

U.S. NUCLEAR REGULATORY COMMISSION
REGION III

Report Nos. 50-373/92008(DRP); 50-374/92008(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: February 21 through April 14, 1992

Inspectors: D. Hills
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5/6/92
Date

Inspection Summary

Inspection from February 21 through April 14, 1992 (Reports No. 50-373/92008 (DRP); 50-374/92008(DRP)).

Areas Inspected: A routine, unannounced safety inspection was conducted by 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; safety assessment/quality verification; and report review.

Results: One violation was identified. It involved three examples of non-licensed operator failure to follow procedures during precharging of control rod drive accumulators (paragraph 4.a(2)), a radwaste transfer (paragraph 4.a(3)), and response actions to control rod drive accumulator alarms (paragraph 4.a(5)).

Four non-cited violations were identified involving failure to follow procedure due to a communication error during an average power range monitor surveillance (paragraph 2), failure to follow administrative requirements in regard to fire protection impairment permits (paragraph 4.b(1)), an inadequate work package that failed to reflect a safety evaluation prohibition against

removing specific cable trays (paragraph 5.b), and the failure of fire door technical specification surveillances to meet documentation requirements (paragraph 6.a.).

One unresolved item was identified involving combustible loading restrictions in a dry active waste storage area in the turbine building (paragraph 6.b).

Four open items were identified involving planned licensee actions to develop a memorandum delineating system engineer walkdown expectations (paragraph 4.c), review steam seal evaporator level control valve design adequacy (paragraph 5.a), develop plans to reduce the number of long standing temporary system changes (paragraph 5.d), and evaluate possible changes to the procedure process to address procedure weaknesses (paragraph 7.d).

Plant Operations

Performance remained steady in this area. Implementation of control room operator activities, shift turnovers, and operator response to a loss of condenser vacuum event were good. The licensee's "war room" concept for outage control was regarded as a qualified success. However, procedure adherence problems continued in regard to non-licensed operators. Although a review of licensed operator overtime did not identify any problems in this area, further NRC review of non-licensed operator overtime is planned in response to an event where fatigue may have been a factor. Continued procedure weaknesses were noted with some indicating a reluctance of operators to initiate procedure changes when they do not reflect actual practice. In addition, further NRC review to assess the timeliness of identifying needed procedure changes is planned in response to a single incident where this proved to be a factor. An unauthorized impairment of a fire door discovered by the inspectors was considered to be an isolated incident. Housekeeping was generally good during the Unit 2 refueling outage.

Maintenance and Surveillance

Performance remained steady in this area. The inspectors ascertained general equipment condition coming out of the Unit 2 refueling outage to be good in regard to outstanding corrective work requests. Management emphasis on maintaining equipment was evident. However, an excessive number of long standing temporary system changes remained. Followup of a reactor scram indicated the need for operators to compensate for either failed or poorly designed non-safety related equipment with respect to the main turbine steam seal system. In addition, the scram could have been averted if troubleshooting of a previous non-safety valve problem had been more extensive. A work analyst's inattention to detail resulted in a cable tray being removed, contrary to a licensee safety evaluation. A weakness in the licensee's method of setting torque switch bypass limit switches was also identified. Technical specification fire door surveillances were not being documented such that adequate confirmation of the surveillance could be verified.

Radiological Controls

Performance remained steady in this area. Continued problems were noted with contractor personnel leaving contaminated areas and not frisking prior to donning personal clothing. A need for greater respect for ALARA principles among contractors was clearly evident. The licensee took actions to address this concern.

Engineering/Technical Support

Performance remained steady in this area. Two examples of inadequate technical staff communications with other station staff resulting in adverse occurrences were noted. Management expectations of system engineer responsibilities were not clearly communicated to technical staff engineers. However, good coordination was noted between onsite corporate engineers and station staff during modification work.

Safety Assessment/Quality Verification

Performance remained steady in this area. Nuclear Quality Programs coverage of outage activities was adequate. Onsite Nuclear Safety Group oversight was excellent and indicated a good safety perspective. The licensee, however, remained ineffective in adequately addressing previously identified procedure inadequacy and adherence problems. The licensee was evaluating further actions in these areas. Observed onsite review committee meetings were comprehensive. The inspectors noted that the distinction between a deviation report and informal report was unclear, resulting in untimely event followup in at least one case.

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
 - *M. Cray, Master Instrument Mechanic
 - *R. Crawford, Master Electrician
 - *W. Steffes, Fire Marshall
 - *K. Francis, Radwaste Coordinator
 - *R. Bare, Senior Quality Control Inspector
 - *J. Bell, Work Analyst Supervisor
 - *P. Nottingham, Chemistry Supervisor
 - *T. Hamerick, Operating Engineer
 - *J. Borm, Nuclear Quality Programs Engineer
 - *D. Carlson, NRC Coordinator
- *Denotes those attending the exit interview conducted on April 14, 1992.

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) Unresolved Item (374/91025-01(DRP)): Review of the wrong survey results and received the wrong ALARA briefing prior to reactor water cleanup system insulation work. This issue was discussed in inspection report 50-373/92006(DRSS); 50-374/92006(DRSS) where it was deemed a non-cited violation. This item is considered closed.

