



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE ROAD, SUITE 210
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April 28, 2008

Mr. Charles G. Pardee
Chief Nuclear Officer and
Senior Vice President
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville IL 60555

**SUBJECT: LASALLE COUNTY STATION, UNITS 1 AND 2
NRC INTEGRATED INSPECTION REPORT 05000373/2008002;
05000374/2008002**

Dear Mr. Pardee:

On March 31, 2008, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your LaSalle County Station, Units 1 and 2. The enclosed report documents the results of this inspection, which were discussed on April 8, 2008, with Site Vice President, Mr. Daniel Enright, 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. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel. Based on the results of this inspection, two NRC-identified findings of very low safety significance were identified. One of these findings also involved a violation of NRC requirements. However, because the finding associated with this violation was of very low safety significance and because the issue has been entered into the licensee's corrective action program, the NRC is treating the issue as a Non-Cited Violation in accordance with Section VI.A.1 of the NRC's Enforcement Policy.

If you contest the subject or severity of any finding or Non-Cited Violation in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspectors' Office at the LaSalle County Station.

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Mr. C. Pardee

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Sincerely,

/RA by N. Shah, Acting for/

Kenneth Riemer, Chief
Branch 2
Division of Reactor Projects

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

Enclosure: Inspection Report 05000373/2008002; 05000374/2008002
w/Attachment: Supplemental Information

cc w/encl: Site Vice President - LaSalle County Station
Plant Manager - LaSalle County Station
Regulatory Assurance Manager - LaSalle County Station
Chief Operating Officer and Senior Vice President
Senior Vice President - Midwest Operations
Senior Vice President - Operations Support
Vice President - Licensing and Regulatory Affairs
Director - Licensing and Regulatory Affairs
Manager Licensing - Braidwood, Byron and LaSalle
Associate General Counsel
Document Control Desk – Licensing
Assistant Attorney General
J. Klinger, State Liaison Officer
Illinois Emergency Management Agency
Chairman, Illinois Commerce Commission
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SUBJECT: LASALLE COUNTY STATION, UNITS 1 AND 2
NRC INTEGRATED INSPECTION REPORT 05000373/2008002;
05000374/2008002

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 05000373; 05000374
License Nos: NPF-11; NPF-18

Report No: 05000373/2008002; 05000374/2008002

Licensee: Exelon Generation Company, LLC

Facility: LaSalle County Station, Units 1 and 2

Location: Marseilles, Illinois

Dates: January 1, 2008 through March 31, 2008

Inspectors: D. Kimble, Senior Resident Inspector
F. Ramírez, Resident Inspector
J. Jandovitz, Region III Reactor Inspector
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N. Shah, Region III Branch 2 Project Engineer
J. Yesinowski, Illinois Dept. of Emergency Management

Approved by: Kenneth Riemer, Chief
Branch 2
Division of Reactor Projects

Enclosure

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SUMMARY OF FINDINGS

IR 05000373/2008002, 05000374/2008002; 1/01/2008 - 3/31/202008; LaSalle County Station, Units 1 & 2; Maintenance Effectiveness and Identification and Resolution of Problems.

The inspection was conducted by U.S. Nuclear Regulatory Commission (NRC) resident inspectors and regional inspectors. The report covers a three-month period of resident inspection, and announced baseline inspections in radiation protection (RP) and of the licensee's inservice inspection (ISI) program. Two Green findings and one associated non-cited violation (NCV) were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using NRC Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green, or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. Inspector-Identified and Self-Revealed Findings

Cornerstone: Mitigating Systems

- Green. The inspectors identified a finding of very low safety significance involving the unacceptable preconditioning of the Unit 1 Main Steam Isolation Valves (MSIVs). Specifically, the inspectors identified that the licensee performed maintenance on the MSIVs prior to performing the American Society of Mechanical Engineers (ASME) required inservice testing (IST). The inspectors concluded that pre-stroking all the MSIVs during the limit switch calibration and replacing the ASCO test solenoid valve on the 'D' MSIV unacceptably preconditioned the valves and as a consequence masked the results of the as-found closing stroke of the MSIVs. A NCV of the Code of Federal Regulations (CFR), 10 CFR 50, Appendix B, Criterion XI, "Test Control" was also identified for the failure to establish test procedures that appropriately demonstrated that a safety related component will perform satisfactorily in-service.

The inspectors determined that the finding was more than minor because it is associated with the equipment performance attribute of the Mitigating Systems Cornerstone, and it affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. However, since the MSIVs would have been able to perform their safety function, the finding was considered to be of very low safety significance. The finding is also related to the cross cutting area of Problem Identification and Resolution (PI&R). Specifically, the finding is related to the Operating Experience component (Aspect P.2(b)) because the licensee did not properly use and evaluate relevant operating experience information received from other Exelon plants, nor apply it to the station procedures. Corrective actions by the licensee included additional examination of the MSIV maintenance practices to further evaluate preconditioning cases. (Section 1R12)

- Green. The inspectors identified a finding of very low safety significance involving the licensee's seismic monitoring system. Specifically, the inspectors identified that the licensee had not appropriately prioritized restoration activities for three channels of the station's seismic monitoring system following a scheduled instrument calibration surveillance during which a fourth channel had failed calibration. During several ensuing weeks, the licensee missed several opportunities to identify the exact nature of the

problem and restore the three potentially available and operable channels of the system to service.

Because the seismic monitoring system was not within the scope of 10 CFR 50, Appendix B, no violation of regulatory requirements was identified in conjunction with the finding. The licensee entered this issue into their corrective action program (CAP) as issue report (IR) 725240. Corrective actions planned and completed by the licensee included sending out an internal operating experience communication on the seismic monitoring system. In addition, the inspectors determined that the finding was related primarily to the cross cutting area of PI&R as defined in NRC IMC 0305, "Operating Reactor Assessment Program," since the licensee did not take appropriate corrective actions to address the partial restoration of potentially available channels of the seismic monitoring system in a timely manner (Aspect P.1(d)). (Section 4OA2.3)

B. Licensee-Identified Violations

Violations of very low safety significance, which were identified by the licensee, have been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's CAP. These violations and the licensee's CAP tracking numbers are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Unit 1

The unit began the inspection period in coast down for Cycle 12, at approximately 83 percent power and decreasing. On January 12, 2008, power was reduced to approximately 65 percent to permit fuel channel distortion testing, control rod scram timing, and removal of the 16A high pressure feedwater (FW) heater. Maximum achievable reactor power was restored on January 13, 2008, consistent with the Cycle 12 coast down profile. On January 25, 2008, power was reduced to approximately 55 percent for additional power suppression testing in an attempt to localize the location of a potential third fuel defect. During power suppression testing, on-shift operations personnel observed that control rod 26-23 was unusually slow during insertion. Since this control rod was not in the susceptible population for fuel channel distortion testing, the licensee extended the window at reduced power to permit channel distortion testing on all control rods not previously tested. Maximum achievable reactor power was restored on January 31, 2008; no new fuel defects were identified as a result of the power suppression testing. On February 3, 2008, a normal reactor shutdown was commenced for the L1R12 refueling outage (see Section 1R20 for details). The unit's main electrical generator was removed from the grid just after midnight on February 4th. Reactor startup from refueling outage L1R12 commenced on February 27, 2008, at 2:28 p.m. The reactor became critical for Cycle 13 the same day at 8:59 p.m., and the main electrical generator was synchronized to the grid on February 28th, at 1:45 p.m. The total refueling outage duration was 24 days, 13 hours. The unit achieved full power operation for Cycle 13 on March 4, 2008, at 5:00 a.m., and remained operating at or near full power for the rest of the inspection period.

Unit 2

The unit began the inspection period operating at full power. On January 30, 2008, power was reduced to approximately 80 percent to facilitate repairs to the Main Turbine No. 1 Control Valve position indication. The unit returned to operation at full power later the same day. On March 15, 2008, power was reduced to approximately 55 percent in order to perform fuel channel distortion testing, a control rod sequence exchange, and control rod scram timing. Operation at full power resumed on March 16th, and the unit remained operating at or near full power for the rest of the inspection period.

1. REACTOR SAFETY

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

1R04 Equipment Alignment (71111.04)

.1 Quarterly Partial System Alignment Verifications

a. Inspection Scope

The inspectors performed a partial equipment alignment verification of the following equipment trains to verify operability and proper equipment lineup. These systems were

selected based upon risk significance, plant configuration, system work or testing, or inoperable or degraded conditions:

- Unit 2 high pressure core spray (HPCS) system during a planned reactor core isolation cooling (RCIC) work window;
- Unit 1 RCIC following valve maintenance and testing; and
- Unit 1 Division 2 vital AC and DC power during Division 1 planned maintenance.

The inspectors verified the position of critical redundant equipment and looked for any discrepancies between the existing equipment lineup and the required lineup.

These partial equipment alignment verifications constituted three inspection samples as defined in Inspection Procedure (IP) 71111.04.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Fire Protection Zone Inspections

a. Inspection Scope

The inspectors walked down the following risk significant areas looking for any fire protection issues. The inspectors selected areas containing systems, structures, or components that the licensee identified as important to reactor safety.

- Fire Zone 2E, Unit 1 - Elevation 761'0";
- Fire Zone 2F, Unit 1 - Elevation 740'0";
- Fire Zone 2K, Unit 1 - Steam Tunnel 687'0" and 736'7";
- Fire Zone 3F, Unit 2 - Elevation 740'0";
- Fire Zone 4E1, Unit 1 - Auxiliary Equipment Room 731'0"; and
- Fire Zone 8B2, Unit 2 - Division 2 Emergency Diesel Generator (EDG) Room 710'6".

The inspectors reviewed the control of transient combustibles and ignition sources, fire detection equipment, manual suppression capabilities, passive suppression capabilities, automatic suppression capabilities, and barriers to fire propagation.

These quarterly fire protection zone inspections constituted six inspection samples as defined in IP 71111.05.

b. Findings

No findings of significance were identified.

1R08 Inservice Inspection Activities (71111.08)

.1 Piping Systems ISI

a. Inspection Scope

From February 11 through February 14, 2008, the inspector conducted a review of the implementation of the licensee's risk-informed inservice inspection program (RI-ISI) for monitoring degradation of the reactor coolant system boundary, and the risk significant piping system boundaries. The inspector selected the licensee's RI-ISI program components, ASME Boiler and Pressure Vessel Code, Section XI, required components in order of risk priority as identified in Section 71111.08-03 of the inspection procedure, based upon the ISI activities available for review during the on-site inspection period.

The inspector observed the following three types of nondestructive examination (NDE) activities to evaluate compliance with the ASME Code Section XI and Section V requirements, and to verify that the indications, and defects (if present) were dispositioned in accordance with the ASME Code Section XI requirements, or a NRC approved alternative (e.g., relief requests):

- Ultrasonic examination (UT) of Reactor Vessel Weld GEL-1109-AF, Flange to Shell Weld;
- UT of Main Steam Weld MS-1002-07, weld-o-let to elbow weld;
- Magnetic particle testing (MT) examination of FW pipe support lugs FW02-1004V; and
- Visual testing (VT)-1 examination of MS04-1006C, lugs on main steam support.

The inspector requested examinations completed during the previous outage with relevant/recordable conditions/indications that were accepted for continued service to verify that the licensee's acceptance was in accordance with the Section XI of the ASME Code. There were no relevant indications resulting from volumetric or surface examinations. The inspector did review two recordable conditions resulting from VT. Specifically, the inspector reviewed the following records:

- IR 460519; Loose Clamp Bolt on Strut 1FW02-1158X; dated March 31, 2006; and
- IR 462076; Support 1RH04-1505C Failed Inspection; dated April 3, 2006.

The inspector reviewed three ASME Section XI Code repair/replacement activities to determine if the welding acceptance and preservice examinations (e.g., VT, MT, and weld procedure qualification tensile tests) were performed in accordance with ASME Code Sections III, V, IX, and XI requirements. Specifically, the inspector reviewed welds associated with the following work activities:

- Replacement (welding) of ASME Class 2 valve 1E12-F064A, residual heat removal (RHR) pump minimum flow bypass valve;
- Repair welding of ASME Class 2 HPCS pump casing; and
- Replacement (welding) of ASME Class 1 valve 1B21-F016, main steam drain header isolation valve.

These piping system RI-ISI inspections constituted one inspection sample as defined in IP 71111.08.

b. Findings

No findings of significance were identified.

.2 Identification and Resolution of Problems

a. Inspection Scope

The inspector performed a review of ISI related problems that were identified by the licensee and entered into the CAP, conducted interviews with licensee staff and reviewed licensee corrective action records to determine if:

- The licensee had described the scope of the ISI related problems;
- The licensee had established an appropriate threshold for identifying issues; and
- The licensee had evaluated operating experience and industry generic issues related to ISI and pressure boundary integrity.

The inspector performed these reviews to ensure compliance with 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," requirements. The corrective action documents reviewed by the inspector are listed in the Attachment to this report.

