U.S. NUCLEAR REGULATORY COMMISSION

REGION III

REPORT Nos.
50-373/95009(DRP); 50-374/95009(DRP)

FACILITY
LaSalle County Station, Units 1 and 2

Licenses No. NPF-11; NPF-18

LICENSEE
ComEd
Executive Towers West III
1400 Opus Place Suite 300
Downers Grove, IL 60515

DATES
September 1 through October 13, 1995

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11/29/95
Date

AREAS INSPECTED

A routine, unannounced inspection of operations, engineering, maintenance, plant support and Temporary Instruction (TI) 2515/109 (motor-operated valves, see Attachment A), was conducted. Safety assessment and quality verification activities were routinely evaluated. Follow-up inspection was performed for non-routine events and for certain previously identified items. SIMS item 67.3.3 is also considered closed (Section 3.9).

RESULTS

Assessment of Performance

Within the area of **PLANT OPERATIONS**, improvement was observed with regard to safety focus and a conservative operating philosophy; as well as improvements in control room professionalism and performance.

- Operators manually scrammed Unit 1 when control of reactor vessel level was lost. This was the first manual scram from power since April 1993 - with more than 10 automatic scrams in the intervening period.

- The decision to shutdown Unit 2 due to problems with the 2B reactor recirculation flow control valve demonstrated good sensitivity to materiel condition problems which impact reactivity control.

However, problems remain with the quality and backlog of operating procedure changes. Weaknesses in procedure consistency and incorporating human factors concepts remain a problem.

Plant performance has demonstrated that within the area of **MAINTENANCE** the degraded plant materiel condition remains a serious challenge and that efforts to improve the materiel condition were achieving slow progress.

- Foreign material exclusion problems continue to impact the trip system of the 1B turbine driven reactor feedwater pump and its reliability.

- Plant management was slow to recognize the impact of the degraded ventilation systems on plant safety and reliability. Recurring problems in multiple systems were observed over the course of the hot summer of 1995. The problems with the ventilation systems have multiple root causes that vary from poor original designs, poor resolution of problems (work arounds), to insufficient or non-existent preventive maintenance. The problems also vary in safety significance from minimal to potentially significant.

- The amount of emergent work remained at very high levels, with 45 to 50 percent occurring some weeks.

Within the area of **ENGINEERING**, system engineering continues to demonstrate weaknesses.

- One operator work-around, associated with the HPCS keep-fill system, was not addressed in a timely fashion.

- Engineers sometimes did not meet management expectations regarding initiating problem identification forms (PIFs).

- Engineers were inconsistent regarding the implementation of the "System Engineers' Handbook."

On the positive side, engineering assumed an industry leadership role and demonstrated a good safety-focus related to motor-operated valve (MOV) activities.

- Engineering provided leadership in the area of pressure locking and thermal binding testing of MOVs.

- The motor and actuator testing program was providing information which will help to resolve longstanding technical questions about MOV performance.

- Innovative MOV program initiatives combined sophisticated statistical analyses and risk considerations to enhance the performance of highly important MOVs.

Within the area of **PLANT SUPPORT**, problems continue with the fire protection program. ConEd has restructured the program and was performing a comprehensive review - which continued to find new problems. The inspectors also noted continuing problems with radiological housekeeping and contamination control boundaries.

Performance was improving in the **SAFETY ASSESSMENT and QUALITY VERIFICATION** area, with Site Quality Verification becoming more effective at identifying problems. The assessment of the MOV program was limited in scope but was adequate in evaluating the MOV program.

Summary of Open Items

Violations: none identified
Non-cited Violations: three identified in paragraphs 2.4, 3.2, and 4.2.
Unresolved Items: one identified in paragraph 3.4

INSPECTION DETAILS

1.0 PLANT OPERATIONS

NRC Inspection Procedure 71707 was used in the review and observation of plant operations. No violations were identified. The decisions to manually scram Unit 1 on a feedwater level control transient and shut down Unit 2 to repair the 2B reactor recirculation (RR) flow control valve (FCV) that was causing reactivity perturbations were both examples of a conservative operating philosophy by both licensed operators and operations department management.

1.1 Summary of Operations

Unit 1 operated at or near full power until September 24, 1995, when a manual scram was initiated (see paragraph 1.2). The unit was restarted on September 28 and remained at full power for the rest of the report period.

Unit 2 operated at or near full power until September 16, 1995, when a maintenance outage was entered to repair the 2B RR FCV and other selected components. The unit was restarted on September 24 and remained at full power for the rest of the report period.

