U.S. NUCLEAR REGULATORY COMMISSION
REGION III

Report Nos. 50-373/91025(DRP); 50-374/91025(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: December 3, 1991, through January 14, 1992

Inspector: C. Phillips

Approved By: B. L. Burgess, Chief — Date 2/3/92
Reactor Projects Section 1B

Inspection Summary

Inspection from December 3, 1991 through January 14, 1992 (Report Nos. 50-373/91025(DRP); 50-374/91025(DRP)).

Areas Inspected: Routine, unannounced safety inspection by the resident inspectors of licensee action on previously identified items; licensee event reports; operational safety; shut down risk assessment; monthly maintenance; monthly surveillance; report review; evaluation of licensee quality assurance program implementation; and installation and testing of modifications.

Results: Of the nine areas inspected, no violations were identified. Five unresolved items were identified pending further review. These included workers given an incorrect survey and ALARA briefing (section 4.b), an inoperable low pressure coolant injection valve due to a pinched power lead (section 6.a), a trip of a reactor feedpump caused by opening of an incorrect fuse panel (section 6.b), a contaminated water spill caused by inadequate controls on a sump pump (section 6.c), and setting of all six average power range monitor gains simultaneously in the nonconservative direction due to a miscommunication (section 7).

Plant Operations

Management supervision of the Unit 2 shutdown was a strength. Supervisors discussed evolutions with the unit operators before they occurred, what the possible outcomes were, and what the operator actions should be in each case.

Radiation Controls

Performance was mixed. Two administrative overexposures occurred and a breakdown in communications could have resulted in a third. Radiological housekeeping declined during the beginning of the period but improved with prompting from the inspectors. Conversely, reactor vessel internal underwater removal saved significant man-rem exposure and was a strength.

Maintenance/Surveillance

Several events relating to this functional area occurred. These included a temporary loss of feedwater during the Unit 2 reactor shutdown; incorrect energization of a submersible pump which resulted in a 1000 gallons of water being pumped onto the floor of the waste sludge tank room, and the Unit 1 average power range monitor gains being set incorrectly for a short duration. These are considered unresolved items and will be evaluated more fully in the next inspection period.

Safety Assessment/Quality Verification

The Onsite Nuclear Safety group submitted an excellent "Shutdown Risk Assessment" for the Unit 2 outage. Several proactive steps were taken, based on the report findings, and are considered a strength. Inspector review of the modified "soft shutdown" procedure revealed a weakness in licensee procedural review.

DETAILS

1. Persons Contacted

*G. Diederich, Manager, LaSalle Station
*W. Huntington, Technical Superintendent
*J. Schmeltz, Production Superintendent
D. 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, NRC Coordinator
*B. Wood, Onsite Nuclear Safety Administrator

*Denotes those attending the January 14, 1992, exit interview.

The inspectors also talked with and interviewed several other licensee employees, including members of the technical and engineering staffs; reactor and auxiliary operators; shift engineers and foremen; electrical, mechanical, and instrument maintenance personnel; and contract security personnel.

2. Licensee Action on Previously Identified Items (92702)

a. (Closed) Violation (373/91009-01, 374/91008-01(DRP)): Improper surveillance for assessment of oxygen concentration in the suppression pool due to failure to properly upgrade a surveillance procedure to reflect a 1981 Technical Specification (TS) change. The appropriate procedures were changed and the required oxygen sampling was performed. A licensee evaluation determined that the pre-licensing TS "Proof and Review" copy used the words "Primary Containment". The copy returned from NRC review changed the wording to "Drywell and Suppression Chamber". The change was misinterpreted as being editorial in nature. This is not considered a programmatic problem. This item is closed.

b. (Closed) Violation (373/91005-01a-f(DRP)): Adequacy and use of procedures with multiple examples. The inspector verified the immediate and long term corrective actions for each example. The licensee took several additional steps to enhance awareness of procedural adherence and to communicate to the users their responsibility to correct procedural errors. In addition, the licensee initiated action to improve the procedure revision process. Licensee management was making a committed effort to reduce the frequency of personnel errors. This item is closed.

