December 16, 2005

Mr. Christopher M. Crane
President and CNO
Exelon Nuclear
Exelon Generation Company, LLC
200 Exelon Way KSA 3-E
Kennett Square, PA 19348

SUBJECT: LIMERICK GENERATING STATION - NRC SAFETY SYSTEM DESIGN AND PERFORMANCE CAPABILITY INSPECTION REPORT 05000352/2005007 AND 05000353/2005007

Dear Mr. Crane:

On November 4, 2005, the U.S. Nuclear Regulatory Commission (NRC) completed a safety system design and performance capability team inspection at your Limerick Facility. The enclosed report documents the inspection results that were discussed on November 4, 2005, with Messrs. E. Callan and P. Orphanos, 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 inspection team reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of the inspection, no findings of significance were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Lawrence T. Doerflein, Chief
Engineering Branch 2
Division of Reactor Safety

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

Enclosure: NRC Inspection Report 05000352/2005007and 05000353/20005007

w/Attachment: Supplemental Information

cc w/encl:
Chief Operating Officer, Exelon Generation Company, LLC
Site Vice President - Limerick Generating Station
Plant Manager, Limerick Generating Station
Regulatory Assurance Manager - Limerick
Senior Vice President - Nuclear Services
Vice President - Mid-Atlantic Operations
Vice President - Operations Support
Vice President - Licensing and Regulatory Affairs
Director - Licensing and Regulatory Affairs, Exelon Generation Company, LLC
Manager, Licensing - Limerick Generating Station
Vice President, General Counsel and Secretary
Associate General Counsel, Exelon Generation Company
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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos.	50-352, 50-353
License Nos.	NPF-39, NPF-85
Report Nos.	05000352/2005007, 05000353/2005007
Licensee:	Exelon Generation Company, LLC
Facility:	Limerick Generating Station, Units 1 and 2
Location:	Limerick, PA
Dates:	October 17, 2005 through November 4, 2005
Inspectors:	Kevin Mangan, Senior Reactor Inspector (Team Lead Inspector) Frank Arner, Senior Reactor Inspector Glenn Meyer, Senior Reactor Inspector Patrick Finney, Reactor Inspector Jeffrey Josey, Reactor Inspector Shani Lewis, Reactor Inspector Geoffrey Ottenberg, Reactor Inspector (Trainee)
Approved by:	Lawrence T. Doerflein, Chief Engineering Branch 2 Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000352/20050007, 05000353/20050007; 10/17/2005 - 11/05/2005; Limerick Generating Station, Units 1 & 2; Engineering Team Inspection.

This inspection was conducted by a team of six inspectors from the NRC's Region I office. No findings of significance were identified. 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. NRC-Identified and Self-Revealing Findings

None.

B. Licensee-Identified Violations

None.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Mitigating Systems and Barrier Integrity

1R21 Safety System Design and Performance Capability (SSD&PC) (IP 71111.21)

1. Inspection Basis

The NRC performed an inspection to verify the selected safety systems would achieve their design and performance capability. The inspection effort included a review of the licensee's programs and methods for monitoring the capability of selected safety systems to perform their current design bases functions. The scope of the team's inspection also included non safety-related structures, systems and components that provided functions required to support the selected system's safety functions. The team inspected the selected systems on both units.

The systems reviewed during this inspection were selected by the inspection team using information from the licensee's and NRC's probabilistic risk analysis models. The models were used to identify risk significant systems, structures, and components in the mitigating system and barrier integrity cornerstones. The team also used deterministic criteria in the selection process by considering previous SSD&PC sample selection, recent inspection history, site problem history, and operational experience. The two systems selected for review were:

- High Pressure Coolant Injection System (HPCI)
- Reactor Core Isolation Cooling System (RCIC)

The team assessed the adequacy of calculations, analyses, engineering processes, and engineering and operating practices that were used by the licensee to support the performance of the selected safety systems and associated support systems during normal, abnormal, and accident conditions. The inspection included review and examination of support systems, such as DC electrical power, instrumentation, and related structures and components. Acceptance criteria utilized by the NRC team included verification of compliance with NRC regulations, the Limerick Technical Specifications, and applicable sections of the Updated Final Safety Analysis Report (UFSAR). Additionally, the team reviewed guidance in NRC Generic Communications, industry codes and standards, as well as, industry initiatives implemented by the licensee's programs, to assess the ability of the systems to meet their design basis function. The team also assessed the licensee's ability to monitor the system for age related degradation that could result in the system failing to fulfill its design requirement. A complete list of documents reviewed is included in the attachment to this report.