1.2 Description of the Unit 1 Manual Reactor Scram due to Problems with a Reactor Feedwater Pump

At 4:08 a.m. on September 24, with the reactor at 98 percent power, reactor operators were performing a routine surveillance test on the trip system for the 1B turbine driven reactor feedwater pump (TDRFP). During the surveillance, the TDRFP's speed and flow began to drop rapidity as did reactor vessel level. Operators started the motor driven RFP and level turned. At this point the 1B TDRFP came back and began injecting. The situation was then complicated by the automatic downshifting of the RR pumps on a 10.1°F delta temperature (Δ T) signal. This reduced reactor power to 46 percent and consequently reduced steam flow; however, with all three RFPs injecting, reactor vessel began to rise very rapidly. The reactor operator manually scrammed the unit on high reactor level. The RFPs tripped automatically when level 8 was reached and the subsequent shrinkage caused a second (automatic) scram on low level, but the rods were already inserted.

The cause of problem with the 1B TDRFP was identified (see paragraph 2.1) and other priority items were also repaired. The unit was stabilized in Mode 3 and all systems functioned as expected after the scram. The unit was restarted in 4 days. Operator performance is assessed below.

1.3 Conservative Safety Focus Demonstrated by Operations Personnel

The performance by the reactor operators and shift supervisors in manually scramming the Unit 1 exhibited an excellent safety focus.

Likewise, operations management's decision to shut down Unit 2, because the performance of the 2B RR FCV was causing reactivity perturbations, demonstrated an increasingly conservative decision making process and philosophy. However, to place this trend in perspective, the last manual scram from power where the operators were responding to a transient was in April 1993. Over 10 automatic scrams have occurred since then.

1.4 Improvement in Control Room Professionalism

Over the course of this year, the inspectors observed improvement in the performance and professionalism of the control room crews. During that period management established, and emphasized, new expectations for conduct and performance. Improvements were seen in communications, use of repeat backs, background noise levels, response to alarms, management oversight and awareness of plant conditions, and decorum. The inspectors will continue to follow management's efforts to improve performance and reduce tolerance of work arounds.

1.5 Follow-up on Previously Opened Items

A review of previously opened items was performed per NRC Inspection Procedure 92901.

(Closed) Violation 373/94018-01(DRP): Failure to follow LaSalle Operating Procedure (LOP)-DG-05, "Startup of the 1B(2B) Diesel Generator (DG)": This item referred to an instance where an operator failed to place the DG selector switch in "local manual," as was required by procedure. Subsequently, another operator tried to secure the DG with the local stop button, which was not functional under the circumstances. This ultimately resulted in catching a relay on fire.

In ComEd's response to the Notice of Violation, corrective actions to avoid further violations included reviewing and revising all operating procedures for Dgs to resolve the human factors deficiencies, which could result in incorrectly performing any action steps. The inspectors concluded this review was narrowly focused and did not address all human factors problems which may cause human errors. For example, LOP-DG-05 has two sections that address a local manual DG start, but only one of the sections contained an appropriate caution which stated that the normal stop button will only be operable if the engine selector switch is in local manual.

Other problems were identified with the DG operating procedures such as inconsistency among procedures within the actions and limitations sections, inconsistency in titling sections of shutdown procedures for the different diesels, and inconsistency in formats among procedures. While no additional operator errors were experienced as a result of these problems, the consistency and human factors aspects of these procedures were not conducive to error free performance.

ComEd identified LaSalle's operating procedures as a significant weakness and was taking action to prioritize the procedures for rewrite. Based on ComEd's awareness and ongoing actions to improve procedures at LaSalle, this violation is closed.

2.0 MAINTENANCE

NRC Inspection Procedures 62703 and 61726 were used to perform an inspection of maintenance and testing activities. One non-cited violation was identified. Foreign material was still causing problems with the trip system for the 1B TDRFP. The rate at which plant materiel condition was being improved remained slow and significant problems existed with multiple ventilation systems.

2.1 Foreign Material Caused Multiple Problems with the Trip system for the 1B TDRFP

While investigating the malfunction of the 1B TDRFP, ComEd personnel found that the bypass solenoid appeared to be stuck in its normal (non-bypassed) position. However, when the valve was removed and disassembled only a minor metal burr was found. Maintenance personnel effected repairs and the trip system appeared to work well. However, the TDRFP again failed to trip during a pre-startup test. The cause was determined to be the trip dump valve but when it was removed no problems were found. After further investigation ComEd personnel concluded that foreign material was flushed into the valve, caused the binding, and was then flushed out.

