U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-373/86015(DRS); 50-374/86016(DRS)

Docket Nos. 50-373; 50-374 Licenses No. NPF-11; NPF-18

Licensee: Commonwealth Edison Company
P. O. Box 767
Chicago, IL 60690

Facility Name: LaSalle County Station, Units 1 and 2

Inspection At: LaSalle Site, Marseilles, Illinois

Inspection Conducted: April 14-21, 1986

Inspectors: R. A. Hasse — Date: 6-3-86

R. D. Lanksbury — Date: 6/3/86

for M. J. Jordan — Date: 6/4/86

S. M. Hare — Date: 6-3-86

Approved By: M. P. Phillips, Chief
Operational Programs Section — Date: 6/3/86

Inspection Summary

Inspection on April 14-21, 1986 (Reports No. 50-373/86015(DRS); 50-374/86016(DRS))
Areas Inspected: Special safety inspection conducted by three region based inspectors and the LaSalle Senior Resident Inspector of events surrounding the March 19, 1986, incorrectly hung out of service tag for the Unit 1 High Pressure Core Spray Suppression Pool Full Flow Test Valve and the subsequent control room shift turnover.
Results: Of the two areas inspected, one violation with four examples was identified (failure to follow procedures). The individual examples are discussed in Paragraphs 2.b. and 3.

DETAILS

1. Persons Contacted

Commonwealth Edison Company (CECo)

**C. Reed, Vice President
**D. L. Farrar, Director of Nuclear Licensing
**G. Diederich, Plant Manager
*R. Bishop, Services Superintendent
*C. Sargent, Superintendent of Operations and Maintenance
*W. Huntington, Assistant Superintendent of Operations
*J. Payton, Industrial Relations
T. Shaffer, Shift Engineer
A. Ruger, Nuclear Station Operator
J. Clausen, Equipment Attendant
D. Laggett, Station Control Room Engineer
L. Nichols, Shift Foreman

U. S. Nuclear Regulatory Commission (USNRC)

**J. G. Keppler, Regional Administrator, Region III
**C. J. Paperiello, Director, Division of Reactor Safety

*Denotes those in attendance at the preliminary exit interview on April 14, 1986.

**Denotes those attending the enforcement conference on May 12, 1986. Other CECo and USNRC staff personnel were also in attendance.

2. Follow-up of Incorrectly Hung Out of Service Card

a. Background

At 10:20 A.M. on March 19, 1986, an Out-Of-Service Card was temporarily lifted by an Equipment Attendant for electrical testing of the valve motor on the Unit 1 High Pressure Core Spray (HPCS) Suppression Pool Full Flow Test Valve. At about 11:30 A.M., the Electrical Maintenance (EM) personnel working on the valve motor notified the Unit 1 day shift Nuclear Station Operator (NSO) that something was wrong with the motor, and that he was turning the breaker off to prevent damage. The Unit 1 NSO verified that the valve position indicating lights went out, indicating that the breaker was open. Subsequently, an Electrical Maintenance (EM) Foreman requested the Shift Foreman to rehang the OOS card on this electrical breaker. In response to this request, the NSO gave a Temporary Lift Checklist to an Equipment Attendant (EA) to hang an OOS card on the breaker. Instead of going to the appropriate Unit 1 switchgear, the EA took the Temporary Lift Checklist and went to the Unit 2 switchgear (243-1), turned the equivalent Unit 2 breaker off,

and then hung the OOS card on that breaker at approximately 1:30 P.M. the same day. Although the floor coloring in the switchgear room was supposed to be different from that in Unit 1, during the inspection it was found to be the same as that in Unit 1. However, the hallways leading to the room were correctly color-coded and the doorways leading into the Unit 2 switchgear room were so marked. The breaker label was found not to contain a unit identifier.

The EA, after signing the Temporary Lift Checklist on the OOS, returned it to the Unit 1 NSO. The NSO did not have the breaker position and the OOS card placement independently verified before the end of his shift, so he turned it over to the afternoon shift Unit 1 NSO. During the Unit 2 panel walkdown at shift turnover by the offgoing NSO and Station Control Room Engineer (SCRE), and the oncoming Shift Engineer, Shift Foreman, SCRE, and NSO, the panel indication of the Unit 2 deenergized HPCS breaker was not identified. Details regarding this turnover are contained in Section 3 of this report.

The afternoon shift Unit 1 NSO gave, or thought he gave, the subject Temporary Lift Checklist along with several other outage packages to another EA for the required independent verification that the OOS tag had been correctly hung. Due to circumstances described in Section 2.b of this report, the OOS tag was not verified and the verification portion of the Temporary Lift Checklist was not initialed by the EA. After the EA had returned with the completed outage packages, the Unit 1 NSO reviewed them and noted the subject Temporary Lift Checklist had not been initialed. This indicated that either the breaker had not been verified or that the EA had forgotten to initial the verification portion of the Temporary Lift Checklist. The NSO determined through direct observation of the valve's control room panel indicating lights that the valve's motor operator was deenergized, and therefore the NSO placed the initials "J.C." on the Temporary Lift Checklist. These were the initials of the EA.

