. PSI plans for the Control Rod Drive (CRD) and Standby Liquid Control (SLCS) systems will be provided by October 15, 1982. All examinations on the piping for these systems are scheduled for completion by the end of 1982. The plan for preservice inspection of the reactor vessel will be submitted in January 1983 and examinations scheduled for completion in April 1983. The specific requests and justifications for relief from ASME code requirements will be provided at that time.

We believe that this additional information will enable the Materials Engineering branch to resolve this issue in a supplement to the Perry SER.

If you have any questions, please let me know.

Very truly yours,

Dalwyn R. Davidson  
Vice President  
System Engineering and Construction

DRD:EMB:mb

cc: Jay Silberg, Esq.  
John Stefano  
Max Gildner

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121.1 Your Preservice Inspection (PSI) Program Plan description, paragraph 3.6, states that Perry Unit 1 will utilize Appendix III, ASME Code Section XI in lieu of Article 5 of ASME Code Section V for the examination of piping.

The ASME Code, Section XI, Division 1, 1977 Edition with Addenda through Summer 1978 specifies use of Appendix III of Section XI for ferritic piping welds. If this requirement is not applicable (for example, for austenitic piping welds), ultrasonic examination is required to be conducted in accordance with the applicable requirements of Article 5 of Section V, as amended by IWA-2232. Provide a technical justification for any alternatives used such as Section XI, Appendix III, Supplement 7, for austenitic piping welds and discuss the following:

1. All modifications permitted by Supplement 7.
2. Methods of assuring adequate examination sensitivity over the required examination volume.
3. Methods of qualifying the procedure for examination through the weld (if complete examination is to be considered for examinations conducted with only one side access).

When using Appendix III of Section XI for inservice examination of either ferritic or austenitic piping welds, the following should be incorporated:

4. Any crack-like indication, 20 percent of DAC or greater, discovered during examination of piping welds or adjacent base metal materials should be recorded and investigated by a Level II or Level III examiner to the extent necessary to determine the shape, identity, and location of the reflector.
5. The Owner should evaluate and take corrective action for the disposition of any indication investigated and found to be other than geometrical or metallurgical in nature.

#### RESPONSE

The method of piping examination for ferritic piping have been selected for use on austenitic piping primarily to take advantage of the attention given to notches for calibration reflectors. During ultrasonic examination the area of interest should be detection of reflectors near the pipe surfaces. Reliance on holes as calibration reflectors does not provide any greater assurance of detectability than does the notch, and the notch is more relevant to inservice concerns.

The welds to be examined using this procedure are approached on a case-by-case basis. If the 45° angle is deemed to be unsatisfactory, other angles would be used as necessary.

The requirements to investigate reflectors of 20% DAC or greater is generally incorporated whenever IGSCC is of concern and is to be covered in a separate document.

Generally, the comments offered by the NRC in this case is emphasizing requirements that are beyond current code requirements and are equally valid if Article 5, Section 5 is used.

121.2

Provide an approximate date when all relief requests will be submitted for evaluation. The PSI program plan should include the following information:

1. For ASME Code Class 1 and 2 components, provide a table similar to IWB-2600 and IWC-2600 confirming that either the entire Section XI preservice examination was performed on the component or relief is requested with a technical justification supporting your conclusion.
2. Where relief is requested for pressure retaining welds in the reactor vessel, identify the specific welds that did not receive a 100% preservice examination and estimate the extent of the examination that was performed.
3. Where relief is requested for piping system welds (Examination Category B-J, C-F, and C-G), provide a list of the specific welds that did not receive a complete Section XI preservice examination including a drawing or isometric identification number, system, weld number, and physical configuration; e.g, pipe to nozzle weld, etc. Estimate the extent of the preservice examination that was performed. When the volumetric examination was performed from one side of the weld, discuss whether the entire weld volume and the heat affected zone (HAZ) and base metal on the far side of the weld were examined. State the primary reason that a specific examination is impractical; e. g., support or component restricts access, fitting prevents adequate ultrasonic coupling on one side, component-to-component weld prevents ultrasonic examination, etc. Indicate any alternative or supplemental examination performed and method(s) of fabrication examination.

#### RESPONSE

CEI will identify all areas where ASME Code requirements cannot be met and will provide detail relief requests with supporting technical justifications by April 1983. The PSI program plan will include the requested information for justification.