

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-352/ 80-14
50-353/ 80-12
Docket No. 50-352
50-353
License No. CPPR-106 Priority -- Category A
CPPR-107

Licensee: Philadelphia Electric Company
2301 Market Street
Philadelphia, Pa. 19101

Facility Name: Limerick Generating Station, Units 1 & 2

Inspection at: Limerick, Pa.

Inspection conducted:

Inspectors: J. C. Mattia
J. C. Mattia, Senior Resident Inspector

9/5/80
date signed

date signed

date signed

Approved by: R. W. McGaughy
R. W. McGaughy, Chief Projects
Section, Reactor Construction and
Engineering Support Branch

9/15/80
date signed

Inspection Summary: Unit 1 Inspection on July 1 - 18 and 28-31, 1980 (Report No. 352/80-14) Areas Inspected: Routine inspection by the resident inspector of work activities relative to: installation and welding of safety related piping and supports, the storage and maintenance of equipment, and construction electrical activities. The inspector also performed plant tours. The inspection involved 28 inspector hours by the resident inspector.

Results: No items of noncompliance were identified.

Unit 2 Inspection on July 1 - 18 and 28-31, 1980 (Report No. 50-353/80-12) Areas Inspected: The inspector performed plant tours, inspected storage of equipment and work activities associated with the reactor vessel nozzle safe ends. The inspection involved 4 inspector hours by the resident inspector.

Results: No items of noncompliance were identified.

DETAILS

1. PERSONS CONTACTED

Philadelphia Electric Company

D. Clohecy, QA Engineer
J. Corcoran, Field QA Branch Head
D. DiPaolo, QA Engineer
F. Gloeckler, QA Engineer
J. Fedick, Construction Engineer
J. Lauderback, QA Engineer
D. Marascio, QA Engineer
W. Strickland, Construction Engineer

Bechtel Power Corporation

T. Altum, Lead Welding Engineer
W. Chronister, Lead Electrical Superintendent
R. Diduch, Lead Electrical Engineer
B. Dragon, QA Engineer
T. Fallon, Assistant Project Field QC Engineer
G. Fissel, Area 2 Engineer
H. Foster, Project Field QC Engineer
J. Grey, Lead QC Engineer
J. Gwin, Project Superintendent
G. Kelly, QA Engineer
E. Klossin, Project QA Engineer

Bechtel (continued)

- A. Kompeneck, Mechanical Staff Engineer
- J. Martin, Lead QA Engineer
- M. Norm, QC Engineer
- M. Orlando, QC Engineer
- D. Smolinsky, Mechanical Staff Engineer
- M. Tokolics, QA Engineer
- T. Waters, Lead QC Engineer
- A. Weedman, Project Field Engineer

Peabody Testing Co.

- R. Clarke, NDE Technician

2. Plant Tour - (Units 1 & 2)

The inspector observed work activities in progress, completed work and the plant status in several areas of the plant during general inspection of the plant. The inspector examined work for any obvious defects or noncompliance with regulatory requirements or license conditions. Particular note was taken of presence of quality control, evidence such as inspection records, material identification, housekeeping and equipment preservation. The inspector interviewed, when appropriate, craft personnel, craft supervision and QC personnel in the work areas.

3. Primary Coolant Pressure Boundary Piping - Work Activities - (Units 1 & 2)

The inspector observed various work activities associated with the piping erection inside the primary containment to verify compliance with regulatory commitments, codes and standard requirements. The following specific activities were inspected:

- a. The inspector observed the rework of hanger DBA-107-H3 in Unit 1 containment, in accordance with Bechtel's in-process rework notice #W-526. The rework involved the grinding out an unacceptable fillet weld that attached the hanger to the structural box beam. The inspector noted that instead of grinding out the specific fillet weld, the cognizant foreman had the hanger completely removed. The inspector discussed this with the foreman and his immediate supervisor. They stated that they did not like the appearance of all the field fillet welds on the hanger and decided it would be quicker to remove the hanger and refabricate with new hanger material. The cognizant Bechtel area engineer also concurred with their decision. It is their understanding that the rework instructions under the "remarks" section of the in-process rework notice are not mandatory requirements (not a disposition), therefore they can cut out the hanger and fabricate another. The inspector informed the licensee that he had no problem with this particular item, since the final product will be in accordance with the design drawing, however, there can be occasions where the rework instructions are intended to be mandatory and the rework notice in its present form doesn't have a disposition section. The licensee stated that they would evaluate this area of concern and report back to the inspector their conclusions. (352/80-14-01)
- b. The inspector observed the grinding of a Unit 2 feedwater reactor vessel nozzle safe end (located at azimuth 30^o). The grinding was to remove an unacceptable liquid penetrant indication in accordance with G.E.'s procedure FDDR HH2-355. The procedure had strict requirements for the method of grinding and the amount of material to be removed. The inspector witnessed some of the grinding and noted that the pipe-fitter was conforming to the G.E. procedure.

No items of noncompliance were identified.

- c. The inspector inspected a completed Unit 2 feedwater reactor vessel safe end weld which is located at azimuth 270⁰. The inspector noted a ground-out area on the inner diameter, at approximately the 11 o'clock position. The inspector reviewed the data history for this weld joint and verified that the subcontractor measured this ground-out area (the minimum wall thickness was measured to be 0.983"). This value was submitted to G.E. (San Jose) and was accepted by G.E. engineering.

No items of noncompliance were identified.

- d. The inspector inspected various welding activities in progress for the following reactor recirculation weld joints to determine compliance with Bechtel's weld procedure P1-AT-Lh(CVN). The inspector also verified the qualifications of the individual weldors performing the welding:

- 28" pipe weld joint BWRPD-1REC-1-WB4
- " " " " " " "-WA43
- " " " " " " "-WA9

No items of noncompliance were identified.

- e. The inspector inspected the modifications being performed to pipe spools DLA-108-1-5A and DLA-108-1-4A in accordance with Bechtel's field change request M-5653.

No items of noncompliance were identified.

- f. The inspector observed the fit-up of the mainsteam piping to the reactor pressure vessel (RPV) nozzle to verify compliance with the G.E. specification 22A2513. This closure weld has critical cold pull tolerances prior to welding to the RPV nozzle and it is also an inspection hold point for the G.E. site representative. The joint is identified as BWRPD-1MS-1/OF-WD01 and it is the third main steam pipe to RPV closure (total of four) to be welded. The inspector also reviewed the G.E. quality control inspection record (QCIE #4 - section 2.0, item 19) to verify that a G.E. representative witnessed the cold pull for all three pipe to vessel closure welds.

No items of noncompliance were identified.

g. The inspector inspected the various welding activities in progress for the following weld joints to verify compliance with the applicable Bechtel weld procedures and specifications:

- HBB-142-4-FW2 (fillet seal welds)
- HBB-142-3-FW3 (fillet seal welds)
- Pipe restraint #DBA-107-H3

No items of noncompliance were identified.

4. Storage of Equipment (Units 1 & 2)

The inspector inspected various mechanical and electrical items being stored in the outdoor laydown areas and also inside the various buildings to verify compliance with the Bechtel Job Rules (JR) E-3 and G-7 and the vendor requirements. The inspector did not note any nonconforming conditions of the safety related equipment being stored, however, a non-safety related hydrogen storage tank (1AT-1FT-557) was noted as having lost its nitrogen purge (gauge reading was zero). The licensee was informed of this condition.

No items of noncompliance were identified.

5. Electrical Work Activities (Unit 1)

The inspector inspected the rework of electrical conduits entering the D.C. ground detection cabinet located at elevation 239' in the control building. This rework was being performed in accordance with a construction aid document ("Action Item No. 516"). This particular rework involved moving the conduits entering the panel so that the 6 inch separation criteria inside the panel is maintained. The rework in progress was acceptable, however, the inspector was concerned that the electrical area engineers were using the construction aid documents which they call "Action Items" in violation of the Bechtel "In-Process Rework Notices" as outlined in Bechtel's Project Special Provision Notice (PSP) SF/SPS G-3.1. The inspector reviewed several randomly selected action items to determine if they should have been processed as In-Process Rework Notices. The review did not indicate that the PSP procedure was violated.

No items of noncompliance were identified.