These reviews for the identification and resolution of problems did not constitute any additional inspection samples. Instead, by procedure they were considered an integral part of the inspections performed in Section 1R08.1 of this report.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Regualification Program (71111.11)

.1 Quarterly Resident Inspector Observation of Licensed Operator Training

a. Inspection Scope

The inspectors observed a training crew during an evaluated simulator scenario and reviewed licensed operator performance in mitigating the consequences of events. The scenario included multiple equipment and instrumentation failures, and a transient resulting in a complex loss of coolant accident. Areas observed by the inspectors included: clarity and formality of communications, timeliness of actions, prioritization of activities, procedural adequacy and implementation, control board manipulations, managerial oversight, and group dynamics. Additionally, the inspectors observed the post-scenario critiques performed by both the simulator instructor staff evaluating the crew, and the training crew themselves.

This licensed operator regualification observation constituted a single inspection sample as defined in IP 71111.11Q.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

.1 Quarterly Maintenance Effectiveness Reviews

a. Inspection Scope

The inspectors reviewed the licensee's handling of performance issues and the associated implementation of the Maintenance Rule in 10 CFR 50.65 to evaluate maintenance effectiveness for the selected systems. Systems were selected for evaluation based on

- Designation as risk significant under the Maintenance Rule, or
- Inclusion in the increased monitoring (Maintenance Rule category a(1)) group, or
- Inspector identification of an issue or problem that potentially impacted system work practices, reliability, or common cause failures.

Based on the above criteria, the following systems were selected:

- 345 kV main switchyard circuit breakers, and grid block issues; and
- Unit 1 MSIV maintenance and performance testing.

The inspectors' review included verification of the licensee's categorization of specific issues including evaluation of the performance criteria, appropriate work practices, identification of common cause errors, extent of condition, and trending of key parameters. Additionally, the inspectors reviewed the licensee's implementation of the Maintenance Rule requirements, including a review of scoping, goal-setting, performance monitoring, short-term and long-term corrective actions, functional failure determinations associated with the condition reports reviewed, and current equipment performance status.

These maintenance effectiveness reviews constituted two inspection samples as defined in IP 71111.12.

b. Findings

Introduction

The inspectors' identified a finding of very low safety significance (Green) and an associated NCV of 10 CFR 50, Appendix B, Criterion XI, "Test Control", for the unacceptable preconditioning of the Unit 1 MSIVs prior to the performing the IST.

Description

On February 19, 2008, Unit 1 was in refueling outage L1R12. Surveillance procedure LOS-PC-Q2, "Primary Containment Isolation Valves Operability Test and ISI for Conditions 4, 5, or Defueled," was performed. This surveillance procedure satisfies ASME IST stroke-time testing requirements, and the Technical Specifications (TS)

Surveillance Requirement (SR) 3.6.1.3.6 requirement to verify that each MSIV closes within 3 to 5 seconds. Following LOS-PC-Q2, the licensee generated IRs 740441 and 740440 to document the results of the testing. The 'B' and 'D' outboard MSIVs (1B21-F028B and 1B21-F028D respectively) closing times were outside of the allowable TS limits at 2.9 seconds each.

The licensee attributed the TS stroke time failures to the fact that maintenance had been performed on the MSIVs prior to the testing. Specifically, for the outboard 'D' MSIV, prior to performing LOS-PC-Q2 where the IST values for the outboard MSIVs are taken, the licensee had replaced the ASCO actuating solenoid valve. For the 'B' outboard MSIV, the licensee attributed the test failure to the fact that the MSIV position limit switches had been calibrated prior to the IST using procedure LES-MS-101, "Unit 1 Main Steam Isolation Valve Limit Switch Calibration." Upon further review, the inspectors noted that LOS-PC-Q2 has as a prerequisite the performance of LES-MS-101 on all the MSIVs prior to the performance of IST as-found measurements. This procedure, LES-MS-101, requires each MSIV to be open and closed several times to complete the calibration of the limit switches.

The inspectors questioned the licensee on whether the performance of LES-MS-101 on the MSIVs and the replacement of the ASCO test solenoid valve on the 'D' outboard MSIV were considered acceptable preconditioning. In response, the licensee provided the inspectors with EC 342908, "Evaluation for MSIV Preconditioning." This document was written as a result of an internal operating experience from the Limerick Nuclear Plant where the NRC resident inspectors had raised the same MSIV preconditioning question in 2003. This internal operating experience was distributed to all Exelon plants for each site to evaluate. EC 342908 at LaSalle evaluated the routine preventive maintenance (PM) performed on MSIVs, including the replacement of the ASCO actuating solenoid valve. The evaluation provided reasons to justify that the preconditioning on the MSIVs was acceptable. The inspectors noted that this evaluation was limited to PM activities on the MSIVs, and it did not include a justification for the performance of LES-MS-101. Additionally, EC 342908 did not adequately address why the licensee's performance of the PM activities before as-found testing was more than a matter of scheduling convenience, or why these practices, like the calibration of the limit switches, did not mask the as-found condition of the MSIVs.

The inspectors reviewed the NRC Inspection Manual Part 9900: Technical Guidance, "Maintenance – Preconditioning of Structures, Systems, and Components before Determining Operability." This document established the NRC's expectation that surveillances and testing of processes of Structures, Systems, and Components (SSCs) be evaluated in an 'as-found' condition. This NRC guidance also provided screening questions to evaluate the acceptability of preconditioning. Additionally, the licensee's Quality Assurance Manual, which was written to satisfy the requirements of 10 CFR 50, Appendix B, for safety-related equipment states that an as-found measurement shall be taken during ASME required tests. As a result, the inspectors concluded that the licensee's practice of calibrating limit switches, which requires multiple stroking of each MSIV, as well as the replacement of the ASCO solenoid valve on the 'D' outboard MSIV, masked the as-found condition of the MSIVs and therefore constituted unacceptable preconditioning.

Analysis

The inspectors concluded that the unacceptable preconditioning of the MSIVs prior to performing the as-found IST constituted a performance deficiency that warranted evaluation using the SDP. Specifically, the performance of LES-MS-101, calibration of the limit switches and the replacement of the ASCO solenoid valve masked the as-found condition of the MSIVs during the ASME required IST. Using IMC 0612, Appendix B, "Issue Screening," the inspectors determined that the finding was of more than minor significance because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone, and it affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences.

To further assess significance of the finding, the inspectors used IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," and determined that Mitigating Systems was the only cornerstone affected. Using the Mitigating Systems column on the Phase 1 SDP characterization worksheet, the inspectors determined that the finding was not a design or qualification deficiency; did not represent the loss of a safety function; did not represent the loss of a single train for greater than the TS allowed outage time; did not involve risk-significant non TS equipment; and was not potentially risk significant due to seismic, flooding, or severe weather. In this case, the MSIVs would have been able to perform their intended safety functions if called upon. Therefore, the finding was considered to be of very low safety significance (Green), and within the licensee's response band.

The finding was also determined to have been related to the cross cutting area of PI&R, as defined in IMC 0305, "Operating Reactor Assessment Program." Specifically, the finding was related to the Operating Experience component because the licensee did not properly use and evaluate operating experience information and did not apply it to the station procedures. (Aspect P.2(b))

Enforcement

Appendix B of 10 CFR Part 50, Criterion XI, "Test Control," requires, in part, that a test program be established to assure that all testing required to demonstrate that structures, systems and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in the applicable design documents. Contrary to this requirement, on February 19, 2008, the licensee performed LES-MS-101, "MSIV limit switch calibration," on all valves, a procedure that strokes all the MSIVs, before performing the required as-found IST. Additionally, the licensee performed maintenance on the 'D' outboard MSIV that also masked the results of the IST surveillance procedure and as such, unacceptably preconditioned the MSIVs. Because the finding is of very low safety significance and has been entered into the licensee's CAP as IR 759538, this violation of 10 CFR 50, Appendix B, Criterion XI, is being treated as a NCV, consistent with Section VI.A of the NRC Enforcement Policy. (NCV 05000373/2008002-01; 05000374/2008002-01)

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

.1 Quarterly Reviews of Maintenance Risk and Emergent Work

a. Inspection Scope

The inspectors reviewed and observed emergent work, preventive maintenance, or planning for risk significant maintenance activities. The inspectors observed maintenance or planning for the following activities or risk significant systems undergoing scheduled or emergent maintenance.

- Unit 1 Division 1 Yellow work window for the low pressure core spray (LPCS) system;
- Emergent Unit 1 control rod/fuel channel distortion issues; and
- A planned Division 1 EDG Yellow work window on Unit 1 and 2.

The inspectors also reviewed the licensee's evaluation of plant risk, risk management, scheduling, and configuration control for these activities in coordination with other scheduled risk significant work. The inspectors verified that the licensee's control of activities considered assessment of baseline and cumulative risk, management of plant configuration, control of maintenance, and external impacts on risk. In-plant activities were reviewed to ensure that the risk assessment of maintenance or emergent work was complete and adequate, and that the assessment included an evaluation of external factors. Additionally, the inspectors verified that the licensee entered the appropriate risk category for the evolutions.

The inspectors' reviews of maintenance risk and emergent work constituted three inspection samples as defined in IP 71111.13.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

.1 Quarterly Review of Licensee Operability Issues and Evaluations

a. Inspection Scope

The inspectors reviewed the technical adequacy of the following operability evaluations to determine the impact on TS, the significance of the evaluations, and to ensure that adequate justifications were documented.

- OE 06-02: Instrument nitrogen system;
- IR 721532: Unit 1 reactor recirculation loop flow mismatch;
- Control room ventilation (VC) and auxiliary electric equipment room ventilation (VE) damper operability issues;
- Unit 1 control rod operability and fuel channel distortion issues;
- EC 369345: L1R12 decay heat calculations and spent fuel pool operability;

- Various evaluations related to L1R12 lost parts and abandoned foreign material and
- OE 08-02: EDG cold load de-rating due to elevated outside temperatures.

Operability evaluations were selected based upon the relationship of the safety-related system, structure, or component to risk.

The inspectors' review of these operability evaluations and issues constituted seven inspection samples as defined in IP 71111.15.

b. Findings

No findings of significance were identified.

1R18 Plant Modifications (71111.18)

.1 Temporary Plant Modifications

a. Inspection Scope

The inspectors selected the following temporary modifications for review. The inspectors reviewed the safety screening, design documents, Updated Final Safety Analysis Report (UFSAR), and applicable TS to determine that the temporary modifications were consistent with modification documents, drawings, and procedures. The inspectors also reviewed the post installation test results to confirm that tests were satisfactory and that the actual impact of the temporary modification on the permanent system and interfacing systems were adequately verified.

- EC 364424: Compensation for loss of jet pump flow signal for Jet Pump No. 19; and
- EC 367549: Temporary configuration change for 1B EDG pyrometer.

The inspectors' reviews of these temporary plant modifications constituted two inspection samples as defined in IP 71111.18.

b. Findings

No findings of significance were identified.

.2 Permanent Plant Modifications

a. Inspection Scope

The inspectors reviewed the following modifications to verify that the design basis, licensing basis, and performance capability of risk significant systems were not degraded by the installation of the modification. The inspectors also verified that the modifications did not place the plant in an unsafe configuration.

- EC 363448: Internal leading edge flow meter (LEFM) "Checkplus" system to measure flow into the reactor vessel; and
- EC 366645: Drywell permanent scaffold, lead shielding, handrail, and control rod drive (CRD) track.

The inspectors considered the design adequacy of the modification by performing a review, or partial review, of the modification's impact on plant electrical requirements, material requirements and replacement components, response time, control signals, equipment protection, operation, failure modes, and other related process requirements.

The inspectors' reviews of these permanent plant modifications constituted two inspection samples as defined in IP 71111.18.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

.1 Quarterly Review of Post-Maintenance Testing (PMT) Activities

a. Inspection Scope

The inspectors selected the following post-maintenance activities for review. Activities were selected based upon the structure, system, or component's ability to impact risk.

- Unit 1 LPCS system operability run following repairs;
- Unit 1 RCIC system operability run following maintenance;
- Division 1 EDG operability run following maintenance;
- Unit 1 'A' FW check valve local leak rate test (LLRT) after valve repairs;
- Unit 1 Jet Pump No. 19 post-repair/inspection testing;
- Unit 1 reactor recirculation hydraulic power unit (HPU) Loop 'B' control and 1B33-F060B limit switch calibration;
- 1A EDG, 1DG01K, start and load acceptance testing;
- Various CRD mechanism post-replacement stroke tests;
- Post-installation testing of the internal LEFM "Checkplus" system to measure flow into the reactor vessel; and
- Post-installation testing of the Unit 1 main turbine digital electro-hydraulic control (DEHC) system.

The inspectors verified by witnessing the test or reviewing the test data that PMT activities were adequate for the above maintenance activities. The inspectors' reviews included, but were not limited to, integration of testing activities, applicability of acceptance criteria, test equipment calibration and control, procedural use and compliance, control of temporary modifications or jumpers required for test performance, documentation of test data, TS applicability, system restoration, and evaluation of test data. Also, the inspectors verified that maintenance and post-maintenance testing activities adequately ensured that the equipment met the licensing basis, TS, and UFSAR design requirements.

