

U.S. NUCLEAR REGULATORY COMMISSION
REGION III

Report No. 50-373/92016(DRP); 50-374/92016(DRP)

Docket Nos. 50-373; 50-374

License Nos. NPF-11; NPF-18

Licensee: Commonwealth Edison Company
Opus West III
1400 Opus Place
Downers Grove, IL 60515

Facility Name: LaSalle County Station, Units 1 and 2

Inspection At: LaSalle Site, Marseilles, Illinois

Inspection Conducted: July 21 through August 31, 1992

Inspectors: D. Hills
C. Phillips
R. Elliott
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Approved By:

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Reactor Projects Section 1B

9/3/92
Date

Inspection Summary

Inspection from July 21 through August 31, 1992 (Reports No. 50-373/92016 (DRP); 50-374/92016(DRP)).

Areas Inspected: A routine, unannounced safety inspection was conducted by the resident inspectors and an Illinois Department of Nuclear Safety inspector. The inspection included followup on previously identified items and licensee event reports; review of operational safety, monthly maintenance, and surveillance activities; safety assessment and quality verification; Emergency Safety Feature Walkdown; Temporary Instruction 2515/115; and report review.

Results: No violations were identified. One open item was identified regarding the resolution of a problem with corrosion of the reactor core isolation cooling (RCIC) system governor valve stem (paragraph 7).

Plant Operations

Performance in this area remained steady. Improved licensee management effectiveness in procedural adherence was observed during a post maintenance test shift briefing. Housekeeping and material condition were mixed. A communications weakness between operating and maintenance personnel resulted in blocked access into an electrical panel. Under specific circumstances, access could have been needed to perform emergency operating procedure activities. Previous licensee walkdowns did not identify tube fretting of a diesel generator oil sensing line.

Maintenance/Surveillance

Performance in this area remained steady. Troubleshooting and repair efforts of a RCIC valve were considered good.

Safety Assessment/Quality Verification

Performance in this area remained steady. The results of a review of Onsite Nuclear Safety group effectiveness was good. A review of Licensee Event Report corrective actions indicated timeliness was good.

DETAILS

1. Persons Contacted

- *G. J. Diederich, Manager, LaSalle Station
- *W. R. Huntington, Technical Superintendent
- *J. V. Schmelz, Production Superintendent
- D. S. Berkman, Assistant Superintendent, Work Planning
- H. Hentschel, Assistant Superintendent, Operations
- *J. Walkington, Services Director
- J. Lockwood, Regulatory Assurance Supervisor
- M. Santic, Assistant Superintendent, Maintenance
- W. Betourne, Quality Assurance Supervisor
- *D. Carlson, Regulatory Assurance
- *B. Wood, Onsite Nuclear Safety

*Denotes those attending the exit interview conducted on August 31, 1992.

The inspectors also talked with and interviewed several other licensee employees during the course of the inspection.

2. Licensee Action on Previously Identified Items (92701 and 92702)

(Closed) Violation (374/92011-01): Inadequate procedure in regard to securing the reactor water cleanup system (RWCU). The inspector reviewed the implementation of the corrective actions for this violation and has no further concerns. This item is closed.

(Closed) Violation (374/92011-02): Failure to follow two procedures when bypassing a valid RWCU differential flow isolation signal. The inspector reviewed the implementation of the corrective actions for this violation and has no further concerns. This item is closed.

(Closed) Unresolved Item (50-373/92013-04(DRP)): Scaffolding was erected in the Unit 1 auxiliary electrical equipment room blocking the door to panel 1PA13J, "NSSS Auxiliary Relay Cabinet Division I," such that it could not be opened far enough for jumper installation or lifting leads. A sign on the door indicated that access to the cabinet was required for support of emergency operating procedures (EOP).