(Closed) Unresolved Item (373/91025-04(DRP)): Review of corrective actions to contaminated water spill from a submersible pump. The licensee's corrective actions included tailgating to station personnel on positively identifying what equipment was energized, proper labeling of portable equipment, and awareness of the consequences of placing anything into a tank or sump. The licensee also required the use of a written procedure when using a submersible pump and planned training to emphasize this requirement. The inspector has no further concerns in this area.

(Closed) Unresolved Item (374/91025-02(DRP)): Evaluate licensee's root cause and corrective actions of Unit 2 low pressure coolant injection valve pinched motor leads. This problem was addressed in inspection report 50-373/92002(DRS); 50-374/92002(DRS). The inspectors have no further concerns in this area.

(Closed) Unresolved Item (373/91025-05(DRP)): Review simultaneous nonconservative adjustment of all six Unit 1 average power range monitors (APRM). Poor communications between the control system technician and the qualified nuclear engineer resulted in the desired power level not being correctly specified in accordance with LaSalle Instrument Surveillance (LIS)-NR-109, "Unit 1 APRM Gain Adjustments," Revision 5, Step F.1. Failure to perform the surveillance in accordance with this procedure is considered to be a violation of Technical Specification 6.2.A which requires adherence to surveillance and test procedures. This violation will not be subject to enforcement action because the licensee's efforts in identifying and correcting the violation met the criteria in Section V.G of the "General Statement of Policy and Procedures for NRC Enforcement Actions," (Enforcement Policy, 10 CFR Part 2, Appendix C (1991)).

Safety significance was minimal in that the fixed neutron flux, flow biased thermal power trips and rod block monitor rod blocks would have still functioned but at a 5% higher setpoint. The licensee's analysis concluded sufficient margin remained to not exceed safety limits during postulated accidents. In addition, licensee personnel identified the error prior to completion of the surveillance such that applicable Technical Specification limiting conditions for operations action statement time frames were not exceeded. LIS-NR-109 was revised to include additional verifications of usage of applicable values and verification of correct calibration prior to continuing with the next channel. The licensee also scheduled additional training for station personnel with emphasis on formal communications and repeat-backs. The inspectors have no further concerns in this area.

(Closed) Unresolved Item (374/91025-03(DRP)): Review corrective actions to non-safety bus 252 inadvertent de-energization during an electrical maintenance out-of-service walkdown. The electricians were not aware that opening the potential transformer fuse cubicle would disconnect the potential transformer fuses and cause the bus to sense undervoltage. The licensee provided additional training on potential transformer fuse cubicle operation to electricians subsequent to the event and installed warning labels on the cubicle. The inspectors have no further concerns in this area.

No cited violations, one non-cited violation, and no deviations were identified in this area.

3. Licensee Event Reports Followup (92700)

The following licensee event reports were reviewed to ensure that reportability requirements were met, and that corrective actions were accomplished in accordance with the technical specifications:

(Closed) LER 373/92001-00 APRM Set Nonconservatively Due to Communication Error

(Closed) LER 373/92003-00 Unit 1 Scram Due to Loss of Condenser Vacuum

(Closed) LER 374/92002-00 Spurious Division 1 Emergency Core Cooling System Initiation Due to Air Trapped in Reference Piping

(Closed) LER 374/85035-01 Safety Relief Valve Actuation

(Closed) LER 374/91005-02 Reactor Core Isolation Cooling Declared Inoperable Due to Steam Line High Flow Switch Failure

(Closed) LER 374/91013-01 Loss of Auxiliary Electric Equipment Room Ventilation Supply Fan Due to Overheating of Starting Coil for the Breaker

(Closed) LER 373/91015-02 Inadequate Testing of Diesel Generators Due to Inadequate Procedures/Technical Specification Misinterpretation

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 (60710, 61715, 71707, 71710, 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.

Significant observations were:

- (1) During control room tours, the inspectors consistently noted that control room access was adequately controlled. Operators were knowledgeable of plant activities, were deeply involved in performing their jobs, and displayed a highly professional attitude. Shift turnover meetings were comprehensive and detailed, performed prior to actual relief, and involved numerous work groups.

Good outage coordination improvement efforts were noted. The licensee's new "war room" concept ensured good communication and interaction between departments, timely status update, and identification of most potential scheduling conflicts. The inspectors regarded the process an overall success with only minor problems (e.g. out-of-

service placement and removal scheduling) primarily attributable to implementation of a new process. The licensee planned a lessons learned review of the process to provide further enhancements for the next refueling outage.

- (2) An example of poor communications involving technical staff personnel was evidenced on February 10, 1992, when a Unit 2 control rod was inserted during a scram valve timing test. The control rod drive system hydraulic control units were out of service with the reactor defueled at the time. The technical staff engineers did not conduct a pre-job briefing with operating personnel, to ensure that involved personnel understood the evolution, and to question operating personnel regarding system status prior to testing. As a result, the engineers did not know the overpiston area of the water side of the accumulator had not been drained during the simultaneous accumulator precharging process. (The engineers had assumed the operators were following the appropriate procedure). One of the operators involved in the precharging was not aware the scram valve timing test had even started. Although station administrative procedures addressed briefing and communication expectations for more complex evolutions, these procedures did not address less involved evolutions such as technical staff surveillances. This was regarded as a weakness. Plant management indicated their expectations were that an adequate briefing be given to involved personnel prior to performance of technical staff surveillances. Corrective actions included tailgates to emphasize this point.