No violations or deviations were identified in this area.

3. Licensee Event Reports (LER) Followup (92700 and 90712)

Through direct observations, discussions with licensee personnel, and review of records, the following event report was 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.

(Closed) LER 373/91015-01, Inadequate Testing of Diesel Generators Due To Inadequate Procedures/Technical Specification Misinterpretation

Additionally, the inspector reviewed the licensee's Deviation Reports (DVRs) generated during the inspection period. This was done to monitor conditions related to plant or personnel performance, or to detect potential trends. DVRs were also reviewed to ensure that they were generated appropriately and dispositioned in a manner consistent with the applicable procedures and the QA manual.

No violations or deviations were identified in this area.

4. Operational Safety Verification (71707)

During the inspection period, the inspectors verified daily, and randomly during back shift and on weekends, that the facility was being operated in conformance with the licenses and regulatory requirements and that the licensee's management control system was effectively carrying out its responsibilities for safe operation. This was done on a sampling basis through routine direct observation of activities and equipment, tours of the facility, interviews and discussions with licensee personnel, independent verification of safety system status and limiting conditions for operation action requirements (LCOs), corrective action, and review of facility records.

The inspector daily verified proper control room staffing and access, operator behavior, and coordination of plant activities with ongoing control room operations; verified operator adherence with the latest revisions of procedures for ongoing activities; verified operation as required by Technical Specifications (TS); including compliance with LCOs, with emphasis on engineered safety features (ESF) and ESF electrical alignment and valve positions; monitored instrumentation recorder traces and duplicate channels for abnormalities; verified status of various lit annunciators for operator understanding, off-normal conditions, and corrective actions being taken; examined nuclear instrumentation (NI) and other protection channels for proper operability; reviewed radiation monitors and stack monitors for abnormal conditions; verified that onsite and offsite power was available as required; observed the frequency of plant/control room visits by the station manager, superintendents, assistant superintendents, and other managers; and observed the Safety Parameter Display System (SPDS) for operability.

During tours of accessible areas of the plant, the inspectors made note of general plant/equipment conditions, including control of activities in progress (maintenance/surveillance), observation of shift turnovers, general safety items, etc. The specific areas observed were:

a. Engineered Safety Features (ESF) Systems

Accessible portions of ESF systems and components were inspected to verify: valve position for proper flow path; proper alignment of power supply breakers or fuses (if visible) for proper actuation on an initiating signal; proper removal of power from components if required by Technical Specifications or the updated final safety analysis report (UFSAR); and the operability of support systems essential to system actuation or performance through observation of instrumentation and/or proper valve alignment. The inspectors also visually inspected components for items such as leakage, proper lubrication, and adequate cooling water supply.

b. Radiation Protection Controls

The inspectors verified that workers were following health physics procedures for dosimetry, protective clothing, frisking, and posting. The inspectors also randomly examined radiation protection instrumentation for use, operability, and calibration.

There were several examples of communications breakdown resulting in inadequate radiological protection of workers. These communications problems were considered a weakness. The first case of inadequate radiological protection was failure to perform an adequate survey when hydrolazing the Unit 1 fuel pool cooling heat exchanger, due to an inadequate turnover between radiation protection technicians. This resulted in an administrative radiation overexposure to two mechanical maintenance workers. The second case was caused by contract workers failing to tell a radiation protection technician that their administrative dose limit had changed. Because the radiation protection technician was not informed, two contract workers received an administrative radiation overexposure. These events will be discussed in a separate NRC inspection report.