LaSalle administrative procedure (LAP)-900-28, "Erection, Inspection, and Use of Scaffolding and Ladders" step F.9 states "The Shift Engineer/Shift Supervisor/Work Planning Personnel/ or a specific individual identified as the scaffold coordinator by a letter from the Production Superintendent will inspect all areas where scaffolds are erected for interference with Plant Operations/Safe Operations of Plant Systems..." The scaffold permit indicated this inspection was performed. The scaffold was in place from June 26 to July 2, 1992. When interviewed the scaffolding inspector revealed that he was told the

scaffold would only be in place for a few hours and since the scaffold could be quickly disassembled its location was not a problem. However, the scaffold inspector was not able to return to the area for several days and no action was taken to remove the scaffold. This was an example of a weakness in communications between the maintenance and operations departments. Due to the fact that there was no time requirement in the EOP's for access to the panel and that the time required to disassemble the scaffold was minimal, the safety significance was minimal. This item is closed.

(Closed) Open Item (50-374/92013-05(DRP)): RCIC vacuum exhaust line primary containment isolation valve 2E51-F086 breaker tripped on thermal overloads while being cycled. The troubleshooting and corrective actions taken to prevent reoccurrence following the latest such failure were considered good. The inspector has no further concerns. This item is closed.

No violations or deviations were identified in this area.

3. Licensee Event Reports Followup (92700)

The following licensee event reports were reviewed to ensure that reportability requirements were met, and that corrective actions, both immediate and to prevent recurrence, were accomplished in accordance with the technical specifications:

(Closed) LER 373/92007 Spurious Auto Start Of Control Room Ventilation Emergency Make-up Train Due To High Radiation Spike

(Closed) LER 374/92007 Spurious Auto Start Of Control Room Ventilation Emergency Make-up Train Due To High Radiation Spike

(Closed) LER 373/92008 RCIC Initiation and Vessel Injection Due to Pressure Perturbation

(Closed) LER 374/92008 Thermal Overload Trip of RCIC Exhaust Vacuum Breaker Upstream Valve 2E51-F086

(Closed) LER 374/92009 Failure of RCIC Isolation Valve 2E51-F086 Due to Packing Binding

In addition, recent Deviation Reports (DVRs) were reviewed in order to monitor conditions related to plant or personnel performance and to detect potential development of trends. Appropriate generation and disposition of DVRs, in accordance with the Quality Assurance Manual, were also reviewed.

No violations or deviations were identified in this area.

4. Operational Safety Verification (71707)

The inspectors reviewed the facility for conformance with the license and regulatory requirements.

- a. On a sampling basis the inspectors observed control room activities for proper control room staffing, coordination of plant activities; adherence to procedures or Technical Specifications; operator cognizance of plant parameters and alarms; electrical power configuration; and the frequency of plant and control room visits by station managers. Various logs and surveillance records were reviewed for accuracy and completeness.

Significant observations were:

- (1) The inspector observed a shift brief on the post maintenance testing of the Unit 1 motor driven feed pump. The conduct and contents of the brief were excellent. The operator in charge of the evolution questioned the appropriateness of parts of the procedure and brought this to the attention of his supervisors. The questions were resolved prior to the start of the evolution. This was a positive example of the questioning attitude with regard to procedural adherence concepts for which management was attempting to increase emphasis in all departments.
- (2) On August 27, 1992, a reactor scram occurred on Unit 2 with several equipment complications. An augmented inspection team (AIT) was dispatched to further review the event. A detailed discussion of this event can be found in inspection report 50-374/92020 for the AIT. Those aspects not within the scope of the AIT will be covered in the next resident inspection report.

- b. On a routine basis the inspectors toured accessible areas of the facility to assess worker adherence to radiation controls and the site security plan, housekeeping or cleanliness, and control of field activities in progress. Significant observations were:

Housekeeping during the period was mixed. The licensee has made a significant improvement in cleanliness and in the reduction of contaminated areas in the reactor building. However, a leak of caustic liquid in the turbine building caused damage to a non-safety related cable tray and to a non-safety related pipe over a period of several days.

- c. Walkdowns of select engineered safety features (ESF) were performed. The ESFs were reviewed for proper valve and electrical alignments. Components were inspected for leakage, lubrication, abnormal corrosion, ventilation and cooling water supply

availability. Tagouts and jumper records were reviewed for accuracy where appropriate.

No violations or deviations were identified in this area.

