

U.S. NUCLEAR REGULATORY COMMISSION
REGION III

Report No. 50-373/93004(DRP); 50-374/93004(DRP)

Docket Nos. 50-373; 50-374

License Nos. NPF-11; NPF-18

Licensee: Commonwealth Edison Company
Executive Towers West III
1400 Opus Place Suite 300
Downers Grove, IL 60515

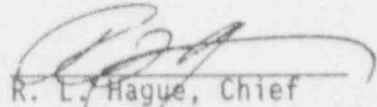
Facility Name: LaSalle County Station, Units 1 and 2

Inspection At: LaSalle Site, Marseilles, Illinois

Inspection Conducted: December 28, 1992 through February 8, 1993

Inspectors: D. Hills
C. Phillips
J. Roman, Illinois Department of Nuclear Safety

Approved By:


R. L. Hague, Chief
Reactor Projects Section 1C

2/10/93
Date

Inspection Summary

Inspection from December 28, 1992 through February 8, 1993 (Reports No. 50-373/93004(DRP); 50-374/93004(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; and report review.

Results: No violations were identified during the inspection. One unresolved item was identified regarding the adequacy of administrative controls which allowed duct tape to remain on the exhaust parts of a safety relief valve. One open item was identified regarding the cause of a reactor core isolation cooling (RCIC) system problem encountered during the Unit 1 startup. Another open item was identified regarding the failure of technical specifications to require the performance of channel checks on reactor vessel water level instrumentation.

Plant Operations

Performance remained steady in this area. Although initially slow in recognizing the need to implement corrective actions regarding the adverse personnel error trend, licensee corrective actions appear, thus far, to be effective. Operator actions as to evolution preparation and event response were excellent, thereby limiting the consequences of a safety relief valve failure.

Maintenance/Surveillance

Performance remained steady in this area. Reasonable explanations existed for remaining degraded equipment during the Unit 1 startup. Duct tape left on the exhaust ports, resulted in a stuck open safety relief valve. A review of the adequacy of licensee controls in this area is continuing. Despite extensive RCIC maintenance during the refueling outage to address a previous high failure rate, several problems were noted during the Unit 1 startup. Although licensee actions to address recurring problems with turbine driven reactor feed pump oil leaks were good, a decision to remove an oil collection apparatus did not reflect the possibility other leaks could develop. A review of emergency diesel generator and related equipment failures did not indicate any obvious maintenance program deficiencies. The licensee's approach to these failures was reasonable. The preparation and performance of work during check valve inspections were excellent.

Engineering/Technical Support

Performance remained steady in this area. The reduction of the motor operated valve differential pressure testing outage scope, could potentially impact the timeliness of Generic Letter 89-10 commitments. The inspectors will continue to evaluate the impact this action, in conjunction with substantial in-service inspection deferrals could have on the scope and complexity of future refueling outages. The inspectors identified that contrary to the plant licensing basis, the LaSalle technical specifications did not require performance of channel checks on reactor vessel water level instrumentation.

Radiological Controls

Performance remained steady in this area. Another example of a radworker failure to adhere to radiological administrative controls was identified.

DETAILS

1. Persons Contacted

W. Murphy, Site Vice President
*G. Spedl, Station Manager
J. Gieseke, Site Engineering and Construction Manager
J. Schmeltz, Operations Manager
C. Sargent, Support Services Director
M. Reed, Technical Services Superintendent
*J. Lockwood, Regulatory Assurance Supervisor
*M. Santic, Maintenance Superintendent
R. Crawford, Work Planning Assistant Superintendent
*J. Walkington, Executive Assistant to Vice President
*J. Miller, Station Support Engineering Supervisor
*M. Depuydt, Nuclear Licensing Administrator
*M. Cray, Master Instrument Mechanic
*D. Hieggelke, Radiation Protection Supervisor
*K. Kociuba, Station Qualification Verification Superintendent
*M. Martinovich, Technical Staff

*Denotes those attending the exit interview conducted on February 8, 1993.

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) Open Item (373/91002-02): Safety evaluations did not provide a detailed explanation why a change did not alter the facility or its operations as described in the safety analysis report. The safety evaluation procedure was revised to provide more extensive documentation. The procedure also provided a screening of changes which were exempt from evaluation. The inspectors reviewed safety analysis documentation completed both before and after the procedure revision. No problems were found with the safety evaluations. This item is closed.

No violations or deviations were identified in this area.

3. Licensee Event Reports Followup (92700)

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

(Closed) LER 374/92016 Reactor Scram On Loss Of Air Due To a Defective Procedure

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 (61715, 71707, and 71711)

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.
- 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 included:

On January 14, 1993, the inspectors observed an operator in a designated contaminated area climbing a ladder and performing a valve manipulation. The individual was wearing minimum radiation protection clothing which was prohibited by the radiation work permit for this activity. This is considered another example of violation 50-373/92026-01. The licensee was in the process of evaluating work practices and implementing corrective actions for that violation so another notice of violation will not be issued.