The TDRFPs use the main turbine lubricating oil for their control oil system and there are no filters located between the oil supply and the various trip solenoid valves. However, system engineering was developing a plan for installing a filter in the oil supply lines. As an additional corrective measure, the oil sump for the TDRFP was inspected but no problems were found. Operations personnel were also reviewing operating procedures to see if foreign material could have been flushed from potential deadlegs during the lube oil and turbine systems' startup processes.

There were numerous failures of the 1B TDRFP to trip over the past several years. In those events the causes were previously attributed to improper alignment and installation. However, foreign material may have caused or contributed to those failures as well. The inspectors will continue to follow ComEd's plans to improve the long term reliability of the TDRFP's trip systems.

2.2 Significance of Ventilation System Weaknesses Were Not Initially Recognized

Over the course of the summer of 1995, recurring problems transpired in multiple plant ventilation systems (see NRC Inspection Report 95007). In performing a retrospective evaluation, the inspectors concluded that the licensee was slow in understanding both the scope and seriousness of the problems.

The problems with the ventilation systems have multiple root causes that vary from poor original designs, poor resolution of problems (work arounds), to insufficient or non-existent preventive maintenance. The problems also vary in safety significance from minimal to potentially significant. Examples of the problems included:

- 35 small rooftop air conditioning units had no preventive maintenance tasks to clean the evaporator coils or inspect the compressors.

- The cooling system for the chemistry laboratory and counting room degraded to the point that temperatures exceeded the maximum ranges of some instruments.

- The turbine building was at a positive pressure, which was inconsistent with the UFSAR (see Section 3.4).

- Operators preferentially run the OA control room ventilation system because the OB system will not provide an adequate level of cooling in the main control room.

- Panel doors to some electronic cabinets in the auxiliary equipment rooms had to be left open with fans blowing on the internals to support sustained operation of the systems.

- Operators had to install jumpers to bypass safety signals in both units within 90 to 120 seconds after a trip of the reactor building ventilation (VR) system to prevent a dual unit MSIV isolation and reactor scram. During the summer months, normal operating temperatures in the main steam tunnels were less than 10 °F from the MSIV high temperature isolation set point.

- During the autumn, the electric blast coils for the VR system were energized, with building temperatures over 95°F, because as outside supply air temperatures drop at night the MSIV Δ T isolation set point was approached.

The elevated temperatures in the plant affected both equipment and personnel. The effects on personnel also impacted materiel condition, as heat stress reduced the amount of effective work an individual could perform. These high temperatures may also be causing accelerated thermal aging. Since the August 16 event, plant management recognized that the ventilation problems are significant and was developing a corrective action strategy.

2.3 Efforts to Improve Materiel Condition Continue to Make Slow Progress

The inspectors reviewed ComEd's progress at improving the materiel condition of LaSalle and concluded slow progress was being made. The licensee's internal performance indicators showed that while improvements have been made to the maintenance planning process, performance appears to have plateaued. Emergent work rates have increased significantly, some weeks 45 - 50 percent of the work was emergent. Also, problems were still occurring in the recognition of issues and performance of work. Some examples were:

- The shear pin for the 2D lake screen house traveling screen was broken due to an excessive buildup of biological growth on the bottom of the screen - another consequence of the abnormally hot summer. While this condition was found by the system engineer, no

periodic preventive maintenance or rotation of the screens was performed.

- The problems with the 2B RR FCV were due to insufficient vendor torque values on the clamp holding the feedback linkage to the feedback rod. This condition placed additional stresses on the alignment roll pin causing it to shear. Investigation determined that mechanical maintenance had removed and later reinstalled this linkage while repacking the valve during the last refueling outage. Additionally, interference between the reflective mirror insulation on the RR system and the positioner feedback linkage on the FCV were identified. ComEd concluded the insulation had been incorrectly reinstalled in the last refueling outage. Inspection of the other FCV in Unit 2 and the FCVs in Unit 1 (during its shutdown) revealed similar, though not as degraded, conditions.

Performance has improved in some areas. For example: work on the 2B heater drain pump, 2B Condensate pump, and 1B control rod drive pump all utilized excellent foreign material exclusion controls.

2.4 Follow-up on Non-Routine Events

NRC Inspection Procedures 90712 and 92700 were used to perform a review of written reports of non-routine events. Items that were "Closed" as a result of the inspection satisfied the criteria established in the Inspection Procedures.

