



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

August 13, 2008

Mr. Charles G. Pardee
Chief Nuclear Officer (CNO) and Senior Vice President
Exelon Generation Company, LLC
Chief Nuclear Officer (CNO)
AmerGen Energy Company, LLC
200 Exelon Way
Kennett Square, PA 19348

**SUBJECT: LIMERICK GENERATING STATION - NRC INTEGRATED INSPECTION
REPORT 05000352/2008003 AND 05000353/2008003**

Dear Mr. Pardee:

On June 30, 2008, the U. S. Nuclear Regulatory Commission (NRC) completed an inspection at your Limerick Generating Station Units 1 and 2. The enclosed integrated inspection report documents the inspection results which were discussed on July 7, 2008, with Mr. C. Mudrick 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.

This report documents one NRC-identified finding of very low safety significance (Green). The finding was determined to involve a violation of an NRC requirement. Additionally, two licensee-identified violations which were determined to be of very low safety significance are listed in this report. However, because of the very low safety significance and because they are entered into your corrective action program (CAP), the NRC is treating these findings as non-cited violations (NCVs), consistent with Section VI.A.1. of the NRC Enforcement Policy. If you contest any NCV in this report, you should provide a response within 30 days of the date of this inspection report, with basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administration, Region 1; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-001; and the NRC Resident Inspector at the Limerick facility.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the

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Sincerely,

/RA/

Paul G. Krohn, Chief
Projects Branch 4
Division of Reactor Projects

Docket Nos: 50-352, 50-353
License Nos: NPF-39, NPF-85

Enclosure: Inspection Report 05000352/2008003 and 05000353/2008003
w/Attachment: Supplemental Information

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Sincerely,
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U.S. NUCLEAR REGULATORY COMMISSION

REGION 1

Docket Nos: 50-352, 50-353

License Nos: NPF-39, NPF-85

Report No: 05000352/2008003 and 05000353/2008003

Licensee: Exelon Generation Company, LLC

Facility: Limerick Generating Station, Units 1 & 2

Location: Sanatoga, PA 19464

Dates: April 1, 2008 through June 30, 2008

Inspectors: E. DiPaolo, Senior Resident Inspector
C. Bickett, Resident Inspector
T. Moslak, Health Physicist (Section 2PS2)

Approved by: Paul G. Krohn, Chief
Projects Branch 4
Division of Reactor Projects

TABLE OF CONTENTS

SUMMARY OF FINDINGS	3
REPORT DETAILS.....	4
1. REACTOR SAFETY	4
1R01 Adverse Weather Protection	4
1R04 Equipment Alignment	5
1R05 Fire Protection.....	5
1R06 Flood Protection Measures	6
1R11 Licensed Operator Requalification Program	6
1R12 Maintenance Effectiveness	7
1R13 Maintenance Risk Assessments and Emergent Work Control	7
1R15 Operability Evaluations.....	8
1R19 Post-Maintenance Testing	8
1R22 Surveillance Testing	9
EP6 Drill Evaluation	9
2. RADIATION SAFETY	10
4. OTHER ACTIVITIES.....	12
4OA1 Performance Indicator (PI) Verification	12
4OA2 Identification and Resolution of Problems	13
4OA3 Event Follow-Up	16
4OA6 Meetings, Including Exit.....	17
4OA7 Licensee-Identified Violations.....	17
SUPPLEMENTAL INFORMATION	A-1
KEY POINTS OF CONTACT	A-1
LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED.....	A-1
LIST OF DOCUMENTS REVIEWED	A-2

SUMMARY OF FINDINGS

IR 05000352/2008003, 05000353/2008003; 04/01/2008 - 06/30/2008; Limerick Generating Station, Units 1 and 2; Problem Identification and Resolution.

The report covered a three-month period of inspection by resident inspectors and an announced inspection by a regional health physics inspector. One NRC-identified Green finding, determined to be a non-cited violation (NCV), was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using 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," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Barrier Integrity

- Green. The inspectors identified an NCV of Title 10 of the Code of Federal Regulations, Part 50 (10CFR50), Appendix B, Criterion XVI, "Corrective Action," for not correcting a condition adverse to quality associated with safety-related motor operated valve motor control center auxiliary contact switches in a timely manner following the failure of the Unit 1 Core Spray Loop A test bypass primary containment isolation valve (HV-052-1F015A) to close on August 3, 2006. As a result, the Unit 2 Reactor Core Isolation Cooling (RCIC) turbine exhaust line vacuum breaker outboard primary containment isolation valve (HV-049-2F080) experienced a similar failure to close on June 4, 2008.

The finding was more than minor because it was associated with the structures, systems, and components and barrier containment performance attribute of the Barrier Integrity cornerstone and affected the objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents and events. The inspector assessed the finding using Phase 1 of IMC 0609, Appendix A, "Significance Determination Process for Reactor Inspection Findings for At-Power Situations" and determined the finding to be of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment. This finding has a cross-cutting aspect of Problem Identification and Resolution because Exelon did not take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with the safety significance and complexity (P.1(d)). (Section 4OA2)

B. Licensee-Identified Violations

Violations of very low safety significance, which were identified by Exelon, have been reviewed by the inspectors. Corrective actions taken or planned by Exelon have been entered into their corrective action program. These violations and corrective actions are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Unit 1 began the inspection period operating at full rated thermal power (RTP). On April 5, 2008, operators reduced power to approximately 85 percent to facilitate a control rod pattern adjustment and to return control rod hydraulic control units to service following maintenance. Full RTP was achieved on April 6, 2008. A planned downpower to approximately 77 percent was performed on May 16, 2008, to facilitate control rod scram time testing, main turbine valve testing, and secondary plant maintenance. Full RTP was achieved on May 17, 2008. Unit 1 operated at full RTP for the remainder of the inspection period.

Unit 2 began the inspection period operating at full RTP. On April 26, 2008, operators reduced power to approximately 25 percent to facilitate main steam isolation and main turbine valve testing, control rod scram time testing, and to perform hot weather readiness preventive maintenance. Full RTP was achieved on April 27, 2008. On May 22, 2008, operators reduced power to approximately 60 percent to facilitate main turbine valve testing and to perform secondary plant maintenance. Power was restored to full RTP on May 23, 2008. Unit 2 operated at full RTP for the remainder of the inspection period.