Later during the afternoon shift the Station Control Room Engineer (SCRE), while performing a control room panel review, noted that there was no position indication light for valve 2E22-F023, the Unit 2 HPCS Suppression Pool Full Flow Test Valve. Unit 2 was operating at 100% power at the time. The licensee's investigation led to the discovery that the first EA had incorrectly opened the Unit 2 breaker instead of the Unit 1 breaker. When the Unit 1 afternoon shift NSO was initially questioned regarding the initials on the Temporary Lift Checklist, he did not acknowledge he had initialed the Temporary Lift Checklist for the independent verifier. At a licensee meeting on March 24, 1986, the NSO stated that he did not know who placed the initials "J.C." on the Temporary Lift Checklist. The station then contacted handwriting experts to analyze samples of logs and other handwriting specimens to try to determine who had initialed the Temporary Lift Checklist.

On March 31, 1986, the NSO contacted the Assistant Superintendent of Operations and acknowledged that he had placed the initials "J.C." on the Temporary Lift Checklist. All efforts in handwriting analysis by the licensee were terminated. At a licensee meeting on April 1, 1986, the NSO stated that he had placed the initials "J.C." on the Temporary Lift Checklist after noting that the required verification blank had not been filled in. He stated that he did this believing that the afternoon shift EA had completed the work on this OOS as he had for the others that he had been given that evening, but had forgotten to initial the box for verification. The NSO did not check with the EA to determine if he had completed the verification.

b. Licensee Personnel Interviews

On April 14, 1986, the inspectors interviewed Station personnel to gain some insight as to why the events described in Section 2.a. above occurred. The following personnel that were on the afternoon shift on the date these events transpired were interviewed:

Unit 1 Nuclear Station Operator (NSO)
Equipment Attendant whose initials were used
Station Control Room Engineer
Shift Engineer
Unit 1 Shift Foreman

The inspectors made the following determinations:

- The NSO commonly placed EA's initials on outage packages when signing for an EA unlike other operators who used their own initials instead of the EAs'. The NSO stated he had previously always contacted EAs to confirm they had performed their assigned tasks and to gain their permission prior to placing their initials on the Temporary Lift Checklists.

- The NSO thought that the EA had verified the tag and had simply forgotten to initial the Temporary Lift Checklist. The NSO assumed this because the checklist was in the vicinity of a group of "outages" that had been laid on his table that had been completed by the EA. However, the EA apparently had not seen the subject Temporary Lift Checklist and it apparently never left the NSO's desk. The completed "outages" appear to have been set back upon the desk by the EA in the general area or on the subject Temporary Lift Checklist, and when the NSO picked up the "outages" he also picked up the subject Temporary Lift Checklist.

- The NSO stated that while not frequent, EAs have been known in the past to forget to initial Temporary Lift Checklists. The inspectors were unable to confirm this statement with other licensee employees interviewed.

- When asked the direct question "why did you deny knowledge of these events when confronted about the use of the EA's initials," the NSO stated that he felt the issue was insignificant and would blow over in several days. Additionally, he was afraid of losing face in front of his peers, of being the subject of a procedural violation, and of the potential disciplinary action that might be taken against him.

- When asked "why did you finally admit to using the EA's initials," he stated that because the issue was becoming serious he could no longer, in clear conscience, go on denying any knowledge of the events. At that point he was aware that handwriting analysis and a lie detector test were being considered.

- All five of the station personnel interviewed indicated that they were not aware of any company policy or station procedures governing how to sign or initial for another individual, nor the conditions under which it might be done.

Technical Specification 6.2.A.1 states, in part, that detailed written procedures including applicable checkoff lists covering the applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, Revision 2, February 1978, shall be prepared, approved, and adhered to. Item 1.c of Appendix A to Regulatory Guide 1.33, Revision 2, February 1978, identifies "Equipment Control (e.g., locking and tagging)." Procedure LAP 900-4, Revision 24, entitled Equipment Out Of Service Procedure, requires all necessary Out-Of-Service Cards be placed on safety-related equipment removed from service in accordance with the checklist. Contrary to this requirement, the day shift EA hung the OOS card and deenergized a breaker that was not specified on the Temporary Lift Checklist. This is a violation of Technical Specifiction 6.2.A.1 (373/86015-01A(DRS)).

Both Section E.8 of procedure LAP 1600-2, "Conduct of Operators Procedure," and Section F.3.b of LAP 900-4 further require that a second independent verification shall be made when placing safety-related equipment into or out of service. Contrary to the above, a second verification of the OOS Card placement was not performed after placing the High Pressure Core Spray Suppression Pool Full Flow Test valve motor operator breaker out of service. This is considered a violation of Technical Specification 6.2.A.1 (373/86015-1B(DRS)).

c. Licensee Actions

As a result of these events, the Licensee has taken disciplinary action with respect to the NSO and has not allowed him to perform licensed duties pending formulation of final corrective action. The Equipment Attendant responsible for incorrectly hanging the tag on and deengergizing the Unit 2 HPCS Suppression Pool Full Flow Test Valve

breaker was counseled on the importance of double checking before operating equipment to prevent mistakes. The failure by licensed personnel to identify that the HPCS valve had been inadvertently deenergized is discussed further in Section 3 of this report.

