April 15, 2002

Mr. John L. Skolds, President
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: LASALLE COUNTY STATION
NRC INSPECTION REPORT 50-373/02-03 (DRP); 50-374/02-03 (DRP)

Dear Mr. Skolds:

On March 31, 2002, the NRC completed an inspection at your LaSalle County Station. The enclosed report presents the results of that inspection. The results of this inspection were discussed on April 5, 2002, with Mr. G. Barnes and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel. Specifically, this inspection focused on reactor and radiation safety.

Based on the results of this inspection, the inspectors identified one issue of very low safety significance (Green) that was determined to involve a violation of NRC requirements. However, because of its very low safety significance and because it was entered into your corrective action program, the NRC is treating this issue as a Non-Cited Violation in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you deny this Non-Cited Violation, you should provide a response with a basis for your denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, Region III; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at LaSalle County Station.

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Sincerely,

/RA/

Bruce L. Burgess, Chief
Branch 2
Division of Reactor Projects

Docket Nos. 50-373; 50-374
License Nos. NPF-11; NPF-18

Enclosure: Inspection Report 50-373/02-03(DRP);
50-374/02-03(DRP)

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cc w/encl: Site Vice President - LaSalle County Station
LaSalle County Station Plant Manager
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REGION III

Docket Nos:	50-373, 50-374
License Nos:	NPF-11, NPF-18
Report Nos:	50-373/02-03(DRP); 50-374/02-03(DRP)
Licensee:	Exelon Generation Company
Facility:	LaSalle County Station, Units 1 and 2
Location:	2601 N. 21st Road Marseilles, IL 61341
Dates:	February 17 through March 31, 2002
Inspectors:	E. Duncan, Senior Resident Inspector G. Wilson, Resident Inspector W. Slawinski, Radiation Protection Specialist J. Yesinowski, Illinois Department of Nuclear Safety
Approved by:	Bruce L. Burgess, Chief Branch 2 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000373-02-03(DRP), IR 05000374-02-03(DRP); on 02/17/02-03/31/02; Exelon; LaSalle County Station, Units 1 & 2; Operability Evaluations.

This report covers a 6-week routine resident inspection. The inspection was conducted by the resident inspectors and a regional radiation specialist inspector. One Green finding was identified which was the subject of a Non-Cited Violation. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609 "Significance Determination Process" (SDP). The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at http://www.nrc.gov/NRR/OVERSIGHT/index.html. Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violation.

B. Inspector Identified Findings

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

Green. Licensee personnel failed to properly evaluate a modification which reduced the size of the lube oil tubing used in the 0 Emergency Diesel Generator (EDG) which rendered the EDG inoperable.

The issue was of very low safety significance since the 0 EDG was restored to service within the Technical Specification Allowed Outage Time and the redundant EDGs were available during the entire time that the 0 EDG was inoperable. (Section 1R15)

C. Licensee Identified Violations

No violations of significance were identified.

Report Details

Summary of Plant Status: Unit 1 operated at full power for the entire inspection period, except for power reductions to conduct pre-planned surveillance testing activities and rod pattern adjustments. Unit 2 operated at full power until March 16, when a shutdown was initiated to comply with Technical Specifications (TS) following an unexpected increase in drywell unidentified leakage. Power was reduced to about 69 percent when the problem was resolved and Unit 2 was returned to full power on March 17. Unit 2 operated at full power for the remainder of the inspection period, except for power reductions to conduct pre-planned surveillance testing activities and rod pattern adjustments.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

1R04 Equipment Alignment (71111.04)

.1 Partial Walkdown

a. Inspection Scope

On February 26, 2002, the inspectors performed a walkdown of accessible portions of the Unit 1 Standby Gas Treatment System to verify system operability during maintenance activities associated with the Unit 2 Standby Gas Treatment System. The inspectors reviewed documentation to determine correct system lineup. These documents included plant procedures, such as mechanical and electrical checklists, as well as plant drawings. The inspectors identified any discrepancies between the existing equipment lineup and the correct lineup.

b. Findings

No findings of significance were identified.

.2 Complete Walkdown

a. Inspection Scope

The inspectors performed a complete walkdown of accessible portions of the Unit 1 and Unit 2 125 Volt Direct Current (VDC) and 250 VDC Electrical Distribution Systems to verify system operability. The inspectors verified correct breaker alignment using the 125 VDC and 250 VDC system electrical checklists. Appropriate meter indications were also observed. Proper installation of hangars and supports was periodically observed during the walkdown, and the operational status of support systems was directly verified by observation of various parameters. The inspectors also evaluated other conditions such as adequacy of housekeeping, the absence of ignition sources, and proper component labeling.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Fire Protection Walkdowns

a. Inspection Scope

The inspectors walked down the following risk significant areas to identify any fire protection degradations:

- Fire Zone 2A Unit 1 Instrument Storage Room - Reactor Building Elevation 832'
- Fire Zone 3A Unit 2 Sipping Instrument Room - Reactor Building Elevation 832'
- Fire Zone 5A1 Unit 1 Turbine-Driven Reactor Feed Pump Area
- Fire Zone 5A2 Unit 2 Turbine-Driven Reactor Feed Pump Area

Emphasis was placed on control of transient combustibles and ignition sources; the material condition, operational lineup, and operational effectiveness of the fire protection systems, equipment, and features; and the material condition and operational status of fire barriers used to prevent fire damage or fire propagation.

