

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report Nos. 50-373/84-20(DRP); 50-374/84-26(DRP)

Docket Nos. 50-373; 50-374

License Nos. NPF-11; NPF-18

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

Facility Name: LaSalle County Station, Units 1 and 2

Inspection At: LaSalle Site, Marseilles, IL

Inspection Conducted: July 31 through September 18, 1984

Inspectors: M. J. Jordan

C. D. Evans

Approved By: *N. J. Christotimos*
N. J. Christotimos, Chief
Reactor Projects Section 2C

10-1-84
Date

Inspection Summary

Inspection on July 31 through September 14, 1984 (Report Nos. 50-373/84-20(DRP); 50-374/84-26(DRP))

Areas Inspected: Routine, unannounced inspection conducted by resident inspectors of licensee actions on previous inspection findings; operational safety; monthly surveillance; startup testing witnessing; plant trips; followup on regional requests; and Licensee Event Reports. The inspection involved a total of 150 inspector-hours onsite by two NRC inspectors including 30 inspector-hours onsite during off-shifts.

Results: In the seven areas inspected, no items of noncompliance were identified.

DETAILS

1. Persons Contacted

- *G. J. Diederich, Superintendent, LaSalle Station
- *R. D. Bishop, Administrative and Support Services Assistant
Superintendent
- C. E. Sargent, Operating Assistant Superintendent
- J. Schmeltz, Operating Engineer - Unit 1
- *W. Huntington, Technical Staff Supervisor
- R. Kyrouac, Quality Assurance Supervisor
- D. Berkman, Operating Engineer - Unit 2
- W. Sheldon, Maintenance Assistant Superintendent

The inspectors also talked with and interviewed members of the operations, maintenance, health physics, and instrument and control sections.

*Denotes personnel attending exit interview held on September 14, 1984.

2. Licensee Action on Previous Inspection Findings

(Closed) License Condition (374/81-00-15): This item tracked the licensee's action concerning License Condition 18b on environmental qualification of safety/relief valve position indicators. The licensee received correspondence from Sargent & Lundy dated July 23, 1984, stating the Linear Variable Differential Transformers (LVDT) were qualified for five years. The licensee's engineering department reviewed the analysis and agreed with the analysis in correspondence to the station dated August 9, 1984. This item is considered closed.

(Closed) License Condition (374/81-00-23): This item tracked the licensee's action for providing indication and alarms in the control room as to the condition of the Class 1E DC power supply for Divisions I, II, and III. All indications and alarms have been installed, tested, and are functional. This item is considered closed.

(Closed) License Condition (374/81-00-51): This item tracked the licensee action establishing the operability of the System Parameter Display System (SPDS) contained in part 11b of Attachment 2 to Unit 2 license. The licensee has the parameter identified in the computer and the displays are functional in the control room. This item is considered closed.

(Closed) SER (373/81-00-114): The issued operating license did not require a submittal to the NRC of a new stability analysis prior to the first refueling. This item was on the draft license but not on the issued license.

(Closed) Noncompliance (373/82-10-08): Failure to calibrate timing devices used to measure primary containment isolation valve closure times. These timing devices are now included in a calibration program.

(Closed) Open Item (373/82-46-01): This open item identified the need to evaluate the placement of thermocouples in STP-71. The thermocouples were relocated under ECN PFL-68-LS, therefore addressing the acceptability of the test results.

(Closed) Open Item (373/82-54-06, 374/82-22-06): This open item tracked licensee commitments to evaluate the 32 cracked and/or separated fire penetrations seals against ASTM-E-119. This evaluation has been completed by the licensee satisfying the concern of the inspectors.

(Closed) Noncompliance (373/82-54-07): Failure to post a continuous fire watch when sealing devices in fire rated penetrations are determined to have breakthrough. The site electrical contractor revised Work Instruction 400 to provide more control over fire stop breakthroughs.

(Closed) Open Item (373/83-49-01): The procedure was revised to delineate duties of the outage coordinator.

(Closed) SER (373/81-00-144): Procedures are in place that incorporate the concerns raised in Inspection Report 373/84-10 regarding actions to be taken if both diesel fire pumps become inoperable.

(Closed) Noncompliance (374/84-08-02): Failure to adequately control jumpers. The corrective actions the licensee had agreed to in Inspection Report 84-08 have been completed.

(Closed) Open Item (373/83-53-10): Station Procedures have been changed to incorporate verifying that control rod "Full In" position indicators are functional during shutdown or scram after control rods have inserted.

(Closed) Open Item (373/84-02-04): Station procedures have been modified to ensure that fire detectors removed from service are documented so that upon completion of the work they will be returned to service.

(Closed) Open Item (373/84-10-05): The procedure was changed to require Quality Control to review the completed documentation and inspect the work prior to signing their release block.

(Closed) Noncompliance (374/84-04-02A): Failure to document drawing audits. The procedure was changed to include documenting the quarterly audits of drawing files.