6. Safety Related Piping - Work Activities (Unit 1)

The inspector observed work activities associated with the installation of safety related piping to verify compliance with Regulatory commitments, codes and design documents. The following specific activities were inspected:

9. Pipe Hangers (Unit 1)

The inspector inspected the following hangers located inside the containment:

DLA-112-H1
DLA-112-H3
DLA-112-H5
DLA-112-H7

The shop and field welds were visually inspected to determine compliance with the applicable welding standards. The inspector noted that the upper clevis pins for hangers H1, H3 and H5 had what appeared to be excessive clearances (between the pin and the clevis hole). Discussions were held with the cognizant Bechtel personnel to determine what the maximum tolerance should be. A review of the vendors catalogs and design drawings did not indicate any tolerance. The licensee was informed that this item is considered unresolved pending review of their evaluation of this condition (352/80-14-03).

10. Nondestructive Testing (Unit 1)

The inspector witnessed a liquid penetrant examination being performed by a recently hired Level II examiner. The examination was being performed on a pipe spool identified as DCA-319-1-2 (locations 12-1 and 12-2 on pipe). The examination was in accordance with Peabody Testing's procedure IPPT-340-39-02, Revision A. The inspector also reviewed the examiner's qualifications to determine that they met the requirements of SNT-TC-1A.

No items of noncompliance were identified.

11. Work Activities Inside Containment (Unit 1)

The inspector observed the following activities inside containment to verify compliance with regulatory commitments, codes and standards:

- The first ASME weld performed by the heating, air conditioning and ventilation subcontractor. This was a duct support which was being welded to the containment liner. The weldor was welding in accordance with the subcontractor's weld procedure SP-BV-115F. The inspector also verified with the cognizant Bechtel QC engineer that the weldor was properly qualified.
- Observed welding of weld plate to the biological shield at elevation 312' in accordance with design drawing C-958 (field change request No. 5532).

No items of noncompliance were identified.

6. (Continued)

- Inspected welding activities in progress for two weld joints in the fuel pool cooling system. At one of the weld joints a purge was in process and the oxygen content was being tested in the pipe with an oxygen analyser (#G-227). At the other joint the final weld pass was in process. The weld joints were designated as FSK-HCC-101-6-FW59 and FSK-HCC-101-6-FW63. The inspector also verified that O₂ meter was in calibration.
- Inspected the fit-up of a weld joint in the reactor water clean-up system. The weld joint was designated as FSK-ECC-103-3-FW52. The inspector also observed the purging of this weld joint and the testing of the O₂ content, using an O₂ analyser (#7).

After the inspection of the work activities, the inspector reviewed the calibration records of the above two meters and held discussions with the cognizant PECO individual who calibrated the meters. The inspector determined that the meters were calibrated in accordance with the meter vendor's requirements.

No items of noncompliance were identified.

7. Follow-up of Circular 79-10 and Part 21 Item (Units 1 & 2)

In a previous inspection (352/80-02, paragraph 13) the licensee's records indicated that the NSSS supplier had not replied to the licensee's request if Tube Turn pipefittings (ASTM A-234) were used in their scope of supply. A reply was received dated 2/25/80 stating that Tube Turn 4 inch fittings (ASTM A-234 WPB) were not used for the Limerick Plant.

This item is considered resolved.

8. Diesel Generator Intake Filter Anchor Bolts

The supplier of the diesel Generator intake filter verbally informed NRC that the Limerick foundation anchor bolts (5/8" diameter) were not adequate for a seismic event. This information was transmitted to the licensee for evaluation. The licensee stated that bechtel engineering will discuss this with the supplier and will also review the design calculations.

This item is considered unresolved pending review of licensee's evaluation (352/80-14-02).

12. Unresolved Items

Unresolved items are matters about which more information is required to ascertain whether they are acceptable items, items of noncompliance or deviations. Unresolved items disclosed during the inspection are discussed in paragraphs 3, 8 and 9.

13. Management Meetings

At periodic intervals during the course of this inspection, meetings were held with senior plant management to discuss the scope and findings of this inspection.

The resident inspector also attended entrance and exit interviews of region-based inspectors conducted with plant management during the course of this inspection.