1. REACTOR SAFETY**Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity**1R01 Adverse Weather Protection (71111.01 – 2 samples).1 Summer Readiness of Offsite and Alternate Alternating Current (AC) Power Systemsa. Inspection Scope

The inspectors performed a review of plant features and procedures for the operation and continued availability of the offsite and alternate AC power system to evaluate the readiness of the systems prior to seasonal high grid loading. The inspectors reviewed Exelon's procedures affecting these areas and the communications protocols between the transmission system operator and Exelon. This review focused on verifying that appropriate information is exchanged when grid conditions arise that could impact the offsite power system. The inspector assessed whether appropriate procedures and protocols were established and implemented to monitor and maintain availability and reliability of both the offsite AC power system and the onsite alternate AC power system. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

.2 External Floodinga. Inspection Scope

The inspectors performed a review of external flood protection barriers associated with the Emergency Diesel Generator (EDG) fuel oil storage tanks and the safety-related

service water underground manholes. The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR) to identify design features for coping with external flooding. The inspectors performed a walkdown of accessible fuel oil storage tank vaults and underground manholes associated with the service water system to verify that design features for the protection of water intrusion were installed and functional. The inspector reviewed preventive maintenance and site procedures to verify that commitments associated with the protection of water intrusion for the areas were properly established. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

Partial Walkdown (71111.04Q - 3 samples)

a. Inspection Scope

The inspectors performed a partial walkdown of the plant systems listed below to verify the operability of redundant or diverse trains and components when safety-related equipment in the opposite train was either inoperable, undergoing surveillance testing, or potentially degraded. The inspectors used plant Technical Specifications (TS), Exelon operating procedures, plant piping and instrumentation drawings (P&IDs), and the USFAR as guidance for conducting partial system walkdowns. The inspectors reviewed the alignment of system valves and electrical breakers to ensure proper in-service or standby configurations as described in plant procedures and drawings. During the walkdown, the inspectors evaluated material condition and general housekeeping of the system and adjacent spaces. The documents reviewed are listed in the Attachment. The inspectors performed walkdowns of the following areas:

- 'A' Control Room Emergency Fresh Air System (CREFAS) with 'B' CREFAS out-of-service for planned maintenance;
- D22 EDG following return-to-service due to fuel oil storage tank inspection; and
- 2 'A' and 'C' Residual Heat Removal (RHR) pumps with 2 'D' RHR pump out of service for planned maintenance.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

Fire Protection - Tours (71111.05Q - 5 samples)

a. Inspection Scope

The inspectors conducted a tour of the five areas listed below to assess the material condition and operational status of fire protection features. The inspectors verified that combustibles and ignition sources were controlled in accordance with Exelon's administrative procedures, fire detection, and suppression equipment was available for

use, and that passive fire barriers were maintained in good material condition. The inspectors also verified that station personnel implemented compensatory measures for out-of-service, degraded, or inoperable fire protection equipment in accordance with the station's fire plan. The documents reviewed are listed in the Attachment. The inspectors toured the following areas:

- Spray Pond Pumphouse;
- Auxiliary Equipment Room and Remote Shutdown Panel Room;
- Diesel-Driven Fire Pump Room;
- D22 EDG Fuel Oil Storage Tank (FOST) Vault; and
- D21 EDG and Fuel Oil/Lube Oil Tank Room.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06 - 1 sample)

a. Inspection Scope

The inspectors reviewed the UFSAR and related flood analysis document to identify areas that can be affected by internal flooding, to identify features designed to alert operators of a flooding event, and to identify features designed for coping with internal flooding. The inspectors performed a walkdown of Units 1 and 2 Emergency Core Cooling Pump Rooms (Reactor Buildings, Elevation 177'). The inspectors observed flood protection features to assess their ability to minimize the impact of a flooding event. The inspector verified that periodic preventive maintenance was established for flood detection equipment in these areas. The inspector performed a review of operator actions contained in off-normal procedures for flooding to verify that they can reasonably be used to achieve desired actions. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Regualification Program (71111.11Q - 1 sample)

a. Inspection Scope

On April 29, 2008, the inspectors evaluated licensed operator regualification simulator scenarios on two operating crews. The scenario tested the operators' ability to respond to various failures, including the loss of power to plant equipment, control rod malfunctions, a fuel failure, and a steam leak outside containment. The inspectors observed licensed operator performance including operator critical tasks that measure operator actions required to ensure the safe operation of the reactor and protection of the nuclear fuel and primary containment barriers. The inspectors also assessed group dynamics and supervisory oversight to verify the ability of operators to properly identify and implement appropriate TS actions, regulatory reports, and notifications. The inspectors observed and reviewed the training evaluators' grading and critiques and assessed whether appropriate feedback was provided to the licensed operators. The documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12 - 2 samples)

a. Inspection Scope

The inspectors evaluated Exelon's work practices and follow-up corrective actions for structures, systems, and components (SSCs) and identified issues to assess the effectiveness of Exelon's maintenance activities. The inspectors reviewed the performance history of risk significant SSCs and assessed Exelon's extent-of-condition determinations for those issues with potential common cause or generic implications to evaluate the adequacy of the station's corrective actions. The inspectors assessed Exelon's problem identification and resolution actions for these issues to evaluate whether Exelon had appropriately monitored, evaluated, and dispositioned the issues in accordance with Exelon procedures and the requirements of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance." In addition, the inspectors reviewed selected SSC classifications, performance criteria and goals, and Exelon's corrective actions that were taken or planned, to evaluate whether the actions were reasonable and appropriate. The documents reviewed are listed in the Attachment. The inspectors performed the following samples:

- Issue Report (IR) 707564, Maintenance Rule a(1) Determination for Instrument Air System; and
- IR 671975, HV-055-2F093 Failed to Operate from Handswitch.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 - 6 samples)

a. Inspection Scope

The inspectors evaluated the effectiveness of Exelon's maintenance risk assessments required by 10 CFR 50.65(a)(4). This inspection included discussion with control room operators and risk analysis personnel regarding the use of Exelon's on-line risk monitoring software. The inspectors reviewed equipment tracking documentation, daily work schedules, and performed plant tours to gain assurance that the actual plant configuration matched the assessed configuration. Additionally, the inspectors verified that Exelon's risk management actions, for both planned and emergent work, were consistent with those described in Exelon procedure, ER-AA-600-1042, "On-Line Risk Management." The documents reviewed are listed in the Attachment. Inspectors reviewed the following samples:

- Unit 2 RHR Heat Exchanger Repairs with a Control Rod Drive Pump Out-of-Service during Work Week 0815;
- IR 762240, Unit 2 A RHR Heat Exchanger Bypass Valve Failure (HV-C-051-2F048A);

