

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

REGION III

Reports No. 50-254/80-28; 50-265/80-29

Docket Nos. 50-254; 50-265

Licenses No. DPR-29; DPR-30

Licensee: Commonwealth Edison Company
Post Office Box 767
Chicago, IL 60690

Facility Name: Quad-Cities Station, Units 1 and 2

Inspection At: Quad-Cities Site, Cordova, IL

Inspection Conducted: November 19 - 20, 1980

Inspector: I. T. Yin

Approved By: *D. H. Danielson*
D. H. Danielson, Chief
Engineering Support Section 2

12/18/80

Inspection Summary

Inspection on November 19-20, 1980 (Reports No. 50-254/80-28; 50-265/80-29)

Areas Inspected: Licensee actions relative to IE Bulletin No. 79-14 including general discussion on requirements, observation of system modification, and review of records. The inspection involved a total of 14 inspector-hours onsite by one NRC inspector.

Results: No items of noncompliance or deviations were identified.

DETAILS

Persons Contacted

Commonwealth Edison Company (CECo)

- *N. J. Kalivianakis, Station Superintendent
- *R. Bax, Assistant Superintendent, Maintenance
- *D. F. Biaufuss, Engineering Assistant, Maintenance
- D. F. Thayer, Staff Assistant, Maintenance
- *L. Gerver, Assistant Superintendent, Administration
- *D. A. Gibson, QA Inspector
- *K. J. Hansing, QA Coordinator

EDS Nuclear Inc. (EDS)

- R. Yrure, Engineer
- J. Bencivenga, Field Engineer
- W. F. Tschudi, Section Manager, Engineering Division

*Denotes those attending the exit interview on November 20, 1980.

Functional or Program Areas Inspected

1. Licensee Event Report (LER) Followup

LER No. RO 50-80/27-01T, dated October 29, 1980, indicated that a number of safety related piping systems in Unit 1 did not meet seismic design operability criteria as determined by the IEB 79-14 analyses. The inspector reviewed the LER actions and had the following findings:

a. Recirculation System Modification

The licensee's IEB 79-14 inspection walkdown failed to identify an existing installed snubber, GE Mark SS-5, on the 22" circular ring header. Based on the established procedure requirements, EDS performed pipe stress analysis and determined that a snubber should be added at the SS-5 location. In addition, five more snubbers were specified to be added to the system (four on the circular ring header, and one on the Loop A 28" pump suction). Furthermore, two new variable spring hangers of 8804 lb. and 11,332 lb. capacities replaced the spring hangers originally installed on the connecting 20" RHR Shutdown Supply.

Site walkdown of Unit 1, the Recirculation System was completed on August 13, 1979, and for Unit 2 on October 16, 1979. In review of the walkdown packages, it was concluded that due to similar piping physical properties and configurations, the problems that existed in Unit 1 could well exist in Unit 2. This is an unresolved item (265/80-29-01)

b. Other Systems Inside Drywell Requiring Modification

In addition to the work required to be done for the Recirculation System, the following hanger and restraint modifications inside the Unit 1 drywell were required to ensure the primary pipe stresses are within the FSAR commitments:

(1) Q1-HPCI-05C

One 4195 lb. capacity variable spring (VS) hanger replaced the existing VS hanger on a 10" line.

(2) Q1-CRDC-04B

Addition of one two-directional seismic restraint with maximum design loading of 1512 lbs. on a 3" line.

(3) Q1-SLC-01B

Addition of one two-directional seismic restraint with maximum design loading of 252 lbs. on a 1 1/2" line.

(4) Q1-FW-01C

One 3018 lb. capacity constraint spring (CS) hanger replaced the existing CS hanger on a 12" line.

(5) Q1-RCIC-01B (C)

One 575 lb. VS hanger replaced the existing VS hanger on a 3" line.

Three rigid struts of 1894, 675, and 1428 lb. capacities replaced existing spring can sway braces on 3" lines.

(6) Q1-RWCU-01B (C)

Two rigid struts of 1882 and 5240 lb. capacities replaced existing spring can sway braces on 6" lines.

(7) Q1-RHRS-12B

Addition of five new rigid struts with maximum design loading of 611, 616, 554, 1,395, and 472 lb. on 4" lines.

Addition of one snubber, PSA-1/2, on a 4" line.

(8) Q1-RBCW-01B

Addition of two one-directional restraints with maximum design loading of 7660, and 10,588 lb. on 8" lines.

Addition of one rigid strut of 9,800 lb. capacity on an 8" line.

(9) Q1-RBCW-01B

Addition of two one-directional restraints with maximum design loading of 14,569 and 10,400 lb. on 8" lines.

Addition of one rigid strut of 8,234 lb. capacity on an 8" line.

(10) A1-CCCD-01B (C)

Addition of two rigid struts of 281 and 393 lb. capacity on 3" lines.

Addition of one two-directional restraint with maximum design loading of 310 lb. on a 3" lines.

2. Review of Records and Observation of Work

The Recirculation System piping hanger and snubber installation is based on GE drawing 719E481, "Recirculation Loop Suspension Systems", Sheets 1 to 3, originally issued on April 29, 1967, with revisions up to calendar year 1970. In review of the site IEB 79-14 Unit 1 walkdown records, the inspector noted that snubbers with GE Mark No. SS-5 on the ring header, and SS-1 on the 28" pump suction elbow just below the pump inlet were marked missing. However, in review of the latest plant snubber maintenance and surveillance record, both SS-5 and SS-1 were shown properly serviced and were noted to be in acceptable condition. To resolve the apparent conflict of documentation and to understand the cause of the difference in observation, the inspector performed a piping system walk-down and identified the following:

- a. Snubber SS-5 was found on the recirculation loop ring header. The IEB 79-14 inspection personnel apparently missed the snubber as it was installed on a not so easy to see location. As a result of the observation, the inspector noted that perhaps one of the six new snubbers required by the EDS analysis was not required. The licensee stated they would bring this to the attention to the EDS design engineers.
- b. Snubber SS-1 on the 28" pump suction elbow could not be found as shown on GE drawing 719E481, sheets 1 to 3, and was apparently connected to the pump body a few feet above the original design location. The licensee was requested to determine whether or not this could affect the original stress calculation. This is an unresolved item. (254/80-28-01)

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. Two unresolved items disclosed during this inspection are discussed in paragraphs 1.a and 2.b.

Exit Interview

The inspector met with licensee representatives at the conclusion of the inspection. The inspector summarized the scope and findings of the inspection. The licensee acknowledged the findings reported herein.