The prescribed procedure, LaSalle Operating Procedure (LOP)-RD-10, "Control Rod Drive System Accumulator Initial Charging," was not followed by the operators. Step F.10.b required opening of the accumulator water side vent valve prior to precharging, which would have prevented the event. Precaution D.4 specifically addressed leaving open the drain valve to prevent inadvertent control rod insertion. This failure to adhere to procedure is considered to be an example of a violation (50-373/92008-01a (DRP)) of Technical Specification 6.2.A.1. Interviews with the operators, coupled with other examples described in this report, indicated that procedural adherence expectations had been previously stressed by plant management. However, it appeared that confusion existed regarding specific implementation of these expectations.

Fatigue may also have been a factor in that one of the operators was nearing the completion of a double shift at the time of the event. A review of work hours during the preceding two weeks indicated the operators were well short of the 72-hour in any seven-day period overtime guideline limitation. However, the operators worked occasional double

shifts resulting in just reaching (but not exceeding) the 16 in 24 hours and 24 in 48 hours limitations during those times. The inspectors regarded this as too small of a sample to reach a representative conclusion regarding non-licensed operator overtime practices during the refueling outage. Therefore, inspector review of a bigger sample population is planned for the next inspection period.

- (3) On February 16, 1992, approximately 1500 gallons of contaminated water was spilled onto the floor during the transfer of water from the Unit 1A floor drain concentrator feed tank to the chemical waste system. LaSalle Operating Procedure (LOP)-WF-29, "Transfer of Floor Drain Concentrator Feed Tank to Chemical Waste System," Revision 2, prerequisite C.6, and step F.1.a required an operator to verify a hose in place between the tank discharge and the chemical waste sump. The radwaste operator failed to perform this step. This failure to adhere to procedure is considered an example of a violation (50-373/92008-01b (DRP)) of Technical Specification 6.2.A.1. Subsequent interviews indicated that failure to follow this procedure was not limited to this one individual or incident. In addition, the inspectors noted that the normal practice of leaving open the tank discharge valve and opening and closing a ball valve in the middle of the hose to cause the transfer was not reflected in the operating procedure. Operators had failed to identify the need for a procedure change to reflect actual practice.
- (4) On March 12, 1992, shift 2, during the performance of LaSalle Operating Surveillance (LOS)-AA-S2, "Center Desk Shiftly/Daily Surveillance", the operator failed to notice the sample flow to the main stack wide range gas monitor was high and outside the tolerance given in LaSalle Operating Procedure (LOP)-PR-04, "Startup, Operation, and Troubleshooting of the Station Vent Stack Wide Range Radiation Monitoring System." The operator failed to check the data he had recorded against the graph in LOP-PR-04 as he was interrupted during performance and subsequently forgot to complete the action. The operator on shift 3 also recorded data outside the tolerance of LOP-PR-04, checked the graph in the procedure, but misread the graph due to the poor quality of the graph. The inspectors regarded this as a procedural weakness. Operations personnel had previously expressed problems with the graph and corrective action had been awaiting planned procedure revision during the scheduled two-year procedure review cycle. (Actual documentation of the request could not be retrieved as it was discarded after the procedure revision following the event.) The inspectors plan to evaluate a wider sample of planned procedure revisions to assess timeliness in the next inspection period.

- (5) The inspectors identified that LaSalle Operating Procedure (LOP)-RD-20, "Control Rod Accumulator Recharging/Water Removal," Revision 1, Attachment B, "Control Rod Drive System Accumulator Charging Checklist," was not being completed in accordance with Step F.9 of the procedure. The attachment was to be completed upon recharging or draining water from the instrument block of a control rod drive hydraulic control unit (HCU) accumulator following an accumulator trouble alarm. The attachment provided documentation of as left checks and independent verifications of system status and actions taken (recharge or drain water). It was to be reviewed by the shift supervisor and forwarded to the cognizant technical staff engineer for trending. An alternate procedure LOP-RD-10, "CRD System Accumulator Initial Charging," Revision 9, could be used to clear a low nitrogen pressure accumulator alarm when sufficient nitrogen pressure was unavailable to recharge. Step F.2C of this procedure also required completion of Attachment B, "CRD System Accumulator Charging Checklist," to provide documentation of as-left checks and independent verification of system status.

The Unit 1 log indicated accumulator alarms on the day shifts of March 13, 14, and 15. No corresponding attachments from LOP-RD-10 or LOP-RD-20 existed. The licensee was able to retrieve only five Attachment B's for all of 1992 (all on Unit 2.) This failure to adhere to procedure is considered an example of a violation (373/92008-01c (DRP)) of Technical Specification 6.2.A.1. Experience indicated numerous additional accumulator alarms would have been received during this time period (at least once a day and probably more.) Therefore, this problem appeared to affect multiple shift crews.

