

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

REGION III

Report Nos. 50-373/79-12; 50-374/79-09

Docket Nos. 50-373; 50-374

License Nos. CPPR-99; CPPR-100

Licensee: Commonwealth Edison Company  
P. O. Box 767  
Chicago, IL 60690

Facility Name: LaSalle County Station, Units 1 and 2

Inspection At: LaSalle Site, Seneca, IL

Inspection Conducted: March 14-15, 1979

Inspectors:

J. H. Neisler

*J. H. Neisler*

March 30, 1979

H. S. Phillips

*H. S. Phillips*

March 30, 1979

Approved By:

R. C. Knop, Chief  
Projects Section

*R. C. Knop*

April 5, 1979

Inspection Summary

Inspection on March 14-15, 1979 (Report Nos. 50-373/79-12; 50-374/79-09)

Areas Inspected: Work and procedures relative to the modification of the reactor recirculating system nozzle safe ends and thermal sleeves on Unit 1, work activities relative to the suppression pool modification in Units 1 and 2. Independent inspection (housekeeping, control of welding materials), and followup on previously identified problems. The inspection involved a total of 24 inspector hours by two NRC inspectors.

Results: No items of noncompliance or deviations were identified during this inspection.

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DETAILS

Persons Contacted

Principal Licensee Employees

- \*L. J. Burke, Site Project Superintendent
- R. T. Rose, Project Structural Engineer
- D. J. Skoza, QA Engineer
- B. L. Wood, QA Engineer
- \*T. Quaka, QA Supervisor
- \*J. R. Kodrick, QA Mechanical Coordinator
- \*E. R. Wendorf, Field Engineer
- \*B. J. McAndrew, Lead Mechanical Engineer
- \*E. Fall, Field Engineer

Other Personnel

R. C. Schulz, Quality Control Marrison Construction Company

The inspector also contacted other licensee representatives in the course of the inspection.

\*Denotes those present at exit interview.

Licensee Action on Previously Identified Items

(Closed) Noncompliance (373/78-29-01). Reactor water level instrumentation pipe identified on MCCO isometric drawing number NB-19, Rev. 0, was connected to the wrong instruments. The inspector verified that the instrument pipe has been reconnected to the correct instruments. NCR's 334 and 335 were closed on 12/19/78 and 12/21/78 respectively. The inspector was shown documentation indicating that a walkdown of all installed Unit 1 instrument piping was completed on January 22, 1979. This item is closed.

(Open) Report 10 CFR 50.55(e) item (373/78-XX-03); 374/78-XX-04). Deficiencies in deminsional tolerances on RHR, HPCS and LPCS pumps. (See Section II paragraph 2, this report).

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## SECTION I

Prepared by J. H. Neisler

Reviewed by R. C. Knop, Chief  
Projects Section

### 1. Modification of Recirculation System (Unit 1)

Weld #1, new thermal sleeve adapter to thermal sleeve, has been completed on nozzle 2C. The weld has been visually inspected and accepted by contractor QC and licensee field engineering personnel. Other methods of NDE are precluded by the weld's inaccessibility.

The inspector observed fit-up prior to welding the new thermal sleeve adapter to the thermal sleeve on nozzle 2H. Work was being performed according to procedure. Two contractor QC personnel were observing the work and verifying measurements at hold points listed on the inspection checklist.

No items of noncompliance or deviations were identified in the above area.

### 2. Inspection of Construction Activities

During the inspection the inspector toured the Unit 1 and 2 reactor buildings and containments. It was noted that the licensee has initiated a cleaning program for cable trays in the containment and reactor building. The cleaning effort has been augmented by two full time cleanliness inspectors who file daily reports of conditions in the areas inspected. The inspector observed wood materials stacked in the cable tray at approximately elevation 750 feet in Unit 1 containment. At the exit meeting, the inspector was informed that the materials had been removed from the cable tray.

The inspector observed one portable weld rod oven in Unit 2 suppression pool was unplugged. Licensee QA representative took the necessary corrective action before the inspector left the suppression pool work area.

### 3. Suppression Pool Modifications

The inspector observed activities relative to the suppression chambers in both units. In Unit 1 the liner plate has been removed, core drilling for embed studs complete, and the embed studs installed and grouted. In Unit 2 core drilling for the embed studs was in progress. It was determined that QC inspection

of work was adequate and that work was being performed in accordance with drawings and specifications.

No items of noncompliance or deviations were identified in this area.

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## SECTION II

Prepared by H. S. Phillips

Reviewed by R. C. Knop, Chief  
Projects Section

### 1. Tour of Construction Site

The RIII inspector toured the construction site to assess construction work in progress. Unit 1 drywell area was closely inspected since work activity is currently concentrated in this area. Unit 2 work activity was obviously lower and less construction progress has been made.

Unsatisfactory housekeeping was observed in Unit 1 in the area adjacent to the vessel support skirt. Old grinding heads, scrap metal, debris and a number of whole E7018 weld rod were found in this area. The weld rod had obviously been dropped by workmen working above this area. Because the area was not very accessible and because the weld rod was in standing water, it is unlikely that this weld rod would be picked up by welders and used. The licensee stated that two inspectors had recently been assigned to housekeeping but apparently had not inspected this area yet. The licensee took immediate action to cleanup this area. The inspector has no further questions regarding this matter.

No items of noncompliance or deviations were identified.