- IR 737066, Unit 2 Main Turbine Valve Testing following Abnormal Bypass Valve Response;
- Emergent Work on Reactor Enclosure Recirculation System (RERS) during 'B' CREFAS Out of Service for Planned Maintenance;
- Emergent Work on 'A' CREFAS during Unit 1 'A' Core Spray (CS) System Outage Window (SOW), D22 EDG FOST Cleaning, and D11 EDG SOW; and
- IR 790935, Emergent Work on D14 EDG due to Load and Voltage Transient during Post-Maintenance Testing.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15 - 5 samples)

a. Inspection Scope

For the five operability evaluations described below, the inspectors assessed the technical adequacy of the evaluations to ensure that Exelon properly justified TS operability and verified that the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors reviewed the UFSAR to verify that the system or component remained available to perform its intended safety function. In addition, the inspectors reviewed compensatory measures implemented to ensure that the measures worked and were adequately controlled. The inspectors also reviewed a sample of issue reports to verify that Exelon identified and corrected deficiencies associated with operability evaluations. The documents reviewed are listed in the Attachment. The inspectors performed the following assessments:

- IR 756914, Unit 1C Safety/Relief Valve Second Stage Temperature is Reading Two Degrees Low;
- IR 765052, D12 FOST Mechanical Indicator Stuck;
- IR 766331, Unit 2A Suppression Pool Cooling Return Valve (HV-051-2F024A) Stem-to-Disc Separation;
- IR 758875, D23 EDG Jacket Water and Lubricating Oil Temperature Switches Found Out-of-Calibration; and
- IR 780592, 'A' Flow Balance 89-13 Margin Review of CS Unit Coolers.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19 - 7 samples)

a. Inspection Scope

The inspectors reviewed the seven post-maintenance tests (PMTs) listed below to verify that procedures and test activities ensured system operability and functional capability. The inspectors reviewed Exelon's test procedures to verify that the procedures adequately tested the safety functions that may have been affected by the maintenance activity, and that the acceptance criteria in the procedures were consistent with information in the licensing and design basis documents. The inspectors also witnessed

the test or reviewed test data to verify that the results adequately demonstrated restoration of the affected safety functions. The documents reviewed are listed in the Attachment. The inspectors performed the following samples:

- C0224662, Unit 2A RHR Heat Exchanger Bypass Valve (HV-C-051-2F048A) Repairs;
- C0223007, Unit 2A RHR Suppression Pool Cooling Return Valve (HV-051-F024A) Repairs;
- ST-6-076-250-1 following Unit 1A RERS SOW;
- R1096864, Overhaul Unit 1 Control Rod Drive Hydraulic Control Unit 26-03 Waterside Components;
- ST-6-076-250-2, Standby Gas Treatment System (SGTS) and RERS Flow Test following 2B RERS SOW;
- High Pressure Coolant Injection (HPCI) Valve Test and Pump, Valve and Flow Test following Unit 1 HPCI SOW; and
- C0225543, D14 EDG Troubleshooting and Repairs following Load Transient during Testing.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22 - 5 samples)

a. Inspection Scope

The inspectors witnessed the performance and reviewed test data for five surveillance tests (STs) that are associated with risk-significant SSCs. The review verified that Exelon personnel followed TS requirements and that acceptance criteria were appropriate. The inspectors also verified that the station established proper test conditions, as specified in the procedures, that no equipment preconditioning activities occurred, and that acceptance criteria had been met. The documents reviewed are listed in the Attachment. The inspectors reviewed STs for the following systems and components:

- ST-6-092-315-2, D21 Diesel Generator Fast Start Operability Test Run;
- ST-6-092-316-1, D12 Diesel Generator Fast Start Operability Test Run;
- ST-6-092-115-1, D11 Diesel Generator Loss of Coolant Accident /Loss of Coolant Projection Test;
- ST-6-049-230-1, RCIC Pump, Valve, and Flow Test; and
- ST-6-076-250-1, SBGT and RERS Flow Test.

b. Findings

No findings of significance were identified.

EP6 Drill Evaluation (71114.06 - 3 samples)

a. Inspection Scope

The inspectors observed the training evolution and emergency preparedness drills listed below to assess Exelon's emergency response organization's (ERO) implementation of the Limerick emergency plan and implementing procedures. The inspectors reviewed ERO's response to simulated degraded plant conditions to identify weaknesses and deficiencies in classification, notification, and PAR development activities. In addition, the inspectors assessed licensed operator performance required to ensure the safe operation of the reactor and the protection of the nuclear fuel and primary containment barriers. The inspectors observed Exelon's controller and evaluators' critiques of the drill to evaluate Exelon's identification of weaknesses and deficiencies. The inspectors compared inspector observed weaknesses with those identified in Exelon's drill critique to verify whether Exelon adequately identified weaknesses and deficiencies at an appropriate threshold. The inspector verified that the licensee appropriately assessed ERO performance with regard to activities contributing to the Drill and Exercise Performance (DEP) performance indicator training evolution and drills. The documents reviewed are listed in the Attachment. The inspectors assessed the following samples:

- Simulator Training Exercise conducted on April 29, 2008;
- Emergency Preparedness Drill conducted on June 3, 2009; and
- Emergency Preparedness Drill conducted on June 18, 2008.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Public Radiation Safety

2PS2 Radioactive Material Processing and Transportation (71122.02 – 6 samples)

a. Inspection Scope

During the period June 2 - 6, 2008, the inspector conducted the following activities to verify that Exelon's radioactive material processing and transportation programs complied with the requirements of 10 CFR 20, 61, 71, and Department of Transportation (DOT) regulations 49 CFR 170-189. The documents reviewed are listed in the Attachment.

Radioactive Waste Systems Walkdown

The inspector walked down accessible portions of the radioactive liquid processing systems and site radwaste storage areas with the Radwaste Systems Engineer and a Radiation Protection Specialist, respectively. During the tour, the inspector evaluated if the systems and facilities were consistent with the descriptions contained in the UFSAR and the Process Control Program (PCP), evaluated the general material conditions of the systems and facilities, and identified any changes to the systems. The inspector reviewed the current processes for transferring radioactive resin/sludge to shipping containers, and the subsequent de-watering process.

Also during this tour, the inspector walked down portions of radwaste systems that are no longer in service or abandoned in place, and discussed the status of administrative

and physical controls for these systems including components of the radwaste evaporators and centrifuges.

The inspector visually inspected various radioactive material storage locations with the Radiation Protection Specialist, including areas of the Radwaste Building, outside yard locations within the Protected Area, and the on-site disposal site (10 CFR 20.2002 area) to evaluate material conditions.

Waste Characterization and Classification

The inspection included a selective review of the waste characterization and classification program for regulatory compliance, including:

- The radio-chemical sample analytical results for various radioactive waste streams;
- The development of scaling factors for hard-to-detect radio-nuclides from radio-chemical data;
- The methods and practices to detect changes in waste streams; and
- The characterization and classification of waste relative to 10 CFR 61.55 and the determination of DOT shipment subtype per 49 CFR 173.