(Closed) LER 373/95012: Missed Fire Protection Valve Verification: This issues was discovered as part of the corrective actions for notice of violation 373;374/95005-03(DRS). Consequently, no enforcement action will be taken.

(Closed) LER 373/95013: Calibration of 1B Diesel Generator Lube Oil Pressure Switch Missed due to Personnel Error: Maintenance personnel identified that an oil pressure switch on the 1B diesel generator (DG) was not calibrated within its surveillance interval. The pressure switch provided a low oil pressure shutdown function that was required to be calibrated by Technical Specification 4.8.1.1.2.d.13.b. The surveillance was due on November, 4, 1994; was overdue on May 6, 1995; and was discovered on July 26, 1995. The switch was subsequently tested and found to be in calibration.

The cause of this event was determined to be a personnel error in entering the last completed surveillance in the computer database. No other problems were found with oil pressure switches for the other Dgs. This licensee-identified and corrected violation of Technical Specification 4.8.1.1.2.d.13.b is being treated as a Non-Cited Violation, consistent with Section VII of the NRC Enforcement Policy (NUREG 1600).

(Closed) LER 373/95014: Reactor Scram and MSIV Isolation due to RPS Breaker Trip: This event is discussed in detail in section 2.2.

(Closed) LER 373/95015: Missed Fire Protection Valve Surveillance: This issue was discovered as part of the corrective actions for notice

of violation 373;374/95005-03(DRS). Consequently, no enforcement action will be taken.

3.0 ENGINEERING

NRC Inspection Procedures 37550 and 37551 were used to perform an onsite inspection of engineering activities. One non-cited violation was identified associated with the untimely removal of scaffolding.

While SQV's assessment of engineering was good and strengths were evident in the motor-operated valve (MOV) program, problems were identified in the areas of untimely resolution of operator work-arounds (HPCS keep-fill system); attention to detail during walkdowns; implementation of the "System Engineers' Handbook;" and utilization of the problem identification form (PIF) process. Additionally, the inspectors opened an unresolved item regarding the positive pressure in the turbine building, which was inconsistent with the USFAR.

3.1 Engineering Slow in Resolving Operator Work Arounds

The evaluation and corrective actions which addressed a work around associated with the HPCS keep-fill system were not timely. Additionally, the root cause of a design change deficiency (which caused the work around) was not identified.

Approximately five years ago a design change was implemented to resolve a system leakage problem with the HPCS pump recirculation line to the cycled condensate storage tank. As a result of the change, the discharge pressure of the keepfill pump was inadvertently reduced to less than the Technical Specification keep-fill header pressure alarm setpoint. As a compensatory measure, the licensee performed shiftly checks of the water level in the keepfill system to ensure the system was functional (a work around).

The licensee documented the need to resolve the work around in June 1992. However, the subsequent engineering evaluation and Technical Specification amendment request (to change the transmitter setpoints) took approximately 30 months to accomplish. The NRC approved the Technical Specification amendment on August 15, 1995. At the time of the inspection, the licensee had not implemented the change to the transmitter setpoints. Considering the minor scope of the design changes that were required to correct the work around, the total amount of time taken (five years) to resolve the problem was considered excessive.

The licensee had also failed to identify the event that caused this operator work around. By failing to identify the root cause the licensee missed an opportunity to learn from previous mistakes and to correct potential deficiencies in the design change process.

3.2 System Engineer Performance was Acceptable But Attention to Detail and Followup to Problems was Lacking During Some Walkdowns

The inspectors conducted interviews and performed walkdowns of various systems to evaluate the knowledge and effectiveness of the engineers. For the most part, engineers were knowledgeable about their systems and were monitoring system performance, addressing materiel condition concerns and tracking scheduled work. However, system engineers, as well as other plant staff and management, were not always aware of equipment in the vicinity of plant systems which could adversely affect component performance if not properly controlled. Those items included:

- Several ladders were stored against the wall next to valve 1E21-F001, "low pressure core spray (LPCS) mini-flow valve" with the base of the ladders chained to the wall. The radius of fall could bring the top of the ladders in contact with valve.

- In numerous auxiliary building locations, tools were placed near impeller shafts or in structural supports that were above, or near, the pumps. At the time of discovery, the pumps were considered operable and in service.

- The metal screens/strainers installed in several room floor drains appeared to be clogged.