The previous accumulator alarm log had been discontinued and transferred to the technical staff engineer on March 8, 1992. A revision to Attachment B had been made on January 4, 1992, to LOP-RD-20 to provide the trending capability. However, LOP-RD-10 had not received the same changes to provide for trending. In addition, LaSalle Operating Abnormal (LOA) 1(2) H13-P603-A503 "CRD Hydraulic Accumulator," Revision 6, had not been revised to delete the reference to the discontinued accumulator alarm log. Although operators were aware the log no longer existed, the discrepancy was apparently not identified as operators did not routinely refer to the procedure when responding to the alarm due to frequency of this alarm and familiarity with needed actions. These were considered procedural weaknesses. The licensee revised the indicated procedures to correct the weaknesses following identification by the inspectors.

The inspectors also noted that the Unit 1 log for the dates reviewed, March 7-19, 1992, contained references on accumulator alarms only for the same shift on the March 13, 14, 15. As normal experience would dictate, additional accumulator alarms probably occurred on dates other than just these three. Therefore, it appeared that these alarms were not being logged by most crews. LaSalle Administrative Procedure (LAP)-220-2, "Unit Operator's Log," Revision 14, did not require unexpected alarms to be logged. Further review of licensee logging practices is planned for the next inspection period.

- (6) The inspectors reviewed documentation of overtime hours for licensed reactor operators and senior reactor operators including those holding inactive licenses. No discrepancies were found and overtime was not excessive.
- 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 were:

- (1) On February 26, 1991, the inspectors identified that fire door 417, separating Units 1 and 2 on the 761-foot elevation of the reactor building near the control rod drive hydraulic control units, was tied wide open with a rope. Nobody was in attendance and a fire protection impairment permit had not been issued. The door was closed upon notification to the licensee. The reason for the open fire door could not be identified. Safety significance was minimal in that fire detection systems in the area were operable. In addition, the door was open only a short time as the security rover indicated the door was observed closed less than an hour prior to identification. LaSalle Administrative Procedure (LAP)-900-16, "Fire Protection Equipment and Fire Barrier Impairments," Revision 10, Step F.1b required a fire protection impairment permit to be initiated before a fire protection system or component is taken out of service. This failure to adhere to the procedure is considered to be a violation of Technical Specification 6.2 A.11 requiring adherence to fire protection program implementing procedures. In March 17, 1992, the licensee issued a letter to department heads and security to stress to the work force the importance of communication to appropriate parties prior to changing door status. The violation is not being cited because the criteria specified in Section VII.B.1 of the "General Statement of Policy and Procedures for NRC Enforcement Actions," (Enforcement Policy, 10 CFR Part 2, Appendix C (1992) was satisfied.

- (2) The inspectors noted, for the most part, good housekeeping during the refuel outage. Occasional problem areas were quickly cleaned up when identified by NRC inspectors.
- (3) While inspecting maintenance activities on February 26, 1992, the inspector noticed numerous contractor personnel leaving contaminated areas and donning personal clothing prior to frisking. Contractor radiation protection personnel were notified of the situation. Later the same contractor personnel were observed following frisking requirements correctly. This was previously identified as a problem in Inspection Report (50-373/92006(DRSS); 50-374/92006 (DRSS)) in which the need for proper management attention was stressed. These later observations were made prior to completion of the licensee's corrective actions to this concern. The licensee and the contractor company subsequently held meetings with all personnel to emphasize this concern. The inspectors will continue to monitor radiation protection practices for further problems in this area.

- c. Engineered safety features (ESF) systems were specifically inspected to verify proper valve and electrical alignments and proper essential support system operability. Components were inspected for leakage, proper lubrication, abnormal corrosion and cooling water supply availability. Associated tagouts and jumper records were also reviewed.

During the inspection, the inspectors selected accessible portions of the Unit 2B low pressure core injection (LPCI) system to verify its status. Consideration was given to the plant mode, applicable Technical Specifications, limiting conditions for operation action requirements, and other applicable requirements.

The material condition of the system and its components was assessed as very good. Previous work requests and the work request backlog were reviewed and were in good order. A sample of system operating, surveillance, and instrument procedures was reviewed and was good.

The inspector interviewed the licensee technical staff system engineer and the technical staff supervisor and reviewed the system notebook. Management expectations of system engineer responsibilities such as frequency and scope of system walkdowns, system operating parameter review, and system notebook update and review were not clearly communicated to the engineers or their group leaders. This is considered a weakness. The licensee intended to issue a controlled memorandum to describe system expectations to the engineers. NRC will review this memorandum and this issue is considered an open item (50-373/92008-02 (DRP)).

