

NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-295/89034(DRP); 50-304/89029(DRP)

Docket Nos. 50-295; 50-304

Licenses No. DPR-39; DPR-48

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

Facility Name: Zion Nuclear Power Station, Units 1 and 2

Inspection At: Zion, Illinois

Inspection Conducted: October 15 through November 30, 1989

Inspectors: J. D. Smith
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Reactor Projects Section 1A

12/22/89
Date

Inspection Summary

Inspection from October 15 through November 30, 1989 (Reports No. 50-295/89034 (DRP); No. 50-304/89029(DRP))

Areas Inspected: Routine, unannounced resident inspection of licensee action on previous inspection findings; operational safety verification and engineered safety feature (ESF) system walkdown; monthly surveillance observation; monthly maintenance observation; licensee event reports (LERs) followup; training; safety assessment/quality verification; and meetings and other activities.

Results: Of the seven areas inspected, no violations or deviations were identified in six areas. One licensee identified violation, missed surveillances, is discussed in Paragraph 5. Two unresolved items were identified in two areas and two open items in one area. The unresolved items are discussed in Paragraphs 6 and 7. The open items are discussed in Paragraph 6.

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DETAILS

1. Persons Contacted

- *T. Joyce, Station Manager
- T. Rieck, Superintendent, Services
- *W. Kurth, Superintendent, Production
- P. LeBlond, Assistant Station Superintendent, Operations
- R. Johnson, Assistant Station Superintendent, Maintenance
- *R. Budowle, Assistant Station Superintendent, Technical Services
- J. LaFontane, Assistant Superintendent, Planning
- N. Valos, Unit 2 Operating Engineer
- W. Demo, Unit 1 Operating Engineer
- M. Carnahan, Unit 1 Operating Engineer
- *E. Broccolo, Jr., Director of Performance Improvement
- *T. Vandervoort, Quality Assurance Supervisor
- *C. Schultz, Quality Control Supervisor
- *W. Stone, Regulatory Assurance Supervisor
- W. T'Niemi, Technical Staff Supervisor
- R. Smith, Security Administrator
- T. Saksefski, Regulatory Assurance
- D. Kent, Training Administrative Assistant
- D. Egger, Operations Scheduler
- L. Thorsen, Regulatory Assurance, Fuel Handling Supervisor
- H. Logaris, Training
- T. Koleno, Training
- T. Egger, Shift Supervisor
- G. Armstrong, Shift Supervisor

*Indicates persons present at the exit interview.

The inspectors also contacted other licensee personnel including members of the operating, maintenance, security, and engineering staff.

2. Licensee Actions on Previous Inspection Findings (92701, 92702)

(Closed) Violation (50-295/89021-05B(DRP); 50-304/89019-04B(DRP)): Failure to follow procedure in that the operator select switch was not returned to normal following channel calibration. The procedure for rescaling the nuclear instrumentation system (NIS) detector currents was revised to include a separate step to verify the correct switch position and a second step to verify that the control board "NIS TEST" annunciator is not lit. This violation is considered closed.

(Closed) Violation (50-304/89019-01(DRP)): Loss of Control Room Unit 2 annunciators due to a reversed emergency power supply lead. This condition had existed since installation and apparently no post installation test was performed to verify the wiring. The polarity of the nuclear steam supply system (NSSS) emergency feed was corrected immediately. The licensee initiated work requests to verify the wiring of the remaining emergency DC feeds and found no discrepancies. This violation is considered closed.

No violations or deviations were identified.

3. Summary of Operations

Unit 1 - The unit remained in the refueling mode for the continuation of the scheduled refueling outage. The unit was placed in cold shutdown at 5:24 p.m. on November 10, 1989, in preparation for returning the unit to service.

With the unit in refueling shutdown there was an automatic start of engineer safety feature equipment. On November 2, 1989, the 1C SW pump auto-started due to personnel error while returning Bus 149/139 to service.

Unit 2 - The unit operated at power levels up to 100% power. On November 15, 1989, power was reduced to approximately 50% to perform maintenance on the 2A heater drain pump and was returned to 100% later that day. On November 22, 1989, power was reduced to 20% to repair and test the 2B SW pump.