- The roof hatch sections located above the unit 1 HPCS pump were ajar, allowing a pathway for fluids to flow from the adjacent room. External flood water could pass into the room and onto the pump. A roof hatch that provided access to another part of the room was properly installed and the joints sealed with a caulking compound. The inspectors will continue to followup on this issue during normal inspection activities.

- On September 18, 1995, the licensee identified two cases where an engineering evaluation was not performed to address "seismically qualified" scaffolding which was installed in the plant for more than 120 days. The inspectors had independently identified the same concern the following day regarding scaffolding above the low pressure core spray pump. This scaffolding was originally installed on September 9, 1994 (over one year earlier) and documentation on the scaffolding indicated that it should have been removed no later than January 8, 1995. An effective engineering walkdown could have identified this concern in a more timely manner.

  Procedure LAP-900-28, "Qualification, Erection, Inspection, and Use of Scaffolding and Ladders" dated April 8, 1994, permitted the scaffolding to remain in place for longer than 120 days if a separate engineering evaluation was performed. This was not accomplished. However, once identified as a problem the scaffolding was removed and the issue was documented on a PIF. The failure to follow the noted procedure was a violation of minor significance and is being treated as a Non-Cited violation, consistent with Section IV of the NRC Enforcement Policy (NUREG 1600).

3.3 Initiation of PIFs by System Engineers was Weak

The system engineering organization did not always meet management expectations regarding the use of PIFs. Several problems (e.g., leaking battery post seals, incorrect relay setting orders, inadequate procedures, etc.) identified in the system engineer's work activity tracking system (WATS) appeared to meet PIF reportable criteria but PIFs were not generated. Although some of the problems had ARs or work requests written to address the concerns, the failure to write PIFs for these issues could hamper tracking and trending efforts.

The PIF procedure was being revised to provide better direction regarding the expectations for writing PIFs. The failure to appropriately utilize the PIF process was previously identified as a station wide problem in CAR 01-94-058, dated October 24, 1994. The inspectors will continue to monitor the licensees progress at dealing with this issue.

3.4 Turbine Building Positive Pressure was Contrary to the UFSAR and GDC

The licensee identified that the turbine building was always at a positive pressure. This was not consistent with UFSAR sections 9.4.4.1, 9.4.4.2.f, and 12.3.3. These sections describe the VT system air flow as always being from clean areas to potentially contaminated areas by maintaining a negative differential pressure in the turbine building. The areas of the Turbine Building that are positively pressurized include general access areas like the main turbine deck aisles, hydrogen seal oil unit and stator winding cooler unit areas, and general access aisles on the ground floor. These are normally radiologically clean areas. The licensee performed a 10 CFR 50.59 review in October, 1994 and concluded that this condition was acceptable. ComEd had also tried several fixes but none were successful.

The licensee also identified that they may not be in compliance with 10 CFR 50, Appendix A, General Design Criteria 60 and 64. These criteria require provisions for controlling and monitoring radioactive releases. The positive pressure in the turbine building creates a situation where very small amounts of radioactive material may be released to the environment without being appropriately monitored. However, the licensee calculated the potential releases to be a very small percentage (less than 0.02 percent) of the 10 CFR 50 Appendix I guidelines. Therefore, there appeared to be no increased danger to the general public. The apparent noncompliance is under evaluation by ComEd Corporate Licensing. This is considered an Unresolved item pending further NRC review of the licensee's evaluation and corrective actions 373;374/95009-01(DRS).

3.5 SQV Performance was Good

Overall, the SQV Audit Group and the Independent Safety Evaluation Group (ISEG) provided a good assessment of the activities related to the system engineering organization. Some of the NRC inspectors' concerns had been addressed to some degree by the SQV Audit Group and the ISEG. Although each inspection concern was not specifically addressed, the assessment results were similar and indicated a good oversight process.

Interviews with the SQV Audit Group supervisor indicated that the major problems SQV was having with engineering were timeliness of responses to CARs as well as responses to other issues. At the time of the inspection, there were nine CARs open against engineering. SQV followup on the findings appeared acceptable.

The ISEG was comprised of three engineers. Some of their activities appeared to be shared with the SQV Audit Group. The ISEG performed a detailed review of the RCIC system on September 30, 1994 (QLV 01-94-087). The results of that independent review provided a straightforward and detailed summary of the RCIC performance problems.

The engineering organizations have started to develop self-assessment activities. The actual initiation and development of the self-assessments should improve the overall engineering effectiveness.