The inspectors' reviews of these PMT activities constituted ten inspection samples as defined in IP 71111.19.

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activities (71111.20)

.1 Resident Inspector Refueling Outage Inspection Activities

a. Inspection Scope

The inspectors reviewed the Outage Safety Plan and contingency plans for Unit 1 refueling outage L1R12, which took place from February 4, 2008, through February 28, 2008, to confirm that the licensee had appropriately considered risk, industry experience, and previous site-specific problems in developing and implementing a plan that assured maintenance of defense-in-depth. During the refueling outage, the inspectors observed portions of the reactor shutdown and cooldown processes and monitored licensee controls over the outage activities listed below. Documents reviewed during the inspection are listed in the Attachment.

- Licensee configuration management, including maintenance of defense-in-depth commensurate with the Outage Safety Plan for key safety functions and compliance with the applicable TS when taking equipment out of service;
- Implementation of clearance activities and confirmation that tags were properly hung and equipment appropriately configured to safely support the work or testing;
- Installation and configuration of reactor coolant pressure, level, and temperature instruments to provide accurate indication and an accounting for instrument error;
- Controls over the status and configuration of electrical systems to ensure that TS and outage safety plan requirements were met, and controls over switchyard activities;
- Monitoring of decay heat removal processes;
- Controls to ensure that outage work was not impacting the ability of the operators to operate the spent fuel pool cooling system;
- Reactor water inventory controls including flow paths, configurations, and alternative means for inventory addition, and controls to prevent inventory loss.
- Controls over activities that could affect reactivity;
- Maintenance of secondary containment as required by TS;
- Refueling activities, including fuel handling and sipping to detect fuel assembly leakage;
- Startup and ascension to full power operation, tracking of startup prerequisites, inspection of the drywell (primary containment) to verify that debris had not been left which could block emergency core cooling system suction strainers; and
- Licensee identification and resolution of problems related to refueling outage activities.

This inspection constituted one refueling outage sample as defined in IP 71111.20.

b. Findings

No findings of significance were identified.

.2 Refueling Outage Activities – Crane and Heavy Lift Inspection (OpESS FY2007-03)

a. Inspection Scope

From January 22 through January 29, 2008, the inspector reviewed licensee design documentation and maintenance procedures for control of heavy loads that supported removal and installation of the Unit 1 reactor vessel head during the 2008 refueling outage. This inspection was conducted in conjunction with Operating Experience Smart Sample (OpESS) FY2007-03, "Crane and Heavy Lift Inspection, Supplemental Guidance for IP 71111.20," and Enforcement Guidance Memorandum (EGM) 07-006, "Enforcement Discretion for Heavy Load Handling Activities."

The inspector performed the following activities listed below during the inspection. Documents reviewed during the inspection are listed in the Attachment.

- Reviewed the licensee's documentation related to a postulated Unit 1 reactor vessel head drop for conformance to EGM 07-006 guidance for an outage beginning before July 1, 2008; and
- Reviewed the licensee's procedures that remove and install the Unit 1 reactor vessel head during refueling operations with respect to limiting parameters that reflect the reactor head drop analysis for conformance to EGM 07-006 guidance for an outage beginning before July 1, 2008, i.e., load drop weight, load drop height, and medium through which load drop occurs (air).

These reviews of the licensee's crane and heavy lift handling activities by the inspectors were an integral part of the refueling outage inspection sample documented in Section 1R20.1 above, and as such did not constitute any separate inspection samples.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

.1 General Surveillance Tests

a. Inspection Scope

The inspectors selected the following general surveillance test activities for review. Activities were selected based upon risk significance and the potential risk impact from an unidentified deficiency or performance degradation that a system, structure, or component could impose on the unit if the condition were left unresolved:

- LTS-300-4: Unit 1 primary containment integrated leak rate test;
- LOS-DG-SR6: Unit 1 Division 2 cooling water system test;
- LOS-RD-SR7: Unit 1 fuel channel distortion tests; and
- LOS-RD-SR7: Unit 2 fuel channel distortion tests.

The inspectors observed the performance of surveillance testing activities, including reviews for preconditioning, integration of testing activities, applicability of acceptance criteria, test equipment calibration and control, procedural use, control of temporary modifications or jumpers required for test performance, documentation of test data, TS applicability, impact of testing relative to Performance Indicator (PI) reporting, and evaluation of test data.

The review of these general surveillance testing activities by the inspectors constituted four inspection samples as defined in IP 71111.22.

b. Findings

No findings of significance were identified.

.2 Inservice Testing (IST) Required by the ASME Operations and Maintenance Code

a. Inspection Scope

Based on the relatively high risk significance of the system, the inspectors selected the following Code valve IST activity for review:

- LOS-RH-Q1; Unit 1 'C' residual heat removal in-service test.

The inspectors observed the performance of the test, including reviews for preconditioning, applicability of acceptance criteria, test equipment calibration and control, procedural use, documentation of test data, TS applicability, compliance with 10 CFR 50.55a, "Codes and Standards," impact of testing relative to PI reporting, and evaluation of the test data.

The inspectors' review of this IST activity constituted a single inspection sample as defined in IP 71111.22.

b. Findings

No findings of significance were identified.

.3 Reactor Coolant System (RCS) Leakage Surveillance Testing

a. Inspection Scope

The following RCS leakage testing activity was selected by the inspectors for review:

- LOS-NB-R1: Unit 1 ASME Class 1 primary system post-refuel pressure test.

The inspectors observed the performance of the testing activity, including reviews for preconditioning, integration of the testing activities with other plant work, applicability of acceptance criteria, test equipment calibration and control, procedural use, documentation of test data, TS applicability, and evaluation of test data.

The inspectors' review of this RCS leakage test constituted a single inspection sample as defined in IP 71111.22.

b. Findings

No findings of significance were identified.

.4 Containment Isolation Valve (CIV) LLRT

a. Inspection Scope

The following LLRT activities required by 10 CFR 50, Appendix J, were selected by the inspectors for review. These LLRT activities were performed as part of the licensee's L1R12 refueling outage work:

- LOS-100-10: Unit 1 'A' FW check valve LLRT; and
- LOS-900-3: Unit 1 HPCS CIV LLRT.

The inspectors observed the performance of LLRTs, including reviews for preconditioning, integration of the testing activities, applicability of acceptance criteria, test equipment calibration and control, procedural use, documentation of test data, TS applicability, compliance with 10 CFR 50, Appendix J, and evaluation of the test data.

The inspectors' review of these LLRTs by the inspectors constituted two inspection samples as defined in IP 71111.22.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

.1 Quarterly Resident Inspector Emergency Preparedness (EP) Drill Observation

a. Inspection Scope

The resident inspectors conducted detailed observations of a licensee site-wide EP drill evolution to evaluate drill conduct and the adequacy of the licensee's critique of performance to identify weaknesses and deficiencies. The inspectors selected a drill that the licensee had scheduled as providing input to the Drill/Exercise PI. The inspectors observed the classification of events, notifications to off site agencies and protective action recommendation development. Observations were compared to the licensee's observations during the drill critique and CAP entries. The inspectors verified that there were no discrepancies between observed performance and PI reported statistics. The particular drill scenario observed resulted in Alert, Site Area Emergency, and General Emergency classifications.

This quarterly EP drill observation constituted a single inspection sample as defined in IP 71114.06.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01)

.1 Review of Licensee PIs for the Occupational Exposure Cornerstone

a. Inspection Scope

The inspectors reviewed the licensee's Occupational Exposure Control Cornerstone PIs to determine whether the conditions resulting in any PI occurrences had been evaluated, and identified problems had been entered into the CAP for resolution.

This inspection of the licensee's Occupational Exposure Control Cornerstone PIs constituted one sample as defined in IP 71121.01-5.

b. Findings

No findings of significance were identified.

.2 Plant Walkdowns and Radiation Work Permit (RWP) Reviews

a. Inspection Scope

The inspectors reviewed licensee controls and surveys in the following radiologically significant work areas within radiation areas, high radiation areas (HRA) and airborne radioactivity areas in the plant to determine if radiological controls including surveys, postings and barricades were acceptable:

- Drywell Safety Relief Valve Activities;
- Nozzle Inservice Inspection Activities; and
- Reactor Refuel Floor Activities.

The inspectors reviewed the RWPs and work packages used to access these areas and other high radiation work areas to identify the work control instructions and control barriers that had been specified. Electronic dosimeter alarm set points for both integrated dose and dose rate were evaluated for conformity with survey indications and plant policy. Workers were interviewed to verify that they were aware of the actions required when their electronic dosimeters noticeably malfunctioned or alarmed.

The inspectors walked down and surveyed (using an NRC survey meter) these areas to verify that the prescribed RWP, procedure, and engineering controls were in place, that licensee surveys and postings were complete and accurate, and that air samplers were properly located.

The inspectors reviewed RWPs for airborne radioactivity areas to verify barrier integrity and engineering controls performance (e.g., high-efficiency particulate air ventilation system operation) and to determine if there was a potential for individual worker internal exposures of greater than 50 millirem committed effective dose equivalent: There were no airborne radioactivity work areas during the inspection period. Work areas having a history of, or the potential for, airborne transuranics were evaluated to verify that the

licensee had considered the potential for transuranic isotopes and provided appropriate worker protection.

This RWP inspection constituted four samples as defined in IP 71121.01-5.

b. Findings

No findings of significance were identified.

.3 Problem Identification and Resolution

a. Inspection Scope

The inspectors reviewed a sample of the licensee's self-assessments, audits, Licensee Event Reports, and Special Reports related to the access control program to verify that identified problems were entered into the CAP for resolution.

The inspectors reviewed corrective action reports related to access controls and high radiation area radiological incidents (non-PIs identified by the licensee in high radiation areas <1R/hr). Staff members were interviewed and corrective action documents were reviewed to verify that follow-up activities were being conducted in an effective and timely manner commensurate with their importance to safety and risk based on the following:

- Initial problem identification, characterization, and tracking;
- Disposition of operability/reportability issues;
- Evaluation of safety significance/risk and priority for resolution;
- Identification of repetitive problems;
- Identification of contributing causes;
- Identification and implementation of effective corrective actions;
- Resolution of NCVs tracked in the corrective action system; and
- Implementation/consideration of risk significant operational experience feedback.

The inspectors evaluated the licensee's process for problem identification, characterization, prioritization, and assessed whether problems that were entered into the CAP and resolved. For repetitive deficiencies and/or significant individual deficiencies in PI&R, the inspectors verified that the licensee's self-assessment activities were capable of identifying and addressing these deficiencies.

This inspection of the licensee's program to identify and address problems constituted three samples as defined in IP 71121.01-5.

b. Findings

No findings of significance were identified.

.4 Job-In-Progress Reviews

a. Inspection Scope

The inspectors observed the following jobs that were being performed in radiation areas, airborne radioactivity areas, or high radiation areas for observation of work activities that presented the greatest radiological risk to workers:

- Caldon Modification;
- Safety Relief Valve Activities; and
- Drywell Scaffold Activities.

The inspectors reviewed radiological job requirements for these activities including RWP requirements and work procedure requirements.

Job performance was observed with respect to these requirements to assess whether radiological conditions in the work area were adequately communicated to workers through pre-job briefings and postings. The inspectors also evaluated the adequacy of radiological controls including required radiation, contamination, and airborne surveys for system breaches; RP job coverage, including any applicable audio and visual surveillance for remote job coverage; and contamination controls.

Radiological work in high radiation work areas having significant dose rate gradients was reviewed to evaluate the application of dosimetry to effectively monitor exposure to personnel and to assess the adequacy of licensee controls.

This job-in-progress inspection constituted three samples as defined in IP 71121.01-5.

b. Findings

No findings of significance were identified.

.5 High Risk Significant, High Dose Rate HRA and Very High Radiation Area (VHRA) Controls

a. Inspection Scope

The inspectors held discussions with the RP Manager concerning high dose rate/high radiation area and VHRA controls and procedures, including procedural changes that had occurred since the last inspection, in order to assess whether any procedure modifications did not substantially reduce the effectiveness and level of worker protection.

The inspectors discussed with RP supervisors the controls that were in place for special areas that had the potential to become very high radiation areas during certain plant operations, to determine if these plant operations required communication beforehand with the RP group, so as to allow corresponding timely actions to properly post and control the radiation hazards.

The inspectors conducted plant walkdowns to assess the posting and locking of entrances to high dose rate HRAs, and VHRAs.

This RP inspection constituted three samples as defined in IP 71121.01-5.

b. Findings

No findings of significance were identified

.6 Radiation Worker Performance

a. Inspection Scope

During job performance observations, the inspectors evaluated radiation worker performance with respect to stated radiation protection work requirements and evaluated whether workers were aware of the significant radiological conditions in their workplace, the RWP controls and limits in place, and that their performance had accounted for the level of radiological hazards present.

The inspectors reviewed radiological problem reports for which the cause of the event was due to radiation worker errors to determine if there was an observable pattern traceable to a similar cause, and to determine if this perspective matched the corrective action approach taken by the licensee to resolve the reported problems. Problems or issues with planned and taken corrective actions were discussed with the Radiation Protection Manager.