4. Operational Safety Verification and Engineered Safety Features System Walkdown (71707 & 71710)

The inspectors observed control room operations, reviewed applicable logs, and conducted discussions with control room operators from October 15 through November 30, 1989. During these discussions and observations, the inspectors ascertained that the operators were alert with one exception in that the Shift Control Room Engineer (SCRE) was unaware of annunciator alarm status. Operators were determined to be cognizant of plant conditions, attentive to changes in those conditions, and took prompt action when appropriate. The inspectors verified the operability of selected emergency systems, reviewed tagout records, and verified proper return to service of affected components. Tours of the auxiliary and turbine buildings were conducted to observe plant equipment conditions, including potential fire hazards, fluid leaks, and excessive vibrations, and to verify that maintenance requests had been initiated for equipment in need of maintenance.

The inspectors by observation and direct interview verified that selected physical security activities were being implemented in accordance with the station security plan.

The inspectors observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls. The inspectors walked down the accessible portions of the Unit 1 containment, emergency diesel generators, battery room, feedwater, condensate, main steam safety injection, component cooling, and vital switch gear room systems to verify operability.

These reviews and observations were conducted to verify that facility operations were in conformance with the requirements established under Technical Specifications, 10 CFR, and administrative procedures. The following observations were made:

- a. On November 15, 1989, the licensee identified excessive seal leakage on the 2A heater drain pump inboard seal. At the time, the 2A and 2B pumps were in service. Attempts were made to start the 2C heater drain pump; however, due to a plugged oil filter, the pump did not have sufficient oil pressure to start. The 2A pump was secured and reactor power was reduced to 50% to perform maintenance on the 2C heater drain pump. Reactor operation resumed at 100% power when the 2C pump was repaired and placed in service.
- b. On November 18, 1989, the 2B service water (SW) pump was declared inoperable due to repair work on supporting equipment. On November 22, 1989, while performing safeguards testing on Unit 2, the "0" EDG was shut down due to a high connecting rod bearing temperature alarm and declared inoperable at 7:15 a.m. Because the 2B SW pump was already inoperable and the 2A SW pump emergency power is from the "0" EDG, TS 3.8.7.C required the unit to be in hot shutdown within four hours. The licensee made the required emergency notification system (ENS) phone call at 7:30 a.m. At 8:15 a.m., a Generating Station Emergency Plan (GSEP) Unusual Event (UE) was declared and power was reduced to 20%. The licensee requested relief from TS 3.8.7.C. to allow an extension to the four hour requirement by three additional hours in order to complete the performance test run of the 2B SW pump. Discretionary enforcement was granted by the Regional Administrator on November 22, 1989. The pump was returned to service at 2:10 p.m. and the UE was terminated at 2:20 p.m. on November 22, 1989.
- c. On November 22, 1989, at 7:15 a.m., the "0" EDG was declared inoperable as discussed above. This condition placed the unit on a seven-day limiting condition for operation (LCO) clock to hot shutdown at 7:15 a.m. on November 28, 1989. The bearing repair work was completed and jacket water leak tests were performed on November 27, 1989, at approximately 5:00 p.m. This test revealed two additional jacket water leaks into the crankcase lube oil system. The cylinder liner water bellows gaskets were replaced.

An inspection of the cylinder liner revealed a casting inconsistency. The cylinder liner was replaced and the jacket water leak test repeated. The licensee requested enforcement discretion to extend the seven days to hot shutdown clock by eight hours in order to perform the required TS operability test on the EDG. Discretionary enforcement was granted by the Regional Administrator on November 28, 1989. The operability test was completed at 10:05 a.m. on November 29, 1989, and the diesel was returned to service.

- d. An Unusual Event (UE) on Unit 2 was declared at 3:49 p.m. on November 29, 1989, when the action statement of TS 3.9.2.B. could not be met due to the "0" containment penetration pressurization compressor (CPPC) failing its capacity test. At the same time, the 1 CPPC was considered out of service because it's emergency power supply, the 1A EDG, was out of service. The CPPCs are shared compressors between the two units. The two inoperable CPPC, in conjunction with the backup nitrogen supply header pressure being

low, placed the unit into TS 3.0.3 LCO action statement which required the unit to be in hot shutdown within four hours. A unit ramp down started at 3:40 p.m. from 99% power and was stopped at 4:50 p.m. at 85% power when the 0 CPPC passed its capacity test. The UE was terminated at 4:50 p.m. and the unit was returned to 99% power. Subsequently, the licensee retracted the UE for the CPPCs on November 30, 1989, after determining that TS 3.0.3 was not applicable.