- d. The inspectors verified that refueling activities were being conducted and controlled as required by Technical Specifications and approved procedures. This was done on a sampling basis through direct observation of activities and equipment, tours of the facility, interviews and discussions with licensee personnel, and independent verification of safety system status and limiting conditions for operation (LCO) action requirements. The inspectors observed fuel movement during core reload to verify that core alterations were being performed in a safe manner. The inspectors also discussed core alterations with Nuclear Quality Programs personnel who were also witnessing fuel reload.
- e. The inspectors participated in the Unit 2 drywell closeout on March 31, 1992. The drywell was inspected for cleanliness and approximately ten containment isolation valves internal to the drywell were verified to be in the proper position. The drywell was clean with the exception of tape and tie wraps left after instrument removal at the end of the containment integrated leak rate test. In addition, the inspectors observed the April 2, 1992, Unit 2 reactor startup. The startup was performed in accordance with applicable procedures. Prior to startup, the inspectors performed a detailed walkdown of portions of the high pressure core spray and division 125-volt dc systems. The inspectors determined the systems had been returned to service in accordance with approved procedures.

One cited violation with three examples, one non-cited violation, and no deviations were identified in this area.

5. Monthly Maintenance Observation (37701 and 62703)

Station maintenance activities affecting the 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:

Unit 1

- WR L13990 1A Turbine Driven Reactor Feedwater Pump Will Not Transfer to Auto
- WR L13870 Valve 1GS-002 Main Steam Supply to the Steam Seal Evaporator Would Not Open From the Control Room
- WR L13871 Inspect the Steam Seal Evaporator

Unit 2

- WR L7452 Perform VOTES Testing on Valve 2E32-F007

WR L12731 Valve Leaks During Local Leak Rate Testing at Bottom Center
of Valve
WR L13645 Check Flange Bolt Tightness

Significant observations included:

- a. On March 1, 1992, a loss of main turbine sealing steam resulted in a Unit 1 reactor scram following a turbine trip on low condenser vacuum. Several operational and non-safety maintenance related aspects to the scram were evaluated by the inspectors.
 - (1) Operator actions were necessary to compensate for either failed or poorly designed equipment. Although steam seal evaporator (SSE) level control and steam seal header pressure control design allowed for automatic control, circumstances necessitated manual control by the nuclear station operator (NSO) during a load decrease prior to the scram. Steam seal header pressure was controlled through manual adjustment of the pressure control bypass valve. A work request had existed on the pressure control valve since May 1991 indicating it would not maintain pressure. Initial actions taken to correct the problem were ineffective and this issue has not been resolved despite numerous subsequent opportunities (unit shutdown of sufficient length). Makeup to the SSE was supplied from the condensate system through an automatic level control valve. At high power levels, the flow control valve alone was not capable of supplying adequate makeup. The flow control bypass valve was being manually positioned by the NSO to provide additional makeup capability. Following the event, the licensee requested General Electric to evaluate the design adequacy of the system. NRC review of the completed evaluation is considered an open item (50-373/92008-03 (DRP)).
 - (2) The inspectors also noted that LaSalle Operating Procedure (LOP)-GS-01, "Gland Seal Steam Startup," Revision 7, did not reflect usage of the SSE flow control bypass valve during high power levels. Although this had always been normal operating practice, the procedure valve lineup indicated this valve as closed and did not contain references to any need to open it. This was regarded as a procedure weakness and was corrected after identification to the licensee. (The associated annunciator procedure already referred to use of the bypass valve.)
 - (3) SSE level indication (provided by a capacitance probe) in the control room failed such that it would not indicate below six and one half inches, thereby misleading the NSO. Therefore, the NSO did not attempt to reopen the flow control bypass valve during the transient to provide sufficient level in the SSE. The pneumatic displacement transmitter controlling the flow control valve controlled

about two inches lower than required but otherwise was later found to be functioning correctly. The licensee was able to drain considerable evaporator bottoms from the SSE level sensing column. Plugging of the column could have caused level indication problems. This had never been previously checked by the licensee. Following the event, the licensee similarly drained the Unit 2 SSE and scheduled the activity as routine preventive maintenance on both units.

- (4) The SSE steam supply pressure control valve opening fully upon sensing a low steam seal header pressure may have also contributed to the event. Instrumentation for SSE steam supply pressure would have caused the valve to instead close but it had also failed. An open May 1991 work request also indicated this valve would not maintain pressure.
- (5) During the event, the operators took prudent and correct actions in accordance with applicable procedures. One of these actions included opening a valve to supply main steam directly to the steam seal header which should have averted the scram. However, the valve torqued out and failed to open. A previous CECO Nuclear Operations Directive prescribed expanding the torque switch bypass from five to twenty-five percent of travel. LaSalle Electrical Procedure (LEP)-GM-102, "Motor Operated Valve Electrical Maintenance," was revised on October 3, 1988, on non-safety related valves to make this change coincident to other valve work. On September 15, 1990, the same valve failed to open from the control room. During the following refueling outage, the valve cycled satisfactorily and the work package was signed off as completed. At the time of the cycling, there was no differential pressure across the valve and thus less torque was required to open the valve. Further trouble shooting of the valve at that time may have revealed the problem with the torque switch bypass. The licensee planned to issue a General Information Notice (GIN) on the event for electrical maintenance and operating personnel in regard to the previous valve problem. The licensee reviewed and identified 20 balance of plant motor operated valves which opened against a differential pressure. Two of these valves had incorrect torque switch bypass settings and were corrected prior to startup.
- (6) Although not contributing to the event, the licensee also found a failed level controller in the SSE drain system and two air leaks. The controller and other instruments mentioned above were calibrated during the previous refueling outage.

