



APPL. Ex. 100

REF: 54

c. Connectors

In reviewing the Conax Electrical Penetration Qualification Report IPS-269, the inspector noted that the only reference to connector qualification is made in Section 4.9 of the report. Paragraph 1 states, in part, that: "connectors used on the Limerick penetration are standard connectors, certified by the vendors to meet pull requirements and not contain mercury. ...." It does not appear that the external connectors have been qualified for the LOCA environment.

Discussions with site licensee CA personnel and licensee HQ engineering indicates the licensee is aware of this and that engineering has already contacted the vendor who is performing additional qualification testing of connectors.

This item is unresolved pending NRC review of test data.  
(352/78-04-02) (353/78-02-02)

8. Modification of Containment Structural Steel Box Beams

An inspection was performed of the activities related to the modification of structural steel box beams located inside the drywell. These modifications corrected beam width fabrication errors at the beam ends connecting to the containment clevis imbeds.

The inspector found that Bechtel drawing C-875, Revision 6, provides the design details of the change to correct the width of the beams. Detail 4.a shows a weld which joins two plates at an unspecified angle. No dimensions were shown on the drawing for the angle of fit-up or weld groove opening for the specified fillet weld. The inspector was informed that the contractor considers this to be a prequalified weld joint design. However, AWS D.1.1 Section 2.7, "Details of Fillet Welds" show fillet welds to be lapped plates with metal-to-metal contact. A comparison of the designed weld to the code descriptive and referenced weld sketches of Figure 2.7 in the AWS Code shows that these welds do not meet the criteria for a prequalified weld joint and would require rework or qualification. As stated in paragraph 2.6.2 of the AWS Code, "Joint details may depart from details prescribed in 2.9 through 2.14 and 10.13 only if the proposed joints and joint welding procedures demonstrate their adequacy with the requirements of 5.2 of this code and their conformance with the applicable provisions of Sections 3 and 4." This demonstration had not been performed.

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Detail 9 of the same drawing, Sechtel C-875, Revision 5, shows the use of filler bars to take up space for large weld gaps. The AWS Code specifies certain rules in the use of fillers as described in para. 8 2.4.3 and Figure 2.4.3. The fillers as designed do not meet the requirements described in the AWS Code.

The two items described above appear to be an item of noncompliance concerning control of design deviations from quality standards.

9. Review of Quality Records

Two drywell box beams Nos. 40 and 41 were randomly selected for a review of the Quality related records for conformance to specifications 8031-C-72 and 8031-C-63 and AWS D1.1 welding code. The records reviewed are listed below.

- Statement of conformance by the fabricator
- Certified Mill test report for (3) heats of ASTM 441 material
- Certified Mill test report for weld filler material
- Magnetic particle inspection reports
- Ultrasonic test reports
- Surface preparation and painting reports
- Vendor Quality Control Inspection Record

No items of noncompliance were identified.

10. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. Unresolved items disclosed during this inspection are discussed in paragraph 7.