- e. On November 6, 1989, at 7:30 p.m., a ten member fire brigade responded to a lint fire in a clothes dryer in the auxiliary building. The fire was reported because of the smell of smoke in the area. Lint in the dryer had started to smolder. The dryer was stopped, and the fire went out. No actual flames were observed.

On November 7, 1989, at 4:15 a.m., there was a fire in the motor control center (MCC) 1323B compartment F-4, "OB Waste Neutralization Tank Pump", due to the faulty breaker. An eight-member fire brigade responded to the MCC and extinguished the fire. No other equipment was damaged. The licensee is investigating a modification to install a lockout relay to prevent contact cycling for this breaker.

In both events, the fire brigade responded in a timely manner.

- f. An inspection of Unit 1 containment recirculation sump was conducted on November 20, 1989, per NRC Information Notice 89-17, "Debris in Containment Emergency Sumps and Incorrect Screen Configurations." The sump screens were all intact and no debris was found in the sump or on the screens. A thin coating of white crystals thought to be boric acid covered part of the sump floor, and was determined not to affect the operability of the sumps.
- g. During this inspection period, the inspectors observed several indications of poor communication. Information concerning plant activities was not always communicated to the operators and plant managers.

For example, while testing the plant fire alarm, there was an actual fire in the 1B charging pump bearing. The fire brigade was sent to the charging pump room; however, members of the management staff and the NRC office were not informed of the fire. Also, control room log entries for fires in a MCC and in the laundry were made; however, these fires were not discussed at the morning meeting. After a large number of balance-of-plant (BOP) annunciators were lost on Unit 2, the resident called the Shift Control Room Engineer (SCRE). The SCRE referred the resident to the Unit 2 operator who had concerns about the adequacy of equipment available for monitoring in the plant. The residents contacted management who promptly followed up on this issue.

Two incidents involving the performance of work without operators' knowledge resulted in annunciator alarms. The operators were unaware

of the potential impact on the units from the work activities. In the first case, several of the BOP annunciators for Unit 2 were lost. The Unit 2 operator was unaware of the testing activities because testing started a day earlier than scheduled on Unit 1 and was to be continued and carried over on Unit 2. However, this information was not communicated during shift turnover. The other event involved the loss of instrument air to Unit 1 containment during testing by the technical staff.

During the monitoring of control room activities, the inspectors noted that the center desk Nuclear Station Operator (NSO) opened switchyard breakers at the direction of the Load Dispatcher. The NSO did not inform the SCRE or the Unit 1 NSO prior to opening the switchyard breakers. As a result, an annunciator on Unit 1 alarmed with the Unit 1 NSO unaware of the cause until the center desk NSO identified to the Unit 1 NSO that the opening of the switchyard breakers was the cause. Even though Unit 1 was in Mode 6, refueling shutdown, and the opening of the switchyard breakers did not affect Unit 2, which was operating at power, the center desk NSO should have informed the SCRE and the Unit 1 NSO prior to the breakers being opened.

The inspectors monitored shift briefings and observed that planned plant evolutions were not always addressed and that some shift personnel were talking and not attentive during the briefings. Since the number of personnel errors have increased in the past several months, the licensee should evaluate the shift briefing process for improvements that will contribute in the reduction of personnel errors.

No violations or deviations were identified.

5. Monthly Surveillance Observation (61726)

Technical Specifications required surveillance testing on the reactor ventilation and containment isolation systems were reviewed or observed. Consideration was given to: procedures; calibration of test instrumentation; limiting conditions for operation during testing; removal and restoration of the affected components; whether test results conformed with Technical Specifications and procedure requirements; review of test results by personnel other than the individual directing the test; and correction of any deficiencies identified during the testing. PT-21, "Reactor Coolant System Leakage Surveillance" was reviewed and no problems were noted.