- b. On February 25, 1992, it was discovered that a cable tray section, posing interference for a valve actuator replacement, was inadvertently removed. The tray removal caused the licensee to

declare the "B" train of the control room emergency makeup for the heating, ventilation, and air-conditioning system and the Unit 2 standby gas treatment system inoperable. The tray was reinstalled and the systems were returned to operability. A licensee seismic evaluation later determined the systems were never inoperable. The work analyst failed to properly review a safety evaluation which did not allow the removal of the cabinet tray. The inappropriate work package is considered to be a violation of 10 CFR 50, Appendix B, Criterion V. This violation will not be subject to enforcement actions because the licensee's efforts in identifying and correcting the violation met the criteria in Section VII.B.2 of the "General Statement of Policy and Procedures for NRC Enforcement Actions," (Enforcement Policy, 10 CFR Part 2, Appendix C (1992)). Significant planned corrective actions included counseling of the work analyst on the importance of verifying that the information received, is adequate in addressing the issue. In addition, the licensee planned to establish a programmatic method to ensure explicit coupling of technical evaluations and work packages for technical specification issues.

- c. The inspectors noted good coordination between onsite corporate engineers and the station staff during modification work such as the battery upgrades and motor operated valve testing results evaluations. Close support of these activities contributed to timely completion and was regarded as a benefit obtained from having corporate engineers on site.
- d. The inspector reviewed work requests, temporary system changes, and disabled control room annunciators on Unit 2 to ascertain general equipment condition coming out of the refueling outage. Deferred work requests from the refueling outage were evaluated. The number of outage corrective work requests remaining open on the unit was very minimal and each open work request was justifiable (e.g. while implementing the work requests during the outage, the need for modifications or additional parts with longer lead times was identified.) In addition, backlog of non-outage corrective work requests on the unit was small and reasonable, and within prescribed limits of LaSalle Administrative Procedure (LAP) 200-9, "LaSalle Plan to Achieve Error-Free Operation." There were 41 temporary system changes in effect on Unit 2 with 19 of these in effect since 1990 and the oldest one was from 1984. The significance of any particular one was minimal, but in aggregate they showed a lack of management attention to minimize the number of temporary system changes. Concerns with temporary system changes was previously identified by the NRC Operational Safety Team Inspection (OSTI) in Inspection Report 373/91023(DRP); 374/91023(DRP)). The licensee was formulating plans to effectively deal with the excessive number of long standing temporary system changes. This is considered an open item (50-374/92008-04 (DRP)) pending completion and NRC review of these plans.

The number of disabled control room annunciators on Unit 2 was minimal and considered acceptable for startup. However, some minor discrepancies were noted. A blue dot on the annunciator window indicated the bulb was removed and an orange dot indicated a temporary system change removing or all of the alarm inputs. The inspectors noted that work required to return two alarms (2A First Stage Reheater Drain Tank Drain Valve Closed and Second Stage Reheater Drain Tank Drain Valve Closed) to normal was completed, but the bulbs had not been installed and blue dots were removed from the annunciator windows. The documentation referred to the wrong annunciator window numbers. During a review of the log, the shift control room engineer had cleared the documentation because there was no dot and the bulb was installed on the incorrectly referenced annunciator window. The inspectors also noted the "Rx Recirc A/B Temp High" annunciator had an orange dot on the window although all associated temporary system changes were completed. The dot was not removed because the temporary system change paperwork was improperly filled out, due to an inattention to detail, and did not indicate that a dot was placed on the annunciator window. There was no safety significance to these discrepancies and they were corrected by the licensee after identification by the inspectors. The licensee also planned to issue a general information notice on the details of these problems and the need to ensure that temporary system change paperwork properly reflects the placement and removal of annunciator markers. In addition, the temporary system change form (LAP-240-6, Attachment B) was to be reviewed by the licensee to determine if changes were possible that would make the use of dots and caution cards more evident.

- e. The inspectors reviewed recent failures of the Unit 2 reactor water cleanup (RWCU) containment isolation valves. These valves were Anchor Darling motor operated parallel disc gate valves which were installed during the refueling outage to replace the previous flex-wedge gate valves. During a hydrostatic test at approximately 200 degrees F, RWCU containment isolation valve 2G33-F004 closed and tripped on thermal overloads as the close torque switch bypass limit switches had not been actuated. The valve had passed post modification testing at cold conditions. The licensee reset the limit switch, placed the valve back in service, and scheduled additional testing of the valve during the unit startup sequence at higher pressures. During Unit 2 startup on April 2, 1992, but prior to reaching the test conditions for thermal expansion, an expected RWCU isolation signal caused both RWCU containment isolation valves to close at approximately 230 degrees F. As the thermal overloads were automatically bypassed when an automatic isolation signal was present, both valve motors were damaged and required replacement.

The procedure for setting the limit switch required the switch to be set so that the torque switch was bypassed for greater than 98 percent of the valve's closing stroke to provide greater assurance

of closure. The limit switch was typically set at 100 percent stroke on motor operated valves (MOV) as it also controlled the open indication light. Anchor Darling motor operated parallel disc gate valves do not experience disc travel past seating, as opposed to flex-wedge gate valves and globe valves which allow some minimal disc travel after seating. Thermal expansion of the valve discs and stems resulted in the valves seating prior to limit switch actuation.

