

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-373/84-14(DRP); 50-374/84-18(DRP)

Docket No. 50-373; 50-374

License No. NPF-11, NPF-18

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

Facility Name: LaSalle County Station, Units 1 and 2

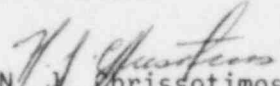
Inspection At: LaSalle Site, Marseilles, IL

Inspected Conducted: May 12 through June 18, 1984

Inspectors: M. J. Jordan

S. C. Guthrie

C. D. Evans

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

7-2-84
Date

Inspection Summary

Inspection on (dates) May 12 through June 18, 1984 (Report No. 50-373/84-14(DRP); 50-374/84-18(DRP))

Areas Inspected: Routine, unannounced inspection conducted by resident inspectors of licensee actions on previous inspection findings; operational safety; monthly maintenance; monthly surveillance; startup testing witnessing; plant trips; followup on regional requests; I.E. Bulletins; review of periodic and special reports, and Licensee Event Reports. The inspection involved a total of 210 inspector-hours onsite by three NRC inspectors including 30 inspector hours onsite during off-shifts.

Results: In the ten areas inspected, no items of noncompliance or deviations were identified in eight areas. Two items of noncompliance were identified in the remaining two areas (Failure to control access to high radiation area - Paragraph 3; failure to follow procedures - Paragraph 5).

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 June 19, 1984.

2. Licensee Actions on Previous Inspection Findings

(Closed) Open Item (373/83-42-08 and 374/83-46-03(DPRP)): This open item concerned the adequacy of the primary containment vent and purge valves to close within 15 seconds if an isolation signal was received. This item will be tracked and closed as a result of a licensee condition for Unit 2 (374/81-00-58) and will be closed by open item 373/83-49-08 for Unit 1.

(Closed) Unresolved Items (373/83-29-02) and 374/83-28-05(DPRP)): This unresolved item tracked receipt of information from the licensee on the acceptability of lowering the oil temperature alarm setpoints for the emergency diesel operators. The inspector reviewed the provided information and noted that it adequately addressed the inspector's concerns.

(Closed) Open Items (373/83-49-07 and 374/83-52-02(DPRP)): This open item tracked completion of breaker modifications in reference to 10 CFR 50.55(e) reports 373/83-03 and 374/83-03. The breaker modifications have been completed.

(Closed) Open Item (374/84-07-04(DPRP)): This open item tracked updating of licensee's surveillance matrix to ensure that valves listed in Technical Specification Table 3.6.3-1 are tested to verify full travel and operability following maintenance. The licensee has completed the requested update of the surveillance matrix and has addressed the inspector's concerns.

(Closed) Open Item (373/83-37-07(DPRP)): This open item tracked licensee committed-to corrective actions in response to IE Information Notice 83-23, "Inoperable Containment Atmosphere Sensing Systems". Procedure LOP-FC-12 has been revised to ensure that drywell head area sensing lines remained uncapped following head removal and replacement. The revised procedure has adequately addressed the inspector's concerns.

(Open) Open Item (373/83-53-06(DPRP)): This open item tracked the status of licensee action to resolve problems with diesel fire pump flywheel cracks. On June 13 the inspector was notified by the licensee that quarterly dye penetrant inspection of the flywheel on diesel driven fire pump engines was being scheduled. This inspection resulted from flywheel cracking detailed in Report Nos. 373/83-53(DRP), 374/83-56(DRP), 373/84-11(DRS), and 374/84-15(DRS) that require dye penetrant testing of accessible portions of the flywheel. The licensee requested clarification of the required extent of testing, noting that while the outside face of the flywheel is fully accessible, inspection of any portion of the inside face requires flywheel removal with extended out-of-service time and increased potential for flywheel damage. Following a review of testing results, metallurgists from Region III recommended quarterly testing of the outside face only and semiannual inspection of both the inside and outside faces, a recommendation concurred in by Division of Engineering Management. This schedule of inspection was based in part on a significant reduction in the component's operating hours following completion of construction. The licensee has committed to perform the required inspections at the recommended intervals pending determination by the component manufacturer of earlier flywheel failure mechanisms.