In particular, the inspectors verified that all observed transient combustibles were being controlled in accordance with the licensee's administrative control procedures. In addition, the inspectors observed the physical condition of fire suppression devices, such as overhead sprinklers, and verified that any observed deficiencies did not impact the operational effectiveness of the system. The physical condition of portable fire fighting equipment, such as fire extinguishers, was observed. The inspectors also verified that extinguishers were located appropriately, and that access to the extinguishers was unobstructed. Fire hoses were verified to be installed at their designated locations and the physical condition of the hoses was verified to be satisfactory and access unobstructed. The physical condition of passive fire protection features such as fire doors, ventilation system fire dampers, fire barriers, fire zone penetration seals, and fire retardant structural steel coatings was inspected and verified to be properly installed and in good physical condition.

b. Findings

No findings of significance were identified.

.2 Annual Fire Drill Observation

a. Inspection Scope

On March 5, 2002, the inspectors observed the fire brigade respond to a simulated fire in Fire Zone 5B8 (Unit 2 Turbine Building Elevation 731' - Hydrogen Seal Oil Unit) to evaluate the readiness of licensee personnel to fight fires.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (71111.12)

a. Inspection Scope

The inspectors reviewed the licensee's implementation of the maintenance rule requirements, including a review of scoping, goal-setting, and performance monitoring, short-term and long-term corrective actions, and current equipment performance status. The systems selected for inspection were all classified as risk significant by the licensee's maintenance rule program. The systems evaluated were:

- Reactor Vessel Instrumentation (NB)
- Residual Heat Removal (RHR)
- Control Rod Drive (CRD)
- High Pressure Core Spray (HPCS)

The inspectors independently verified the licensee's implementation of maintenance rule requirements for these systems by verifying that these systems were properly scoped within the maintenance rule; that all failed structures, systems, or components (SSCs) were properly categorized and classified as (a)(1) or (a)(2); that performance criteria for SSCs classified as (a)(2) were appropriate; and that the goals and corrective actions for SSCs classified as (a)(1) were appropriate. The inspectors also verified that issues were identified at an appropriate threshold and entered in the corrective action program.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment and Emergent Work Evaluation (71111.13)

a. Inspection Scope

The inspectors reviewed the licensee's evaluation of plant risk, scheduling, configuration control, and performance of maintenance associated with planned and emergent work activities and verified that scheduled and emergent work activities were adequately managed. In particular, the inspectors reviewed the licensee's program for conducting maintenance risk assessments and verified that the licensee's planning, risk management tools, and the assessment and management of online risk was adequate. The inspectors also verified that licensee actions to address increased online risk during these periods, such as establishing compensatory actions, minimizing the duration of the activity, obtaining appropriate management approval, and informing appropriate plant staff, were accomplished when online risk was increased due to maintenance on risk-significant SSCs. The inspectors reviewed the maintenance risk assessments for work planned during the weeks of:

- February 24, 2002.
- March 10, 2002.
- March 17, 2002.
- March 24, 2002.

b. Findings

No findings of significance were identified.

1R14 Non-Routine Evolutions (71111.14)

a. Inspection Scope

The inspectors reviewed the circumstances surrounding a March 23, 2002 event where, following primary containment ventilation chiller manipulations, Unit 2 unidentified leakage increased greater than the 2 gallon per minute (gpm) limit established in TS 3.4.5, "RCS [Reactor Coolant System] Operational Leakage." In particular, the inspectors observed the licensee's actions in response to the issue, including the initiation of a plant shutdown and Emergency Notification System (ENS) report, and the evaluation of potential leakage sources. The inspectors also verified that after measured leakage rate decreased, licensee personnel appropriately reviewed all necessary conditions prior to exiting the TS Limiting Condition For Operation (LCO) and returning Unit 2 to full power.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed selected Operability Evaluations (OEs) of degraded and non-conforming conditions affecting mitigating systems and barrier integrity to ensure that operability was properly justified and the component or system remained available, such that no unrecognized increase in risk had occurred. The following evaluations were reviewed:

- OE 01-22: 0 Emergency Diesel Generator (EDG) Lube Oil System
- OE 02-06: Unit 1 and Unit 2 Secondary Containment Leakage
- OE 02-07: Unit 1 High Pressure Core Spray System Leakage

b. Findings

.1 OE 01-22: 0 Emergency Diesel Generator (EDG) Lube Oil System

One "Green" finding and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," was identified due to the failure to properly evaluate a modification which reduced the size of the lube oil tubing used in the 0 EDG.

Description of Issue

On December 26, 2001, while performing LaSalle Operating Surveillance (LOS) DG-M1, "0 Diesel Generator Operability Test," the 0 EDG unexpectedly tripped on low lube oil pressure. The licensee conducted root cause investigation 88165-02-01, "0 Diesel Generator Trip on Low Lube Oil Pressure," and determined that an 8-foot section of the lube oil pressure instrument tubing had been replaced in November 1992 in accordance with Design Change Package (DCP) H-1-2-90-001. The modified tubing had a 0.049-inch wall thickness compared to the 0.035-inch wall thickness that previously existed. Since the outside diameter remained constant, this modification effectively reduced the inside diameter of the tubing. Licensee personnel concluded that the reduction in the inside diameter of the tubing adversely impacted the response of the lube oil sensing circuit, potentially affecting the operability of the 0 EDG. This potential problem was exacerbated by a lower than normal temperature in the 0 EDG room during the surveillance conducted on December 26 due to a tripped 0 EDG room heater breaker, and was the reason that this problem manifested itself. The lower room temperature resulted in a change in the viscosity of the lube oil, which in conjunction with the reduction in the inside diameter of the tubing, slowed the response time of the lube oil pressure sensing circuit, causing the 0 EDG to trip.