Setting the limit switches to bypass the torque switches for 100 percent of valve travel was not conservative because the setting left no tolerance for such factors as switch repeatability and thermal expansion. Since limit switches were normally set at ambient temperature, the effects of elevated temperature was neglected in the setting. The licensee planned to revise the switch setting procedure to prescribe setting in an acceptable band. The licensee performed a review of all other safety-related MOVs to determine if similar operability concerns existed. The licensee reset the limit switches on most of the affected valves. For the remaining affected valves (which would have necessitated a Unit 1 shutdown to reset the switches), the licensee performed an operability evaluation which supported leaving the current switch settings until plant conditions allow for switch reset work. The inspectors reviewed the justification and found it acceptable.

No cited violations, one non-cited violation, and no 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:

Unit 1

LES-GM-103 Inspection of 4.16 kv and 6.9 kv I.T.E. Circuit Breaker
LES-GM-109 Inspection of 480 Volt Klockner-Moeller Motor Control Center
LOS-DG-M3 1B Diesel Generator Operability Test
LIS-NR-303B Unit 1 Average Power Range Monitor Channels B, D, and F Rod Block and Scram Weekly Functional Test

Unit 2

LTS-500-5 Low-Low Setpoint System Functional Test

LLP-91-050 Low-Low Setpoint Matrix Logic Test
 Mod Test M-1-2-89-021 Anticipated Transient Without Scram (ATWS)
 Recirculation Pump Trip (RPT) Logic Changes
 LST-91-108 Unit 2 24/48 Volt Battery Performance Test
 LTS-1100-1 Shutdown Margin Test
 LTP-1600-22 Source Range Monitor (SRM) Performance Check
 LTS-300-4 Unit 2 Integrated Containment Leak Rate Test
 LTS-800-204 0 Diesel Generator ODG01K Twenty Four Hour Run Surveillance
 LOP-DG-08 Startup of Diesel Generator ODG01K

Significant observations included:

- a. The inspectors identified that LaSalle Post Order 121, "Fire Door Check," Revision 23, addressed only 45 of the 124 fire doors required to have either daily, weekly, or monthly checks in accordance with Technical Specification Surveillance 4.7.6.2. Although Post Order 121 specifically listed each of these fire doors and noted deviations, records were not kept to identify whether results were acceptable, the cause of the deviations, and any corrective actions. Although not indicated by the post order itself, the licensee indicated the surveillances on the remaining fire doors were accomplished through Post Order 112, "Removing Firewatch Patrol," Revision 3. Post Order 112 contained a step requiring that security guards ensure fire doors were latched closed while touring their assigned areas. As each fire door was not specifically listed, this did not provide absolute assurance that all fire doors were checked nor did it document identified deviations. Records were not kept in sufficient detail to permit adequate confirmation of the test program. Failure to meet ANSI N18.7-1972 requirements as committed to in CECO Quality Assurance Technical Report, Revision 60, through Regulatory Guide 1.33, Revision 2, is considered a violation of 10 CFR 50, Appendix B, Criterion V. On March 27, 1992, the licensee issued LaSalle Post Order 121, Revision 24, which corrected the identified deficiencies and was expanded to cover all applicable fire doors. Therefore, the inspectors have no further concerns in this area and the violation is not being cited because the criteria specified in Section VII.B.1 of the "General Statement of Policy and Procedures for NRC Enforcement Actions," (Enforcement Policy, 10 CFR Part 2) Appendix C(1992)), were satisfied.
- b. On March 16-18, 1992, the inspectors noted what appeared to be an excessive quantity of trash (filled plastic bags and cardboard sheets) in a dry active waste (DAW) storage area on the 735 feet elevation of the turbine building. Bags were piling up beyond the storage area boundaries). As a result of the inspector's concerns, the fire marshall reviewed the area on March 18, 1992, and estimated approximately 200 bags had accumulated. Further review indicated that, in response to a Nuclear Mutual Limited (insurer) concern about this area, an action item record (AIR) 373-355-90-00003 was generated in 1990. The resolution included establishing administrative requirements to post a one hour fire

watch upon reaching 75 bags and a continuous fire watch upon reaching 125 bags in the storage area. The licensee's DAW sorting table had become inoperative on March 13, 1992, causing a buildup of trash in the storage area. The exact time the administrative limits were exceeded could not be positively established. However, it was clear that the appropriate fire watch had not been posted in a timely manner. Formal controls had not been established to implement the storage limitations except for specific individuals who knew of their existence. These individuals had not identified a problem during that period. This is considered an unresolved item (50-373/92008-05 (DRP)) pending NRC review of the LaSalle Fire Protection Program Document regarding this fire zone (5B4). The licensee posted a continuous fire watch following notification by the inspectors until trash was removed to an acceptable level. In addition, a sign was posted at the location to delineate storage limitations.