The inspector observed that Technical Specifications required for surveillance testing on the EDGs, charging pumps, and fire protection, radiation monitoring, and reactor protection systems, and verified whether testing was performed in accordance with adequate procedures, whether test instrumentation was calibrated, whether limiting conditions for operation were met, whether removal and restoration of the affected components were accomplished, whether test results conformed with Technical Specifications and procedure requirements and were reviewed by

personnel other than the individual directing the test, and whether any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

The inspector also witnessed portions of the following test activities:

Unit 0

TS 15.6.38.B Station Battery Charger Performance Test for Battery
Charger 011

PT-201 Weekly Check Sheet for Fire Suppression Water System and
CO2 Tank

Unit 1

PT-11 Diesel Generator Loading Test for 1B Emergency Diesel
Generator

1R-PR49 Eberline Vent Stack Air Sampling Radiation Monitor Test

1P-455E Pressurizer Pressure Channel Electronics

1F-450D Steam Generator 1B Feedwater Bypass Control Valve
Instrumentation Calibration

1F-530D Steam Generator 1D Feedwater Bypass Control Valve
Instrumentation Calibration

Unit 2

TSS 15.5.1 Determination of Delta I Operating Limits

TSS 15.6.2 NIS (Nuclear Instrumentation System) Calibration

TSS 15.6.0 Flux Map Data Acquisition, Power, and Distribution and
Incore/Excore Axial Imbalance Checks

IMFT-2P-CS19 Containment Pressure Protection Channel I Functional Test

IMFT-2P-CS21 Containment Pressure Protection Channel III Functional
Test

IMFT-2P-457 Pressurizer Pressure Functional Test

IMFT-2L-539 Steam Generator Level Functional Test

During this inspection period, the licensee identified surveillances that had been missed.

- a. On October 30, 1989, two Steam Generators (SG) blowdown system valves were taken out-of-service for repacking. This isolated R-19, the Steam Generator blowdown monitor. With this Radiation monitor inoperable, TS 3.14.1 requires grab samples to be taken and analyzed

each shift. This surveillance requirement was missed for two shifts.

- b. On October 23, 1989, the licensee discovered that an hourly firewatch that was required for a degraded fire barrier in the Unit 1 Volume Control Tank Room had been erroneously cancelled on October 21, 1989. These firewatch rounds were not performed for two days.

These missed surveillances had minimal safety significance. Appropriate corrective actions were taken in a timely manner. Discussions with the plant manager indicated that the revised PT-14, Inoperable Equipment Surveillance Tests, should prevent reoccurrence of missed surveillances. Failure to meet the requirements of a Limiting Condition of Operation of Action statement within the specified time is considered a violation of TS 3.0.2 (295/89034-XX(DRP); 304/89029-XX(DRP)). This violation meets the criteria specified in 10 CFR 2, Appendix C, Section V.G; consequently, no Notice of Violation will be issued.

One licensee identified violation was noted.

6. Monthly Maintenance Observation (62703)

Station maintenance activities on safety related systems and components were observed or reviewed to ascertain whether they were conducted in accordance with approved procedures, regulatory guides, industry codes or standards, and in conformance with Technical Specifications. Consideration was given to: the limiting conditions for operation while components or systems were removed from service; approvals prior to initiating the work; use of approved procedures; functional testing and/or calibrations prior to returning components or systems to service; quality control records; personnel qualifications and training; certification of parts and materials; radiological and fire prevention controls. In addition, work requests were reviewed to determine the status of outstanding jobs and to assure that priority is assigned to safety related equipment maintenance which may affect system performance.

The following maintenance activities were observed or reviewed:

NWR #	Z79998	1A Residual Heat Removal Pump Breaker Inspection
NWR #	Z81187	1B Safety Injection Pump Discharge Line Relief Valve - 1SI9031 Test, Disassembly, Cleaning, Lapping, Reassembly and Retest.
NWR #	Z83089	Safety Related Snubber Z01SI-1325-H05 Test and Replacement
NWR #	Z87137	Investigate root cause for 2B EDG trip.
NWR #	Z82652	1C Steam Generator Auxiliary Feedwater Check Valve Z01FW0067-V25 disassembly, inspection, repair, and reassembly

NWR # 283789 ESF Pump Room Coolers controller calibration and removal or installation as necessary

NWR # 282505 2B Safety Injection pump oil filter differential pressure gauge leak repair

NWR # 288110 2A Charging Pump Speed Changer oil leak repair

- a. On November 17, 1989, the "1A" EDG tripped on high connecting rod bearing temperature during the performance of an overspeed trip maintenance test after a eighteen month refueling overhaul. On November 22, 1989, the swing "O" EDG was shut down due to a high connecting rod bearing temperature alarm during the monthly surveillance performance test. The licensee has performed a preliminary investigation and ascertained that the root causes were different for the "1A" and "O" EDGs high connecting rod bearing temperatures alarms.