- 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.

The inspectors observed the Unit 1 drywell walkdown after the containment integrated leak rate test. The drywell was clean and the material condition was good. Maintenance on the drywell personnel access hatch was reviewed and the local leak rate test was observed. Ten containment isolation valves and isolation flanges were inspected and found to be in the required position. The standby gas treatment system and the secondary containment were walked down. The inspectors verified that the combined total

leakage rate for all Type B and C tested containment penetrations was within specifications. The inspectors determined that primary containment had been restored in accordance with approved procedures.

- d. The inspectors witnessed and reviewed portions of the Unit 1 startup from the refueling outage. The inspectors were in the control room during periods of startup activities and found it well staffed and functioning properly. Reasonable explanations existed for the remaining degraded equipment log items and none were safety significant. The inspectors witnessed the startup of the turbine generator which went well despite minor vibration problems. The problems were expected, being that all three low pressure turbine rotors were replaced during the outage. The shift engineer and the test director held a pre-evolution briefing with all the personnel involved in the activity.
- e. The inspectors continued to monitor activities in regard to the previously noted adverse personnel error trend. No remaining adverse trend was noted regarding operations personnel, the principle concern of the previous problems. A short term trend was beginning to develop with regard to maintenance personnel, during the first week of January, but subsequently subsided. The inspectors will continue to closely monitor this area for more long term effects. Although the licensee was initially slow in recognizing the need to implement corrective actions regarding the original adverse trend, corrective actions appeared thus far to be effective.

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:

WR L13251	Troubleshoot 1PL83JA reactor building air sample unit
WR L18538	Install 1FC08B spool number 7 to allow draining the Unit 1 reactor cavity to the suppression chamber
WR L20260	Replace actuator and perform signature trace on 1B21-F069
WR L19134	Replace cell number 50 of the Unit 1 Division I 125 volt battery
WR L17162	Perform VOTES testing on the 1E51F045 RCIC steam supply stop valve

Significant observations included:

- a. On January 26, 1993, a Unit 1 manual scram was initiated when a safety relief valve (SRV) failed to reclose during testing. The inspectors regarded operator actions as to evolution preparation and event response to be excellent, thereby limiting consequences of the failure.

An inspection of the Crosby SRV actuator and solenoid valve internal air system porting revealed that the pilot valve manifold exhaust port and the actuator cylinder atmospheric vent were covered with duct tape. The combination of these two ports being partially or fully blocked caused the SRV failure to close. The tape was installed at Wyle labs following setpoint testing to prevent debris from entering these ports during shipment to LaSalle. This is an unresolved item (50-373/93004-01(DRP)) pending completion of a review of licensee controls regarding the duct tape.

- b. Due to a previous high failure rate, a significant number of modifications were performed on the Unit 1 reactor core isolation cooling (RCIC) system during the refueling outage. Prior to declaring RCIC operable, testing of the system during startup revealed a burned out circuit card in the governor valve logic circuitry. The use of vendor supplied equipment during previous testing was suspected. Final determination of the burned circuit card is an open item (50-373/93004-02(DRP)). RCIC was later rendered inoperable by failure of the barometric condenser condensate pump due to uneven wear of the pump motor brushes. This was repaired and the licensee planned replacement of the motor as an added precaution. During subsequent testing to determine operability, the RCIC governor valve unexpectedly closed. A loose lead, that was lifted and landed during the circuit card replacement, was caused by insufficient thread engagement.
- c. On January 26, 1993, the inspectors identified that oil had soaked fire retardant covering a structural beam in the Unit 2 auxiliary building. The fire retardant was subsequently replaced. The oil source was leakage from the 2A turbine driven reactor feed pump (TDRFP). This leakage traveled down the exhaust duct into a room below the TDRFP. This room was seldom entered due to high radiation dose rates.

The inspectors previously identified a similar problem as indicated in inspection report 50-373/91008(DRP); 50-374/91008(DRP). Extensive actions were taken to identify and repair or modify equipment to prevent TDRFP oil leaks. Following these actions, a funnel arrangement to contain any leakage was removed. (Similar activities occurred on Unit 1). Although

licensee actions to address recurring problems with TDRFP oil leaks were good, the decision to remove the oil collection apparatus did not reflect the possibility other leaks could develop.