Inspector Review

The inspectors reviewed the licensee's root cause evaluation as well as DCP H-1-2-90-001 and concluded that the modification failed to identify the adverse impact caused by the design change. In addition, the inspectors verified that based upon operators logs, previous EDG surveillance testing documentation, and the failure to identify any prior maintenance work orders associated with EDG room heaters, that there was reasonable assurance that 0 EDG room temperature was maintained within a normal band such that no prior adverse operability impact was likely.

Significance Evaluation

The inspectors reviewed this issue against the guidance contained in Appendix B, "Thresholds for Documentation," of Inspection Manual Chapter (IMC) 0610*, "Power Reactor Inspection Reports." In accordance with the Group 1 questions, the inspectors determined that the issue had an actual impact on safety since it caused the 0 EDG to trip on low lube oil pressure which rendered the EDG unavailable. As a result, the inspectors reviewed this issue against the Group 2 questions and determined that since the 0 EDG was a train in an accident mitigation system, the issue warranted further review in accordance with Inspection Manual Chapter (IMC) 0609 "Significance Determination Process (SDP)." The inspectors conducted this review utilizing the "SDP Phase 1 Screening Worksheet For IE [Initiating Events], MS [Mitigating Systems], and BI [Barrier Integrity] Cornerstones." The inspectors determined that although the operability of the 0 EDG was affected, because the loss of the 0 EDG did not exceed the TS Allowed Outage Time (AOT) and no weather-related impact existed, that the finding screened out as Green.

Enforcement Actions

10 CFR 50, Appendix B, Criterion III, "Design Control," requires that measures shall be established for the selection and review for suitability of application of materials, parts, and equipment that are essential to the safety-related functions of structures, systems, and components. The failure to identify the adverse impact on the response of the lube oil sensing circuit when the inside diameter of the lube oil instrumentation tubing was reduced by Design Change Package H-1-2-90-001 was an example where the requirements of 10 CFR 50, Appendix B, Criterion III, were not met and was a violation. However, because of its low safety significance and because it was entered into the corrective action program, the NRC is treating this issue as a Non-Cited Violation (NCV 50-373/0203-01(DRP); 50-374/0203-01(DRP)), in accordance with Section VI.A.1 of the NRC's Enforcement Policy. The issue was entered into the licensee's corrective action program as Condition Report (CR) 82092.

.2 OE 02-06: Unit 1 and Unit 2 Secondary Containment Leakage

Description of Issue

On March 1, 2002, during the performance of LaSalle Technical Surveillance (LTS) 300-3, "Secondary Containment Leak Rate Test," pressure in the secondary containment was identified as abnormally low; -0.18 inches water gauge with respect to atmosphere. This occurred with the reactor building ventilation (VR) and Standby Gas Treatment (VG) systems of both units shutdown and with the turbine building ventilation (VT) systems of both units operating. Due to the unexpected condition, the test was aborted and the issue was evaluated under OE 02-06, "Unit 1 and Unit 2 Secondary Containment Leakage," to determine whether the operability of the secondary containment was adversely impacted. The evaluation concluded that based upon historical testing data and walkdowns, the Standby Gas Treatment (VG) system and secondary containment would perform all of their design functions.

Inspector Review

The inspectors reviewed OE 02-06 which documented that the design basis functions of the Standby Gas Treatment system included the ability to maintain the secondary containment vacuum greater than or equal to -0.25 inches water gauge with respect to atmosphere and maintain the pressure in the secondary containment less than the pressure external to the secondary containment (i.e. negative with respect to adjacent structures such as the turbine building).

The inspectors reviewed 10 CFR 50, Appendix A, Criterion 16, "Containment Design"; Section 6.2.3, "Secondary Containment Functional Design," of NUREG-0800, "Standard Review Plan"; Branch Technical Position CSB 6-3, "Determination of Bypass Leakage Paths in Dual Containment Plants"; TS and Bases Section 3.6.4.1, "Secondary Containment"; and the LaSalle Updated Final Safety Analysis Report (UFSAR).

Following that review, the inspectors identified a number of inconsistencies between information presented in OE 02-06 and the other documents reviewed. For example, although the Standby Gas Treatment System design basis function to maintain the

secondary containment vacuum greater than or equal to -0.25 inches water gauge was a requirement explicitly described in TS 3.6.4.1, the requirement to maintain the pressure in secondary containment less than that of adjacent structures was not included. In addition, the inspectors pointed out that discussions in OE 02-06 did not include the impact of instrument inaccuracy on the measurement of differential pressure between the turbine building and secondary containment. Finally, although OE 02-06 discussed the operability of secondary containment regarding a Loss-of-Coolant-Accident, it failed to address the operability of secondary containment following a fuel handling accident, a design basis accident for which the Standby Gas Treatment system was required to mitigate. This consideration was necessary since during a fuel handling accident, the Turbine Building Ventilation system would not necessarily be lost which could impact Standby Gas Treatment system performance and measured differential pressures.

To address the inspectors concerns, the licensee revised OE 02-06. During a review of OE 02-06, Revision 1, the inspectors identified that portions of the licensee's justification for the operability of the secondary containment included a comparison of historical turbine building pressure to more recently measured secondary containment pressure. The inspectors concluded that those comparisons were insufficient to adequately demonstrate that secondary containment pressure was less than turbine building pressure since the alignment of the various ventilation systems were not the same and the time frame of the data used was separated by 2 years.