A third example was contract workers removing insulation from a valve were given the survey results and ALARA brief for the wrong job. The contractors were told that the radiation field was less than one millirem per hour (mr/hr) and that contamination levels were less than 1000 disintegrations per minute (DPM). In reality, the radiation field was 300-500 mr/hr and the contamination levels were approximately 70,000 DPM. The job was of very short duration; therefore, an administrative overexposure did not result. The root cause of this problem was miscommunication between the workers and the radiation protection technician. Corrective actions included counseling of involved insulators and

radiation protection technicians to have all job documentation with them prior to signing the radiation work permit. This is considered an unresolved item (374/91025-01 (DRP)) pending review of licensee administrative requirements.

c. Security

Each week during routine activities or tours, the inspector monitored the licensee's program to ensure that observed actions were being implemented according to their approved security plan. The inspector noted that persons within the protected area displayed proper photo-identification badges and those individuals requiring escorts were properly escorted. The inspector also verified that checked vital areas were locked and alarmed. Additionally, the inspector also verified that observed personnel and packages entering the protected area were searched by appropriate equipment or by hand.

d. Housekeeping and Plant Cleanliness

The inspectors monitored the status of housekeeping and plant cleanliness for fire protection, protection of safety-related equipment from intrusion of foreign matter and general protection of equipment from hazards. Housekeeping in radiological areas declined during the beginning of the period but improved with prompting from the inspectors.

The inspectors also monitored various records, such as tagouts, jumpers, shiftly logs and surveillances, daily orders, maintenance items, various chemistry and radiological sampling and analysis, third party review results, overtime records, quality assurance or quality control audit results, and postings required per 10 CFR 19.11.

e. Unit 2 Reactor Shutdown

The inspector observed the Unit 2 shutdown. The licensee modified the normal shutdown procedure to perform a "soft shutdown" to minimize the source term for the refueling outage. The "soft shutdown" involved taking the reactor subcritical through control rod insertion alone, and increasing the cooldown period to avoid steaming, with its possibility of disturbing crud on the control rod blades. Management supervision and control of the shutdown was a strength. Supervisors discussed evolutions with the unit operators before they occurred, possible outcomes, and appropriate operator actions for each case. However, the inspector reviewed a copy of the approved "soft shutdown" procedure, prior to its use, and found it to be inaccurate and confusing in some places. Licensee management was notified of the concerns and the procedure was corrected prior to commencement of the shutdown. The incomplete licensee review of the procedure was a considered a weakness. Th nspectors will continue ...

No violations or deviations were identified in this area; however, one unresolved item was discussed in section 4.c.

5. Shutdown Risk Assessment (71707 (RI))

The Onsite Nuclear Safety Group prepared a special report to analyze the potential risks involved in the Unit 2 outage. The report identified six outage risk concerns. The station took preventive steps to resolve these concerns, such as procedural enhancements and placing cement barricades around the plant transformers and power line towers. The risks discussed in the special report were addressed appropriately in the outage schedule plan changes. Actions taken by the licensee in the area of shutdown risk were considered a strength.

No violations or deviations were identified in this area.

6. Monthly Maintenance Observation (62703)

Station maintenance activities affecting the safety-related systems and components listed below were observed/reviewed to ascertain that they were conducted in accordance with approved procedures, regulatory guides and industry codes or standards and in conformance with Technical Specifications.

The following items were considered during this review: the limiting conditions for operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures and were inspected as applicable; functional testing and/or calibrations were performed prior to returning components or systems to service; quality control records were maintained; activities were accomplished by qualified personnel; parts and materials used were properly certified; radiological controls were implemented; and, fire prevention controls were implemented. Work requests were reviewed to determine status of outstanding jobs and to assure that priority is assigned to safety-related equipment maintenance which may affect system performance.