3.6 Inconsistent System Engineer Handbook Implementation

The inspectors identified that engineers were not consistently meeting management expectations regarding the implementation of the "System Engineers' Handbook." For example, one system engineering notebook had not been updated since 1992. Additionally, several of the engineers had not prepared a formal quarterly walkdown report.

3.7 Computerized Tracking Systems Useful But Limited

Interviews with system engineers indicated that computers were used as a tool to trend component and system performance. The computerized work requests and PIF index were used for performance trending. However, several challenges remain with the computerized systems, such as:

- The inspectors identified that the nuclear tracking system may not retrieve all of the PIFs applicable to a specific component if the subject field's key words are truncated. For example, the licensee attempted to search for PIF 374-201-95-00944, "HPCS Pump Discharge Check Valve 2E22-F024" by using the words "check valve" in the subject field search. Although several sorts (by a trained individual) identified a total of 36 PIFs associated with check valves, the specific PIF of interest was not included in list of identified PIFs. After several additional attempts using search methods that were not normally used, a total of 44 applicable PIFs (including PIF-00944) were found. The inability to easily identify all pertinent information related to equipment problems could hamper problem resolution and trending efforts.

- The computerized data retrieval system was limited with regard to the retrieval of information about specific component types. For example, the inspectors requested a maintenance history print out for all 16" carbon steel tilting disc check valves (similar to the HPCS pump discharge check valve 2E22-F024). The system was limited in that it could not provide a comprehensive listing of the requested information for all 16" valves, although the maintenance history was obtained for the subject HPCS check valve. This limitation could hamper problem resolution and trending efforts.

in Inspection Reports 50-373;374/95003(DRP), 50-373;374/95004(DRP), 50-373;374/95005(DRP), and vendor inspection report 99900369/95-01.

ComEd determined that three Automatic Switch Co. (ASCO) solenoid valves had failed to operate because two internal pieces (core and plugnut) had stuck together. Apparently a lubricant (Nyogel 775A) and a thread sealant (Loctite PST 550 or Neolube 100) had formed an adhesive film between the core and plugnut. ComEd was unable to conclusively determine how the lubricant came in contact with the core and plugnut, but speculate that it was introduced during manufacturing.

General Electric had, at the request of ASCO, performed an analysis of the material on the plugnut of the ASCO valve that failed on June 11, 1995. They found a microscopic particle of thread sealant that had migrated through the valve to the surface of the plugnut that mates with the core assembly. The thread sealant that was used at LaSalle on this valve (Loctite 550) only cures in anaerobic conditions. The thread sealant may not have cured before air was blown through the components. While the thread sealant (Loctite PST 550 or Neolube 100) is considered to be a contributor to the sticking, all three of the in-service ASCO valves that failed had a lubricant (Nyogel 775A) present at the core and plugnut interface. The presence of the lubricant at the core and plugnut interface may provide the answer to the question of what makes the microscopic particles of uncured thread sealant gather in this location.

After the June 11, 1995 event, ComEd did not have enough ASCO valves for the Unit 1 replacement and obtained four additional valves from an east coast utility. One of the four valves from the other utility was found to have a material that appeared (and was subsequently analyzed) to be Nyogel 775A on the core. This east coast utility had 45 valves left in stock. Other utilities also had a supply of the valves. Long term corrective measures included better control of the use of thread sealant and the replacement of ASCO NP8323 solenoid valves with valves made by a different manufacturer (Valcor).

4.0 PLANT SUPPORT

NRC Inspection Procedure 71750 was used to perform an inspection of plant support activities. One non-cited violation was identified. Weaknesses continue to be identified in the fire protection and housekeeping programs.

4.1 Fire Protection Program Weakness Continue to Surface

Observation of fire protection activities by the inspectors indicated that while the program compliance was good, some poor work practices were still evident. Also, retrieval of design basis and configuration information used to comply with 10 CFR Part 50, Appendix R, was difficult. As a counterbalance to these weaknesses, the number of degraded or impaired fire protection or detection systems remained extremely low.

The system engineers had previously recognized several limitations with the computerized work request system as a trending and tracking tool. In response they developed a site specific program to bridge selected limitations; however, the above limitations were not addressed.