At the end of the inspection period, licensee personnel planned to revise OE 02-06 to address the inspectors concerns. This is an Unresolved Item (URI) (50-373/0203-02(DRP); 50-374/0203-02(DRP)) pending a review of OE 02-06, Revision 2, and determination of whether the secondary containment testing acceptance criteria was adequate.

1R16 Operator Workarounds (71111.16)

a. Inspection Scope

The inspectors reviewed Operator Workarounds (OWAs) and Operator Challenges (OCs) to identify any potentially adverse impact on the function of mitigating systems or the ability to implement an abnormal or emergency operating procedure. The following items were reviewed:

- OWA 338/339 Feedwater Heater Isolations Following Reactor Recirculation Pump Downshift
- OC 336/337 Service Water Radiation Monitor Low Flow Condition
- OC 343 2A Emergency Diesel Generator "A" Air Compressor Refrigeration Unit Does Not Shut Off

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope

The inspectors reviewed the following Design Change Package (DCP) which was accomplished to address problems with oil carryover in the Auxiliary Electrical Equipment Room Ventilation (VE) system.

- DCP 332269 Modification of Auxiliary Electrical Equipment Room Ventilation (VE) Refrigeration Piping - Train 'A'

The inspectors reviewed the DCP and observed modification activities in the field. In particular, the inspectors verified that the Code and safety classification of the replaced structures, systems, and components (SSCs) was consistent with the design basis; affected operations procedures and training were identified; pressure boundary integrity was not compromised; and the modified SSC impact on seismic evaluations was acceptable. The inspectors also verified through a review of post-modification design assumptions, post-modification testing results, and non-destructive testing inspection results that the post-modification testing was adequate.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed and observed the following post-maintenance testing activities involving risk significant equipment:

- WR 99282357 Unit 1 Main Steam Line Tunnel High Temperature Switch Power Monitoring Relay Replacement

- WR 00411691 Repair Defective Actuator For Unit 2 Division 1 Residual Heat Removal Service Water Suction Damper 2VY01Y

- WR 99234884 Unit 1 High Pressure Core Spray Maintenance

During post-maintenance testing observations, the inspectors verified that the test was adequate for the scope of the maintenance work which had been performed, and that the testing acceptance criteria was clear and demonstrated operational readiness consistent with the design and licensing basis documents. The inspectors also verified that the impact of the testing had been properly characterized during the pre-job briefing; the test was performed as written and all testing prerequisites were satisfied; and that the test data was complete, appropriately verified, and met the requirements of the testing procedure. Following the completion of the test, the inspectors verified that the test equipment was removed, and that the equipment was returned to a condition in which it could perform its safety function.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed surveillance testing on risk-significant equipment and verified that the structures, systems, and components (SSCs) selected were capable of performing their intended safety function and that the surveillance tests satisfied the requirements contained in TSs, the Updated Final Safety Analysis Report (UFSAR), and licensee procedures. During surveillance testing observations, the inspectors verified that the test was adequate to demonstrate operational readiness consistent with design and licensing basis documents, and that the testing acceptance criteria was clear. The inspectors also verified that the impact of the testing had been properly characterized during the pre-job briefing; the test was performed as written and all testing prerequisites were satisfied; the test data was complete, appropriately verified, and met the requirements of the testing procedure; and that the test equipment range and accuracy was consistent with the application, and the calibration was current. Following the completion of the test, the inspectors verified that the test equipment was removed, and that the equipment was returned to a condition in which it could perform its safety function.

The following surveillance testing activity was observed:

- LaSalle Operating Surveillance (LOS) RH-Q1, “2C Residual Heat Removal (RHR) System Operability and Inservice Test”

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed Temporary Modification 331903 which defeated the filter demineralizer high differential pressure alarm and high pressure trip associated with Reactor Water Cleanup (RWCU) instrument 2G33-Z00187B and connected monitoring equipment to a test manifold. The inspectors reviewed the associated 10 CFR 50.59 safety evaluation against the system design basis documentation, including the Updated Final Safety Analysis Report (UFSAR). The inspectors also conducted a walkdown of the temporary modification and compared the installed configuration against the configuration prescribed in design drawings.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors evaluated the adequacy of the licensee's conduct of drills and critique of performance through the observation of an emergency preparedness pre-exercise on February 20, 2002. The inspectors reviewed the exercise scenario to identify the timing and location of classification, notification, and protective action measure activities, and for licensee expectations and response. The inspectors verified that these actions were accomplished in a timely manner.

During the exercise scenario, a simulated earthquake was properly classified as a Notice of Unusual Event (NOUE) and then upgraded to an Alert when the magnitude of the earthquake was determined. Following a Unit 1 attempted scram due to multiple rod drift alarms, an Anticipated Transient Without Scram (ATWS) occurred and was properly classified as a Site Area Emergency. Following simulated earthquake aftershocks which resulted in a Loss of Coolant Accident (LOCA) with a simultaneous Loss Of Offsite Power (LOOP) and a subsequent loss of injection capability, a General Emergency was properly classified.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS3 Radiation Monitoring Instrumentation (71121.03)

.1 Walkdowns of Radiation Monitoring Instrumentation

a. Inspection Scope

The inspector conducted walkdowns of selected area radiation monitors (ARMs) to verify they were located as described in the Updated Final Safety Analysis Report (UFSAR). The inspector discussed with radiation protection (RP) staff its plans to review ARM locations, to ensure they were optimally positioned relative to the potential source(s) of radiation they were intended to monitor. Walkdowns were also conducted in those areas where portable survey instruments were calibrated/repaired and maintained for RP staff use both within and outside the radiologically controlled area (RCA), to determine if those instruments designated "ready for use" had current calibration stickers, were operable, and in good physical condition. Additionally, the inspector observed the licensee's instrument calibration units and instrument check sources and discussed their use with RP staff, to assess their material condition and to determine if they were used and maintained adequately.

b. Findings

No findings of significance were identified.