Shipment Preparation

The inspection included a review of radioactive waste program records, shipment preparation procedures, training records, and observations of jobs-in-progress, including:

- Reviewing radwaste and radioactive material shipping logs for calendar years 2006, 2007, and 2008;
- Verifying that training was provided to appropriate personnel responsible for classifying, handling, and shipping radioactive materials, in accordance with Bulletin 79-19 and 49 CFR 172 Subpart H;
- Verifying that appropriate NRC (or agreement state) license authorization was current for shipment recipients for recent shipments;
- Observing a radwaste Shipping Supervisor provide briefing instructions to a driver for shipment MW-08-024; and
- Verifying compliance with the relevant Certificates-of-Compliance and related procedures for shipping casks.

Shipment Records

The inspector selected and reviewed records associated with five Type B shipments of radioactive material made since the last inspection of this area. The shipment numbers were MW-07-014, MW-07-015, MW-07-016, MW-07-017, and MW-07-018. The inspector reviewed the following aspects of the radioactive waste packaging and shipping activities:

- Implementation of applicable shipping requirements including proper completion of manifests;
- Implementation of specifications in applicable certificates-of-compliance, for the approved shipping casks, including limits on package contents;
- Verification that dewatering criteria was met;

- Classification of radioactive materials relative to 10 CFR 61.55 and 49 CFR 173;
- Labeling of containers relative to package dose rates;
- Radiation and contamination surveys of the packages;
- Placarding of transport vehicles;
- Conduct of vehicle checks;
- Providing of emergency instructions to the driver;
- Completion of shipping papers; and
- Notification by the recipient that the radioactive materials have been received and disposed of.

Identification and Resolution of Problems

The inspector reviewed the 2007 Annual Radioactive Effluent Release Report, relevant Issue Reports, a Nuclear Oversight Audit, a self-assessment report and recent Yard Area Rad Material Inspection reports. Through this review, the inspector assessed Exelon's threshold for identifying problems, and the promptness and effectiveness of the resulting corrective actions. This review was conducted against the criteria contained in 10 CFR 20.1101(c) and Exelon's procedures.

b. Findings

No findings of significance were identified.

4. **OTHER ACTIVITIES**

4OA1 Performance Indicator (PI) Verification (71151 – 6 samples)

a. Inspection Scope

The inspectors sampled Exelon's submittal of the initiating events and mitigating systems performance indicators listed below to verify the accuracy of the data recorded from the fourth quarter of 2007 through the first quarter of 2008. The inspectors utilized performance indicator definitions and guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, to verify the basis in reporting for each data element. The inspectors reviewed various documents, including portions of the main control room logs, issue reports, power history curves, work orders, and system derivation reports. The inspectors also discussed the method for compiling and reporting performance indicators with cognizant engineering personnel and compared graphical representations from the most recent PI report to the raw data to verify that the report correctly reflected the data. The documents reviewed are listed in the Attachment.

Cornerstone: Mitigating Systems (6 samples)

- Units 1 and 2 Mitigating Systems Performance Index, Emergency AC Power System
- Units 1 and 2 Mitigating Systems Performance Index, Heat Removal System
- Units 1 and 2 Safety System Functional Failures

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152 - 2 Annual Samples; 1 Semi-Annual Trend Review)

.1 Review of Items Entered into the Corrective Action Program (CAP)

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors screened all items entered into Limerick's corrective action program. The inspectors accomplished this by reviewing each new condition report, attending management review committee meetings, and accessing Exelon's computerized database.

.2 Semi-Annual Review to Identify Trends

a. Inspection Scope

As required by inspection procedure 71152, "Identification and Resolution of Problems," the inspectors performed a review of Exelon's CAP and associated documents to identify whether trends existed that would indicate a more significant safety issue. The review considered the period of January through June 2008 and was focused on repetitive equipment issues. The results of routine inspector CAP item screening, Exelon's trending efforts, and human performance results were also considered. The inspectors reviewed issues documented outside the normal CAP such as Plant Health Committee reports including the Top Ten Equipment Issues List, the Plant Health Committee Issues List, and the Open Action Items List. The inspectors compared and contrasted their results with the results contained in the Limerick Generating Station Performance Trending reports for the first quarter 2008.

b. Assessment and Observations

No findings of significance were identified. The review did not reveal any trends that could indicate a more significant safety issue. The inspectors assessed that Exelon was identifying issues at a low threshold and entering the issues into the CAP for resolution.

.3 Annual Sample: 2A RHR High Discharge Pressure Alarm

a. Inspection Scope

The inspectors reviewed Limerick's corrective actions associated with IR 709219 regarding a 2A RHR pump discharge high pressure alarm. The inspectors reviewed system operating procedures, applicable motor-operated valve calculations, system drawings, operator logs, and design basis documents as well as other past issue reports to ensure Exelon took appropriate actions in accordance with the requirements of their corrective action program.

b. Findings and Observations

No findings of significance were identified. The inspectors confirmed that the high RHR pump discharge pressure would not adversely affect the operation of the RHR motor operated valves and therefore not affect the safety function of the system. Additionally, the inspectors confirmed that Exelon appropriately categorized and prioritized this issue in their corrective action program.

.4 Annual Sample: Unit 1 Core Spray Test Bypass Valve Failed to Close

a. Inspection Scope

The inspectors reviewed Limerick's apparent cause evaluation, extent-of-condition, and corrective actions associated with IR 516425 regarding the failure of the Unit 1 CS test bypass primary containment isolation valve (PCIV) to close on August 2, 2006. The inspectors evaluated Exelon's actions against the requirements of the corrective action program and applicable regulatory requirements.

b. Findings and Observations

Introduction. The inspectors identified a Green, non-cited violation of 10CFR50, Appendix B, Criterion XVI, "Corrective Action," for not correcting a condition adverse to quality associated with safety-related 480 volt motor operated valves (MOVs) in a timely manner.

Description. On June 4, 2008, Unit 2 RCIC turbine exhaust line vacuum breaker outboard PCIV (HV-049-2F080) failed to close during testing. Exelon determined that the cause of the MOV's failure was mechanical binding due to misalignment between the auxiliary contact switches located in the associated motor control center starter. The contact switch arrangement was "double stacked", meaning two sets of double auxiliary contacts switches (one base switch and one add-on switch) were connected on top of each other. Auxiliary contact switch binding due to misalignment between the base switch and add-on switch caused a normally closed set of contacts to stay in the open position. The contact serves as an interlock in the closing circuit for the valve to prevent simultaneous energization of the open and close coil in the control circuit. With the contact stuck in the open position, energization of the close coil was prevented.