The "1A" EDG alarm was due to abnormal wear on the #3 and #6 connecting rod bearings. The abnormal wear was caused by excessive vibration due to: (1) bent master connecting rods on #3 and #6 cylinders; (2) partially engaged turning gear for six years (1976-1983); and (3) inadequate rod cap clamping force. Also contributing to the excessive wear was above normal heat load caused by the excessive vibration and the overspeed test. Since the connecting rod bearings were speed sensitive, the overspeed test affected the heat load on the connecting rod bearings. The "O" EDG alarm was due to abnormal wear on the #2 connecting rod bearing. The abnormal wear was caused by a lube oil pump failure in 1985.

The licensee has evaluated the "2A" and "2B" EDGs and determined that a common cause failure was not applicable. Since the licensee's determinations of root causes were based on a preliminary investigation, the abnormal wear identified on the "1A" and "O" EDGs connecting rod bearings is considered an open item pending NRC review of the licensee's final conclusions of the root causes and subsequent inspections (295/89034-01(DRP); 304/89029-01(DRP)).

In addition, other abnormal conditions which did not contribute to the failure of the "O" EDG were noted. The "O" EDG crankcase lube oil sample revealed excessive water in the oil. The water originated from head stud leakage in 9 of 16 cylinder heads. The resulting concentration of water in oil (9000 parts per million) did not create sufficient emulsification to damage the bearings. The head studs were retorqued. A hydro-test revealed two additional jacket water leaks into the crankcase lube oil system. An inspection of the cylinder liner revealed a casting inconsistency. The cylinder liner and water bellows gaskets were replaced and the jacket water leak test was repeated successfully.

A discrepancy report was written on the torque wrench used to retorquer the heads during maintenance on the "O" EDG earlier this outage. The torque wrench was sent out for recalibration. It is also noted that on November 15, 1989, the 1A and 1B EDGs did not pass their maintenance tests due to leaks on the cylinder heads. The torque wrench used in this job was also sent out for recalibration. It is believed that the EDG cylinder heads were not properly torqued because of a miscalibrated or faulty torque wrench. This issue is considered an Unresolved Item pending further investigation of the root causes of the discrepancies (50-295/89034-02(DRP)).

- b. On October 23, 1989, the 1B charging pump was started at 11:00 a.m. to establish a charging path to the reactor coolant system (RCS). After starting the pump, the auxiliary building operator (ABO) detected a burning odor. The Shift Foreman was contacted, and he examined the equipment with the operator; however, they were unable to locate the source of the odor. The ABO returned to the charging pump room several times for monitoring purposes. When visible evidence of smoke was observed, he contacted the control room. The pump was secured and the station fire alarm was sounded. The fire brigade arrived at the charging pump room and found the fire had been extinguished by the ABO. The pump had been running for 43 minutes.

Subsequent investigation of the incident revealed that the inboard motor bearing had been destroyed due to the lack of lubrication caused by the improper installation of the inboard motor bearing oil slinger ring. The oil slinger ring was installed on top of the upper bearing half which caused it to rest on the motor shaft. The motor shaft had been severely scorched and gouged approximately 1/16 inch deep around its circumference. The bearing material had melted during this evolution and some of the babbitt had collected in the bottom of the oil sump. The pump seals had been completely destroyed.

Maintenance procedure, P/M030-4N, Inspection and Lubrication of Environmentally Qualified 4KV Motor Bearings for Charging Pump Motors, was reviewed and approved to be acceptable for the work. The Human Performance Investigation revealed six inappropriate actions that led to the destruction of the inboard bearings. The licensee's corrective actions will be followed by the resident staff. This is considered an Open Item (295/89034-03(DRP)).

- c. The results of the recent eddy current testing of the movable incore probe (MIP) tubes revealed 25 tubes with greater than 60% wall degradation. Three years ago, wear was also found on the tubes and the licensee displaced the MIP tubes on both units by 1-1/2 inches to remove the affected wear area from the lower core support structure. During this outage, evaluation revealed notable wear, however, none of the tubes required replacement. These affected tubes will be isolated at the seal table as designed. Technical Specifications requires 16 operable tubes of which at least two must

be operable in each core quadrant. The proposed plugging of the 25 tubes meets these requirements. The effect on flux mapping is being evaluated by the Nuclear Engineering staff.

In addition, the licensee plans to compare their eddy current data with specific Westinghouse tube samples taken from the Diablo Canyon station.