.2 Tests and Calibrations of Radiation Monitoring Instrumentation

a. Inspection Scope

The inspector reviewed radiological instrumentation associated with monitoring transient high and/or very high radiation areas, and instruments used for remote emergency assessment to verify that the instruments had been calibrated consistent with industry standards and in accordance with station procedures. Inspector identified deficiencies with the methodology used for ARM source checks and with differences in the frequency of ARM calibrations compared to the description in the UFSAR were also assessed, to verify that these issues did not impact instrument operability. The inspector also reviewed the licensee's alarm setpoints for selected ARMs to verify that the setpoints were established consistent with the UFSAR and TSs. Specifically, the inspector selectively reviewed calibration procedures and the most recent calibration records and/or certificate of conformance for the following radiation monitoring instrumentation and instrument calibration equipment:

- Unit 2 Traversing In-Core Probe (TIP) Room ARM
- Unit 2 Reactor Water Cleanup Phase Separator Room ARM
- Common Unit High Level Drum Storage ARM
- Unit 2 Primary Containment Gross Gamma Radiation Monitors
- Unit 1 Fuel Pool Exhaust Radiation Monitor - High Range
- Unit 2 Off-Gas Pre and Post Treatment Radiation Monitors
- Bicron RSO-5 (Instrument # A168Y and # B822G) Portable Survey Instruments
- MGP Telepole (Instrument # 6696-100) Portable Survey Instrument
- Radcal Corporation Model 20X5-180 and Model 20X5-3 Electrometer/Ion Chamber Instrument Calibration Equipment
- J.L. Shepherd Model 89-400 and Model 89-30 Instrument Calibrators
- Deepwell Portable Survey Instrument Calibrator

The inspector reviewed the most current high radiation sampling system (HRSS) chemistry sampling/analysis procedures and results of HRSS surveillances completed since January 2000, to determine if the system was maintained consistent with TSs. The inspector also reviewed the most recent chemistry technician training information, to verify that personnel were qualified for HRSS use as required by TSs. Inspector identified deficiencies, associated with HRSS surveillances, were assessed to verify that these problems did not significantly impact the licensee's accident assessment capability, and to determine whether the deficiencies were understood by the licensee and were being addressed.

The inspector discussed surveillance (source check) practices and reviewed the most recent calibration records and procedures for selected radiation monitors used for assessment of internal exposure, and those instruments utilized for surveys of personnel and equipment prior to egress from the RCA. These instruments were as follows:

- Canberra Fastscan Whole Body Counting System
- Nuclear Enterprise IPM Contamination Monitors (Serial #s 226 and 239)
- NE Technology Small Article Monitor (Serial # 159)
- Eberline PM-7 Portal Monitor (Serial # 115)

b. Findings

No findings of significance were identified.

.3 Radiation Protection Staff Instrument Use

a. Inspection Scope

The inspector observed RP staff source check portable radiation survey instruments and calibrate an ionization chamber survey meter to determine if those tests were completed adequately using appropriate techniques, sources, and in accordance with station procedures. The inspector also evaluated radiation protection technician (RPT) performance while instruments used for surveys of personnel and equipment prior to unconditional release from the RCA were source checked, to determine if those surveillances were completed adequately and in conformance with station procedures.

b. Findings

No findings of significance were identified.

.4 Respiratory Protection Program

a. Inspection Scope

The inspector reviewed aspects of the licensee's respiratory protection program for compliance with the requirements of Subpart H of 10 CFR Part 20, and to ensure that self-contained breathing apparatus (SCBA) were properly maintained and stored. The inspector also performed a review to determine if selected emergency response personnel required to use SCBAs were trained and qualified in their use. Specifically, the inspector reviewed SCBA equipment maintenance procedures and maintenance inspection records for calendar year 2001, for all units maintained for emergency use and located in various areas of the plant. The review was performed to determine if the equipment was properly maintained consistent with industry standards and the station procedure.

The inspector walked-down the SCBA air bottle filling station and SCBA storage locations in the main control room, the primary fire equipment storage cage in the Turbine Building, and the equipment storage cart adjacent to the HRSS room. The inspector also accompanied RPTs during a routine surveillance of the SCBA equipment. The inspector examined several SCBA units in these areas to determine their material condition, to verify that air bottle hydrostatic tests were current and bottle pressure was sufficient, and to verify that the surveillance was completed adequately.

In addition, the inspector reviewed respiratory protection training and plant staff SCBA qualification information, to determine if active NRC license holders designated for control room on-shift duty and active members of the station's fire brigade maintained current SCBA qualifications.

b. Findings

No findings of significance were identified.