The inspectors reviewed the history of MOV failures due to auxiliary contact switch binding. This review included IR 516425 associated with the failure of the Unit 1 CS Loop A test bypass PCIV (HV-052-1F015A) to close on August 3, 2006. Exelon also determined this failure to be caused due to binding of the "double stacked" auxiliary contact switches similar to the HV-049-2F080 failure. Exelon's investigation found that the same failure mechanism had also been previously experienced at Peach Bottom Atomic Power Station. The problem associated with binding caused by misalignment of "double stacked" auxiliary contact switches was significantly reduced at Peach Bottom Atomic Power Station by eliminating the add-on double auxiliary contact switch and replacing them with less susceptible single auxiliary contact switches. Unused spare contacts were also eliminated which minimized the need to use more than one single auxiliary contact switch.

Exelon determined that the extent-of-condition of the cause of potential binding included all 480VAC motor starters installed with "double stacked" auxiliary contact switches on Units 1 and 2. For pumps and fans, the normally closed auxiliary contacts were typically used in non-critical indication circuits. However, for MOVs, the normally closed contact is used in the close and open interlock and failure will prevent valve operation. The station's corrective actions included inspecting all high and medium risk valve controllers, as defined by Exelon's Specification NE-145, "Selection of Generic Letter 96-05 Program Valves," to identify susceptible controllers and to develop a plan to eliminate the add-on double auxiliary contact arrangement during the next respective system outage window. No specific actions were identified for valves in low risk applications.

The corrective action for low risk valves was to develop a method to fully eliminate the use of this component in low risk applications. This action for low risk valves had a status note following it stating "pending management decision on necessity." The due date for completing the corrective actions was June 30, 2009.

The inspectors compared the corrective actions associated with low risk valves with the guidance in LS-AA-125, "Corrective Action Program Procedure," Revision 11. The inspectors concluded that these actions did not meet the guidance that corrective actions "clearly state the desired end result" or that the corrective actions "address the identified cause."

The performance deficiency associated with this issue is the failure to take appropriate corrective actions in a timely manner to address the adverse condition of mechanical binding in "double stacked" auxiliary contact switches for low risk motor-operated valves. The performance deficiency applies to both Units 1 and 2 because Exelon's established corrective action in IR 516425 applied to both units. As a result, HV-049-2F080, a low risk safety-related valve, failed to close due to mechanical binding of the "double stacked" auxiliary contact switches on June 4, 2008. This performance deficiency applies to both Units 1 and 2 because Exelon's established corrective actions in IR 516425 applied to both units.

Analysis. The finding was more than minor because it was associated with the structures, systems, and components and barrier containment performance attribute of the Barrier Integrity cornerstone and affected the objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents and events. The inspector assessed the finding using Phase 1 of IMC 0609, Appendix A, "Significance Determination Process for Reactor Inspection Findings for At-Power Situations" and determined the finding to be of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment because the RCIC turbine exhaust line vacuum breaker inboard PCIV was available to be closed.

This finding has a cross-cutting aspect of Problem Identification and Resolution because Exelon did not take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with the safety significance and complexity, in that, a previously identified deficiency, which disabled a primary containment isolation valve, was not corrected. This resulted in disabling an additional primary containment isolation valve. (P.1(d))

Enforcement. 10CFR50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. Contrary to the above, between August 3, 2006 and June 4, 2008, Exelon did not correct a condition adverse to quality associated with safety-related motor operated valve motor control center auxiliary contact switches that was identified by the failure of Unit 1 CS Loop A test bypass PCIV (HV-052-1F015A) to close on August 3, 2006. Because the condition adverse to quality was not corrected, the Unit 2 RCIC turbine exhaust line vacuum breaker outboard PCIV (HV-049-2F080) did not close on June 4, 2008, due to binding of the auxiliary contact switch in its motor starter circuitry. Because the finding is of very low safety significance and has been entered into Exelon's CAP as IR 781939, this violation is being treated as a Green NCV, consistent with Section VI.A.1 of the NRC Enforcement policy. This inspector-identified

non-cited violation was entered into Exelon's CAP as IR 781939. **(NCV 05000352, 353/2008003-01, Failure to Correct Adverse Condition Associated with Motor Operated Valves.)**

4OA3 Event Follow-Up (71153 - 2 samples)

.1 Plant Event Review

a. Inspection Scope

For the two plant events listed below, the inspectors observed plant parameters and, as applicable, reviewed personnel performance and evaluated performance of mitigating systems. The inspectors communicated the plant events to appropriate regional personnel and compared the event details with criteria contained in IMC 0309, "Reactive Inspection Decision Basis for Reactors," for consideration of additional reactive inspection activities. The inspectors reviewed Exelon's follow-up actions related to the events to assure that appropriate corrective actions were implemented commensurate with their safety significance.

- IR 766331, Unit 2 A Suppression Pool Cooling Return Valve (HV-051-2F024A) Discovered to Have a Stem-Disc Separation; and
- Unit 2 Turbine Building Condenser Bay Flooding due to Failure of a Circulating Water Anode on May 22, 2008.

b. Findings

No findings of significance were identified.

.2 (Closed) LER 05000352/02008-001: Source Range Monitor Inoperable While Control Rod Moved.

On March 16, 2008, during the Unit 1 refueling outage, a control rod was withdrawn with the source range monitor in the affected core quadrant inoperable which is contrary to TS 3.9.2, Refueling Operations - Instrumentation. This issue was identified by an Instrumentation and Controls technician performing maintenance activities in the auxiliary instrument room. The root cause of the event was the control room supervisor and reactor operator failing to ensure the "C" source range monitor was not bypassed prior to declaring it operable. The source range monitor was restored to operable and the control rod was inserted. The event is documented in Exelon's corrective action program as IR 750227. The enforcement aspects of this issue are discussed in Section 4OA7. This LER is closed.

.3 (Closed) LER 05000352/02008-002: Unit 1 Trip Due to Actuation of Power Load Unbalance.

On March 22, 2008, Unit 1 automatically scrammed due to a main turbine trip during power escalation following refueling outage with the unit at 87 percent power. The root cause of the scram was the generator protection relay logic failure caused by an inadequately seated tap screw on the "B" phase of the Accidental Energization (350-G101) relay. The failure caused a false input into the power load unbalance circuit of the electro-hydraulic control system that resulted in a turbine trip and reactor scram.

Exelon's investigation could not determine when the tap screw was inadequately seated. The inspectors determined that there was no performance deficiency associated with this event since the post-maintenance testing performed following the relay's replacement during the Spring 2008 refueling outage was consistent with industry practices. As a result of this event, the main generator relay testing procedures will be revised to include a circuit loop signal verification test to ensure reliability of newly installed equipment. The event is documented in Exelon's corrective action program as IR 750227. This LER is closed.

.4 (Closed) Licensee Event Report (LER) 05000353/02008-003: Condition Prohibited By Technical Specifications Due To Inoperable Radiation Monitor.