A correction is needed to an open item number assigned on page 16 in inspection report 373/84-10; 374/84-13. The open item "(374/81-00-59(DRP))" should have read "(374/81-00-60(DRP))". This will be the tracking number for the 14 welds which were not treated as part of the Induction Heat Stress Improvement (IHSI) program.

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

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 on Unit 1 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.

On May 22 at 12:45 p.m. the resident inspector observed a contractor guard posted to provide direct surveillance of an unlocked high radiation area near the waste sludge pump room on the 663' elevation of the turbine building to be inattentive to his duties; entry to the high radiation area could be made without the guard observing the entry. In addition, the inspector identified that confusion existed on the part of the security department as to the intent of the posting orders as written. For example, the contractor guard indicated that he did not know exactly for what area he was to provide direct surveillance. Concurrently, security department supervisors were in the process of clarifying post orders with the health physics supervisor. The inspector informed licensee representatives of his findings at which time the guard was replaced and orders were rewritten to clarify the responsibilities of the posted contractor guards. The dose rate at the front of the door to the waste sludge pump room was determined to be 270 mr per hour and 100 mr per hour at three feet from the door. In addition to the immediate corrective actions taken, licensee representatives committed to develop a new form for conveying information on special posting to prevent confusion in the future and to train security personnel in the use of the new forms. The failure to control access to a high radiation area as required by Technical Specification 6.1.1.4 is considered an item of noncompliance. (373/84-14-01(DRP), and 374/84-18-01(DRP))

On June 13 the inspector was informed of an electrical fire which had been discovered and extinguished by two security guards at approximately 4:58 a.m. The fire was located in the electrical switch portion of liquid level detector 2LS-T0046 for the main generator hydrogen detainer section, and was believed to have originated within the switch at some time after the electrical conduit leading to the component was deformed by undetermined means. This level detector alerts operators to increased oil level and indicates possible water accumulation. Loss of the component presents no safety hazard or operational restriction, and the licensee is performing level checks once per shift during the out-of-service period.

During the inspection period intermittent isolation signals occurred on Unit 2 Reactor Water Cleanup (RWCU). The isolations were mostly attributed to the Riley temperature detectors for the pump room and the heat exchanger room. The actual cause for the isolation or which signal was causing the isolation could not be determined. The licensee has assigned a technical staff task force to look into the causes and the corrective actions for these isolations. This item will remain as an open item (374/84-18-02(DRP)).

4. Monthly Maintenance Observation

Station maintenance activities of safety related system and component listed below was observed/reviewed to ascertain that it was 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.

Following completion of maintenance on the Units 1 and 2 electric breaker for High Pressure Core Spray (HPCS), the inspector verified that this system was returned to service properly.

The inspection of this breaker was due to the licensee performing the monthly full flow test of the Unit 2 High Pressure Core Spray (HPCS) System and the HPCS pump failure to start. Investigation into the cause of the failure resulted in an inspection of the HPCI pump breaker. This investigation revealed that a switch which activates a set of auxiliary contacts was not assembled properly. The switch was replaced and a similar switch in Unit 1, HPCI pump breaker was inspected and found satisfactory. To assure that the faulty switch was the only root cause for the pump failure to start the licensee has started a two week surveillance test of the Unit 2 pump to ensure it starts and comes up to rated speed.

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

5. Monthly Surveillance Observation

On June 11 during the performance of instrument surveillance 1 LIS-NB-03, "Reactor Vessel Low Low Water Level Recirculation Pump Trip Calibration and Functional Test, Reactor Recirculation pump 1B was tripped from fast speed while the reactor was operating near 100% power. The pump trip occurred when the instrument mechanic operated the incorrect switch. After confirming that the "ATWS TEST" control switch was positioned to bypass trip channel "C", the mechanic operated the control switch LIS-1B21-N036B, inserting the pump trip signal through channel "B" which was not bypassed. No immediate operator action was taken in response to the pump loss as the reactor responded to the loss of recirculation flow with a power reduction transient. Subsequent operator action involved controlled insertion of preselected highly reactive "cram array" control rods. Recirculation pump restart was accomplished within the temperature restrictions of Technical Specifications 3.4.1.4.. The failure to comply with the procedural requirements of 1 LIS-NB-03 is an item of noncompliance (373/84-14-02(DRP)).