(Closed) Open Item (373/84-10-07): The procedure was revised to correct the discrepancies noted between LAP 1300-1 and Q.P. 3-52.

3. Operational Safety Verification

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the inspection period. The inspector verified the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components. Tours of Units 1 and 2 reactor buildings and turbine buildings

were conducted to observe plant equipment conditions, including potential fire hazards, fluid leaks, and excessive vibrations and to verify that maintenance requests had been initiated for equipment in need of maintenance. The inspector by observation and direct interview verified that the physical security plan was being implemented in accordance with the station security plan.

The inspector observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls. During the inspection period, the inspector walked down the accessible portions of the A, B and C Residual Heat Removal (RHR) systems of Unit 1 and Unit 2 to verify operability. The inspector also witnessed portions of the radioactive waste system controls associated with radwaste shipments and barreling.

These reviews and observations were conducted to verify that facility operations were in conformance with the requirements established under Technical Specifications, 10 CFR, and administrative procedures.

During the inspection period, the licensee violated the Limiting Condition for Operating as specified in Technical Specification for drywell purging. Additionally, several procedural violations were also identified; these violations will be documented in special inspection reports (373/84-23; 374/84-30).

On August 6, 1984, at 10:45 p.m. CDT, two station operators were finishing a backwash and precoat evolution of the B Reactor Water Cleanup (RWCU) demineralizer; and had just completed lining up the demineralizer for service, where upon the precoat tank immediately began to expel steam, water, and resin into the surrounding area. Concurrently the RWCU system isolated on high differential flow. The expulsion of water and resin contaminated the area, resulting in the subsequent contamination of three individuals. Contamination levels of the individuals were in the range of 5000 dpm; all the individuals were decontaminated and sent home. The release of steam, water, and resin from the precoat tank has been determined by the licensee to have been caused by a mispositioned valve on the 1/2 inch vent line of the demineralizer vessel. The valve operator was broken and the valve was believed to have been closed when it was actually open.

On August 17 at 4:15 a.m. CST, the licensee declared an unusual event. The unit had scrammed earlier on August 16 at 8:54 a.m. from a generator load reject and was in hot shutdown at 450° F pending completion of pre-startup activities. During the day of August 16, while performing an evolution with the suppression pool cooling mode of the B loop of the Residual Heat Removing System, the full flow test valve failed to completely close with remote operation and had to be manually secured closed. Later on August 17, at 2:00 a.m. CST, a similar evolution was conducted and the valve again did not completely close and efforts to manually secure the valve also failed. The inoperability of this valve effects primary containment isolation capability and makes inoperable the following modes of the B loop of the Residual Heat Removing System: Low Pressure Injection, Shutdown Cooling, and Suppression Pool Cooling. The licensee declared an unusual event at 4:15 a.m. and proceeded toward cold shutdown as required by Technical Specification 3.6.3,

"Primary Containment Isolation Valves". On August 19 at 2:40 a.m. CST, the unit was brought to cold shutdown and the unusual event was terminated.

4. Unit Trips

On August 5, 1984, the unit scrambled on high reactor flux from approximately 80% power. A General Electric technician, while working on the Electrical Hydraulic Control System for the turbine control valves, had replaced batteries on a digital volt meter and reconnected the leads to the millivolt circuit in lieu of the millieamp recorder. This caused a ground in the circuit and caused the turbine control valves to close. The bypass valves opened and three safety relief valves opened on the resulting pressure spike. All systems functioned as expected and no Emergency Core Cooling System (ECCS) initiation occurred.

On July 31, 1984 at 6:11 p.m. Unit 2 received a scram signal on low reactor water level. The unit was already shut down to repair a steam leak in a vent and drain line to the B moisture separator. An instrument mechanic was performing a calibration check on a reactor vessel differential pressure switch and while valving in a common reference leg sent a pressure transient to the C and D scram switches for low reactor water level. These switches provided the scram signal to their respective scram channels. No actual water level changed in the reactor vessel and no ECCS initiation occurred.

On August 10, 1984, at 7:53 a.m. LaSalle Unit 2 scrambled from approximately 96% power. At the time the unit was involved in startup testing and Startup Test Procedure STP-24 (Turbine Valve Surveillance) had just commenced. When one control valve was closed the unit tripped on a high pressure signal (setpoint 1043 psig). Reactor Core Isolation Cooling (RCIC) automatically initiated and injected water into the reactor vessel. No Emergency Core Cooling Systems were activated. The purpose of STP 24 is to determine the maximum power at which turbine control valve surveillances can be performed, and based on data gathered when STP 24 was performed at 90% power the maximum reactor pressure increase anticipated when the control valve closed (assuming proper bypass valve operation) was +7 psig. Actual increase observed at the time of scram was 30-38 psig. Contributing to the events was the conservative calibration of high pressure scram setpoints, conservative calibration of RCIC initiation setpoint that caused RCIC initiation at approximately -40" level (setpoint -50"), and data indicating that one bypass valve that should have opened 100% when the control valve closed actually opened only 50%. The licensee entered an outage to repair leaking recirculation pump seals prior to resumption of the test program.