On April 15, 2008, during a review of ST-2-013-600-2, "Reactor Enclosure Cooling Water (RECW) Radiation Monitor Functional Test," the Surveillance Test Coordinator identified the "as-left" value of the HI-HI setpoint was above the required limit of 1050 counts per minute (CPM). The "as-found" value for the HI-HI setpoint was recorded as 1100 CPM as indicated on the radiation monitor analog scale. During the data review, the technician performing the test on March 24, 2008, did not identify that this value was above the required limit. Contrary to TS 3.3.7.1, "Monitoring Instrumentation - Radiation Monitoring Instrumentation," the station did not collect the required grab samples for the inoperable monitor during the effected period. The condition was caused by a less-than-adequate self-check by the technician recording the data during the functional surveillance test as well as a less-than-adequate supervisory review. Corrective actions included a workgroup stand-down to reinforce the consequences of not applying the barriers that are designed for error prevention and the addition of independent reviews of surveillance test data. The event was documented in Exelon's corrective action program as IR 763510. The enforcement aspects of this issue are discussed in section 4OA7. This LER is closed.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On July 7, 2008, the resident inspectors presented the inspection results to Mr. C. Mudrick and other members of his staff. The inspectors confirmed that proprietary information was not included in the inspection report.

4OA7 Licensee-Identified Violations

The following violations of very low safety significance (Green) were identified by Exelon and are violations of NRC requirements which met the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for disposition as NCVs.

- Technical Specification 3.3.7.1, "Monitoring Instrumentation - Radiation Monitoring Instrumentation," requires one operable reactor enclosure cooling water (RECW) system radiation monitor channel "at all times." Action 72 of Table 3.3.7.1-1 requires obtaining a grab sample every 24 hours with the required monitor inoperable. Contrary to TS 3.3.7.1, the required RECW Radiation Monitor was inoperable in Unit 2 from March 24, 2008 until April 15, 2008 without obtaining a grab sample every 24 hours. The event is documented in Exelon's CAP as IR 763510. The finding was of very low safety significance

because it does not represent an open pathway in the physical integrity of reactor containment.

- Technical Specification 3.9.2, “Refueling Operations - Instrumentation,” requires an operable source range monitor (SRM) in the quadrant where core alterations are being performed when in Operational Condition 5 (OPCON 5). If this requirement is not satisfied, the operators are required to immediately suspend all operations involving core alterations and insert all insertable control rods. Contrary to TS 3.9.2, on March 16, 2008, with Unit 1 in OPCON 5, a control rod was withdrawn with the required source range monitor in the affected core quadrant inoperable. The event is documented in Exelon’s CAP as IR 750227. The finding is of very low safety significance because the finding did not require quantitative assessment per Checklist 7 of Attachment 1 to IMC 0609, Appendix G, “Shutdown Operations Significance Determination Process.”

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION**KEY POINTS OF CONTACT**Exelon Generation Company

C. Mudrick, Site Vice President
 E. Callan, Plant Manager
 D. DiCello, Manager, Radiation Protection
 R. Dickinson, Director, Engineering
 P. Gardner, Director, Operations
 R. Kreider, Manager, Regulatory Assurance
 M. Jesse, Manager, Nuclear Oversight
 S. Bobbyock, Manager, Plant Engineering
 M. Crim, Manager, Operations Services
 C. Gray, Manager, Radiological Engineering
 R. Harding, Engineer, Regulatory Assurance
 J. Berg, System Manager, HPCI
 J. George, System Manager, RHR
 M. Gift, System Manager, Radiation Monitoring Systems
 L. Lail, System Manager, EDG
 R. Gosby, Radiation Protection Technician, Instrumentation
 D. Malinowski, Simulator Instructor
 J. Sprucinski, Senior Radiation Protection Technician

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSEDOpened

None

Closed

05000353/02008-003	LER	Condition Prohibited By Technical Specifications Due To Inoperable Radiation Monitor (Section 4OA3.4)
05000352/02008-001	LER	Source Range Monitor Inoperable While Control Rod Moved (Section 4OA3.2)
05000352/02008-002	LER	Unit 1 Trip Due to Actuation of Power Load Unbalance (Section 4OA3.3)

Opened and Closed

05000352-05000353/2008003-01	NCV	Failure to Correct Adverse Condition Associated with Motor Operated Valves (Section 4OA2.4)
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Discussed

None

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures

E-5, Grid Emergency, Revision 11
Limerick Generating Station Units 1 and 2 Individual Plant Examination for External Events, June 1995
OP-AA-108-107, Switchyard Control, Revision 2
OP-AA-108-107-1001, Station Response to Grid Capacity Conditions, Revision 2
OP-AA-108-107-1002, Interface Agreement between Exelon Energy Delivery and Exelon Generation for Switchyard Operations, Revision 4
OP-AA-108-107-101, Station Response to Grid Capacity Conditions, Revision 2
PJM Manual 13, Emergency Operations, Revision 33
PJM Manual 3, Transmission Operations, Revision 30
UFSAR Section 2.4, Hydrologic Engineering
UFSAR Section 3.4, Water Level (Flood) Design
UFSAR Section 9.5.4, Diesel Generator Fuel Oil System
WC-AA-8000, Interface Procedure between Exelon Energy Delivery (COMED/PECO) and Exelon Generation (Nuclear Power) for Construction and Maintenance Activities, Revision 2

Section 1R04: Equipment Alignment

Procedures

ARC-BOP-0CC101 A1, Control Room Air Supply Filter A DP HI/OA Temperature Trouble, Revision 0
RT-100-370-0, Inspection of Emergency Diesel Generator Fuel Oil Storage Tank Leak Collection Sumps, Revision 7
ST-4-078-731-0, A CREFAS Charcoal Adsorber/HEPA Filter Test, Revision 4, completed 11/08/2006
ST-4-078-801-0, A CREFAS Charcoal Analysis, Revision 6, completed 12/22/2006
ST-6-078-301-0, A CREFAS Monthly Operability Test, Revision 14, completed 04/06/2008

Issue Reports and Action Requests

IR 648657, Defective Damper Seal
IR 770342, D22 FOST Vault Seals Degraded around Through-Floor Piping
IR 770348, D22 FOST-Fuel Oil Fill Line into Vault is Rusted
IR 770355, D22 FOST Vault-Conduit Piping is Cracking
IR 770357, D22 FOST-Fuel Oil Gravity Return Line is Rusted

Miscellaneous

Limerick Active LCO Logs, dated 04/21/2008
Online Risk Assessment for Work Week 0817

Section 1R05: Fire Protection

Procedures

F-FOSB-001, Pre-Fire Plan Strategy for Fuel Oil Storage Building, Revision 0
F-P-001, Diesel Driven Fire Pump (Circ Water Pump Structure Elevation 217),” Revision 6
F-S-001 Common “Spray Pond Pump Structure Western Half Fire Area 122,” Revision 7