This radiation worker performance inspection constituted two samples as defined in IP 71121.01-5.

b. Findings

No findings of significance were identified.

.7 Radiation Protection Technician Proficiency

a. Inspection Scope

During job performance observations, the inspectors evaluated RP Technician performance with respect to radiation protection work requirements and evaluated whether they were aware of the radiological conditions in their workplace, the RWP controls and limits in place, and if their performance was consistent with their training and qualifications with respect to the radiological hazards and work activities.

The inspectors reviewed radiological problem reports for which the cause of the event was radiation protection technician error to determine if there was an observable pattern traceable to a similar cause, and to determine if this perspective matched the corrective action approach taken by the licensee to resolve the reported problems.

This RP Technician proficiency inspection constituted two samples as defined in IP 71121.01-5.

b. Findings

No findings of significance were identified.

2OS2 As-Low-As-Reasonably-Achievable Planning and Controls (71121.02)

.1 Inspection Planning

a. Inspection Scope

The inspectors reviewed plant collective exposure history, current exposure trends, ongoing and planned activities in order to assess current performance and exposure challenges. This included determining the plant's current 3-year rolling average for collective exposure in order to help establish resource allocations and to provide a perspective of significance for any resulting inspection finding assessment.

The inspectors reviewed the outage work scheduled during the inspection period and associated work activity exposure estimates for the following work activities which were likely to result in the highest personnel collective exposures:

- Drywell Safety Relief Valve Activities;
- Drywell Scaffold Activities;
- Drywell Control Rod Drive Support Activities;
- Drywell Nozzle ISI Activities;
- Suppression Pool Diving Activities; and
- Reactor Vessel Disassemble/Reassemble Activities.

The inspectors reviewed documents to determine if there were site specific trends in collective exposures and source-term measurements.

The inspectors reviewed procedures associated with maintaining occupational exposures as-low-as-reasonably-achievable (ALARA) and processes used to estimate and track work activity specific exposures.

This ALARA planning and controls inspection constituted four samples as defined in IP 71121.02-5.

b. Findings

No findings of significance were identified.

.2 Radiological Work Planning

a. Inspection Scope

The inspectors evaluated the licensee's list of work activities ranked by estimated exposure that were in progress and reviewed the following work activities of highest exposure significance:

- Drywell Safety Relief Valve Activities;
- Drywell Scaffold Activities;
- Drywell Control Rod Drive Support Activities;
- Drywell Nozzle ISI Activities;
- Suppression Pool Diving Activities; and
- Reactor Vessel Disassemble/Reassemble Activities.

For these six activities, the inspectors reviewed the ALARA work activity evaluations, exposure estimates, and exposure mitigation requirements in order to verify that the licensee had established procedures and engineering and work controls that were based on sound radiation protection principles in order to achieve occupational exposures that were ALARA. This also involved determining that the licensee had reasonably grouped the radiological work into work activities, based on historical precedence, industry norms, and/or special circumstances.

The inspectors compared the results achieved including dose rate reductions and person-rem used with the intended dose established in the licensee's ALARA planning for these six work activities. Reasons for inconsistencies between intended and actual work activity doses were reviewed.

This radiological work planning inspection constituted three samples as defined in IP 71121.02-5.

b. Findings

No findings of significance were identified.

.3 Verification of Dose Estimates and Exposure Tracking Systems

a. Inspection Scope

The inspectors reviewed the assumptions and bases for the current annual collective exposure estimate including procedures, in order to evaluate the licensee's methodology for estimating work activity-specific exposures and the intended dose outcome. Dose rate and person-hour estimates were evaluated for reasonable accuracy.

The licensee's process for adjusting exposure estimates or re-planning work, when unexpected changes in scope, emergent work or higher than anticipated radiation levels were encountered, was evaluated. This included determining that adjustments to estimated exposure (intended dose) were based on sound radiation protection and ALARA principles and not adjusted to account for failures to control the work. The frequency of these adjustments was reviewed to evaluate the adequacy of the original ALARA planning process.

This dose estimate and exposure tracking systems inspection constituted two samples as defined in IP 71121.02-5.

b. Findings

No findings of significance were identified.

.4 Job Site Inspections and ALARA Control

a. Inspection Scope

The inspectors observed the following jobs that were being performed in radiation areas, airborne radioactivity areas, or high radiation areas for observation of work activities that presented the greatest radiological risk to workers:

- Drywell Safety Relief Valve Activities;
- Drywell Scaffold Activities;
- Drywell Control Rod Drive Support Activities;
- Drywell Nozzle ISI Activities;
- Suppression Pool Diving Activities; and
- Reactor Vessel Disassemble/Reassemble Activities.

The licensee's use of ALARA controls for these work activities was evaluated using the following:

The licensee's use of engineering controls to achieve dose reductions was evaluated to verify that procedures and controls were consistent with the licensee's ALARA reviews, that sufficient shielding of radiation sources was provided for and that the dose expended to install/remove the shielding did not exceed the dose reduction benefits afforded by the shielding.

This job site and ALARA control inspection constituted one sample as defined in IP 71121.02-5.

b. Findings

No findings of significance were identified.

.5 Source-Term Reduction and Control

a. Inspection Scope

The inspectors reviewed licensee records to determine the historical trends and current status of tracked plant source terms and to determine if the licensee was making allowances and had developed contingency plans for expected changes in the source term due to changes in plant fuel performance issues or changes in plant primary chemistry.

This source-term reduction and control inspection constituted one sample as defined in IP 71121.02-5.

b. Findings

No findings of significance were identified.

.6 Radiation Worker Performance

a. Inspection Scope

Radiation worker and RP technician performance was observed during work activities being performed in radiation areas, airborne radioactivity areas, and high radiation areas that presented the greatest radiological risk to workers. The inspectors evaluated whether workers demonstrated the ALARA philosophy in practice by being familiar with the work activity scope and tools to be used, by utilizing ALARA low dose waiting areas and that work activity controls were being complied with. Also, radiation worker training

and skill levels were reviewed to determine if they were sufficient relative to the radiological hazards and the work involved.

This radiation worker performance inspection constituted one sample as defined in IP 71121.02-5.

b. Findings

No findings of significance were identified.

.7 Problem Identification and Resolutions

a. Inspection Scope

The inspectors reviewed the licensee's self-assessments, audits, and special reports related to the ALARA program since the last inspection to determine if the licensee's overall audit program's scope and frequency for all applicable areas under the Occupational Cornerstone met the requirements of 10 CFR 20.1101(c).

The licensee's CAP was also reviewed to determine if repetitive deficiencies and/or significant individual deficiencies in PI&R had been addressed.

This PI&R inspection constituted two samples as defined in IP 71121.02-5.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 PI Verification (71151)

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Physical Protection

.1 Data Submission Issue

a. Inspection Scope

The inspectors performed a review of the data submitted by the licensee for the 1st Quarter 2008 PI for any obvious inconsistencies prior to its public release in accordance with IMC 0608, "PI Program."

This review was performed as part of the inspectors' normal plant status activities and, as such, did not constitute a separate inspection sample.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Physical Protection

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

As part of the various baseline IPs conducted during the period, the inspectors verified that the licensee entered the problems identified during the inspection into their CAP. Additionally, the inspectors verified that the licensee was identifying issues at an appropriate threshold and entering them in the CAP, and verified that problems included in the licensee's CAP were properly addressed for resolution. Attributes reviewed included: the complete and accurate identification of the problem; that timeliness was commensurate with the safety significance; that evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent of condition reviews, and previous occurrences reviews were proper and adequate; and that the classification, prioritization, focus, and timeliness of corrective actions were commensurate with safety and sufficient to prevent recurrence of the issue.

These routine reviews for the identification and resolution of problems did not constitute any additional inspection samples. Instead, by procedure they were considered an integral part of the inspections performed during the quarter and documented in Section 1 of this report.

b. Findings

No findings of significance were identified.

.2 Daily CAP Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's CAP. This review was accomplished through inspection of the station's daily condition report packages.

These daily reviews were performed by procedure as part of the inspectors' daily plant status monitoring activities and, as such, did not constitute any separate inspection samples.

b. Findings

No findings of significance were identified.

.3 Selected Issue Follow-up Inspection: Review of Seismic Monitor Corrective Actions

Introduction

The inspectors selected the licensee's corrective actions for an ongoing technical issue associated with the operability and availability of the station's seismic monitoring system for a more in-depth review in accordance with IP requirements.

The inspectors' review of this selected follow-up issue constituted one inspection sample as defined in IP 71152.

a. Effectiveness of Problem Identification

(1) Inspection Scope

The inspectors reviewed plant logs, issue reports, and work requests to verify that the licensee's identification of the seismic monitoring technical issue was complete, accurate, and timely, and that the consideration of extent of condition review, generic implications, common cause, and previous occurrences was adequate.

(2) Findings and Issues

No findings of significance were identified. No issues were identified.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The inspectors reviewed plant logs, issue reports, maintenance procedures, and work requests associated with the ongoing technical issue involving the operability and availability of the station's seismic monitoring system. The nature and significance of problems encountered by the licensee in attempting to restore the seismic monitoring system to service following a failed sensor calibration, both individual issues and groups of issues in aggregate with respect to safety, risk, and the licensee's CAP procedural requirements, were considered. Additionally, the inspectors assessed the licensee's evaluation and disposition of performance issues, evaluation and disposition of operability issues, and application of risk insights for prioritization of issues.

(2) Findings and Issues

Introduction

A finding of very low safety significance (Green) was identified by NRC inspectors during review of the licensee's activities associated with attempts to restore several inoperable and unavailable seismic monitoring system channels to an operable and available status. Specifically, the inspectors identified that the licensee had not appropriately prioritized restoration activities for three channels of the station's seismic monitoring system following a scheduled instrument calibration surveillance during which a fourth channel had failed calibration. During several ensuing weeks, the licensee missed several opportunities to have identified the exact nature of the problem and to have restored the three potentially available and operable channels of the system to service.

Because the seismic monitoring system was not within the scope of 10 CFR 50, Appendix B, no violation of regulatory requirements was identified in conjunction with the finding.

Description

On December 3, 2007, station instrument maintenance technicians removed the seismic monitoring system from service to perform LIS-EM-002, "Seismic Monitoring System Calibration," and Work Order (WO) No. 927500-01/02 for wiring verification. During performance of the surveillance, the OXT-EM-010c free field accelerometer/sensor was removed for testing and failed the calibration portion of the procedure. The surveillance was stopped and the seismic monitoring system was left with power removed making the system inoperable. Technical Requirements Manual (TRM) section 3.3.o, Required Action (RA) A.1 was entered to restore all channels operable within 30 days. The TRM 3.3.o instruments that were left inoperable by the licensee were:

- Tri-axial Accelerometers:

- Containment foundation, plant elevation 673' 4";
- Containment structural, plant elevation 820' 6";
- Free field; and
- Auxiliary electric equipment room.

- Tri-axial Seismic Switches:

- Containment foundation, plant elevation 673' 4"; and
- Internal trigger.

- GNC-CR Central Recorder – Instrument Panel No. 0PA11J in the Unit 1 Auxiliary electric equipment room.

In this configuration and in event of a seismic operating basis earthquake (OBE) or safe shutdown earthquake (SSE), the overhead control board alarms in the main control room would not annunciate, nor would the OBE or SSE status lights at instrument panel 0PA11J be energized. During the period of time that the seismic monitoring system was inoperable, operators took compensatory actions as specified in LOA-EM-001, "Environmental Monitoring Abnormal Procedure," which directed that the emergency plan and emergency action level (EAL) classification for a seismic event be made by confirming the occurrence of an earthquake with the U.S. Geological Survey via telephone, and by obtaining ground acceleration measurements at the Braidwood or Byron Nuclear Station. No assessment was made by the licensee as to whether or not the seismic monitoring system could be partially restored to an operable and available status, despite the fact that licensee personnel were experiencing difficulties obtaining the appropriate spare parts to repair the out-of-calibration OXT-EM-010c free field accelerometer/sensor. Near the end of December 2007, the Operations Director questioned an instrument maintenance department supervisor as to whether or not the seismic monitoring system could be partially restored. Believing that the question was related to the existing instrument maintenance calibration procedure that had been suspended, the supervisor responded that the system could not be partially restored.

On January 1, 2008, operations personnel initiated IR 716994 in accordance with TRM 3.3.o, RA B.1, which required that within 10 days following the seismic monitoring instruments' inoperability for a period of 30 days, the licensee was to, "Prepare a CAP report outlining the cause of the malfunction and the plans for restoring the instrument to operable status". Although this IR met the TRM 3.3.o, RA B.1, requirement, it did not generate any actions to assess partial seismic monitoring system restoration.