3. Followup of Shift Turnover

The inspectors talked to the March 19, 1986, oncoming afternoon operating shift (Unit 2 Nuclear Station Operator (NSO), Shift Control Room Engineer (SCRE), Unit 2 Shift Foreman (SF), and Shift Engineer (SE)) and determined that all personnel except the Shift Foreman had walked down the panels as part of their shift turnover and did not recognize the loss of power to the control switch for the HPCS Suppression Pool Full Flow Test Valve (2E22-F023). The SCRE and NSO walked down the panels with their offgoing counterparts who also did not recognize the condition. The oncoming NSO stated that he walked the panels briefly to get a rough idea of the Unit 2 status before he walked the unit panels again with the offgoing NSO to receive the final turnover. Station procedure LAP 200-3, "Shift Change," required the following:

a. Paragraph F.1.e.5)a): "During the shift change the oncoming Shift Engineer shall: Perform a visual control room panel check which shall include, but is not limited to: Status of safety-related systems (green board concept)."

b. Paragraph F.2.c.4)a): "The offgoing SCRE shall: Inspect all unit and control room panels with the oncoming SCRE/plant SRO, which shall include, but are not limited to: Status of safety-related systems (green board concept)."

c. Paragraph F.2.d.3): "Inspect all unit and common control room panels with the offgoing SCRE/plant SRO per Step F.2.c.4) of this procedure."

d. Paragraph F.3.g.1): "The oncoming Shift Foreman shall maintain cognizance for his assigned unit by performing a panel walkdown for his assigned unit, as soon as conditions allow following shift change, which shall include, but is not limited to: Status of safety-related systems (green board concept)."

e. Paragraph F.6.c.3)a): "The offgoing NSO shall: With the oncoming NSO, walkdown the assigned control room panels specified in LAP 200-1, Operating Department Organization. Discussions shall include, but are not limited to: Status of safety-related systems (green board concept)."

f. Paragraph F.6.d.2): "With the offgoing NSO, walkdown the assigned control room panels per Step F.6.c.3) of this procedure."

Although the shift personnel interviewed stated that the panel walkdowns were accomplished, the walkdowns were not adequate to have identified the loss of power to the 2E22-F023 valve. Technical Specification 6.2.A.1

states, in part, that detailed written procedures including applicable checkoff lists covering the applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, Revision 2, February 1978, shall be prepared, approved, and adhered to. Item 1.g of Appendix A to Regulatory Guide 1.33, Revision 2, February 1978, identifies "Shift and Relief Turnover" as required procedures. Failure to perform an adequate walkdown in accordance with procedure LAP 200-3 by the offgoing SCRE and NSO, and the oncoming SCRE, NSO, SF, and SE is considered a violation of Technical Specifiction 6.2.A.1 (374/86016-1A(DRS)).

The primary containment function of this valve was maintained because the valve was taken out-of-service on Unit 2 in the closed position. The failure of the shift personnel to recognize the removal of power to the HPCS valve was attributed to lack of sufficient attention to responsibility and detail. However, two conditions existed which may have contributed to this event. The first was that three other valves in that area for HPCS had been taken OOS for several months with no control room indication; however, they had OOS tags on them. The walkdowns did not identify that the fourth set of lights were also out. The second reason was that the ESF panel showed HPCS problems but the alarm was already up due to low HPCS water leg pump pressure and power was not available to the other three valves which were already OOS, the normal condition with the HPCS in this condition.

After the shift turnover but during each shift, the NSO is also required to perform LOS-AA-S1, Shiftly Surveillance. The procedure required that the surveillance should be conducted by each shift unit operator at the beginning of the shift after shift relief had been accomplished. Step F.33.f of LOS-AA-S1 states, "In condition 1, 2, 3, and in 4 or 5 if HPCS is required to be operable, CHECK the lineups/indication as follows: HPCS Full Flow Test to CST, 1(2)E22-F010 and 1(2)E22-F011; HPCS Full Flow Test to Suppression Pool, 1(2)E22-F023...are CLOSED." Unit 2 was in condition 1 at the time of turnover. When asked about performance of this procedure, the NSO stated that he remembered doing the procedure because he had a hard time getting the computer to produce a P-1 edit which was needed to record data in another step. He, however, did not remember whether he had checked the valves to accomplish step 33. This step only required a check and did not require a sign off that the valves were closed.

Technical Specification 6.2.A.1 states, in part, that detailed written procedures including applicable checkoff lists covering surveillances shall be prepared, approved, and adhered to. The failure of the oncoming NSO to adhere to LOS-AA-S1 is considered another example of the violation of Technical Specification 6.2.A.1 (374/86016-01B).

4. Enforcement Conference

An enforcement conference was held with licensee management on May 12, 1986, in the USNRC Region III office. The details of the inspection results and intended enforcement actions were discussed. Attendees are denoted in Paragraph 1.

5. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) on April 14, 1986. The scope and findings of the inspection activities were discussed. The inspectors discussed the likely informational content of the inspection report and the licensee did not identify any items as proprietary.