This matter was reviewed for acceptability through the onsite review function. These actions appear to be acceptable at this time.

- d. On November 3, 1989, while touring the auxiliary building, an equipment operator (EO) noticed water on the floor outside of the Unit 1 horizontal pipe chase door. The EO entered the pipe chase and discovered water spraying in the vicinity of several valves. The charging system had been started an hour earlier. The charging system was then stopped, the water spraying stopped, and the valves were inspected. It appeared that 1MOV CV-8110 had no packing.

Investigation indicated that packing was present; however, there was at least 1-inch of travel left on the packing gland. The valve was repacked, stroked, and current traces were taken on the valve. No leakage was present after the repair.

- e. Refueling maintenance activities on safety related systems and components were observed or reviewed to ascertain whether they were conducted in accordance with approved procedures, regulatory guides, industry codes or standards, and in conformance with technical specifications. Consideration was given to the control of contract work, involvement of quality assurance organizations, radiological control, personnel qualifications, functional testing, and use of proper procedures.
- f. The Unit 1 refueling outage has been extended due to problems involving the upper girth weld inspections on the steam generators (SG), the auxiliary feedwater system valve modifications, and the EDGs' failures. The upper girth welds on the 1D SG were inspected by the licensee during this refueling outage in accordance with the Inservice Inspection (ISI) program. Ultrasonic examination from the outer surface revealed thirty-one indications were present. In accordance with their ISI program, the other SGs were also inspected. The licensee removed the identified indications by mechanical blending. These activities caused the refueling outage schedule to be extended approximately two weeks. NRC Region III and NRR have been following the situation. The recent problems with the "1A" and "D" EDGs have caused an additional delay of approximately two weeks. The refueling outage has been delayed for a total of thirty days.

- g. A vendor branch procurement inspection consisting of nine members was started on November 30, 1989, and will exit on December 10, 1989. This inspection will be covered under reports 294/89200(NRR); 304/89200(NRR).

No violations or deviations were identified.

7. Licensee Event Reports (LERs) Followup (92700)

Through direct observations, discussions with licensee personnel, and review of records, the following event reports were reviewed to determine that reportability requirements were fulfilled, immediate corrective action was accomplished, and corrective action to prevent recurrence had been accomplished in accordance with Technical Specifications. The LERs listed below are considered closed:

<u>LER NO.</u>	<u>DESCRIPTION</u>
295/89006-LL	Overtemperature Delta - Temperature Out of Tolerance
295/89016-LL	Senior Reactor Operator limited to fuel handling (SRO-L) did not meet the requirements of 10 CFR 55.53
304/89005-LL	Auxiliary Building Vent Stack Monitor Inoperable

The following observations were made:

Licensee Event Report 89016 describes an event where an SRO-L supervised a core off-load. The operator did not have an active license as defined in 10 CFR 55; and, therefore, should not have been allowed to supervise the core off-load without the presence of another operator with an active SRO or SRO-L license. This is considered an Unresolved Item pending further review by region-based inspectors (295/89034-04).

In addition to the foregoing, the inspectors reviewed the licensee's Deviation Reports (DVRs) generated during the inspection period. This was done in an effort to monitor the conditions related to plant or personnel performance and potential trends. Deviation Reports were also reviewed to ensure that they were generated appropriately and dispositioned in a manner consistent with the applicable procedures and the quality assurance manual. The following DVRs were reviewed:

DVRs

22-1-88-137N1	1D Feedwater Valve Failure
22-1-89-074	Low Level in RWST
22-1-89-142	Missed Hourly Firewatches
22-2-89-066	2B Accumulator Level Indicators Found Out of Tolerance

No violations or deviations were identified.

8. Training (41400)

During the inspection period, the inspectors reviewed abnormal events and unusual occurrences which may have resulted, in part, from training deficiencies. Selected events were evaluated to determine whether the classroom, simulator, or on-the-job training received before the event was sufficient to have either prevented the occurrence or to have mitigated its effects by recognition and proper operator action. Personnel qualifications were also evaluated.

No violations or deviations were identified.

9. Safety Assessment/Quality Verification (35502 and 40500)

- a. The inspectors reviewed the licensee's self-assessment capabilities to ascertain if weaknesses were identified, had the appropriate corrective action established, and were tracked to completion. The inspectors also reviewed the self-assessment reports for technical content and scope. The inspectors had no concerns.