The inspectors reviewed the IR and questioned instrument maintenance technicians and supervisors as to what exactly was inoperable and whether or not the seismic monitoring system could be partially restored to an operable and available status. Although the licensee had established compensatory measures to assess earthquake events and classify EP EAL thresholds via an alternate means, the inspectors were concerned that the control room on-shift operators were being needlessly deprived of the event analysis and mitigation capabilities provided by the two seismic-related overhead control board alarms in the main control room. Through several follow-up discussions with instrument maintenance technical personnel and system engineers, the inspectors eventually concluded that the seismic monitoring system could be partially restored and the functionality of the seismic-related overhead control board alarms in the main control room regained.

Following the discussions between the licensee's personnel and the inspectors, the licensee began to aggressively examine options to restore the three unaffected channels of the seismic monitoring system to service. However, on January 29, 2008, the licensee obtained the necessary spare parts to replace the out-of-calibration 0XT-EM-010c free field accelerometer/sensor, and was able to restore the entire seismic monitoring system to service. This made it unnecessary for the licensee to continue with efforts to partially restore the seismic monitoring system to an operable and available status.

Analysis

The inspectors determined that there was a performance deficiency associated with the licensee's CAP prioritization and evaluation of this issue. Specifically, licensee instrument maintenance personnel and engineers failed to identify that the three remaining channels of the seismic monitoring system could physically be restored to service with the 0XT-EM-010c free field accelerometer/sensor in an out-of-calibration condition

In accordance with NRC IMC 0612, "Power Reactor Inspection Reports," the inspectors compared the issue to the examples in Appendix E, "Examples of Minor Issues." No correlating example was identified. The inspectors then determined that the finding was of more than minor significance in accordance with Appendix B, "Issue Screening," in that it had a direct impact on the objective for the Mitigating Systems Cornerstone for Reactor Safety "to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage)." Specifically, the inspectors determined that the failure of licensee personnel to have properly evaluated and prioritized the partial restoration of the seismic monitoring system as a CAP option resulted in control room on-shift operators being needlessly deprived of the event analysis and mitigation capabilities provided by the two seismic-related overhead control board alarms in the main control, a condition that could have

unnecessarily complicated the licensee's event response to an earthquake in the vicinity of the plant.

The inspectors determined that the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," and conducted a Phase 1 characterization and initial screening. Because the finding did not represent the actual loss of a safety function for any single train or system, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event, the inspectors concluded that the finding was of very low safety significance (Green) and within the licensee's response band.

In addition, the inspectors determined that the finding was related primarily to the cross cutting area of PI&R as defined in NRC IMC 0305, "Operating Reactor Assessment Program," since the licensee did not take appropriate corrective actions to address the partial restoration of potentially available channels of the seismic monitoring system in a timely manner. (Aspect P.1 (d))

Enforcement

No violations of NRC requirements or regulations were identified by the inspectors. Since the seismic monitoring system was outside the scope of the licensee's 10 CFR 50, Appendix B, quality assurance program, no violation of Criterion XVI of 10 CFR 50, Appendix B, "Corrective Action," had occurred.

The licensee entered this issue into their CAP as IR 725240. Corrective actions planned and completed by the licensee included sending out an internal operating experience communication on the seismic monitoring system to inform other stations within the licensee's fleet with similar seismic monitoring systems that with a single sensor inoperable it is possible to maintain operability and availability of the other channels and alarms. (FIN 05000373/2008002-02; 05000374/2008002-02)

c. Effectiveness of Corrective Actions

(1) Inspection Scope

The inspectors reviewed the issue reports and work requests associated with the ongoing seismic monitoring system issues to determine if the licensee's CAP addressed generic implications. Additionally, the inspectors verified that established corrective actions by the licensee were appropriately focused to correct the problem.

(2) Findings and Issues

No findings of significance were identified. No issues were identified.

4OA3 Event Follow-up (71153)

Cornerstone: Initiating Events

.1 Small Fire During 13B FW Heater Welding Activities

a. Inspection Scope

On February 13, 2008, inspectors followed up on the licensee's response to a small fire in the Unit 1 FW heater bay. During welding on the 13B FW heater, a small flame developed on the side of the weld site due to ignition of residual glycol on the pipe. During weld preheat of the pipe a glycol leak had developed. Craft pipe fitters replaced the glycol hose and wiped down the area. However, some residual glycol remained and as the craft personnel resumed welding, ignition of the glycol was observed. The licensee's fire watch noticed the flame, alerted the craft welders, and extinguished the flame using the designated portable fire extinguisher. The Unit Supervisor, licensee Fire Marshal, and Heater Bay Coordinator/Supervisor were all informed and work was stopped in the area to ensure all residual glycol was cleaned and removed. Following inspection of the job site by the licensee's Fire Marshal, work was allowed to recommence. The licensee briefed all craft workers during their next pre-shift briefings on this incident, and entered the issue into their CAP as IR 735346.

The inspectors evaluated the licensee actions, and confirmed that the licensee had properly addressed event reportability as required by 10 CFR 50.72 and 50.73.

The inspectors' response to and review of this event constituted a single inspection sample as defined in IP 71153.

b. Findings

No findings of significance were identified.

4OA5 Other

Cornerstone: Physical Protection

.1 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors conducted the following observations of security force personnel and activities to ensure that the activities were consistent with licensee security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours.

- Multiple tours of operations within the central and secondary security alarm stations;
- Tours of selected security towers/security officer response posts;
- Direct observation of personnel entry screening operations within the plant's main access facility;

- Observation of firing range qualification activities;
- Observation of vehicle searches prior to protected area entry; and
- Direct observation of selected security force shift turnover activities.

These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspectors' normal plant status review and inspection activities.

b. Findings

No findings of significance were identified.

4OA6 Meetings

.1 Exit Meeting

The inspectors presented the inspection results to the Site Vice President, Mr. Daniel Enright, and other members of licensee management on April 8, 2008. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. Several documents associated with the licensee's ongoing fuel channel distortion monitoring program, as well as several associated with the licensee's reactor head lift/head drop event analysis, were identified. The inspectors stated that these documents were being controlled accordingly.

.2 Interim Exit Meetings

Interim exits were conducted for:

- An interim exit was conducted for IP 71111.08 with Mr. D Enright on February 14, 2008. The inspector returned proprietary information reviewed during the inspection prior to leaving the site and the licensee confirmed that none of the potential report inputs discussed were considered proprietary; and
- The results of the Access Control to Radiologically Significant Areas and ALARA Planning And Controls inspection with the Site Vice President, Mr. D. Enright, on February 15, 2008.

4OA7 Licensee Identified Violations

.1 Violations of Very Low Safety Significance

The following violations of very low significance (Green) were identified by the licensee and are violations of NRC requirements that meet the criteria of Section VI of the NRC Enforcement Policy, NUREG 1600, for being dispositioned as NCVs.

- On February 4, 2008, licensee operations personnel identified an unsecured HRA in the vicinity of the 1B RHR corner room. This is contrary to Step 4.2.1 of procedure RP-AA-460, "Controls for High and Very High Radiation Areas," that requires the staff to barricade and conspicuously Post HRAs (<1000 millirem per hour at 30 centimeters). Radiation protection staff posted and secured a locked HRA to support anticipated changing conditions during shutdown and removed the HRA controls in an adjacent area to conduct that work. An independent

verification of the HRA controls was not performed, resulting in noncompliance for a period of approximately five hours. No individuals entered the area during that time. The violation is of very low safety significance because it did not involve ALARA planning or work controls, an overexposure, substantial potential for overexposure, or the ability to assess radiation dose. This issue was entered into the licensee's CAP as IR 731403.

- TS 5.4.1(a) requires that written procedures recommended by Appendix A of Regulatory Guide (RG) 1.33, Revision 2, be established, implemented, and maintained by the licensee. Section 1.c of RG 1.33, Appendix A, specifies the requirement for procedures that control equipment clearance and safety tagging, and the licensee implements this requirement with procedure OP-AA-109-101, "Clearance and Tagging." On 2/6/2008, contractor pipe fitters incorrectly replaced scram solenoid pilot valve (SSPV) 1C11-D5031-116, which was not covered under an appropriate equipment clearance order specifically intended for that work, contrary to the requirements contained in OP-AA-109-101.

The objective of the Initiating Events Cornerstone of Reactor Safety is "to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations." In accordance with NRC IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," the inspectors determined that the violation was of more than minor significance in that it had a direct impact on this cornerstone objective, one of the key attributes of which is equipment configuration control. The violation was further determined to be of very low safety significance because at the time of the event the entire air system to the Unit 1 Scram Solenoid Pilot Valves (SSPVs) was isolated and depressurized for other refueling outage work activities. The licensee had entered this issue into their CAP as IR 734029. Corrective actions by the licensee included a CAP human performance investigation and an extent-of-condition review of all SSPVs that had been worked by contract pipe fitters to ensure the work had been correctly performed. No additional discrepancies were identified.

- TS 5.4.1(a) requires that written procedures recommended by Appendix A of RG 1.33, Revision 2, be established, implemented, and maintained by the licensee. Section 1.c of RG 1.33, Appendix A, specifies the requirement for procedures that control equipment clearance and safety tagging, and the licensee implements this requirement with procedure OP-AA-109-101, "Clearance and Tagging." On February 11, 2008, operations personnel conducting a plant inspection in the Unit 1 FW heater bay discovered DEHC system valve 1EH067 in the full open position. Contrary to the requirements contained in OP-AA-109-101, this valve was tagged with a clearance order "Danger – Do Not Operate" card and should have been in the closed position.

The objective of the Initiating Events Cornerstone of Reactor Safety is "to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations." In accordance with NRC IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," the inspectors determined that the violation was of more than minor significance in that it had a direct impact on this cornerstone objective, one of the key attributes of which is equipment configuration control. The violation was

further determined to be of very low safety significance because at the time of the event the entire DEHC system was completely shutdown and removed from service for extensive refueling outage work, and no hydraulic fluid or hydraulically-controlled valve movement could have occurred as a result of 1EH067 being out of its intended position. The licensee briefed all craft workers during their next pre-shift briefings on this incident, and entered the issue into their CAP as IR 734294. Additional corrective actions by the licensee included a CAP human performance investigation, which determined that the mispositioning of this valve was apparently the result of unintentional casual contact by a member of the station staff or contract workforce.

- TS 5.4.1(a) requires that written procedures recommended by Appendix A of RG 1.33, Revision 2, be established, implemented, and maintained by the licensee. Section 1.c of RG 1.33, Appendix A, specifies the requirement for procedures that control equipment clearance and safety tagging, and the licensee implements this requirement with procedure OP-AA-109-101, "Clearance and Tagging." On February 16, 2008, contractor pipe fitters performing work on the 13C FW heater removed a section of 3-inch condensate booster system piping that was interfering with the installation of heater drain system pipe 1HD12BC-24". Although this pipe was required to be removed to allow the necessary FW heater work to be completed, the piping was mistakenly believed to have been a 3-inch pipe associated with the floor drain system. Contrary to the requirements contained in OP-AA-109-101, the piping that was actually removed was not covered under an appropriate equipment clearance order specifically intended for that work.

The objective of the Initiating Events Cornerstone of Reactor Safety is "to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations." In accordance with NRC IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," the inspectors determined that the violation was of more than minor significance in that it had a direct impact on this cornerstone objective, one of the key attributes of which is equipment configuration control. The violation was further determined to be of very low safety significance because at the time of the event the Unit-1 condensate booster system was shutdown with and depressurized due to other refueling outage work activities. The licensee had entered this issue into their CAP as IR 737285, and immediately initiated actions to correctly revise the WO and tie an appropriate safety clearance order to the section of 3-inch condensate booster system piping that had been removed. Additional corrective actions by the licensee included the performance of CAP human performance and apparent cause investigations.

- Criterion XVI of 10 CFR 50, Appendix B, states, in part, that: "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition." Contrary to this requirement, various corrective actions taken by the licensee to manage and prevent recurrence of fuel channel distortion effects, a significant condition adverse to quality, in the Unit 1 reactor core following their

L1R11 refueling outage in February – March of 2006 were ineffective. Specifically, the Unit 1 Cycle 12 core, which began operation on March 17, 2006, was designed to be free of fuel channel distortion adverse effects. Despite this design, fuel channel distortion adverse effects, several of which resulted in the licensee having to declare control rods inoperable and forced them to be inserted into the core to comply with TS, were identified by the licensee during fuel channel distortion surveillance testing near the end of the cycle.

The objective of the Mitigating Systems Cornerstone of Reactor Safety is "to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage)." In accordance with NRC IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," the inspectors determined that the violation was of more than minor significance in that it had a direct impact on this cornerstone objective, one of the key attributes of which is equipment performance. The violation was further determined to be of very low safety significance because the finding did not represent the actual loss of a safety function for any single train or system, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The licensee had entered this issue into their CAP as IRs 667185, 727361, and others. Corrective actions by the licensee included the performance of root cause investigations, enhanced coordination with industry working groups on this issue, and significant revisions to their fuel channel distortion monitoring program for both units.