3.8 Closure of TI 2515/109, "Inspection Requirements for Generic Letter 89-10, Safety-Related Motor-Operated Valve Testing and Surveillance"

Based on the inspection results pertaining to the licensee's Generic Letter 89-10 program, TI 2515/109 is considered closed (see Attachment A to this report). The licensee assumed an industry leadership role in the area of pressure locking and thermal binding testing of MOVs. Additionally, the motor and actuator testing program was providing information which will help to resolve longstanding technical questions about MOV performance. Furthermore, innovative MOV program initiatives combined sophisticated statistical analyses and risk considerations to enhance the performance of highly important MOVs.

The licensee's long-term plans to address periodic verification were sufficient to allow closing the TI. However, the NRC staff is preparing a proposed generic letter to further address this issue. Upon issuance, the NRC will review this aspect of the program in greater detail. See Section 3.6 of Attachment A.

3.9 Closure of Regulatory Guide 1.97 Issues

Temporary Instruction 2515/087[1] was closed by Inspection Reports 373/88027(DRS);374/88026(DRS). The associated SIMS Item 67.3.3 was closed following the resolution of six unresolved items in inspection reports 373/90022(DRS);374/90023(DRS), 373;374/93030(DRP) and 373;374/94013(DRP); however, this was not documented. Consequently, this closure information is provided for documentation purposes only.

3.10 Follow-up on Non-Routine Events

NRC Inspection Procedures 90712 and 92700 were used to perform a review of written reports of non-routine events. Items which were "Closed" as a result of the inspection satisfied the criteria established in the Inspection Procedures.

(Closed) LER 374/95006-01: Primary Containment Maximum Leakage Rate Exceeded due to LLRT Failure: This revision to the LER only provided supplemental information to a previous LER, in that it explained why leakage through containment isolation valves was high during LLRTs.

(Closed) LER 374/95005: Failure of Outboard MSIVs 2B21-F018A and 2B21-F028D to Close on Demand Due to Sticking Solenoid Pilot Valves: The inspectors have completed their review and concluded that ComEd's corrective actions were appropriate. This issue was previously reviewed

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[1] Inspection of Licensee's Implementation of Multi-plant Action A-17: Instrumentation for Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident (Regulatory Guide 1.97, 09/17/90)

To improve oversight and accountability of fire protection program, a fire protection group was established in system engineering. An experienced fire protection engineer was placed in charge and all fire protection oversight and coordination activities were centralized.

On October 12, 1995, the inspector observed a 1 liter (L) plastic bottle of Propanol, which was left unattended on a work cart. The cart was located in the turbine building for maintenance on a heater drain pump. The storage of Propanol in 1 L bottles at the work site was allowed per plant procedures. However, the licensee acknowledged that leaving the bottle unattended was not a good work practice.

On August 31, 1995, the inspector noted that the emergency DC lighting in the main control room was not aimed at the same panels in Unit 1 and 2. Specifically, the Unit 1 603 panel (reactor controls) did not have any DC emergency lighting aimed at it. The inspector's concern related to the need to monitor source range nuclear instruments (located on the 603 panel) post-scram to ensure the reactor remained sub-critical. The inspector was subsequently informed by the site fire protection engineers that this capability was not required under scenarios postulated by Appendix R. Additionally, the engineers found it very difficult to establish the design basis for emergency lighting at these panels, due to confusing and inconsistent records.

As part of ComEd's response to the NRC's request for more information in reply to notice of violation 373;374/95005-03(DRP), the new fire protection group was tasked with performing a bottom up review of the entire fire protection program. As this review was progressing, additional problems were identified. ComEd targeted December 31, 1995, for completion of this review. The inspectors have no further concerns on the specific issues raised in this report; however, they will continue to follow the progress of the overall program and respond to specific issues as they arise.

4.2 Poor Housekeeping Observed

Housekeeping was observed to be poor during this inspection period. The inspectors noted the condensate pump and heater drain (HD) pump rooms were in particularly poor condition. After the issue was brought to ComEd management's attention, the rooms where maintenance was being performed were cleaned up. However, the condition of the other rooms was not improved, as it appeared there was no "owner" of these rooms.

In the 1B HD Pump room, a hose was not properly secured as it crossed a contaminated boundary. ComEd failed to identify this during their walkdowns. The hose remained this way for several weeks until the inspectors toured these specific areas with the Maintenance Superintendent. Radiation Protection Procedure LRP-1490-1, "Construction of Radiologically Posted Areas and Step Off Pad Areas," required that hoses and electrical cords that breach a contaminated boundary be taped or tied securely. This was a violation of minor safety significance and is being treated as a non-cited violation in accordance with Section IV of the NRC Enforcement Policy (NUREG 1600). ComEd took several immediate corrective actions including posting signs to make plant personnel aware of the problem, tailgating during

communication meetings and raising the standards of first line supervisors. Only one minor problem has been noted since these actions were taken.