F-S-002 Common, "Spray Pond Pump Structure Eastern Half Fire Area 123," Revision 7

Issue Reports and Action Requests

IR 360027, Smoke Detector LED Did Not Illuminate

Section 1R06: Flood Protection Measures

Procedures

Special Event Procedure SE-4-1, Reactor Enclosure Flooding, Revision 8

Individual Plant Examination, Limerick Generating Station Units 1 and 2

Updated Final Safety Analysis Report, Chapter 3, Design of Structure, Components, Equipment, and Systems

Issue Reports and Action Requests

IR 672157, LSH-55140 Failed to Actuate during Preventive Maintenance

Work Orders

R0046120

Section 1R11: Licensed Operator Regualification Program

Procedures

LSTS-3323, Steam Leak Valve Outside Containment, Revision 2

ON-104, Control Rod Problems, Revision 41

T-101, RPV Control, Revision 19

T-102, Primary Containment Control, Revision 22

T-117, Level Power Control, Revision 12

Section 1R12: Maintenance Effectiveness

Issue Reports and Action Requests

IR 707564, A(1) Determination for Instrument Air System

Miscellaneous

Maintenance Rule Expert Panel Meeting Minutes dated 12/11/2007

Maintenance Rule Scope and Monitoring Report for Instrument Air

Maintenance Rule Scope and Monitoring Report for HPCI

Maintenance Rule Scope and Monitoring Report for Containment and Leak Testing

Maintenance Rule Condition Report Review for IR 671975

Performance Monitoring Summary for Instrument Air System

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Issue Reports and Action Requests

IR 516425, HV-051-1FO15A Failed to Close from Handswitch

Miscellaneous

Paragon Risk Assessment for April 30, 2008

Section 1R15: Operability

Procedures

RT-6-041-490-1, Suppression Pool Gross Input Leak Rate Determination, Revision 2
RT-6-041-490-1, Suppression Pool Gross Input Leak Rate Determination, Revision 3
RT-6-041-490-1, Suppression Pool Gross Input Leak Rate Determination, Revision 13

Issue Reports and Action Requests

IR 665448, Diesel Temperature Switches Found Out of Calibration
IR 698972, Perform Review to Improve Heat Exchanger Heat Transfer Test Evaluations
IR 709577, Critical Temperature Switch Found in Failed Condition
IR 711906, D24 Critical Temperature Switches Deficiency
IR 756914, 1C SRV Second Stage Temperature is Reading 2 Degrees Low
IR 765062, D13 FOST Mechanical Indicator Stuck
IR 780592, Post 'A' Flow Balance 89-13 Margin Review of CS Unit Coolers

Work Orders

M1660252

Miscellaneous

LER 05000352/95-008, Inadvertent Opening of 1M Safety Relief Valve
LER 05000353/01-001, Inadvertent Opening of 2N Main Steam Relief Valve
PEP I0012314, 2N SRV Inadvertently Lifted and Remained Open During S/D

Section 1R19: Post Maintenance Testing

Procedures

S55.1.D, HPCI System Full Flow Functional Test, Revision 34
ST-6-055-200-2, HPCI Valve Test, Revision 47, completed 6/17/08
ST-6-055-230-2, HPCI Pump Valve and Flow Test, Revision 60, completed on 6/17/08

Issue Reports and Action Requests

IR 786980, Unit 2 HPCI Proactive Adjustment of Stop Valve Balance Chamber

Work Orders

R0951637

Miscellaneous

Online Daily Plan for Work Week 0825
Clearance 08001087
Clearance 08001093

Section 1R22: Surveillance Testing

Procedures

ST-6-092-115, D11 Diesel Generator 4KV Safeguards Loss of Power LSF/SAA and Outage Testing, Revision 10

Issue Reports and Action Requests

IR 205101, Unexplained Rise in KW and KVAR during Diesel Generator Runs
IR 291304, D12 Diesel Generator KVAR Swings during RT-6-902-502-1

IR 578265, KVAR Swings during D12 Cooldown
IR 766310, 1 RERS Flow Low Per ST-6-076-250-1
IR 770701, Septoint of FSL-076-294A may Interfere with 2B RERS
IR 770857, FSL-076-1948 Requires Setpoint Optimization
IR 772343, D12 Diesel Generator Large VAR Change
IR 784549, ST-6-076-250-1 Performed without an Eval Comp Measure
A 1498892, D12 Diesel Generator
A 1618063, D12 Diesel Generator Excitation

Miscellaneous

6380E, Diesel Generator Voltage Regulation Study, Revision 3
Diesel Generator Fuel Oil Transfer Pumps In-Service Testing Bases Document
ECR LG 02-00839, Revise IST Program for DG FD Transfer Pump
Exelon IST Program Technical Position, Classification of Skid Mounted Components

Section EP6: Drill Evaluation

Procedures

EP-AA-1000, Exelon Nuclear Standardized Radiological Emergency Plan, Revision 19

Issue Reports and Action Requests

IR 769938, Multiple Failed Drill/Exercise Performance Opportunities during Licensed Operator
Requalification Training

Section 2PS2: Radioactive Material Processing and Transportation (71122.02)

Procedures

M-053-003, 3-55 Transport Cask Handling, Revision 10
M-053-004, 8-120B Transport Cask Operations, Revision 9
RP-AA-600, RADIOACTIVE Material/Waste Shipments, Revision 10
RP-AA-600-1001, Exclusive Use and Emergency Response Information, Revision 4
RP-AA-600-1002, Highway Route Controlled Quantity Advance Notification for
Radioactive/Waste Shipments, Revision 2
RP-AA-600-1003, Radioactive Waste Shipments to BARNWELL and the DEFENSE
CONSOLIDATION FACILITY, Revision 5
RP-AA-600-1004, Radioactive Waste Shipments to ENVIROCARE, Revision 7
RP-AA-600-1005, Radioactive Material and Non-Disposal Site Waste Shipments, Revision 10
RP-AA-600-1006, Notification Requirements for Radioactive Waste Shipments Greater Than
Ten Times the Minimum Quantity of Concern, Revision 4
RP-AA-601, Surveying Radioactive Material Shipments, Revision 10
RP-AA-601, Transportation Accident Response, Revision 0
RP-AA-602, Packaging of Radioactive Material Shipments, Revision 12
RP-AA-602-1001, Packaging of Radioactive Material/Waste Shipments, Revision 9
RP-AA-603, Inspection and Loading of Radioactive Material Shipments, Revision 3
RP-AA-603-1001, Inspection and Loading of Radioactive Material/Waste Shipments, Revision 1
RP-AA-605, 10 CFR 61 Program, Revision 0
RP-LG-6050, 10 CFR 61 Waste Stream Sampling and Analysis, Revision 2
RW-226, Radwaste and Radioactive Material Inspection & Loading Operations, Revision 13
RW-AA-100, Process Control Program for Radioactive Wastes, Revision 5