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

6. Startup Testing Witnessing

- a. On June 8, 1984 the inspector witnessed the Unit 2 loss of offsite power test. All testing was accomplished in accordance with STP-31. All systems functioned as expected with the exception of one isolation valve on a sample line failed to close; however, the redundant isolation valve closed.
- b. On June 15, 1984 the inspector witnessed portions of the Safety Relief Valve Testing in accordance with STP-26.

No items of noncompliance or deviations were identified.

7. Plant Trips

Following the plant trips on Unit 2 on May 21, June 6 and 15 1984, and Unit 1 on May 31, 1984, the inspector ascertained the status of the reactor and safety systems by observation of control room indicators and discussions with licensee personnel concerning plant parameters, emergency system status and reactor coolant chemistry. The inspector verified the establishment of proper communications and reviewed the corrective actions taken by the licensee.

All systems responded as expected, and the plant was returned to operation on May 28, June 2, 7, 18 respectively.

On May 21, 1984 the main power transformer backup differential phase A overcurrent relay actuated on Unit 2. The main generator then went into lockout and the main turbine tripped. Reactor power was greater than 30% power so the main turbine trip generated a reactor scram. All protective features functioned as designed. Investigation into the cause of the phase A overcurrent found the current transformer inputs to the main transformer backup differential overcurrent relays were wired incorrectly. The wiring error was corrected and the unit returned to service on May 26, 1984.

On May 31 at 4:15 p.m. Unit 1 scrambled automatically from approximately 55% power as a result of a trip of the main turbine. The turbine tripped on a loss of main condenser vacuum caused by loss of the loop seal on the main turbine gland seal steam condenser. This loss of loop seal resulted in a gradual decrease in main condenser vacuum, an associated loss of condensing efficiency, an increase in condensate hotwell temperature, and decreased steam jet air ejector operating efficiency. During the period of declining vacuum between 3:30 p.m. and 4:15 p.m., the licensee reduced power from 100% to 55% trying to reduce the load on the condenser. The licensee confirmed the loss of vacuum to be caused by loss of loop seal, but cannot positively identify the specific reason for the loop seal loss. Several proposed explanations could be the contributing factor. No ECCS initiation occurred as a result of the scram and all systems functioned as expected. The unit was returned to service on June 2, 1984.

On June 6, 1984 at approximately 5:30 a.m. (CDT) an instrument mechanic was performing work on the wide range level monitor for Unit 2 and accidentally bumped the instrument rack. Bumping of the instrument rack caused an erroneous water level signal to the B Channel of the Reactor Protective

System (RPS). The bumped rack also caused the Reactor Core Isolation Cooling (RCIC) System to initiate, which subsequently caused a turbine trip. The unit was at approximately 24% power; however, two of the switches which would prevent a scram on a turbine trip at less than 30% power had not reset the day before during the power reduction to 24% power. Thus, the turbine trip caused the Channel A of the RPS to trip which completed the scram signal. All systems functioned normally. The motor driven feedwater pump prevented level from getting low enough for Emergency Core Cooling System (ECCS) initiation. The unit was returned to service on June 7, 1984.

On June 15th the licensee reported that the Unit 2 was in an Unusual Event due to a required unit shutdown because of Technical Specifications. The licensee determined that primary containment integrity was in question due to a rupture of a bellows in a safety relief valve on the discharge of the High Pressure Core Spray (HPCS) System pump. The licensee determined at 2:00 p.m. on June 15 that bellows were potentially ruptured. Because of the 12 hour hot shutdown, Technical Specification requirement the licensee manually scrammed the unit at 2:00 a.m. on June 16 with a few rods remaining to be inserted. All systems functioned normally and no ECCS initiation occurred. The relief valve was replaced, leak rate tested, and the Unusual Event terminated at 7:15 p.m. on June 16. The licensee also repaired a socket weld leak on the discharge header of the "C" condensate booster pump. The unit returned to power on June 18.

