

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

REGION III

Report No. 50-358/81-09

Docket No. 50-358

License No. CPPR-88

Licensee: Cincinnati Gas and Electric Company
139 East 4th Street
Cincinnati, OH 45201

Facility Name: Wm. H. Zimmer Nuclear Power Station

Inspection At: Zimmer Site, Moscow, OH

Inspection Conducted: March 11-13, 1981

Inspector: *C. M. Erb*
C. M. Erb

3/27/81

Approved By: *D. H. Danielson*
D. H. Danielson, Chief
Materials and Processes Section

3/27/81

Inspection Summary

Inspection on March 11-13, 1981 (Report No. 50-358/81-09)

Areas Inspected: Inspection of SRV and downcomer bracing in suppression pool; welding and QC activities related to embeds in floor and walls of suppression pool. The inspection involved a total of 20 inspector-hours onsite by one NRC inspector.

Results: No items of noncompliance or deviations were identified.

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DETAILS

Persons Contacted

Cincinnati Gas and Electric Company

*W. Schwiers, QA Manager
D. Kramer, QA Engineer - Civil
B. A. Gott, Construction Engineer
L. Wood, QA Engineer

Kaiser Engineers, Incorporated

M. R. DuPuccio, QC Inspector
D. Donovan, Lead Inspector - Civil
K. Shinkle, QA Engineer
R. Baker, Level III NDE
P. Norman, QA Engineer

*Present at the exit interview on March 26, 1981.

Functional or Program Areas Inspected

1. Welding in the Suppression Pool

Welds involving the SRV 12" pipes and KWU quenchers were performed by the Kaiser Piping Group, while embeds and braces to the downcomers and SRV piping were performed by the Kaiser Civil Group. Representative welds in both areas were examined together with the NDE and fabrication records.

No items of noncompliance or deviations were identified.

2. KWU Quencher Installation and Record Review

The 13 KWU quenchers are arranged in an inner circle and an outer circle with the respective SRV pipes braced to the reactor pedestal or to the outside wall.

Welding and a PT examination were observed on the fillet welds attaching the quencher base (SN-002) to the floor plate embed. This weld is a 1 3/8" fillet joining the stainless steel base to the Specification SA588 carbon steel floor plate. The Weld Procedure used is No. 3.1.80 and the brace is Specification SA240, Type 316 stainless steel and E-309-16 coated rod and the shielded metal arc process was used. An interpass maximum temperature of 150°F is maintained and PT is performed on the root, at the 50% level, and on the final ground surface of the weld.

The inspector witnessed the PT at 50% which was done by a Level II inspector to Procedure No. SPPM 4.2. The weld had been ground carefully and all steps of the PT inspection were performed in an acceptable manner. The inspector's Stamp No. 106 was imprinted on the process sheet to indicate acceptance by Quality Control.

The KWU quencher is welded to its base using Weld Procedure No. 3.1.37 and the weld is in Class 3 Category. This weld is found on Isometric Dwg. PSK-MS-21A and is a Type 316 to Type 316 stainless steel weld. A backing ring of Type 316 is used and the root is welded using the GTAW process. After the first 3/16" root is in, the weld is completed using the shielded metal arc process and ER 308 filler.

Radiography is performed to Procedure No. SPPM 4.1 and four double wall exposures are made which cover the weld area 100%. The backing ring is not removed upon completion of the welds. The weld issue slips showing the amount and types of electrode issued are filed with the process sheets.

No items of noncompliance or deviations were identified.

3. Bracing to the Main Steam Safety Relief Valve (SRV) Piping

Braces to the outside ring of SRV pipe are anchored to embed plates (2"-2 3/4" thick) which are held in the wall by from four to eight studs. The area around the embed plate is chipped to an acceptable depth so that grout can be poured behind the plate and around the embedded studs. Four filler strips 1/4" thick of stainless steel are welded to the outside edges of the embed which is Specification SA588 GR A carbon steel. Weld Procedure No. 3.1.80 is used with a 1/4" thick stainless steel backing strip below the 500 foot elevation which is the approximate water level, while a carbon steel backing strip is used above the water level in the suppression pool. The weld is given a PT inspection on the root and final weld. It is also given a Vacuum Test since the suppression pool is a Class 1 structure. No preheat is used and an interpass temperature of 100°±40° is maintained to minimize any temperature effects in the underlying concrete.

Leak chase channels are installed over welds and the embedment studs have circular leak chases over each protruding stud end. The leak chases are fillet welded and subject to a pressure test.

Prior to welding on the circular leak chases, a tensioner is used to preload the studs to various loads depending on the usage of the embed. The filler plate welds between the embed plate and surrounding original stainless steel plates are ground and inspected using PT, UT, and Vacuum Test inspection on the final weld.

A Gusset plate 9/16" x 4' 2" is welded with a fillet weld to the embed plate so that a brace can be attached to each of two adjacent downcomer pipes. This weld is carbon steel to carbon steel using Weld Procedure No. 3.1.51, Revision 1. The SMAW process is used with E7018 filler metal.

Eight lugs are welded to the SRV pipes with four above and four below a split clamp, which is attached to the brace arm. These lugs hold the clamp and are welded to Weld Procedure No. 3.1.21H. The pipe is 12" x .688" to Specification SA106, Grade B, while the lugs are Specification SA516, Grade 70 and are about 5" x .406". The weld is a full penetration achieved by grinding the root before welding on the open side. MT inspection is performed on the root, intermediate and final weld.

No items of noncompliance or deviations were identified.

4. N-Stamp on the Personnel Hatch

During this inspection, we were unable to find the ASME Code Data Report or certificate of shop inspection on the subject item. However, further search of CBI documentation by the licensee turned up this item.

The actual N-Stamp on the hardware was complete, except no National Board Number appeared on the plate. Further investigations revealed that the State of Ohio and S&L did not require this number, although the N-Stamp with MC below was in place.

No items of noncompliance or deviations were identified.

Exit Interview

An exit interview was conducted with Mr. W. Schwiers and others of your staff on March 26, 1981. The purpose and findings of the inspection were summarized and acknowledged by the licensee.