Nuclear Oversight Audits

Self-Assessment Report: RadWaste, Transportation, and Process Control Programs
Audit No. NOSA-LIM-08-04 (IR 745595), Chemistry, RadWaste, Effluent and Environmental
Monitoring Audit Report
2008 Chemistry, Radwaste, Effluent, and Environmental Monitoring Audit Comparative Report

Shipping Manifests

Shipment No. MW-07-014, Irradiation Hardware, Type B
Shipment No. MW-07-015, Irradiated Hardware, Type B
Shipment No. MW-07-016, Dewatered Mechanical Filters, Type B
Shipment No. MW-07-017, Irradiated Hardware, Type B
Shipment No. MW-08-024, Green-Is-Clean, Limited Quantity

Issue Reports

748754, 765045, 767494, 723737, 748754, 765045, 764510, 769079, 767313, 766508, 766514,
766506, 766499, 764369, 78343

Miscellaneous

10 CFR 61 Reports for 2006, 2007, and 2008
2007 Limerick Annual Radioactive Effluent Release Report
NHPT2-1100, DOT 79-19 Training Plan for Radiation Protection Personnel
NRWSHP 1000, Lesson Plan for DOT 79-19 Training
Rad Waste and Radioactive Material Shipping Logs for 2006, 2007, and 2008
Radwaste/Transportation Training Records for selected personnel
TQ-AA-223-F070, DOT 79-19 Training for Support of Radioactive Material Shipping, Revision 3
WMG-07-004-RE-080, Packaging and Disposal of Irradiated Hardware at Limerick Generating
Station during 2007

Section 40A1: Performance Indicator (PI) Verification

Procedures

S92.6.N, Diesel Oil Storage Tank Lineup to Fill Other Than its Associated Day Tank,
Revision 10

Issue Reports and Action Requests

IR 671925, HV-055-2FO93 Failed to Operate from the Hand Switch
IR 700312, HPCI LER Retraction Not Communicated to Program Coordinator
IR 712015, 2A-P206 Core Spray Pump Mechanical Seal Drive Collar
IR 741722, Unit 2 HPCI EGM Output Outage Fluctuation
IR 741725, Unit 2 HPCI Erratic Control Valve Position Indication
IR 747350, 1R12 LL – D13 Bus Trip Test – “C” ESW Pump Impact Not Planned
IR 755999, PSV Failed Seat Tightness Test
IR 767479, Relayed Alarm Div 3 RHR or SLC Out of Service Reason Unknown

Miscellaneous

Core Spray Maintenance Rule Failure Report
HPCI Maintenance Rule Failure Report
Maintenance Rule Failure Report for System 092
Operator Logs 10/1/2008 through 3/31/2008
Operator Logs dated 10/1/2007 – 03/31/2008
RHR Maintenance Rule Failure Report

Safeguard DC Power System Maintenance Rule Failure Report
Unit 1 and Unit 2 Heat Removal System Unavailability Reports
Unit 1 and Unit 2 Heat Removal System Unreliability Reports
Unit 1 and Unit 2 MSPI Derivation Reports for Emergency AC Power System
Unit 2 EDG System Unavailability for January 2008

Section 4OA2: Identification and Resolution of Problems

Procedures

ARC-MCR-215 F3, 2B RHR Pump Discharge Hi/Lo Pressure, Revision 1
S51.4.A, Manual Depressurization of RHR, Revision 9
S51.8.A, Suppression Pool Cooling Operation (Start-up and Shutdown) and Level Control,
Revision 38

Issue Reports and Action Requests

IR 470120, The HV-051-1F017C Possibly Leaking By
IR 502283, NRC Issues Concerning 1B RHR Pump Discharge Alarms
IR 512162, 2C RHR PP Discharge Piping Rising Pressure
IR 567128, Received 2A RHR Pump Discharge High Pressure
IR 571708, Received Alarm 2B RHR Pump Discharge Hi/Lo
IR 571794, 2A RHR Pump Discharge High Pressure
IR 636580, 2A RHR Pump Discharge High Pressure Following Pump Shutdown
IR 643538, 2A RHR Pump Discharge Hi/Lo Pressure Alarm
IR 643594, 2B RHR Pump Discharge Hi/Lo Pressure Alarm
IR 666964, Unexpected MCR 213 F3
IR 755510, 2B RHR Pump Discharge Hi/Lo Pressure (213 F3) Alarm Received

Miscellaneous

AC Motor Operated Valve Calculation for HV-051-2F024B
Calculation LM-50, Residual Heat Removal System MOV DP Calculation, Revision 5
Motor Operated Valve Control Parameters for HV-051-2F024B
Operator Logs, dated 04/14/2005 through 04/14/2008

Section 4OA3: Event Follow-up

Procedures

SE-4, Flood, Revision 6
SE-4-2, Turbine/Control Enclosure Flooding, Revision 2

Issue Reports and Action Requests

IR 654041, Dual Indication for HV-051-2-F024A during Stoke Close
IR 656212, Perform Diagnostic Test as follow-up to Limit Switch Failure

Miscellaneous

Drawing 21111-3, Revision 3, 18 “-300” Globe Valve
LGS1 and 2 IST Program ML-008, Revision 8
Work Order C0221891, Replace Limit Switches and Diagnostic Testing

LIST OF ACRONYMS

ADAMS	Agencywide Documents Access Management System
AC	Alternating Current
AR	action request
CAP	Corrective Action Program
CFR	Code of Federal Regulations
CNO	Chief Nuclear Officer
CPM	counts per minute
CREFAS	control room emergency fresh air system
CS	core spray
DEP	drill and exercise performance
DOT	Department of Transportation
EDG	emergency diesel generator
ERO	emergency response organization
FOST	fuel oil storage tank
HPCI	high pressure coolant injection
IMC	Inspection Manual Chapter
IR	issue report
LER	Licensee Event Report
MOV	motor operated valves
NCV	non-cited violation
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OPCON	operational condition
P&ID	pipng and instrumentation drawing
PARS	Publicly Available Records
PCIV	primary containment isolation valve
PCP	process control program
PI	performance indicator
PMT	post-maintenance test
RCIC	reactor core isolation cooling
RECW	reactor enclosure cooling water
RERS	reactor enclosure recirculation system
RHR	residual heat removal
RRP	reactor recirculation pump
RTP	rated thermal power
SDP	significance determination process
SGTS	standby gas treatment system
SOW	system outage window
SRM	source range monitor
SSC	structure, system, component
ST	surveillance test
TS	technical specification
UFSAR	updated final safety analysis report