- d. The inspectors reviewed the implementation of the check valve inspection program on Unit 1 during the refueling outage. Several work packages were reviewed and three inspections were observed during the course of the outage. The results were reviewed with the technical staff check valve coordinator upon completion of the inspections. The preparation and performance of the work was excellent. The root cause evaluation and corrective actions taken in regard to a recurrent problem with 1HD021A were excellent.
- e. The inspectors noted that only three of the original 28 scheduled Generic Letter 89-10 motor operated valve (MOV) differential pressure (dP) tests were accomplished during the refueling outage. The licensee gave the following reasons as to why insufficient resources existed to complete the original scope:
 - The decision to discontinue using MOV stall capability to accept unexpected VOTES test anomalies resulted in additional testing and a drain on resources.
 - Implementation of new acceptance criteria for static and dP VOTES testing resulted in additional time required to review test results.
 - Hand corrections and related clarification due to a Liberty Technologies VOTES equipment Part 21 report added to the time required to evaluate VOTES test data.
 - Support of the NRC MOV inspection drained licensee resources that would have been utilized in the review of work packages and VOTES tests.

As this potentially impacted the timeliness of Generic Letter 89-10 commitments, the inspectors referred this information to the NRC Region III, Division of Reactor Safety for further review.

- f. The inspectors reviewed emergency diesel generators (EDG) and associated electrical bus and breaker failures for the past year to ascertain any common causes. LERs, deviation reports, and informal reports were reviewed for 14 events. The root causes of the events were very diversified and did not signify any obvious maintenance program deficiencies. Examples were reviewed in more detail for which the inspectors concluded the licensee's approach to problem resolution was reasonable.

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 were observed 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 and review signatures, test results properly dispositioned, and independent verification documented. The following activities were observed or reviewed:

LaSalle Operating Procedure (LOP)-NB-01 Reactor Vessel Leakage Test

LaSalle Limited Procedure (LLP)-92-215 Scram Timing During Vessel Inservice Leak Test and Hydro

LLP-92-99 Unit 1 Controlled Startup Of The RCIC System In The Suppression Pool Test Mode

LLP-93-001 Unit 1 Cycle 6 Turbine Generator Startup

LaSalle Instrument Surveillance (LIS)-NB-115 Unit 1 High Pressure Excess Flow Check Valve Refuel Operability Test

LIS-VR-401 Unit 2 Reactor Building Vent Exhaust Plenum Radiation Monitor Functional Test

LIS-NB-115 Unit 1 High Pressure Excess Flow Check Valve Refuel Operability Test

LIS-NR-301 Unit 1 Source Range Monitor Rod Block Functional Test

LaSalle Technical Procedure (LTP)-700-1 Recording of Control Rod Drive Scram Insertion Times

LIS-NR-403 Unit 2 Average Power Range Monitor Rod Block and Scram Functional Test

LaSalle Technical Surveillance (LTS)-500-13 Main Steam Isolation Valve Leakage Control Operability Check

LaSalle Operating Surveillance (LOS)-RD-SR3 Control Rod Operations in Plant Condition 3 or 4

LOS-RD-SR5 Control Rod Drive Timing

LOS-VG-M1 Standby Gas Treatment Operability Test And Inservice Test Of 1(2)VG001 And 1(2)VG003

LOS-DG-M1 0 Diesel Generator Operability Test

LaSalle Electrical Surveillance (LES)-HP-102 Unit 1 High Pressure Core
Spray System Relay Logic and Overload Bypass Functional Test

Significant observations included:

The inspectors identified that LaSalle technical specifications (TS) do not currently require the performance of channel checks on TS reactor vessel level instrumentation. These provide input to automatic actuation circuitry for the reactor protection system, automatic depressurization system, primary and secondary containment isolation systems, emergency core cooling systems, and the reactor core isolation cooling system. Technical specifications typically require, if feasible, channel checks to be performed shiftly as an early indicator of instrument channel failure between more extensive instrument surveillances.

LaSalle TS previously required channel checks as the original design included Barton differential pressure (dP) indicating switches. Due to equipment qualification concerns, these were replaced with dP switches manufactured by Static-O-Ring (SOR). As these SOR switches did not provide a readout capability, LaSalle TS were amended on April 30, 1985 to delete the channel check requirement. However, due to a high rate of SOR switch failures, this instrumentation was subsequently replaced by Rosemount transmitters and trip units. The trip units had readout capability, allowing performance of channel checks. The inspectors verified that plant procedures implemented the channel checks despite the lack of TS requirements. The inspectors notified the NRC Office of Nuclear Reactor Regulation that the LaSalle TS do not reflect plant design or practice with regard to these channel checks. This is an open item (50-373/93004-03(DRP)) pending resolution of this issue.

No violations or deviations were identified in this area.

7. 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.

8. 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 Paragraphs 5.b. and 6.

9. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, violations, or deviations. An unresolved item disclosed during the inspection is discussed in Paragraph 5.a.

10. 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 February 8, 1993. 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.