Review of these licensee identified violations did not constitute any additional inspection samples. Instead, by procedure they were considered an integral part of the inspections performed during the quarter and documented in Section 1 of this report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

D. Enright, Site Vice President
D. Rhoades, Plant Manager
J. Bashor, Site Engineering Director
L. Blunk, Operations Training Manager
R. Chrzanowski, Chemistry Manager
H. Do, Corporate ISI Manager
B. Ginter, Engineering Programs Manager
F. Gogliotti, System Engineering Senior Manager
W. Hilton, Engineering Supervisor – Mechanical/Structural
K. Ihnen, Nuclear Oversight Manager
A. Kochis, ISI Engineer
R. Leasure, Radiation Protection Manager
S. Marik, Operations Director
J. Miller, NDE Level III
B. Rash, Maintenance Director
J. Rommel, Design Engineering Senior Manager
K. Rusley, Emergency Preparedness Manager
J. Shields, ISI Program Supervisor
T. Simpkin, Regulatory Assurance Manager
H. Vinyard, Shift Operations Superintendent
J. White, Site Training Director
C. Wilson, Station Security Manager

Nuclear Regulatory Commission

K. Riemer, Chief, Reactor Projects Branch 2

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

- | | | |
|---|-----|---|
| 05000373/2008002-01;
05000374/2008002-01 | NCV | Unacceptable Preconditioning of MSIV prior to performing ASME Stroke Time Testing. (Section 1R12) |
| 05000373/2008002-02;
05000374/2008002-02 | FIN | Failure to Restore Available Seismic Monitoring System Channels to an Operable and Available Status in a Timely Manner (Section 4OA2.3) |

Closed

- | | | |
|---|-----|---|
| 05000373/2008002-01;
05000374/2008002-01 | NCV | Unacceptable Preconditioning of MSIV prior to performing ASME Stroke Time Testing. (Section 1R12) |
| 05000373/2008002-02;
05000374/2008002-02 | FIN | Failure to Restore Available Seismic Monitoring System Channels to an Operable and Available Status in a Timely Manner (Section 4OA2.3) |

Discussed

None.

LIST OF DOCUMENTS REVIEWED

The following is a partial list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspector reviewed the documents in their entirety, but rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

1R04 Equipment Alignment

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
LOP-HP-02M	Unit 2 HPCS Mechanical Checklist	Revision 15
LOP-HP-02E	Unit 2 HPCS Electrical Checklist	Revision 5
LOP-RI-01M	Unit 1 RCIC Mechanical Checklist	Revision 17
LOP-RI-01E	Unit 1 RCIC Electrical Checklist	Revision 11

MISCELLANEOUS DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
M-95	P&ID High Pressure Core Spray	1/14/2008

1R05 Fire Protection

ISSUE REPORTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
722380	There is an Existing Crack Above a Fire Seal	1/15/2008
735223	Water Fire Extinguisher Discharge	2/12/2008
735346	CO2 Extinguisher Used on 13B Heater for Small Flame on Heater	2/13/2008
746323	Discrepancy for Fire Hose F325 in Fire Hazards Analysis	3/7/2008

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
LTS-1000-41	Electrical Fire Penetration Inspections	Revision 9
LTS-1000-42	Fire Assembly Integrity Inspection	Revision 9

MISCELLANEOUS FIRE PROTECTION DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
	LaSalle County Station – Fire Protection Report	

1R08 Inservice Inspection Activities

NDE PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
ER-AA-335-005	Radiographic Examination	Revision 3
ER-AA-335-014	VT-1 Visual Examination	Revision 3
ER-AA-335-015	VT-2 Visual Examination	Revision 6
ER-AA-335-016	VT-3 Visual Examination of Component Supports, Attachments and Interiors of Reactor Vessels	Revision 4
GE-MT-100	Magnetic Particle Examination	Version 8
GE-PDI-UT-1	PDI Generic Procedure for the Ultrasonic Examination of Ferritic Pipe Welds	Revision 5
GE-PDI-UT-300	Manual Examination of Reactor Vessel Assembly Welds in Accordance with PDI	Version 10

PREVIOUS INDICATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
IR 460519	Loose Clamp Bolt on Strut 1FW02-1158X	3/31/2006
IR 462076	Support 1RH04-1505C Failed Inspection	4/3/2006
1FW02-1158X	VT-3 Examination Report E08-034	2/5/2008
1RH04B-1505C	VT-3 Examination Report E08-049	2/6/2008

NDE EXAM DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
Data sheet L1R12-056	Ultrasonic Examination of MS-1002-07, Tee to Elbow Weld	2/11/2008
Data sheet L1R12-001	Ultrasonic Examination of GEL-1109-AF, RV Shell to Flange Weld	2/12/2008

Data sheet L1R12-046	Visual VT-1 examination of MS04- 1006C, Lugs on Main Steam Support	2/12/2008
Data sheet L1R12-035,	Magnetic Particle Examination of FW02- 1004V, FW Support Lugs	2/12/2008

REPAIR AND WELDING DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
WO 007998597 Revision 2 EC 357497	Rebuild Pump to be used for next Water Leg Pump Repair ASME Section XI Water Leg Pump Repairs to Allow Either Carbon Steel or Stainless Steel Weld Build-Ups	1/6/2006 2/12/2008
EC 357801 Revision 2	Alternate Details for ASME Section XI Water Leg Pump Repairs Using Either Carbon Steel or Stainless Steel Metal Weld Build-Ups	2/12/2008
WPS 1-8-GTSM (WPQR) 1-53B (WPQR) 2-53A (WPQR) 1-8-DI	Welding Procedure Specification Weld Procedure Qualification Record Weld Procedure Qualification Record Weld Procedure Qualification Record	Revision 1 1/29/1986 2/12/1986 2/10/1994
WO 00621574 Revision 1	Replace the 1E12-F064A Valve in L1R11	8/19/2005
WPS 01-01-TS-501 EC359478	Welding Procedure Specification Engineering Review of Contractor Welding and Heat Treatment Related Special Process Procedures	Revision 3 Revision 0
RT Data Sheets 06-044 and 06-045	Component 1E12-F064A	3/4/2006
ASME Repair/Replacement Plan 00621574-01	Component 1E12-F064A	8/9/2004
Visual Data Sheet 06-261	1E12-F064A Mini Flow Line Valve	3/12/2006
WO 755122 ASME Repair/Replacement Plan 00755122-01	Replace 1B21-F016 Valve in L1R11 Component 1B21-F016	8/22/2005 3/5/2006
Magnetic Particle Examination Data Sheet 06-205	1B21-F016	3/7/2006
RT Data Sheets 06-046, 06-047	1B21-F016 Weld 1R1 and Weld 2R1	3/7/2006
RT Data Sheets (un-numbered)	1B21-F016 Weld 1 and Weld 2	3/5/2006
VT-2 Examination Record E06-326	1B21-F016 Valve	3/16/2006

Exelon Procedure CC-AA-501-1021 WPS 5B-5B-T-101	Exelon Nuclear Welding Program Repair of Welds and Base Metal Welding Procedure Specification	Revision 1 Revision 0
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CORRECTIVE ACTION DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
AR 00707382	BWRVIP 2007-367 Recommendations regarding dissimilar metal welds	12/5/2007
AR 00312082	Evaluate Reactor Internal Action Plans	1/17/2008
AR 00602044	JP Riser Brace Pad Weld Inspection; Insufficient Detail	3/10/2007
AR 00649678	Errors in Submittal of ISI Relief Requests to NRC	7/13/2007
AR 00665674	No ISI Data Sheet for LOS-RD-Q1	8/29/2007
AR 00707382	BWRVIP 2007-367 Recommendations regarding dissimilar metal welds	12/5/2007

CORRECTIVE ACTION DOCUMENTS GENERATED AS A RESULT OF ISI INSPECTION

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
IR 735301	Tooling Marks on Pipe Support FW02-1004V	2/13/2008
IR 735527	L1R12 LL UT Exam on Reactor Pressure Vessel (RPV) Shell to Flange Weld GEL-1109-AF	2/13/2008
IR 735912	NRC Identified Uncorrected Typo in WO	2/14/2008
IR 736162	L1R12 Lessons Learned for Visual Examinations	2/14/2008
VT Data Sheet E08-120	Component FW02-1004V	2/13/2008
IR 737204	Further Technical Information for Historical Hanger Issue	2/16/2008
IR 738137	Historical Scope Expansion Documentation for Supports	2/19/2008
IR 740945	NRC Identified Incorrect Date on VT-1 Examination Report	2/26/2008

OTHER DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
Check-In Self-Assessment Plan 707268-01	ISI Program Preparedness for L1R12 NRC Inspection	1/21/2008
BWRVIP Letter	Recommendations Regarding Dissimilar Metal Weld Examinations, Includes Needed Requirement per NEI-03-08	12/4/2007
Drawing 179-10- 045-1	As Built Sweepolet	11/18/1975
Drawing M-1017	24" Nominal Pipe Modified Clamp for use with PSA 3, 10 and 35	Revision AB

1R11 Licensed Operator Regualification Program

LICENSED OPERATOR REQUALIFICATION SCENARIO GUIDES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
ESG 64	Exam Scenario Guide	Revision 1

1R12 Maintenance Effectiveness

ISSUE REPORTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
740441	As Found Time Too Fast for 1B21-F028D	2/24/2008
740440	As Found Time Too Fast for 1B21-F028B	2/24/2008
656523	OPEX Review – Potential for 345 kV OCBs to Not Fully Close	8/2/2007
649794	Need EED WO for OCB Inspection to Address Dresden Failure	7/13/2007
731453	OCB 10-11 Phase 'C' Locking Plate Found Broken	2/4/2008
731451	Inspection Found Broken Locking Plate on OCB 9-10 Grid Block	2/4/2008
649774	Dresden OCB Failure to Close Event – Extent of Condition	7/13/2007
652221	Potential for 345 kV OCBs to Not Fully Close	7/20/2007

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
LOS-PC-Q2	Primary Containment Isolation Valves Operability Test and Inservice Inspection for Conditions 4, 5 or Defueled	Revision 47
LES-MS-101	Unit 1 Main Steam Isolation Valve Limit Switch Calibration	Revision 20

MISCELLANEOUS DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
	Unit 1 Control Room Logs	2/25/2006 through 2/25/2008
	LaSalle Inservice Testing Bases Document: Main Steam Line Isolation Valves	

1R13 Maintenance Risk Assessments and Emergent Work Control

ISSUE REPORTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
667185	Unit 1 Control Rod 58-31 Failed Friction Settle Testing	9/2/2007
667195	LOS-RD-SR7 Results for Unit 1, September 2, 2007	9/2/2007
667335	Control Rod 10-51 Anomalous Performance	9/3/2007
667344	Control Rod 50-51 Slow to Withdraw Following Scram Time Test	9/3/2007
667433	Control Rod 10-51	9/3/2007
676813	Unit 1 September 27, 2007, Channel Distortion Testing Results	9/28/2007
690247	Control Rod Fails Scram Speed	10/27/2007
690330	Unit 1 October 27, 2007, Channel Distortion Testing Results	10/27/2007
695829	Rod 10-51 Declared Inoperable	11/7/2007
701077	Channel Distortion Testing Results for Unit 1, November 18, 2007	11/18/2007
721213	Results of Channel Distortion Testing-Unit 1, December 16, 2007	12/16/2007
721573	January 12, 2008, Channel Distortion Results	1/13/2008

722209	January 14, 2008, Unit 1 Channel Distortion Results	1/14/2008
725910	NRC ID: DEHC Workers Entered Protected Pathway Without Authorization	1/23/2008
727317	Unit 1 Control Rod 26-23 Declared Inoperable	1/26/2008
727361	Unit 1 Control Rod 18-23 Inoperable	1/27/2008
727366	Unit 1 Control Rod 22-35 Inoperable	1/27/2008
727393	Unit 1 Control Rod 18-39 Inoperable	1/27/2008
729911	Unit 1 LOS-RD-SR7 Final Summary of January 25-30 Testing Results	1/31/2008
733935	L1R12 Fuel Bundle Channel Distortion Measurements	2/9/2008
737020	IEMA ID: Shaw Individual Crossed Protected Pathway Boundary	2/15/2008
742915	PORC Rejected LOS-RD-SR7 Revision 14 Presentation	2/29/2008
748272	Channel Distortion Results for Unit 1, March 11, 2008	3/11/2008

MISCELLANEOUS DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
	Control Room Logs	1/26/2008 through 1/29/2008

ROOT CAUSE REPORTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
455968-03	Investigation for Three Control Rods Failed to Indicate Full In Following a Scram	3/11/2006
727361-03	Multiple Control Cells Failed Channel Distortion Surveillance Due to Higher Than Predicted Channel Distortion	2/21/2008

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
LOS-RD-SR7	Channel Interference Monitoring	Revisions 12, 13, and 14

ENGINEERING EVALUATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
EC 368143	Evaluation of Scram Timing as Part of LaSalle Channel Distortion Monitoring	Revision 0
EC 360102, NF 0700097	LaSalle Unit 1 Fuel Channel Bow Assessment and Monitoring Plan	Revision 1
EC 369167	LaSalle Unit 1 Cycle 12 Revised Channel Distortion Test Criteria	Revision 0
EC 369380	LaSalle Revised Channel Distortion Test Criteria	Revision 0
EC 369620	LaSalle Revised Channel Distortion Test Criteria	Revision 0
OE 08-01	Units 1 and 2 Control Rod Operability Evaluation with Respect to Fuel Channel Distortion Observed Effects	Revision 0