The following maintenance activities were observed and reviewed:

Unit 0

Work Request (WR) L10678: Replace Rosemont Process Monitor Cover

Unit 2

WR L08878: Exercise Disassemble and Inspect 2A Diesel Generator Starting Air Compressor Discharge Check Valve

LST-91162: Installation of Temporary Battery Charger to Division 3 Power Supply

WR 111385: Rebuild of the 2A Control Rod Drive (CRD) Pump

WR L71270: Reactor Core Isolation Cooling Line Addition from The Suppression Pool

WR L07478: Rebuild 2A Instrument Nitrogen Compressor

WR L02280: Unit 2 Division III 125 Volt DC Battery Replacement

WR L02278: Unit 2 Division III 125 Volt DC Battery Charger Replacement

The inspectors monitored the licensee's work in progress and verified that it was being performed in accordance with proper procedures, and approved work packages; that applicable drawing updates were made or planned; and that operator training was conducted in a reasonable period of time.

a. On January 4, 1992, after the Unit 2 reactor shutdown and during a valve lineup, the 2A low pressure core injection (LPCI) injection valve would not open. Further investigation found that all three valve motor power phases had resistance readings of zero ohms to ground. The ground appeared to be a power lead that was pinched by the equipment box cover. The last maintenance on this valve was in December 1988. The valve was last successfully cycled in May, 1990. It was not known how long the valve was inoperable. This is considered an unresolved item (374/91025-02 (DRP)) pending further review to determine root cause.

b. On January 4, 1992, while performing a pre-maintenance out-of-service (OOS) walkdown on Unit 2, a station electrician opened a fuse panel. This action opened a disconnect, deenergizing a bus undervoltage relay which tripped the motor-driven reactor water feed pump and the condensate pump. The plant was in the process of a shutdown for the refueling outage. The bus was immediately reenergized and the pumps restarted. Steam loads had been secured and reactor water level did not change. The safety significance was minimal.

   The OOS removed fuses from three potential transformer devices, used for metering purposes, for four electrical buses. All four buses had fuse panels in the same location. Three of the four buses had the fuse panel and fuses removed with an out-of-service card attached to the fuse holder, as required. The fourth bus had a panel in the same location as the other three, but this panel contained fuses for the potential transformer to a bus undervoltage relay which was not part of the OOS. Of the two electricians performing the walkdown the one that opened the panel did not have the master out-of service card with him. He opened the panel to see if fuses had been removed and the panel reinstalled. The panel was designed such that opening it would open disconnects to the fuses. The electrician was unaware of this. The panel was normally opened by the operating department. This is considered an unresolved item (374/91025-03 (DRP)) pending review of licensee training and administrative requirements.

c. On January 9, 1992, a submersible pump left in the ultra-sonic resin cleaning (URC) sludge tank was inadvertently energized. The pump discharge hose was not in the waste sludge tank, as believed, and the pump was energized when it was inappropriately plugged into the wall outlet. Approximately 1000 gallons of water were pumped on to the floor of the waste sludge tank room. The water was collected by the floor drain system and did not increase contamination levels. This item is considered an unresolved item (373/91025-04(DRP)) pending further clarification of event circumstances and review of previous recent spills at the plant.

d. The licensee changed the method of removing the reactor internals during the refueling outage on Unit 2. The dryer and separator were both removed underwater instead of partially draining the vessel. Using this method reduced man-rem exposure by about 4 man-rem to approximately fifty percent of previous totals. This was a strength.

e. On January 13, 1992 the inspectors interviewed licensee construction engineering and contractor craft supervisors in regard to the planning and preparation for the removal and reinstallation of the reactor water cleanup (RWCU) isolation valves. The planning, training, and coordination between departments in preparation for this particular job appears to be excellent.

No violations or deviations were identified; however one open item and two unresolved items were discussed.

7. Monthly Surveillance Observation (61726)

The inspectors observed surveillance testing required by Technical Specifications during the inspection period 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 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.