.5 Identification and Resolution of Problems

a. Inspection Scope

The inspector reviewed the results of a focus area self-assessment of the portable radiation monitoring instrumentation program completed by the RP staff in February 2002, and the licensee's condition report (CR) database and several individual CRs related to radiation monitoring instrumentation and SCBA equipment generated in calendar year 2001 through February 2002. The inspector evaluated the effectiveness of the licensee's self-assessment and corrective action program to identify, characterize and prioritize problems, and to develop corrective actions.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

Cornerstones: Mitigating Systems, Occupational Radiation Safety

.1 Heat Removal System Unavailability Performance Indicator (PI) Review

a. Inspection Scope

The inspectors reviewed the Unit 1 and Unit 2 Reactor Core Isolation Cooling (RCIC) System Unavailability Performance Indicator data reported by the licensee for April through December 2001. In particular, the inspectors reviewed Performance Indicator data sheets which formed the basis for the reported RCIC system unavailability and compared that data to control room operating logs and Monthly Operating Reports to determine if the RCIC system was unavailable for time periods which had not been previously identified and reported. The inspectors also verified performance indicator results through independent calculations.

b. Findings

No findings of significance were identified.

.2 Occupational Radiation Safety Performance Indicator Review

a. Inspection Scope

The inspector evaluated the RP department's PI data analysis methods and records to verify that the licensee had accurately assessed and reported the PI for the occupational radiation safety cornerstone in accordance with the criteria specified in Nuclear Energy Institute 99-02, Revisions 1 and 2, "Regulatory Assessment Performance Indicator Guideline." Specifically, the inspector reviewed the licensee's CR database, selected CRs and investigation reports generated between August 2001 and February 2002, to identify any PI occurrences that were not recognized by the licensee and to verify the performance indicator for the occupational radiation safety cornerstone. The inspector also reviewed PI verification records completed by the RP staff since August 2001, and discussed PI data collection and analysis processes with involved RP staff to determine if the program was implemented consistent with station procedure and the industry guideline.

A preliminary prompt investigation report (CR 00094760) that documented a February 12, 2002, high radiation area event in the Unit 1 Off-Gas Cooler/Condenser Room was reviewed and discussed with the radiation protection manager. The inspector reviewed the report to determine if the licensee's preliminary assessment of the incident was properly focused, and if it was being evaluated as a potential occurrence consistent with the aforementioned industry guideline.

b. Findings

No findings of significance were identified.

4OA6 Meetings

Exit Meeting Summary

The inspectors presented the final inspection results to Mr. G. Barnes and other members of licensee management on April 5, 2002. The licensee acknowledged the findings presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

KEY POINTS OF CONTACT

Exelon

D. Czufin, Site Engineering Manager
D. Enright, Operations Manager
F. Gogliotti, Design Engineering Supervisor
G. Barnes, Site Vice President
J. Henry, System Engineering Manager
K. Hobbs, Radiation Protection Manager
K. Lyons, Chemist
W. Riffer, Regulatory Assurance Manager
M. Schiavoni, Station Manager
C. Wilson, Station Security Manager

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-373/0203-01;50-374/0203-01	NCV	Inoperable 0 Emergency Diesel Generator
50-373/0203-02;50-374/0203-02	URI	Secondary Containment Leakage Measurement

Closed

50-373/0203-01;50-374/0203-01	NCV	Inoperable 0 Emergency Diesel Generator

Discussed

None

LIST OF ACRONYMS USED

ASME	American Society of Mechanical Engineers
ATWS	Anticipated Transient Without Scram
AOT	Allowed Outage Time
ARM	Area Radiation Monitor
BI	Barrier Integrity
CFR	Code of Federal Regulations
CR	Condition Report
CRD	Control Rod Drive
DBT	Design Basis Threat
DCP	Design Change Package
DRP	Division of Reactor Projects
EC	Engineering Change
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
ENS	Emergency Notification System
HPCS	High Pressure Core Spray
HRSS	High Radiation Sampling System
IE	Initiating Events
IMC	Inspection Manual Chapter
LES	LaSalle Electrical Surveillance
LCO	Limiting Condition for Operation
LOCA	Loss of Coolant Accident
LOOP	Loss of Offsite Power
LOP	LaSalle Operating Procedure
LOS	LaSalle Operating Surveillance
LTS	LaSalle Technical Surveillance
MS	Mitigating Systems
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NOUE	Notice of Unusual Event
OC	Operator Challenge
OE	Operability Evaluation
OWA	Operator Workaround
PARS	Publicly Available Records
RCIC	Reactor Core Isolation Cooling
RCS	Reactor Coolant System
RHR	Residual Heat Removal
RHRSW	Residual Heat Removal Service Water
RWCU	Reactor Water Cleanup
PI	Performance Indicator
RCA	Radiologically Controlled Area
RP	Radiation Protection
RPT	Radiation Protection Technician
SCBA	Self-Contained Breathing Apparatus
SDP	Significance Determination Process
SSC	Structure, System, or Component

TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item
VDC	Volt Direct Current
VE	Auxiliary Electrical Equipment Room Ventilation
VG	Standby Gas Treatment System
VR	Reactor Building Ventilation
VT	Turbine Building Ventilation
WO	Work Order
WR	Work Request