VENDOR DOCUMENTS [CONTAINS PROPRIETARY INFORMATION]

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
FAB07-2451	Transmittal of Control Rod Friction Surveillance Recommendations — Interim Supplemental Surveillance of AREVA Fuel Channels in Core Peripheral Locations Global Nuclear Fuel Company Channel Bow Monitoring Plan Friction Buildup Rate Bases Guidance Document	9/14/2007
SC06-12	General Electric Energy – Nuclear 10 CFR 21 Communication: Surveillance Program for Channel-Control Blade Interference	9/26/2006
DRF Section 0000-0080-4637, Revision 0	General Electric Hitachi Nuclear Energy: Predicted Maximum Fuel/Control Rod Friction for CRDs 26-23 and 34-23	1/30/2008
PEC08-001	Global Nuclear Fuel Company: LaSalle Cycle 13: Proposal for Rechanneling and Measurement Criterion for GNF Bundles	2/15/2008
PEC08-003	Global Nuclear Fuel Company: GNF Discussion of Seven Final Rechannels During LaSalle Reload 12	2/19/2008

1R15 Operability Evaluations

ISSUE REPORTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
667185	Unit 1 Control Rod 58-31 Failed Friction Settle Testing	9/2/2007
667195	LOS-RD-SR7 Results for Unit 1, September 2, 2007	9/2/2007
667335	Control Rod 10-51 Anomalous Performance	9/3/2007
667344	Control Rod 50-51 Slow to Withdraw Following Scram Time Test	9/3/2007
667433	Control Rod 10-51	9/3/2007
676813	Unit 1 September 27, 2007, Channel Distortion Testing Results	9/28/2007
690247	Control Rod Fails Scram Speed	10/27/2007
690330	Unit 1 October 27, 2007, Channel Distortion Testing Results	10/27/2007
695829	Rod 10-51 Declared Inoperable	11/7/2007
701077	Channel Distortion Testing Results for Unit 1, November 18, 2007	11/18/2007
709442	OVE09YB Damper Failed to Reposition Due to Binding	12/10/2007
719290	Missed Opportunity Identified During EACE	1/8/2008
721213	Results of Channel Distortion Testing – Unit 1, December 16, 2007	12/16/2007
721332	Unit 1 RR Flow Change	1/11/2008
721532	Unit 1 RR Loop Flow Divergence During Load Drop	1/12/2008
721573	January 12, 2008, Channel Distortion Results	1/13/2008
722209	January 14, 2008, Unit 1 Channel Distortion Results	1/14/2008
727317	Unit 1 Control Rod 26-23 Declared Inoperable	1/26/2008
727361	Unit 1 Control Rod 18-23 Inoperable	1/27/2008
727366	Unit 1 Control Rod 22-35 Inoperable	1/27/2008
727393	Unit 1 Control Rod 18-39 Inoperable	1/27/2008
729911	Unit 1 LOS-RD-SR7 Final Summary of January 25-30 Testing Results	1/31/2008
733935	L1R12 Fuel Bundle Channel Distortion Measurements	2/9/2008
742915	PORC Rejected LOS-RD-SR7 Revision 14 Presentation	2/29/2008

748272	Channel Distortion Results for Unit 1, March 11, 2008	3/11/2008
746204	EDG Cold Load Derating due to Elevated Outside Air Temperatures	3/7/2008
744660	EMD Emergency Diesel Generator Loading Capability Issue	3/4/2008

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
LOS-RD-SR7	Channel Interference Monitoring	Revisions 12, 13, and 14

ENGINEERING EVALUATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
EC 368143	Evaluation of Scram Timing as Part of LaSalle Channel Distortion Monitoring	Revision 0
EC 360102, NF 0700097	LaSalle Unit 1 Fuel Channel Bow Assessment and Monitoring Plan	Revision 1
EC 369167	LaSalle Unit 1 Cycle 12 Revised Channel Distortion Test Criteria	Revision 0
EC 369380	LaSalle Revised Channel Distortion Test Criteria	Revision 0
EC 369405	Generic Evaluation of Lost Parts During L1R12	Revision 0
EC 369559	Lost Parts Evaluation — L1R12 Foreign Material	Revision 0
EC 369620	LaSalle Revised Channel Distortion Test Criteria	Revision 0
EC 369628	Evaluate Leaving in Place a Flashlight Body in the Unit 1 Drywell on the RPV Nozzle N2J Sacrificial Shield Window at 772'8" Elevation and 300 Degrees Azimuth	Revision 0
OE 06-02	Instrument Nitrogen, Safety Relief Valves, and the Automatic Depressurization System	Revisions 1 through 9
OE 08-01	Units 1 and 2 Control Rod Operability Evaluation with Respect to Fuel Channel Distortion Observed Effects	Revision 0
OE 08-02	EDG Cold Load Derating due to Elevated Outside Air Temperatures	Revision 0

APPARENT AND ROOT CAUSE REPORTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
EACE 709276	Investigate Failure of 0VE09YB Damper to Open	1/11/2008

MISCELLANEOUS DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
EC 368724	L1R12 Decay Heat and Related Calculation	1/15/2008
EC 369345	L1R12 Decay Heat and Related Computations	2/6/2008
	Unit 1 Control Room logs	1/12/2008
	Jet Pump Loops A and B total flow plots	1/12/2008

1R18 Plant Modifications

ISSUE REPORTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
581231	Increased Indicated Flow Through Unit 1 Jet Pump 19	1/19/2007
670227	EDG Thermocouple for Cylinder No. 10 and Cylinder No. 20 Wires Swapped	9/11/2007
670273	1B EDG Pyrometer Indication	9/11/2007
670274	1B EDG WO No. 900954-01 to Remain Open	9/11/2007
723562	NOS ID: FW Flow Modification Screened for 10 CFR 50.59	1/17/2008

ENGINEERING CHANGE PACKAGES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
EC 364424	Compensation for Loss of Jet Pump Flow Signal for Jet Pump No. 19	Revision 0
EC 367549	Temporary Configuration Change for 1B EDG Pyrometer	Revision 0
EC 363448	Internal LEFM "Checkplus" System to Measure Flow Into the Reactor Vessel	Revisions 0, 1, 2, 3, and 4
EC 366645	Drywell Permanent Scaffold, Lead Shielding, Handrail, and CRD Track	Revision 1

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
LTP-1600-10	Calculating Core Thermal Power	Revision 26
LTP-1600-11	Core Flow Calibration and Jet Pump Data	Revision 15
LST-2007-014	Unit 1 LEFM Modification Test	Revision 0

WORK ORDERS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
00997571	Install Compensation for loss of Jet Pump No. 19	2/22/2007
00900954	1B EDG Thermocouple Flexible Connection Loose	9/10/2007

1R19 Post-Maintenance Testing

ISSUE REPORTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
688898	Part 21 for 0 Diesel Generator (DG) Air Start Solenoid Valve Never Installed	10/24/2007
729917	0 DG Room Vent Supply Filter D/P	1/31/2008
733747	Motor Shutdown at 30 Minutes vs. 2 Hours as Required	2/8/2008
736509	Vibration Levels Elevated on LPCS Motor Following Repair	2/14/2008
736761	Jet Pump 19 Transmitter Excessive Static Shift	2/15/2008
746271	LST-2007-003 Test Exceptions	3/7/2008

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
LOS-LP-Q1	Unit 1 LPCS System Operability and Inservice Test	Revision 46
LOS-RI-R4	RCIC System Operability and Valve 1E51-F030 Inservice Test	Revision 14
LOS-DG-M1	0 Diesel Generator Operability Test	Revision 60

LOS-100-10	Inboard/Outboard FW Check Valve and Outboard Stop Valves Local Leak Rate Test 1(2)B21-F010A/B, 1(2)B21-F032A/B, 1(2)B21-F065A/B, and Packing on 1(2)G33-F040	Revision 18
LTP-1600-10	Calculating Core Thermal Power	Revision 26
LST-2007-014	Unit 1 LEFM Modification Test	Revision 0
LST-2007-003	Unit 1 DEHC Upgrade Project Operability Test	Revision 1
LOS-DG-102	1A EDG, 1DG01K, Start and Load Acceptance Surveillance	Revision 2
LIS-RR-110B	Unit 1 Recirculation HPU Loop 'B' Control and 1B33-F060B Limit Switch Calibration	Revision 4
LOS-RD-SR5	Control Rod Drive Timing	Revision 20
LOS-RD-SR7	Channel Interference Monitoring	Revisions 12, 13, and 14
LTS-1000-4	Scram Insertion Times	Revision 28

WORK ORDERS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
01008950-02	PMT – LPCS System Functional and Leak Checks	2/10/2008
01066373-01	OP LOS-LP-Q1 LPCS Run Attachment 1A	12/26/2007
01090436-01	Op LOS-LP-Q1 U1 LPCS Run Attachment 1A Increased Performance	1/22/2008
01009082-03	PMT – RCIC System Functional and Leak Checks	2/25/2008
01101531-01	LOS-DG-M1 0 DG Fast Start Attachment 0-Fast	1/31/2008
00934556-01	EP LLRT, 1B21-F032A per LTS-100-10	2/25/2008
01104232-01	EP LLRT, 1B21-F032A per LTS-100-10	2/9/2008

ENGINEERING CHANGE PACKAGES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
EC 363448	Internal LEFM "Checkplus" System to Measure Flow Into the Reactor Vessel	Revision 4
EC 369514	Jet Pump 19 Issue Resolution	Revision 0

MISCELLANEOUS DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
P98-008	IST Technical Review of LPCS Pump Performance	5/14/1998

1R20 Refueling and Other Outage Activities

ISSUE REPORTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
720568	NRC Fatigue Rule required Engineering Work Transfer	1/10/2008
725315	NRC ID: Gang Box Contacting WS Piping Insulation	1/22/2008
725341	NRC ID: NRC Identified Water and Protective Clothing on Floor	1/22/2008
729732	NRC ID: NRC Identified Problem	1/31/2008
730984	GL 82-12 Strict Compliance During Outage Decision	2/3/2008
730992	U1 Control Rod 34-23 Lost Position Indication at Full In	2/3/2008
741419	NRC ID: During NRC Walkdown, Whip Restraint Was Identified Loose	2/26/2008
741428	Anomalies with SRVs 'F', 'H' and 'L' Following ILRT	2/26/2008
742880	L1R12 LL: Extra RCIC Run Resulted from Schedule Adherence	2/29/2008
740264	NRC Questions During Unit 1 Upper Drywell Inspection	2/23/2008

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
MA AB 756 600	Reactor Disassembly	Revision 9A
MA AB 756 601	Reactor Reassembly	Revision 9A
LGP-2-1	Normal Unit Shutdown	Revision 74
LGP-1-1	Normal Unit Startup	Revision 81
LOP-RD-21	Defeating the Mode Switch to Shutdown Scram	Revision 10
LOP-RH-07	Shutdown Cooling System Startup, Operation, and Transfer	Revision 55
LS-AA-119	Overtime Controls	Revision 6
LS-AA-119	Overtime Controls	Revision 4

VENDOR DOCUMENTS [PROPRIETARY]:**CALCULATIONS**

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
General Electric Company Report 82-32	Structural Analysis of Peach Bottom 2/3 Reactor Pressure Vessel Head Drop, Shroud Head Assembly Drop, and Steam Dryer Assembly Drop Conditions	8/1982
General Electric Company Report SASR 89-21 and SASR 82-38	Structural Analysis of Limerick Reactor Vessel Head Drop, Shroud Head Assembly Drop, Steam Dryer Assembly Drop, and Service Platform Drop Conditions	Revision 1, 3/1989
General Electric- Hitachi Nuclear Energy Report GE NE 0000 0079 4330	LaSalle County Station, Unit 1 – Technical Justification for Applying Existing RPV Head Drop Analyses for Evaluation at LaSalle	Revision 1, 1/11/2008, and Revision 2, 1/28/2008

WORK ORDERS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
LS-AA-119	Attachment 1; Overtime Guideline Deviation Authorization	2/2/2008 through 1/1/2008

MISCELLANEOUS DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
901LS	Piping Design Table	1/15/1987
ISI-RH-1003	Inservice Inspection Isometric RHR System	Revision B, 1/23/1996

1R22 Surveillance Testing**ISSUE REPORTS**

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
458813	LLRT on FW CK Vlv 1B21-F032A Exceeded Max-Path Limit	2/25/2006
598826	2B21-F032A As-Found LLRT Exceeded Admin Alarm Limit	3/2/2007