On August 17, 1984, at 8:54 a.m. CDT, Unit 2 experienced a reactor scram from 54% power as a result of a generator load reject. The load reject was caused by an excitor phase fault trip. All systems functioned normally. No ECCS initiation occurred.

On July 31, 1984 Unit 2 received a scram signal due to low pressure on Control Rod Drive (CRD) charging water header. The unit was already in hot shutdown to repair a previous identified steam leak. Prior to returning the unit to power, the licensee was performing a Rod Block Monitor Functional

Test and the mode switch was placed in the refuel position. A scram signal was received due to low CRD pump header pressure. This new scram had just been installed as a result of a new Technical Specification change. All rods were already in the core so no rod movement occurred.

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

5. Monthly Surveillance Observations

The inspector observed Technical Specifications required surveillance testing on the Unit 2 average power range monitors for gain calibration and verified that testing was performed in accordance with adequate procedures, that test instrumentation was calibrated, that limiting conditions for operation were met, that removal and restoration of the affected components were accomplished, that test results conformed with Technical Specifications and procedure requirements and were reviewed by personnel other than the individual directing the test, and that any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

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

6. Startup Test Witnessing

During the inspection period, the inspectors witnessed all or part of the performance of the following LaSalle Unit 2 Startup Test Procedures to fulfill the requirements of MC 2514 and MC 2594:

Test Condition 6

STP 25 Main Steam Line Isolation at 95% Power
STP 27-2 Load Reject at 95% Power
STP 23 Loss of Extraction Steam to High Pressure Feedwater Heaters
STP 24 Turbine Valve Surveillance

The licensee expects to complete the startup testing program by September 30, 1984. The only remaining activity is the warranty run for 50 hours at 100% power.

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

7. Licensee Event Reports Followup

Through direct observations, discussions with licensee personnel, and review of records, the following Licensee Event Reports (LERs) were reviewed to determine that reportability requirements were fulfilled, immediate corrective action was accomplished, and corrective action to prevent recurrence had been accomplished in accordance with Technical Specifications.

374/84-21 Reactor Water Cleanup High Differential Flow Isolation
374/84-25 Reactor Scram

374/84-47 Reactor Scram Caused by Vendor Error
374/84-46 Reactor Water Cleanup Isolation-High Ambient Temperature
374/84-45 Low Control Rod Drive Header Pressure Scram
373/84-44 Reactor Water Cleanup High Differential Flow Isolation
374/84-42 Manual Scram Shutdown
33/84-46 Reactor Water Cleanup High Differential Flow Isolation
373/84-29 Reactor Scram From Low Vacuum Trip of Turbine Generator
373/84-042 High Radiation Area Unsecured and Unposted
373/84-040 Spurious Isolation of Reactor Water Cleanup System
(RWCU) on High Differential Flow
373/84-041 Inoperable Mechanical Fire Penetration
373/84-044 Failure of High Pressure Core Spray Water Leg Pump Valves
374/84-036 RWCU Isolation on High Differential Flow Isolation
374/84-037 RWCU Isolation on High Differential Flow Isolation

8. Followup on Headquarters Request

The inspectors followed up a headquarter request from E. L. Jordan dated July 2, 1984, concerning IE Bulletin 81-03. The licensee is continuing to monitor the build up of Corbicula (Asiatic Clams) in the cooling lake. Based on a recent sample taken in July 1984, the licensee anticipates a problem with the clams. The licensee is presently making plans to inspect during the outage planned in October 1984 one of the Reactor Building Closed Cooling Water System (RBCCW) heat exchangers as well as a strainer on the discharge of one of the Core Standby Cooling System (CSCS) pumps to determine the extent of the problems. The licensee also is making plans to shock annually the service water intake with carbon dioxide (CO₂) which will kill the clams. Also they are looking into a method of CO₂ shocking the intake of the CSCS.

9. Response to Regional Requests

ThT inspectors received a regional request to review the results of a vendor audit sent to the site in correspondence dated July 26, 1984.

The inspector reviewed the licensee's action concerning the 10CFR 50.55(e) report from St. Lucie Nuclear Generating Station on RN23, Radiation Monitoring SYstem (RMS) display channel "lockup" manufactured by Sorrento Electronics Inc. The licensee had documentation that the RM23 which are used at the site have been modified either by site personnel or they had been returned to the manufacturer to correct the "lockup" problem. This item is considered closed.

10. 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. Open items disclosed during the inspection are discussed in Paragraph 2.

11. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) throughout the month and at the conclusion of the inspection period and summarized the scope and findings of the inspection activities. The licensee acknowledged these findings.