In general, workers appeared to be insensitive to housekeeping. This was evidenced by many small tools laying around the plant and protective clothing that was not in its proper storage location.

5.0 SAFETY ASSESSMENT and QUALITY VERIFICATION

NRC Inspection Procedure 40500 was used to evaluate licensee safety assessment/quality verification capabilities. No violations were identified. Identification of issues by SQV was good.

5.1 Site Quality Verification (SQV) Identified Several Problems

Site Quality Verification's performance in identifying problems during this inspection period was both strong and valuable. An SQV auditor identified that two security officers were inattentive to their duties. While this specific issue was handled properly after it was raised to security management, SQV was still concerned with the effectiveness of security management - in that they were not ensuring that security officers were performing their duties.

SQV was also aggressive on an issue that was initially identified by the NRC. During the NRC materiel condition inspection (March 25 through May 11, 1995) the NRC inspectors identified that several deficiency tags (action requests) in the plant were not were being tracked by ComEd's process. In addition, tags were still hanging on equipment that had been fixed. During this inspection period, the inspectors found several more deficiency tags in the plant which were not being properly tracked. In following up on this issue, the inspectors discussed these problems with an SQV auditor and were informed that SQV had issued a level III finding to the Maintenance Department. Although this problem should have been previously resolved by the maintenance department, it demonstrated SQV's ability to follow-up on issues and identify continuing problems.

Finally, SQV has taken a strong stance with regard to auditing personnel safety practices. Several preventable accidents have occurred at LaSalle this year and SQV has recently been aggressive in ensuring personnel are following proper safety practices.

6.0 PERSONS CONTACTED AND MANAGEMENT MEETINGS

The inspectors contacted various licensee operations, maintenance, engineering, and plant support personnel throughout the inspection period. Senior personnel are listed below.

At the conclusion of the inspection on October 13, 1995, the inspectors met with ComEd representatives (denoted by *) and summarized the scope and findings of the inspection activities. The licensee did not identify any of the documents or processes reviewed by the inspectors as proprietary.

R. Querio, Site Vice President
*D. Ray, Station Manager
L. Guthrie, Operations Manager
*P. Smith, Maintenance Superintendent
*R. Jacobs, System Engineering Supervisor
*P. Antonopoulos, Site Engineering and Construction Manager
*D. Boone, Health Physics Supervisor
R. Crawford, Work Control Superintendent
*J. Burns, Regulatory Assurance Supervisor

6.1 Management Meeting to Review the Performance of the Fire Protection Program

On September 29, 1995, Messrs. M. A. Ring and H. B Clayton, Branch Chiefs in Region III, and members of their staff met with Mr. D. E. Ray, Station Manager, and members of his staff at LaSalle. Discussion topics included ComEd's response to the notice of violation contained in Inspection Reports 373;374/95005(DRP), changes to oversight and management of the fire protection program, and schedules and approaches for performing a systematic review of the fire protection program at LaSalle.

6.2 Management Meeting to Review Station Progress in Improving Material Condition

On October 12, 1995, Mr. H. J. Miller, Regional Administrator, and members of his staff met with Mr. R. E. Querio, Site Vice President, and members of his staff at LaSalle. Discussion topics included progress at improving the stations materiel condition, system engineering performance, and recent plant transients.

7.0 DEFINITIONS

7.1 Violations for Which a "Notice of Violation" will Not Be Issued

The NRC uses the Notice of Violation as a standard method for formalizing the existence of a violation of 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 generally issue a Notice of Violation for a Severity Level IV violation that meets the tests of the NRC Enforcement Policy (NUREG 1600) Section VII. These tests are: 1) the violation was identified by the licensee; 2) the violation will be corrected, including measures to prevent recurrence, within a reasonable time period; 3) the violation was not wilful; and 4) it was not a violation that could reasonably be expected to have been prevented by the licensee's corrective action for a previous violation. In addition, in accordance with the provisions of Section IV of the Enforcement Policy, Notices of Violations will not be issued for violations of minor safety significance. Violations of regulatory requirements identified during this inspection for which a Notice of Violation will not be issued are discussed in paragraphs 2.4, 3.2, and 4.2.

7.2 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 this inspection is discussed in paragraph 3.4.

Attachment A: Generic Letter 89-10 Inspection Results