667185	Unit 1 Control Rod 58-31 Failed Friction Settle Testing	9/2/2007
667195	LOS-RD-SR7 Results for Unit 1, September 2, 2007	9/2/2007
667335	Control Rod 10-51 Anomalous Performance	9/3/2007
667344	Control Rod 50-51 Slow to Withdraw Following Scram Time Test	9/3/2007
667433	Control Rod 10-51	9/3/2007
669313	Unit 2 Control Rod 58-27 Signs of Channel Distortion	9/9/2007
676813	Unit 1 September 27, 2007, Channel Distortion Testing Results	9/28/2007
681650	Valve 2B21-F032A Not Torqued to Correct Value	10/8/2007
682373	Unit 2 LOS-RD-SR7 Channel Distortion Testing Results	10/9/2007
688717	2B21-F032A –Need WO for Torque Correction	10/24/2007
690247	Control Rod Fails Scram Speed	10/27/2007
690330	Unit 1 October 27, 2007, Channel Distortion Testing Results	10/27/2007
695829	Rod 10-51 Declared Inoperable	11/7/2007
701077	Channel Distortion Testing Results for Unit 1, November 18, 2007	11/18/2007
721213	Results of Channel Distortion Testing – Unit 1, December 16, 2007	12/16/2007
721573	January 12, 2008, Channel Distortion Results	1/13/2008
722209	January 14, 2008, Unit 1 Channel Distortion Results	1/14/2008
724238	LOS-DG-SR6 Stopped due to Ultrasonic Flow Meters	1/18/2008
724541	LOS-DG-SR6 Procedure Revision Required	1/19/2008
725468	Unit 2 LOS-RD-SR7 Results for January 22, 2008	1/22/2008
727317	Unit 1 Control Rod 26-23 Declared Inoperable	1/26/2008
727361	Unit 1 Control Rod 18-23 Inoperable	1/27/2008
727366	Unit 1 Control Rod 22-35 Inoperable	1/27/2008
727393	Unit 1 Control Rod 18-39 Inoperable	1/27/2008
729911	Unit 1 LOS-RD-SR7 Final Summary of January 25-30 Testing Results	1/31/2008
733257	Unit 2 LOS-RD-SR7 Results for February 7, 2008	2/8/2008
733696	1B21-F032A Failed LLRT	2/8/2008

733935	L1R12 Fuel Bundle Channel Distortion Measurements	2/9/2008
704257	Unit 2 November 27, 2007, LOS-RD-SR7 Channel Distortion Testing Results	11/27/2007
740442	ILRT Leak Check IDs Leaks on 1VQ026 Flange	2/25/2008
740447	ILRT – Leak Found on C Traversing Incore Probe (TIP) Ball Valve at DW Flange	2/25/2008
740448	ILRT – A TIP Ball Valve Air Leakage During ILRT	2/25/2008
740449	ILRT – Leaks Found at 1VQ030 Packing, Lower Cap	2/25/2008
740451	ILRT – Leak Found from Vacuum Breaker Drywell Isolation Stop	2/25/2008
740452	ILRT – Leaks Found from the Unit 1 H2 Recombiner	2/25/2008
742915	PORC Rejected LOS-RD-SR7 Revision 14 Presentation	2/29/2008
748251	March 11, 2008, LOS-RD-SR7 Results for Unit 2, Rod 58-27	3/11/2008
748272	Channel Distortion Results for Unit 1, March 11, 2008	3/11/2008
750351	Unit 2 March 16, 2008 Channel Distortion Results	3/16/2008
751454	March 18, 2008 Channel Distortion Testing Summary	3/18/2008

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
LOS-100-10	Inboard/Outboard FW Check Valve and Outboard Stop Valves Local Leak Rate Test 1(2)B21-F010A/B, 1(2)B21-F032A/B, 1(2)B21-F065A/B, and Packing on 1(2)G33-F040	Revision 18
LOS-RH-Q1	RHR low pressure coolant injection and RHR Service Water Pump and Valve Inservice Test for Modes 1, 2, 3, 4 and 5	Revision 66
LTS-900-3	HPCS High Pressure Water Leak Test 1(2)E22-F004 and 1(2)E22-F005	Revision 18
LTS-300-4	Unit 1(2) Primary Containment Leak Rate Test (ILRT)	Revision 23
LTS-300-5	Primary Containment Leak Rate Testing Program	Revision 37
LTS-300-10	Drywell Floor Bypass Leakage Test	Revision 19
LOS-DG-SR6	Division 2 Cooling Water System Test	Revision 7

LOS-RD-SR7	Channel Interference Monitoring	Revisions 12, 13, and 14
LOS-NB-R1	Reactor Vessel Leakage Test	Revision 3

WORK ORDERS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
01084425-01	OP LOS-RH-Q1 1C RHR Attachment 1C	1/23/2008
00726374-21	EP Check for Leaks (System/Component)	2/26/2008
00726374-13	SSP Leak Test on Blind Flange per LTP- 600-11	2/26/2008
00904796-01	OP LOS-DG-SR6 1A DG Flow Balance Test, Div II	1/15/2008

MISCELLANEOUS DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
M-96	P&ID Residual Heat Removal	1/22/2008
	Unit 1 Control Room logs	1/24/2008
	IPA Brief for Primary Containment Leakage Test per LTS-300-4	2/22/2008
	IPA Brief for Reactor Vessel Leakage Test per LOS-NB-R1	2/21/2008

ENGINEERING EVALUATIONS:

ENGINEERING EVALUATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
EC 368143	Evaluation of Scram Timing as Part of LaSalle Channel Distortion Monitoring	Revision 0
EC 360102,NF 0700097	LaSalle Unit 1 Fuel Channel Bow Assessment and Monitoring Plan	Revision 1
EC 365565, NF 0700098	LaSalle Unit 2 Fuel Channel Bow Assessment and Monitoring Plan	Revision 1
EC 369167	LaSalle Unit 1 Cycle 12 Revised Channel Distortion Test Criteria	Revision 0
EC 369380	LaSalle Revised Channel Distortion Test Criteria	Revision 0

EC 369620	LaSalle Revised Channel Distortion Test Criteria	Revision 0
OE 08-01	Units 1 and 2 Control Rod Operability Evaluation with Respect to Fuel Channel Distortion Observed Effects	Revision 0

1EP6 Emergency Preparedness Drill

ISSUE REPORTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
752382	LaSalle 2008 EP Pre-Exercise Objective H.2 Failure	3/20/2008
752478	EP Pre-Exercise DEP Failure to Classify in a Timely Manner	3/20/2008
754958	NOS IDENTIFIED: EP Pre-Exercise Simulator – Controller Issues	3/26/2008
754962	NOS IDENTIFIED: EP Pre-Exercise Simulator – Performance Issues	3/26/2008

2OS1 Access Control to Radiologically Significant Areas

ISSUE REPORTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
723791	Increased Dose Rates Discovered During ALPS Run	1/17/2008
730490	Incoming General Electric Equipment Found Contaminated	2/1/2008
731080	Issues Identified by the Radiation Protection Behavior Correction Specialist	2/4/2008
731225	Radiologically Restricted Area Entrance Greeter Findings	2/4/2008
733765	Use of Scorpion Changed in Mid-outage	2/9/2008
733960	Issues Identified by the Radiation Protection Behavior Correction Specialist	2/8/2008
733961	Issues Identified by the Radiation Protection Behavior Correction Specialist	2/9/2008
734033	Issues Identified by the Radiation Protection Behavior Correction Specialist	2/10/2008
734183	Issues Identified by the Radiation Protection Behavior Correction Specialist	2/10/2008
712789	Dewatering Sock Filter Dropped During Transfer	12/17/2007

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
RP-AA-376	Radiological Postings, Labeling and Markings	Revision 2
RP-AA-460	Controls for High And Very High Radiation Areas	Revision 13

2OS2 As-Low-As-Reasonably-Achievable Planning and Controls

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
RP-AA-400	ALARA Program	Revision 8
RP-AA-401	Safety Relief Valve ALARA Work-in-Progress Review	Revision 9
RP-AA-401	Caldon Modification ALARA Work-in-Progress Review	Revision 9
RP-AA-401	FW Heater Replacement ALARA Work-in-Progress Review	Revision 9
RP-AA-401	Drywell Scaffolding ALARA Work-in-Progress Review	Revision 9
RP-AA-400	ALARA Program	Revision 8

RADIATION WORK PERMITS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
RWP 10008308	Drywell Safety Relief Valve Activities	Revision 1
RWP 10008313	Drywell Scaffolding Activities	Revision 0
RWP 10008322	Drywell Control Rod Drive Pull/Put Undervessel Activities	Revision 0
RWP 10008330	Drywell ISI Activities	Revision 0
RWP 10008356	Reactor Vessel Disassembly/Reassembly Activities	Revision 0
RWP 10008353	Suppression Pool Diving	Revision 1
RWP 10008308	Drywell Safety Relief Valve Activities	Revision 1

MISCELLANEOUS DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
	Focused Area Self Assessment Report Access Control to Radiologically Significant Areas and ALARA Planning And Controls	

4OA2 Identification and Resolution of Problems

ISSUE REPORTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
716994	Seismic Monitor Inoperable Greater than 30 Days Exceeding TRM 3.3.o Time Clock	1/1/2008
725240	NRC Questions Concerning the Seismic Monitoring System	1/22/2008
724391	Seismic Monitoring Instrumentation Operability	1/18/2008

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
LIS-EM-002	Seismic Monitoring System Calibration	Revision 16
LOA-EM-001	Environmental Monitoring Abnormal Procedure	Revision 6

4OA3 Event Follow-up

ISSUE REPORTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
735223	Water Fire Extinguisher Discharge	2/12/2008
735346	CO2 Extinguisher Used on 13B Heater for Small Flame on Heater	2/13/2008

4OA5 Other

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
SY-AA-101-112	Searching Personnel, Vehicles, Packages, and Cargo	Revision 13
SY-AA-101-115	Controlling Gates	Revision 6
SY-AA-101-117	Routine Processing and Escorting of Personnel and Vehicles	Revision 15
SY-AA-101-126-1001	Nuclear Security Team Turnover and Briefing	Revision 1
SY-AA-151	Firearms Practice Range Management	Revision 3

4OA7 Licensee Identified Violations

APPARENT AND ROOT CAUSE REPORTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
ACE 737285	Condensate Booster System Line Incorrectly Identified and Removed	2/16/2008
RCR 455968	Investigate three rods failed to indicate full in following a scram	3/11/2006
RCR 667185	Repeat Reactor Core Channel Distortion Issues on LaSalle Unit 1 and 2	9/25/2007
RCR 727361	CONTAINS PROPRIETARY INFORMATION — Multiple Control Cells Failed Channel Distortion Surveillance Due to Higher Than Predicted Channel Distortion	2/23/2008

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
OP-AA-109-101	Clearance and Tagging	Revision 2

QUICK HUMAN PERFORMANCE INVESTIGATION REPORTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
734029	Wrong Component Worked — 1C11-D5031-116 Modified Instead of 1C11-D4631-116	2/6/2008

734294	Ball Valve 1EH067 Found Fully Open While Danger Tagged Closed	2/11/2008
737285	3-Inch Line Incorrectly Identified in Work Package Minor Revision	2/16/2008
731403	Un-posted and Barricaded Secured High Radiation Area Prompt Investigation	02/4/2008

LIST OF ACRONYMS USED

AC	Alternating Current
ALARA	As-Low-As-Is-Reasonably-Achievable
ASME	American Society of Mechanical Engineers
CAP	Corrective Action Program
CFR	Code of Federal Regulations
CRD	Control Rod Drive
DC	Direct Current
DG	Diesel Generator
EAL	Emergency Action Level
EDG	Emergency Diesel Generator
EGM	Enforcement Guidance Memorandum
EP	Emergency Preparedness
FW	Feedwater
HPCS	High Pressure Core Spray
HRA	High Radiation Area
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Issue Report
ISI	Inservice Inspection
IST	Inservice Testing
kV	Kilovolt
LEFM	Leading Edge Flow Meter
LLRT	Local Leak Rate Testing
MSIV	Main Steam Isolation Valve
MT	Magnetic Particle Testing <i>or</i> Magnetic Particle Examination
NCV	Non-Cited Violation
NDE	Nondestructive Examination <i>or</i> Nondestructive Testing
NRC	U.S. Nuclear Regulatory Commission
OBE	Operating Basis Earthquake
PI	Performance Indicator
PI&R	Problem Identification and Resolutions
PM	Planned <i>or</i> Preventative Maintenance
PMT	Post-Maintenance Testing
RA	Required Action
RCIC	Reactor Core Isolation Cooling
RG	Regulatory Guide
RHR	Residual Heat Removal
RI-ISI	Risk-Informed Inservice Inspection Program
RP	Radiation Protection
RPV	Reactor Pressure Vessel
RWP	Radiation Work Permit
SDP	Significance Determination Process
SSE	Safe Shutdown Earthquake
SSPV	Scram Solenoid Pilot Valve
SSC	Structures, Systems, and Components
TIP	Traversing Incore Probe
TRM	Technical Requirements Manual
TS	Technical Specification <i>or</i> Technical Specifications
UFSAR	Updated Final Safety Analysis Report

UT	Ultrasonic Examination <i>or</i> Ultrasonic Testing
VHRA	Very High Radiation Area
VT	Visual Testing <i>or</i> Visual Examination
WO	Work Order