- c. On February 29, 1992, during performance of a routine undervoltage load drop test, the 0 diesel generator output breaker failed to close. The failure was caused by a disconnection of the station auxiliary transformer (SAT) feed breaker auxiliary switch linkage due to a loose hex nut. The licensee determined that the failure of the output breaker to close was not a valid diesel failure. Further review of this decision will be considered in conjunction with previous unresolved item 50-374/92003-02 which deals with the same issue.

No cited violation, one non-cited violation, and no deviations were identified in this area.

7. Safety Assessment and Quality Verification (40500)

- a. The inspectors evaluated Nuclear Quality Program's (NQP) Unit 2 refueling outage coverage plans as well as NQP audit and surveillance results during the outage. The outage plans were well thought out and covered major work during the outage. NQP provided coverage during day and afternoon shifts six days a week with the remaining time being covered by callout. The results of past audits were also reviewed. The Audit Planning Worksheets used in preparing for an audit were an adequate tool. The field monitoring report was a satisfactory way of reporting observations made by NQP personnel. The trending program used with the field monitoring reports helped point the NQP inspectors into areas of possible concern such as written communication problems. The findings reported by NQP to the station were usually well received and acted on in a timely manner. The NQP inspectors observed in the field were knowledgeable and well trained.
- b. The inspectors observed Onsite Nuclear Safety (ONS) Group review of the refueling outage. The three ONS members were very knowledgeable of outage activities, and were highly visible both in the plant and at planning and station onsite review meetings.

ONS findings and recommendations were insightful and indicated a good broad-based understanding and good safety perspective. Examples included the effectiveness review of infrequent evolution control and out-of-service problems and concerns. ONS continued to monitor shutdown risk initiatives, including ensuring resolutions of previous concerns. ONS investigations of events were thorough and in some cases resulted in conclusions and recommendations beyond those developed by the plant staff. An example was the improved method to thaw freeze plugs.

- c. The inspectors inquired about the policies and procedures which govern the tie down of large loads when moving them within site boundaries. This concern originated from a previous Dresden Station event in which a large radwaste shipping cask being moved within the protected area fell off a truck whose path was near incoming power lines. As a result of the inspector's inquiry, plant management requested ONS to review the concern. ONS concluded, as in the Dresden case, specific policies or procedures did not exist in this area at LaSalle. ONS implemented an open item on this issue to ensure corrective action. Previous action at LaSalle had not occurred as a result of the Dresden event since Dresden ONS had not initiated a lessons learned initial notification.
- d. Due to previous problems regarding procedure adequacy identified by the inspectors, the licensee was conducting a special review to identify any needed changes to the procedure review process. (Other procedure weaknesses identified by the inspectors are addressed in paragraphs 4.a(3), 4.a(4), 4.a(5), 5.a, and 6.a of this report.) Some of these procedures indicated an apparent reluctance of operators to initiate needed procedure changes to reflect actual practice. Completion of this review is considered an open item (50-373/92008-06 (DRP)).
- e. The inspectors observed several fuel load and startup onsite review and augmented onsite review meetings. The range of items reviewed and discussed was comprehensive and detailed. The augmented review was conducted in accordance with LaSalle Administrative Procedure (LAP)-200-9, "LaSalle Plan to Achieve Error Free Operation," Revision 0. Corporate management's participation was evident with active interactions with station personnel.
- f. The inspectors noted the threshold established in licensee administrative procedures for conducting deviation report investigations was very high. However, personnel seemed to be compensating for this weakness by initiating deviation reports below this threshold. An informal report and investigation system was also utilized with a much lower formal threshold established in administrative procedures. As a result, the distinction between treating an item as a deviation report versus informal report was not clear. Items that could reasonably be categorized

as deviation reports were treated as informal reports with a corresponding reduction in documentation, review, approval, and timeliness requirements. For example, the control rod insertion event described in paragraph 4.a(2) of this report had been treated as an informal report. As of April 13, 1992, over two months subsequent to the event, the informal report still had not been completed.

- g. The inspectors inquired about the previous NQP activities involving fire doors to ascertain any previous opportunities to identify the surveillance deficiencies discussed in paragraph 6.a of this report. The licensee could not identify any past NQP activities in which the applicable security post orders would have been reviewed for adequacy of fire door surveillance documentation. Although the last fire protection audit (#01-90-13), dated August 2, 1990, did include review of fire protection surveillance procedures, the post orders implementing fire door surveillances were not included. An independent fire protection audit was conducted during this inspection period but also did not include review of the applicable post orders.

No violations or deviations were identified in this area.

8. 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/or 10 CFR as appropriate.

No violations or deviations were identified in this area.

9. 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 4.c, 5.a, 5.d, and 7.d.

10. 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 6.b.

11. Violations For Which A "Notice of Violation" Will Not Be Issued

The NRC uses the Notice of Violation to formally document failure to meet a legally binding requirement. However, because the NRC wants to encourage and support licensee's initiatives for self-identification and

correction of problems, the NRC will not issue a Notice of Violation if the requirements set forth in 10 CFR 2, Appendix C, are met. Violations of regulatory requirements identified during the inspection for which a Notice of Violation will not be issued are discussed in paragraphs 2, 4.b(1), 5.b, and 6.a.

12. 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 April 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.