

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-219/84-22
Docket No. 50-219
License No. DPR-16 Priority - Category C
Licensee: GPU Nuclear Corporation
Facility Name: Oyster Creek Nuclear Generating Station
Inspection At: Forked River, New Jersey
Inspection Conducted: July 27, 30, 31 and August 1-3, 1984

Inspector: Robert A. McBrearty
R. A. McBrearty, Reactor Engineer

Sept. 10, 1984
date

Approved by: J. P. Durr
J. P. Durr, Chief, Materials &
Processes Section

9/11/84
date

Inspection Summary:

Inspection on July 27, 30, 31 and August 1-3, 1984 (Report No. 50-219/84-22)
Areas Inspected: Routine, unannounced inspection of activities associated with the isolation condenser system piping replacement/repair including observation of completed repairs, review of installation/repair procedures, review of NDE procedures, NDE data review and review of QA/QC records. The inspection consisted of 46 hours on-site by one regional-based inspector.

Results: No violations were identified.

DETAILS

1 Persons Contacted

GPU Nuclear Corporation

- J. A. Abromovic, Piping Engineering Manager
- J. S. Chardos, Manager, Oyster Creek (O.C.) Projects
- *T. L. Corrie, QC Manager, O.C.
- D. Covill, Materials Engineering
- R. T. DeMuth, Manager, Material Engineering
- *P. B. Fiedler, VP/Director, O.C. Nuclear Generating Station
- *B. Hahman, Licensing
- D. G. Holland, Licensing Manager, O.C.
- H. C. Jung, SPP Engineering
- J. F. Mancinelli, Engineering Projects
- *R. S. Markowski, Manager, Prog. Dev./Audit
- *J. P. Maloney, Manager, Plant Materiel
- R. Nademus, QA - NDE
- *R. Ostrowski, Corporate ISI Manager
- *T. J. Patterson, Manager, QA Special Processes and Programs
- *D. L. Robillard, QC Programs Engineer - QA
- *J. H. Shortt, M&C Manager of Prod.
- *R. Tracy, Manager, QA Modifications/Operations
- R. Turner, NDE Level III
- *F. Weinzimmer, Manager, Special Projects

General Electric Company

- F. H. Hatmaker, QC Supervisor, Eastern Services Department

USNRC

- *W. H. Baunack, Project Engineer
- *C. J. Cowgill, Senior Resident Inspector
- W. S. Hazelton, NRR - Telephone contact
- M. R. Hum, NRR - Telephone contact
- J. J. Lombardo, O.C. Licensing Project Manager, NRR - Telephone contact
- *F. I. Young, Resident Inspector - TMI Unit 2

*Indicates attendance at NRC exit meeting of August 3, 1984.

2. Isolation Condenser Piping Replacement/Repair - Record Review

GPU Nuclear Specification No. OC-IS-323357-001 and General Electric Document No. P50YP225 including Engineering Change Notice No. NH18401 define requirements for replacement and weld overlay repair of isolation condenser system piping welds. These requirements include:

Replaced Welds

- Radiography subsequent to application of the root and two filler passes.
- Radiography, liquid penetrant and visual examination of the completed weld.
- Ultrasonic examination subsequent to completion of the aforementioned examinations. This examination is to satisfy the preservice inspection (PSI) requirements of ASME Section XI.

The acceptance standards of ASME Section III, NC-5000, are applicable and must be met prior to performance of the Section XI PSI.

Materials

- Pipe - ASME - SA 312, Type 316L
- Elbows - ASME - SA 403, Type 316L

Type 316 stainless steel may be used provided that the carbon content is less than 0.05%.

- Filler Metal - Limited to 0.02% maximum carbon content and a minimum ferrite number (FN) of 8 FN in as-deposited undiluted weld metal.

The inspector reviewed records and data associated with the isolation condenser system replacement/repair activities to ascertain that applicable ASME code and procedural requirements were met. Records and data associated with the following welds were included in the inspector's review:

- NE-1-29, weld overlay
- NE-2-80, weld overlay
- J-12-1, pipe to pipe weld
- J-12-2, pipe to elbow weld
- J-12-4, pipe to pipe weld
- J-15-1, pipe to pipe weld
- J-15-2, elbow to pipe weld
- J-15-3, pipe to elbow weld
- J-41-1, elbow to pipe weld

- J-41-2, pipe to elbow weld
- J-41-3, pipe to pipe weld
- J-61-1, pipe to pipe weld
- J-61-2, elbow to pipe weld
- ✓ J-61-3, pipe to elbow weld
- J-61-4, pipe to pipe weld

The licensee identified incomplete penetration and lack of fusion in weld J-12-4 and documented the finding in the radiographic examination report dated July 2, 1984. The weld was rejected by the licensee based on the radiographic films. The inspector reviewed the films and agreed with the licensee's evaluation. During discussions regarding disposition of the weld, the licensee suggested that the weld could be accepted as-is based on a fracture mechanics analysis as permitted by ASME Section XI. The inspector stated that the weld must meet Section III acceptance standards, the construction code invoked by the licensee, before Section XI becomes jurisdictional; therefore, Section XI analysis could not be used to accept the Section III rejectable condition. At the exit meeting, the inspector was advised that replacement of the defective weld had commenced.

In addition to the above, the inspector observed completed weld overlay NE-1-25 and weld overlay NE-2-4 and found that the requirements of Specification OC-IS-323357-001 were met regarding width, taper and surface finish.

The inspector's review confirmed that fabrication requirements, including carbon content, minimum ferrite number, overlay thickness and nondestructive examination, were met. The inspector confirmed also that, when welds were completed and accepted, the Section XI PSI was performed by qualified personnel in accordance with the applicable ultrasonic examination procedure.

The inspector found that licensee Document No. 6150-ADM-3272.01 assigns responsibility for establishing a PSI Program for modifications or additions and provides assurance that modifications and new designs are incorporated into the ISI Program.

No violations were identified.

3. Quality Assurance (QA)

The inspector reviewed licensee QA Monitoring Reports, General Electric Company (G.E.) Weld Travelers and interviewed personnel to ascertain that the isolation condenser system repair activities were adequately controlled by the licensee.

The following were included in the inspector's review:

Licensee QA Monitoring Reports

- File Index No. 84-31.023
- File Index No. 84-31.027
- File Index No. 84-22.042
- File Index No. 84-22.050

G.E. Weld Travelers

- Joint J-15-1
- Weld Overlay NE-2-80
- Weld Overlay NE-1-29

Items covered by the above records included the acceptability of weld prep, fit-up, cleanliness, NDE, certification that the ferrite number of weld wire, root pass of weld overlay and the final overlay surface were equal to or greater than the required minimum and verification that the final overlay dimensions were within acceptable limits.

The inspector found that the licensee provided extensive QA monitoring of the work activity.

No violations were identified.

4. NDE Personnel Qualification/Certification Records

The inspector reviewed qualification/certification records of Magnaflux personnel who participated in nondestructive examination of the isolation condenser system pipe welds and weld overlay, and of the licensee Level III who evaluated the examination results. The review was done to ascertain that the examinations were performed and evaluated by qualified individuals.

The records were found to contain current eye examination certificates for each individual and confirmed that the personnel were properly certified to perform the activities in which they participated.

No violations were identified.

5. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on August 3, 1984. The inspector

summarized the scope and findings of the inspection. At no time during this inspection was written material provided by the inspector to the licensee.