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

8. Followup on Regional Requests

- a) The inspector was requested to review the 18 month surveillance procedure for the CO₂ fire suppression system and determine if the master mechanical/electrical valve (0C0003) tested for its automatic initiation. A review of the procedure identified that the automatic initiation of this valve was not verified using the present surveillance procedure. However, the licensee had documentation that the valve opened on an automatic initiation signal within the 18 month criteria of Technical Specification as evidenced by a preoperational test procedure for the CO₂ system which was performed for Unit 1 on November 15, 1979 and May 2, 1982 and for Unit 2 on November 1, 1982. Thus, since the initial criticality of Unit 1 in June 1982 to present, no 18 month time frame was exceeded that the valves were not automatically tested. The licensee is presently changing his surveillance procedure to verify the automatic initiation of this valve. This will remain as an open item (373/84-14-03(DRP) and 374/84-18-03(DRP)) until the procedure has been changed.
- b) The inspector was requested to followup on an item identified by an NRC audit of Anderson Greenwood and Company. The NRC Audit identified that a new disk assembly modification was designed by the vendor and the licensee had obtained modification parts for all piston check valves, sizes 1/2 to 1 inch in size. The vendor records do not show the licensee ever requested a modification package for 2-2 inch piston check valves. The results of this vendor audit was presented to the licensee, and he is presently determining the location of

the 2 inch check valves and if they have been modified. This will remain as open item (373/84-14-04(DRP) and 374/84-18-04(DRP)).

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

9. IE Bulletin Followup

For the IE Bulletins listed below the inspector verified that the written response was within the time period stated in the bulletin, that the written response included the information required to be reported, that the written response included adequate corrective action commitments based on information presentation in the bulletin and the licensee's response, that licensee management forwarded copies of the written response to the appropriate onsite management representatives, that information discussed in the licensee's written response was accurate, and that corrective action taken by the licensee was as described in the written response.

373/83-07;
374/83-07

Apparently Fraudulent Products Sold by
Ray Miller Inc.

This bulletin remains open until the licensee completes a review of three companies. The Architect Engineer indicated no objective evidence was found that Ray Miller material was received by the secondary respondents and shipped to the primary contractors. The licensee's review of these respondents records will be completed by September 1, 1984.

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

10. Review of Periodic and Special Reports

During the inspection period the inspector reviewed the following reports and verified that they were submitted in a timely manner and contained the required information:

- a. First quarter of 1984 data of the operational fog and rime ice observations submitted by correspondence dated May 24, 1984.
- b. Special Report on inoperable firestops. Submitted by correspondence dated May 16, 1984.

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

11. Licensee Event Reports Followup

Through direct observations, discussions with licensee personnel, and review of records, the following Event Reports (LER's) 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.

374/84-012	Reactor Manual Scram Due To Loss Of Normal Feedwater
373/84-023	Reactor Water Clean-Up Differential Flow Isolation
374/84-015	Failure To Realize Limiting Condition Of Operation Prior To Changing Mode
373/84-022	Reactor Scram On Low RPV Level
373/84-024	Electrical Cable Penetration Inoperable
374/84-020	Generator Lockout and Reactor Scram

LER 374/84-017 documented a scram on Unit 2 as a result of a valving error in the feedwater system. The LER was submitted in a timely fashion, contained the required information, and is considered closed; however, the corrective actions specified in the LER have yet to be completed. These actions will be tracked as an open item (374/84-18-05(DRP)).

LER 373/84-017-01 documents a failure of the control room ventilation ammonia and chlorine detection system. The LER was submitted in a timely fashion, contained the required information, and is considered closed; however, the corrective actions specified in the LER have yet to be completed. These actions will be tracked as an open item (373/84-14-05(DRP)).

LER 374/84-024 documents a loss of Reactor Core Isolation Cooling System (RCIC) control and instrument power. The LER was submitted in a timely fashion, contained the required information, and is considered closed; however, the corrective actions specified in the LER have yet to be completed. These actions will be tracked as an open item (374-84-18-06(DRP)).

LER 373/84-026 documents inoperable electrical cable penetrations. The LER was submitted in a timely fashion contained the required information, and is considered closed; however, the corrective actions specified in the LER has yet to be completed. This action will be tracked as an open item (373/84-14-06(DRP)).

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

12. Public Meeting

On May 10, 1984 two of the inspectors attended a meeting in Morris, Illinois in which the resident inspectors from Dresden Nuclear Power Station met the officials from Grundy and Will Counties. The LaSalle inspectors were introduced to the officials and answered questions which came up concerning activities at the site.

13. 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 2, 3, and 11.

14. Unresolved Items

Unresolved items are matters which more information is required in order to ascertain whether they are acceptable, items of noncompliance, or deviations. An unresolved item disclosed during the inspection is discussed in Paragraph 2.

15. 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.