### 2. Followup on Ingersoll Rand Pump Deficiencies

On October 20, 1978, Commonwealth Edison Company reported that manufacturing deficiencies had been identified inside new residual heat removal pumps manufactured by Ingersoll Rand (I-R) Company, Cameron Pump Division. This report was made in accordance with 10 CFR Part 50.55(e) requirements.

NRC supervision recommended to the inspector that a draft circular be developed to alert licensees regarding similar deficiencies which may exist in similar pumps. A draft circular was submitted to IE Headquarters on January 31, 1979.

On March 14-15, 1979, a followup inspection was conducted to obtain additional information concerning the deficiencies. The inspector obtained additional information as follows:

- a. Out of tolerance measurements were obtained by reviewing correspondence and maintenance inspection reports. Dimensional tolerances were found to be based on I-R field manual tolerances. I-R representatives informed Edison that although measurements may exceed field manual tolerance the same measurements were within tolerances on drawings.

The RIII inspector was unable to understand why design tolerances would be less restrictive than field maintenance manual tolerances. The RIII inspector asked the cognizant Edison field engineer, who had been to the manufacturer, what the tolerances were? The Edison engineer stated he had been unable to see the drawings because the manufacturer considered the drawings proprietary. The manufacturer requested Edison's measurements. Edison furnished the measurements but was not allowed to compare those measurements to the drawings on the initial visit. Comparison was allowed during the QA audit conducted later.

- b. Edison audit of Ingersoll Rand, performed 12/13-14/78, documented four (4) significant findings. Forty-two (42) audit questions were covered in this audit. Edison management became involved in this audit in a very positive manner. The findings were as follows:

-Quality Inspection Personnel records not up-to-date as required by Procedure CQCP-1079, Rev. 2, Training and Qualification.

A number of records of 62 inspector's annual eye examination were not in file.

-Sign off to show item acceptance/rejection on route cards was very confusing. "It was very difficult to determine acceptance or rejection by reviewing route cards."

-Nonconforming items were not segregated as required by the I-R QA Manual Section XIII. "This lack of control of non-conforming items can possibly explain in part the problems encountered with LaSalle pumps."

-The corrective action file revealed that, "Numerous internal request for corrective action reports had been indicated as being completed and closed in their log. A review of these reports revealed that the corrective action had not been completed on several of these items as indicated in their log, for example, report 606.... This apparent lack of corrective action is indicative of how possibly some of the problems occurred with the LaSalle County Station pumps." The same report did state that I-R QC checked before the exit and this type of incident was limited and had been corrected.

The RIII inspector viewed these QA programmatic deficiencies as being potentially serious. Apparently, Edison also shared this concern since a followup surveillance was performed on February 15, 1979. The first three items above remain open to date.

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The audit stated that the problems associated with the subject pumps furnished by I-R to LaSalle were either directly or indirectly traceable to one or more of the findings.

- c. During the inspection the RIII inspector found that additional deficiencies had been identified by the cognizant engineers and field inspection personnel as a result of disassembling additional pumps as follows:

-Three (3) of seven (7) new shaft couplings which had just been uncrated were found to have burrs on the threads. The threads were galled probably because a dull cutting tool was used during machining.

-Shaft coupling threads had been machined from one end and then rechucked and machined it from the other end. This operation resulted in misaligned threads compared to the part's center line. As a result the runout on a LPCS shaft was 0.120 inches as compared with 0.010 and 0.008 max on the individual shafts joined by the coupling.

-The complete specification was not available for review; however, the G.E. RHR Purchase Specification Data Sheet, Document No. 21A9243CL, Rev 3, was reviewed for pertinent specification requirements. It appears that only performance testing was required in this specification. The inspector asked if reliability test requirements were included in the specification. The answer was no.

The RIII inspector stated that a performance test might not prove the reliability of the pumps. This matter is unresolved pending the review of the full specification and pending consultation with pump/reliability testing experts. (373/79-12-01; 374/79-09-01).

- d. Selected calibration records were reviewed to assure that instruments used during the maintenance inspection were calibrated against nationally recognized standards. Log Sheets 74, 125 and 137 recorded on Form No. PC-161 documented that measuring instruments numbers OM-1 through OM-12 were calibrated against a traceable standard within the required frequency in a suitable environment.

- e. GE Records reviewed were as follows:

-Purchase Order 205-AC 755, RHR Pump E12-C002.

-Purchase Specification Data Sheet, Document No. 21A9243CL, Rev. 3.

-Design specification for E12-C002 certified that pump valves were in accordance with ASME Code.

-S&L letter dated October 6, 1976, which documented AE review of GE documents.

-Certification of Compliance, G441 RHR Pump No. 12722910F2 and Pump Shell No. 51125 20F2 dated November 29, 1975.

- f. Ingersoll Rand Certificate of Compliance which stated that previously referenced pump was manufactured per GE Purchase Order 205-AC-755 and welded per ASME Section IX; NDE was performed per SNT-TC-1A dated November 29, 1975. Deviation 9686 was a deviation but did not list any dimensional deviations or nonconformance such as those found during pump disassembly.
- g. Similar records as noted above were reviewed for the high pressure core spray pump and vertical motor, serial number 0972125.

No items of noncompliance or deviations were identified above in 2a thru 2g.

#### 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. An unresolved item disclosed during the inspection is discussed in Section II, paragraph 2c.

#### Exit Interview

The inspectors met with the licensee representatives (denoted under Persons Contacted) at the conclusion of the inspection on March 15, 1979. The scope of areas reviewed were discussed along with the results of the inspection.

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