LIST OF DOCUMENTS REVIEWED

Equipment Alignment

LOP-VG-01E	Unit 1 Standby Gas Treatment System Electrical Checklist
LOP-VG-01M	Unit 1 Standby Gas Treatment System Mechanical Checklist
LTS-700-17	Unit 1(2) 250 VDC Battery Modified Performance Test Discharge
LTS-700-19	Unit 1(2) Division 2 125V Battery Modified Performance Test
LTS-700-6	Unit 1(2) Division 1 125V Battery Service Test Discharge
LTS-700-20	Unit 1(2) Division 3 125V Battery Modified Performance Test
LOP-DC-1E	Unit 1 Division 1 250VDC Distribution Electrical Checklist
LOP-DC-2E	Unit 1 Division 1 125VDC Distribution Electrical Checklist
LOP-DC-3E	Unit 1 Division 2 125VDC Distribution Electrical Checklist
LOP-DC-4E	Unit 1 Division 3 125VDC Distribution Electrical Checklist
LOP-DC-6E	Unit 2 Division 1 250VDC Distribution Electrical Checklist
LOP-DC-7E	Unit 2 Division 1 125VDC Distribution Electrical Checklist
LOP-DC-8E	Unit 2 Division 2 125VDC Distribution Electrical Checklist
LOP-DC-9E	Unit 2 Division 3 125VDC Distribution Electrical Checklist
LOS-DC-Q2	Battery Readings for Safety-Related 250 VDC and Div 1, 2, and 3 125 VDC Batteries
LES-DC-101C	Division 3 125 Volt Battery Inspection
LOP-DC-02	DC System Unit Crosstie Operations
CR L2001-01138	Unit 2 250VDC Battery Cell Intercell Connection Resistance High for One Connection
CR L2001-00941	Repetitive Problem with Corrosion on Unit 1 250 Volt Battery Connections
CR L2001-04859	Unit 1 Div 3 Battery Bad Cell #24
L2001-06047	Indications (Potential Cracks) Found on Div III 125VDC Batteries
WR00392368	POST Nuts On Positive Post Cell #42 & 44 are Cracked
WR99249711	Replace Amplifier Board in Charger
WR99206484	Troubleshoot and Repair Ground

Fire Protection

Updated Final Safety Analysis Report	Appendix H - Revision 13
Condition Report 101376	Fire Drill Critiques For 1st Quarter 2002

Maintenance Rule Implementation

Functional Failure and Availability Data	Reactor Vessel Instrumentation
Functional Failure and Availability Data	Residual Heat Removal System
Functional Failure and Availability Data	Control Rod Drive System
Functional Failure and Availability Data	High Pressure Core Spray System

Maintenance Risk Assessment and Emergent Work Evaluation

LaSalle 7-Day Look-Ahead Schedule	Various
LOS-SC-06, Revision 6	Preparation For Sampling From The SBLC [Standby Liquid Control] Solution Tank

Personnel Performance During Nonroutine Plant Evolutions

10 CFR 50.72 Notification 38774	March 16, 2002 @ 1255 CST
10 CFR 50.72 Notification 38774	March 16, 2002 @ 2114 CST
Condition Report 99520	Increase in Unidentified Leakage Exceeds 2.0 Gallons Per Minute in 24 Hours

Operability Evaluations

OE 01-22	Unit 0 Emergency Diesel Generator Lube Oil System
OE 02-06, Rev. 0	Unit 1 and Unit 2 Secondary Containment Leakage
OE 02-07, Rev. 0	Unit 1 High Pressure Core Spray Leakage
OE 02-07, Rev. 1	Unit 1 High Pressure Core Spray Leakage
CR 98280	HPCS Pump Discharge Check Valve Leakage
EC 335884	Evaluation of the Effect of HPCS Piping Drain Down Due to Leakage and Loss of Power to the HPCS Water Leg Pump
NUREG-0800	Section 6.2.3, Secondary Containment Functional Design
BTP CSB 6-3	Determination of Bypass Leakage Paths in Dual Containment Plants

OE 02-06, Rev. 1	Unit 1 and Unit 2 Secondary Containment Leakage
CR 820092	0 EDG Trip on Low Lube Oil Pressure

Operator Workarounds

Operator Workaround List	November 13, 2001	
LaSalle General Procedure (LGP) 2-1	Normal Unit Shutdown	Revision 60
OWA 338/339	Feedwater Heater Isolations Following Reactor Recirculation Pump Downshift	
OC 336/337	Service Water Process Radiation Monitor Low Flow	
OC 343	2A Emergency Diesel Generator “A” Air Compressor	
Drawing M-83 Sheet 3	Emergency Diesel Generator Auxiliary System	

Permanent Plant Modifications

DCP 332269	Modification of VE Refrigeration Piping - Train “A”
50.59 Screening L01-0718	VC/VE Modifications
LaSalle Special Test 2002-004	VC/VE Refrigeration Modification Test

Post-Maintenance Testing

WR 99282357	Unit 1 Main Steam Line Tunnel High Temperature Switch Power Monitor Relay Replacement	
WR 00411691	Repair Defective Actuator For Unit 2 Division 1 Residual Heat Removal Service Water Suction Damper 2VY01Y	
WO 992205925	Hydramotor Damper Actuator Preventative Maintenance Per LEP-GM-148	
LEP-GM-148	I.T.T. Hydramotor Damper Actuator NH90 Series General Maintenance	Revision 5
LEP-EQ-127	I.T.T. Hydramotor Damper Actuator AH-91 and NH-91 Inspection, Repair, and Rebuilding	Revision 8
WR 99234884	U1 High Pressure Core Spray Maintenance	