5. Monthly Maintenance Observation (62703)

Station maintenance activities affecting the safety-related and important to safety systems and components listed below were observed or reviewed to ascertain that they were conducted in accordance with approved procedures, regulatory guides and industry codes or standards, and did not conflict with Technical Specifications.

The following maintenance activities were observed and reviewed:

Unit 1

WR L01972 VOTES Test On 1E12-F026A
WR L13500 Perform LaSalle Electrical Procedure (LEP)-EQ-146 and Refurbish Motor Operated Valve 1JG009
WR L17106 Troubleshoot and Repair Unit 1 Motor Driven Reactor Feed Pump (RFP)
WR L09079 Troubleshoot and Repair Unit 1 Motor Driven RF

Unit 2

WR L16677 Motor Operated Valve 2E51-F086 RCIC Turbine Exhaust Vacuum Breaker Upstream Stop Valve Packing Replacement

No violations or deviations were identified in this area.

6. Monthly Surveillance Observation (61726)

Surveillance testing required by Technical Specifications, the Safety Analysis Report, maintenance activities or modification activities was observed and/or reviewed. Areas of consideration while performing observations were procedure adherence, calibration of test equipment, identification of test deficiencies, and personnel qualification. Areas of consideration while reviewing surveillance records were completeness, proper authorization/review signatures, test results properly dispositioned, and independent verification documented. The following LaSalle operating surveillances (LOSs), instrument surveillances (LISs) and special procedures (LLPs) were observed/reviewed:

Unit 1

LOS-DG-M1 0 Diesel Generator Operability Test
LOS-RI-Q4 RCIC System Cold Quick Start in Condition 1, 2, and 3
LOS-TG-W1 Turbine Weekly Surveillance
LOS-AA-W1 Rod Operability Check

LOS-TG-W3 Turbine Weekly Powerload Unbalance Surveillance
 LOS-RD-M2 Control Rod Drive Withdrawal Stall Flow Test
 LOS-RP-M3 Turbine Stop Valve Scram Functional Test
 LLP-90-14 Motor Operated Valve Diagnostic Test Operability Procedure
 VOTES 100 System
 LLP-92-032 RCIC System Cold Quick Start in Conditions 1, 2, and 3
 LIS-NR-107 Unit 1 Average Power Range Monitor/Rod Block Monitor Flow
 Converter to Total Core Flow Adjustment
 LIS-NR-111 Unit 1 Local Power Range Monitor Flux Amplifier Gain
 Adjustment

Unit 2

LOS-CS-Q1 Secondary Containment Damper Operability Test
 LOS-RI-Q2 RCIC System Valve Inservice Test For Refuel and Cold
 Shutdown Conditions
 LOS-SC-M1 Standby Liquid Control Pump Operability Test and Explosive
 Valve Continuity Check
 LOS-VG-M1 Standby Gas Treatment System Operability Test and Inservice
 Test of 1(2)VG001 and 1(2)VG003

Significant observations included:

The inspectors identified fretting of a 1/4" oil sensing line for a low
 oil pressure cutout switch and other instrumentation on the "0" diesel
 generator (DG). The operability of the DG was not affected because
 failure of the tube was not imminent and the low oil pressure cutout was
 bypassed during emergency operation. Upon identification, the licensee
 placed a rubber grommet around the tube to prevent additional fretting.
 In addition, replacement of the tube was added to the scope of the DG
 instrument tubing upgrade modification planned for the next Unit 1
 refueling outage. The tube fretting had not been identified by the
 licensee during the modification walkdowns performed in January and May
 of 1991 or during routine operator and system engineer walkdowns. It
 could not be determined if the fretting was visible at the time of the
 modification walkdowns.

No violations or deviations were identified in this area.

7. Safety Assessment and Quality Verification (40500)

- a. The inspector reviewed several Onsite Nuclear Safety (ONS) monthly reports to evaluate the effectiveness of the ONS group in improving safety. Several examples were found where ONS review of station activities resulted in improved safety. Examples included an observation by ONS of RCIC turbine maintenance, resulting in changes to a procedure to increase its scope of work, and a review of the control rod blade pin and roller replacement modification procedures, resulting in improved work controls. In addition, a review by ONS of a "Lessons Learned" report on a Zion DG problem

revealed that a similar problem existed at LaSalle that had not been previously identified. Based on this review, the effectiveness of the ONS group was considered very good.