Portions of the following self-assessments were reviewed:

<u>Area</u>	<u>Date</u>
Maintenance	January 23-26, 1989
Fire Protection	April 3-6, 1989
Primary Containment Leak Testing	July 25-28, 1989
Operations	August 14-18, 1989
Radiation Protection	September 25-29, 1989

- b. On October 27, 1989, a Temporary Waiver of Compliance from TS 3.17.2, Aircraft Fire Detection, was issued from NRR. The event is related to the operation of the EDG room air intake dampers and the resultant operability of the EDGs. The licensee failed to consider the safety function of the ventilation system and did not declare the EDGs inoperable when this support system was inoperable. An Enforcement Conference was held on November 17, 1989 with the licensee to discuss potential escalated enforcement (Inspection Report 50-295/89036;50-304/89032).
- c. On November 22, 1989, the Operations Department wrote a Deviation Report (DVR) for a missed surveillance on the SW pump inoperability which they thought had occurred on November 18, 1989. After extensive licensee review of the TS, it was determined that the surveillance for the SW pump was not required, and the DVR was cancelled. However, this demonstrated that the TS were very confusing, and the licensee is issuing a TS interpretation for the SW pump requirements and is also requesting a proposed amendment for TS 4.8.7.C. This is the second example of the difficulty in

interpreting the TS within a one week period. An Unusual Event was declared on November 28, 1989, for inoperable containment penetration pressurization air compressors. This Unusual Event was later retracted when the licensee determined that the TS was misinterpreted.

- d. A concern was raised that an individual had received a mask fit prior to passing the required respiratory training. Investigation by the licensee indicated that the concern was valid in that the individual was fitted before passing the respiratory training; however, the individual did pass the exam prior to being issued a mask for plant activities. The licensee has initiated actions to improve the screening process for a mask fit test. The licensee plans to use Zion site specific respiratory training stickers on the Nuclear General Employee Training (NGET) card to differentiate from the training given by other stations since the requirements differ from each station. The radiation protection technicians are required to verify that individuals have completed all prerequisites prior to giving the mask fitting tests.

No violation or deviation as identified.

10. 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. Two Open Items disclosed during this inspection are discussed in Paragraph 6.

11. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance or, deviations. Two Unresolved Items disclosed during this inspection are discussed in Paragraphs 6 and 7.

12. Licensee Identified Violations

In accordance with 10 CFR Part 2, Appendix C, General Statement of Policy and Procedure for NRC Enforcement Actions, the NRC will not generally issue a notice of violation for a violation that meets all of the following tests:

- (1) It was identified by the licensee;
- (2) It fits in Severity Level IV or V;
- (3) It was reported, if required;
- (4) It was or will be corrected, including measures to prevent recurrence, within a reasonable time; and
- (5) It was not a violation that could reasonable be expected to have been prevented by the licensee's corrective action for a previous violation.

One licensee identified violation disclosed in this inspection is discussed in paragraph 5 of this report.

13. Management Meetings

The Deputy Regional Administrator and members of the Regional staff met October 17, 1989, with representatives of Commonwealth Edison Company at the Zion Nuclear Power Station to discuss the status of the Zion Performance Improvement Program.

On November 6, 1989, Chief, Branch 1, met with licensee management to discuss the status of the Zion Performance Improvement Program.

On November 13, 1989, the Deputy Regional Administrator toured Unit 1 Containment and met with licensee management.

On November 14, 1989, representatives of Commonwealth Edison Company met with the Regional Administrator and members of the Regional Staff at the Region III office to discuss the status of the Zion Performance Improvement Program.

On November 17, 1989, representatives of Commonwealth Edison Company met with the Regional Administrator and members of the Regional Staff at the Region III office to discuss escalated enforcement on inadequate 10 CFR 50.59 safety evaluation for the EDG room ventilation system.

On November 20, 1989, the NRR Director, the Project Directorate III-2, NRR, and the Licensing Project Manager, NRR, toured the Zion Nuclear Station for plant familiarization and met with management representatives.

14. Exit Interview (30703)

The inspectors met with licensee representatives (denoted in Paragraph 1) throughout the inspection period and at the conclusion of the inspection on December 4, 1989, to summarize the scope and findings of the inspection activities. The licensee acknowledged the inspectors' comments. The inspectors also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspectors during the inspection. The licensee did not identify any such documents or processes as proprietary.