The inspectors witnessed portions of the following test activities:

Unit 1

LOS-RH-Q1 RHR pump B and C surveillance test

LTS-200-1 TBCCW Heat Exchanger Performance Test

LOS-DG-SA2 1A Diesel Generator Operability Test With Response Time

LES-FP-05d Fire Protection System Low Voltage Ionization Detectors Channel Functional Test For Plant Fire Zones

LIS-RR-101 Unit 1 Flow Converter Calibration

LIS-DG-503B Unit 1 Diesel Generator 1B Fuel Oil Day Tank Level Switch and Indication Calibration

LIS-FW-301 Unit 1 Reactor Narrow Range Level Functional Test

Unit 2

LIS-PC-208 Unit 2 Main Steam Line High Flow Primary Containment Isolation Response Time Test

On January 6, 1992, the Unit 1 Average Power Range Gain was nonconservatively adjusted on all six average power range monitors (APRM), due to a miscommunication between the technician performing the surveillance and a nuclear engineer. The procedure called for the required power level set point to be obtained from the shift engineer or the duty nuclear engineer. The technician called the duty nuclear engineer who misunderstood the technician's question and gave him flow bias gain adjustment numbers instead of APRM gain adjustment numbers. The APRMs were reading 93 percent power when the actual power level was 97 percent. The mistake was caught at the end of the procedure when gains were found to be out of tolerance. The APRM gains were immediately reset. The gains were incorrect for less than an hour. This is considered an unresolved item (373/91025-05 (DRP)) pending further review of licensee administrative requirements.

No violations or deviations were identified.

8. Report Review (90713)

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

No violations or deviations were identified.

9. Evaluation of Licensee Quality Assurance Program Implementation (35502)

The inspector evaluated the effectiveness of the licensee's quality assurance program implementation by conducting an in-office evaluation of previous inspection reports, licensee corrective actions for any inspection findings or other items on the Outstanding Items List, SALP reports, and Licensee Event Reports for the last year. No negative performance trends, which would indicate quality assurance program implementation problems, were identified in any functional discipline.

No violations or deviations were identified.

10. Installation and Testing of Modifications (37828)

The inspector reviewed modification packages to ascertain that related modification activities which were not submitted to the NRC for approval were in conformance with the requirements of the Technical Specifications, 10 CFR 50.59, and 10 CFR Part 50, Appendix B, Criterion III, "Design Control." The inspector selected a sample of modifications prepared for the next refueling outage on Unit 2; reviewed the packages to assure they contained approved procedures and drawings; and verified the system licensing design criteria approved by the NRC remained valid following the modification.

Modification package P01-2-90-046: Install Vents on Pressure Switch for SRVs

Modification package P01-2-90-071: Install a Quick Disconnect Skid to the 2B Diesel Generator Lube Circulating Oil Pump

No violations or deviations were identified.

11. Review of Concerns

(Closed) Concern (AMS 88-A-0035): This concern dealt with an individual being fired for cooperating with the NRC and for raising safety issues.

Concern: The individual stated that he was fired for cooperating with the NRC on a concern at another facility.

NRC Review: When terminated from LaSalle, the individual was working with the NRC on a concern at another facility. No connection between the two licensees was established. The licensee had been aware of the individual's contacts with the NRC for approximately six months, and no evidence existed to show that the licensee had any problem with this arrangement. This included the individual's own statements, along with the concern being modified to introduce a safety concern at LaSalle.

Results: This concern was not substantiated.

Concern: The individual modified the concern to state that he was fired because he had raised safety issues at LaSalle and the licensee thought he was discussing these safety issues with the NRC.

NRC Review: A review was performed of the safety concern, the individual's written statements, and various licensee letters and statements. Other than the individual's statement, no evidence of discrimination existed. This concern was also reviewed by the Department of Labor, who was strongly critical of the individual's behavior and who questioned the motives behind the behavior. This review tended to discredit the individual's statement.

Results: This concern was not substantiated.

12. Unresolved Items

Unresolved items are matters which require more information in order to ascertain whether it is an acceptable item, an open item, a deviation or a violation. Four unresolved items disclosed during this inspection are discussed in sections 5.b, 6.a, 6.b, 6.c, and 7.

13. Exit Interview (30703)

The inspectors met with licensee representatives (denoted in Paragraph 1) during the inspection period and at the conclusion of the inspection period on January, 14, 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.