- b. The inspectors reviewed the results of a special working group formed by the licensee to determine the root cause(s) of several recent RCIC turbine overspeeds on Unit 1, the most recent of which occurred April 6, 1992. This group determined the root cause of the overspeeds was mechanical binding of the governor valve stem due to corrosion products in the gap between the valve stem and its graphite packing washers.

The stem and washer area was often exposed to moisture from condensed steam. The stem was made of Type 410 stainless steel and was susceptible to pitting and corrosion in stagnant, oxygenated water conditions. In addition, galvanic corrosion between the graphite packing and the Type 410 stainless steel potentially accelerated the problem.

Corrosion also existed on the Unit 2 RCIC governor valve stem. However, no problems with binding have been encountered. The licensee mechanically exercised the governor valve stems, on both units, on a weekly basis as a short term method to prevent recurrence of the binding problem.

Similar problems have previously been reported at Davis-Besse, Arkansas Nuclear One, D.C. Cook, Catawba, and Vogtle. The licensee was discussing possible valve stem material changes with the nuclear steam supply vendor and the turbine manufacturer, at the end of the inspection period. The licensee also committed to performing a 10 CFR 21 evaluation on the valve stem. The resolution of this issue and the determination if this is a defect reportable under 10 CFR 21 is considered an open item (92016-02(DRP)).

- c. Implementation of corrective actions to Licensee Event Reports were reviewed with good results. Timeliness in regard to currently open items was good. Completeness of closed items were verified by a random sampling with good results.

No violations or deviations were identified in this area.

8. Engineered Safety Feature (ESF) Systems (71710)

During the inspection, the inspectors selected accessible portions of an ESF system to verify its status. Consideration was given to the plant mode, applicable Technical Specifications, Limiting Conditions for Operation Action Requirements (LCOARs), and other applicable requirements.

Items observed included, where applicable, hangers and supports; housekeeping; breaker positions and conditions; potential ignition sources; major component labeling, lubrication, and cooling. The interior conditions of electrical breakers and control panels was reviewed, as was agreement between local and remote indicated breaker positions. The inspectors also verified whether instrumentation was properly installed, calibrated, and functioning and whether significant process parameter values were consistent with expected values.

Verification that necessary support systems were operational and that vendor manuals were controlled and implemented was performed. In addition, licensee system engineers were interviewed to determine their system knowledge, and if they were aware of problems in similar systems at other utilities.

During the inspection, the following ESF components were walked down:

Unit 1

125 volt DC Power Systems
250 volt DC Power Systems

Unit 2

125 volt DC Power Systems
250 volt DC Power Systems

The inspectors found no problems with these systems. The system engineer was found to be knowledgeable and the system note book was found to be in good order.

No violations or deviations were identified in this area.

9. Temporary Instructions

(Closed) Temporary Instruction (TI) 2515/115

A prior review of the items listed in the TI was recently conducted and documented in inspection report 50-373/92010. Findings were transmitted to appropriate NRC personnel for review and assessment and were assigned to be tracked as unresolved item 50-373/92013-02(DRP). TI 2515/115 is considered closed.

10. Report Review (90713)

During the inspection, the inspector reviewed selected licensee reports and determined that the information was technically adequate and that it satisfied the reporting requirements of the license, Technical Specifications and 10 CFR, as appropriate.

No violations or deviations were identified in this area.

11. Open Items

Open items are matters which have been discussed with the licensee, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or licensee or both. An open item disclosed during the inspection is discussed in Paragraph 7.

12. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) during the inspection period and at the conclusion of the inspection period on August 31, 1992. The inspectors summarized the scope and results of the inspection and discussed the likely content of this inspection report. The licensee acknowledged the information and did not indicate that any of the information disclosed during the inspection could be considered proprietary in nature.