Surveillance Testing

LOS-RH-Q1	2C RHR System Operability and Inservice Test

Temporary Modifications

Temporary Modification 331903	Bypass 2B RWCU Filter/Demineralizer Differential Pressure Switch 2G33-Z00187B and Install Alternate Monitoring Instrumentation	
10 CFR 50.59 Screening L01-0495	Bypass RWCU Trips 2G33-Z00187B and Install Alternate Monitoring Instrumentation	
LOP-RT-07	Reactor Water Cleanup System - Placing a Filter/Demineralizer in Service	Revision 20a
Drawing M-1340 Sheet 32	Installation Diagram - Differential Water Pressure Measurement; Radioactive Service; Backflush Provisions; Force Balance Type Meter; Meter Below Primary Connections	
Drawing M-143 Sheets 1,2,3	Unit 2 Reactor Water Cleanup Piping and Instrumentation	

Drill Evaluation

2002 E-Plan Pre-Exercise Drill Scenario Package

Performance Indicator Verification

RCIC Monthly Unavailability Data Sheets	April 2001 Through December 2001
Operator Logs	Various
Condition Report 98867	NRC Identified: 8.5 Hours of Unavailability Discovered to Have Not Been Reported
LaSalle Instrument Surveillance RI-115	RCIC Governor Calibration
Condition Report 00094760	Investigation of Unit 1 Offgas Locked High Radiation Area Event
CRs Related to Access Control and Radiation Exposure Control	August 2001 - February 2002
Occupational Exposure Control Effectiveness Indicator Data Sheets	August 2001 - January 2002

Radiation Monitoring Instrumentation

LRP-5822-10	Operation and Calibration of The Eberline PM-7 Portal Monitors	Revision 1
LRP-5822-7	Surveillance and Operating Guidelines for the IPM Contamination Monitor	Revision 6
LRP-5822-11	Operation and Calibration of the Small Articles Monitor	Revision 7
LRP-1150-4	Area Radiation Monitor Source Checks	Revision 8
LRP-5410-4	Operation of Canberra/RMC Fastscan Whole Body Counter	Revision 1
LRP-1240-6	Calibration of Portable Ion Chamber Survey Meters	Revision 8
LRP-5800-6	Health Physics Portable Instrumentation	Revision 1
LRP-1310-5	Inspection of the ISI Magnum Self Contained Breathing Apparatus	Revision 14
LRP-1310-9	Charging of SCBA Breathing Air Cylinders for Respiratory Protection	Revision 16
LCP-830-13	Testing Process Sample Lines to Verify Representative Sampling	Revision 4
LCP-840-4	HRSS Containment Air Sampling	Revision 5
	Calibration/Certificate of Conformance for Model 20X5-180 and Model 20X5-3 Electrometer - Ion Chamber	December 13, 2001
	Calibration Record for J. L. Shepherd Model 89-30 Instrument Calibrator	September 4, 2001
	Calibration Record for J. L. Shepherd Model 89-400 Instrument Calibrator	January 3, 2002
	Calibration Record for Deepwell Instrument Calibrator	February 20, 2002
LIS-CM-206	Unit 2 Post Accident Monitoring Containment Gross Gamma Radiation Monitor Calibration	July 21, 2000
LIS-VR-202	Unit 2 Reactor Building Fuel Pool Exhaust Radiation Monitor Calibration	March 9, 2001
LIP-AR-601A	Unit 2 Area Radiation Monitor Source Calibration, Channel 2-8	March 21, 2001

LIP-AR-601A	Unit 2 Area Radiation Monitor Source Calibration, Channels #2-2 and #2-8	April 26, 2000
LRP-5822-11	Small Article Monitor Calibration (Instrument # 159)	November 5, 2001
LRP-1820-17	Linearity Check of Process Radiation Monitors Utilizing Ionization Chambers, Off-Gas Pre-Treat and Post-Treat Monitors	December 12 and June 27, 2001
LRP-5823-41	MG Telepole Calibration Record (Instrument #6696-100)	September 26, 2001
LRP-5822-10	PM-7 Portal Monitor Calibration Record (Instrument #115)	November 19, 2001
LRP-1240-6	Bicron Model RSO-5 Instrument Calibration Record (Instruments # B822G and A168A)	August 29 and September 6, 2001
LRP-5822-7	IPM Calibration Record (Instrument # 239)	September 25, 2001
LIP-AR-904	Radwaste Area Radiation Monitor Source Calibration, Channels 4-9	February 2, 1999
	Respiratory Qualifications Report, and Fire Brigade and Active NRC License Holder Training Matrices	February 28, 2002
LCP-830-13, Attachment C	HRSS Operability and Representative Sampling - Reactor Coolant System Surveillance Records	2000 and 2001 Records
LCP-840-4, Attachment D	HRSS Air Sample Surveillance Records - Unit 1 & 2 Drywell and Suppression Pool Air Surveillance	2000 and 2001 Records
	Chemistry Technician Qualification Matrix and Continuing Training Records for the HRSS System	February 27, 2002
	Focus Area Self-Assessment Report - 1st Quarter 2002 - Radiation Monitoring Portable Instruments	February 8, 2002
CR L2001-03011	RP Week in Review for 5/14/01	May 18, 2001
CR L2000-03297	Respirator Training Resulted in Loss of Manpower	June 5, 2001
CR L2001-03922	Self Assessment on Radiation Monitoring Instrumentation	July 5, 2001
CR L2001-04784	Maintenance Department Respiratory Qualifications Not Meeting 50 Percent Expectation	May 30, 2001
CR L2001-05431	Discrepancies Identified with Calibration Facility Documents	September 20, 2001