2. System Needs

a. Inspection Scope

The team inspected the following attributes of the two systems and associated support systems: Process Medium, Energy Sources, Controls, Operator Actions, and Heat Removal. The inspectors verified the above attributes met the requirements and design basis specifications identified in the UFSAR, technical specifications, licensee commitments, design bases documents, vendor technical manuals and plant drawings. A complete list of documents reviewed is included in the attachment. The attributes were verified to meet system requirements as described below:

Process Medium. The team verified that the HPCI and RCIC systems would supply adequate flow rate at design pressures to the reactor vessel following normal transients and design basis events from both the suppression pool and condensate storage tank suction sources. Additionally, the team verified sufficient water was available to meet the design basis assumptions. This included a review of the licensee's net positive suction head and vortexing calculations to determine if sufficient margin existed to assure the availability of the two systems.

Energy Sources. The team verified that the batteries used to supply DC electric power to the HPCI and RCIC systems were adequately sized to meet system demands and that the DC distribution system was designed to assure functionality at reduced voltages anticipated during a design basis event (DBE). Additionally, the team verified that the steam supply to the systems turbines would be available and sufficient to operate the turbines during all design basis events. Finally, the team evaluated the availability of control power to energize/actuate required equipment including motor operated valves (MOV) and governor control circuits during a DBE.

Controls. The team reviewed the automatic and manual controls for the HPCI and RCIC systems to assure that the automatic and manual control functions would be available for initiation, control and shutdown actions including operations at the remote shutdown panel. Additionally, a review of alarms and indicators was performed to ensure that operator actions could be accomplished in accordance with the design assumptions. The team observed operation of the systems during several accident scenarios in the licensee's simulator, reviewed functional testing results, and check electrical prints to assess the ability of the system to both warn operators of problems and allow operators to control the systems.

Operation Actions. The team reviewed normal, abnormal and emergency operating procedures to verify that operator actions for the HPCI and RCIC systems assumed in the design bases could be completed. The team verified this by comparing actions prescribed in the procedure with design basis calculation assumptions, and observing accident scenarios in the licensee's simulator. The review included an assessment of battery loading and discharge rates, controlling maximum room temperatures and process temperature limits. Additionally, the team verified that operators were able to manually initiate the system, monitor components and system indications, automatically

or manually control system functions and shutdown the system during postulated events, such as Small Break Loss of Cooling Accidents (SBLOCA), Station Blackout (SBO), and Anticipated Transient Without Scram (ATWS). Additionally, the team confirmed that operator actions to prevent isolation of the systems during events could be performed via walkdown of the associated procedure and by review of circuit prints.

Heat Removal. The team verified that the licensee's calculations for room heatup and maximum room temperatures during design basis events were adequate to support the design basis documents, which credited no room cooling systems to maintain acceptable environmental conditions in the RCIC and HPCI system rooms. Additionally, the team verified temperature rise on system components due to heat generated by the system was limited such that component temperature qualifications were not exceeded.

b. Findings

No findings of significance were identified.

3. System Condition and Capability

a. Inspection Scope

The team inspected the following attributes of the HPCI and RCIC systems and associated support systems: Installed Configuration, Operation, Design, and Testing. The inspectors verified the above attributes met the requirements and design bases specifications identified in the UFSAR, technical specifications, licensee commitments, design basis documents, vendor technical manuals, calculations and plant drawings. A complete list of documents reviewed is included in the attachment to this report. The attributes were verified to meet system requirements as described below:

Installed Configuration. The team confirmed that the installed configuration of the HPCI and RCIC systems were in agreement with design basis assumptions by performing detailed system walkdowns of accessible portions of both systems. The walkdowns focused on the installation and configuration of piping and instruments; component material condition; licensee identified deficiencies; the placement of protective barriers; the susceptibility to flooding, fire, or other environmental concerns such as temperature and humidity levels in the room; physical separation of redundant trains; and provisions for seismic and other pressure transient concerns. The team compared their observations of the current installed configuration of the systems with the design and licensing bases to assure that the system would be capable of functioning during plant transients or accident conditions.

Operation. The team performed a procedure walk-through of selected manual operator actions to confirm that the operators had the capability to complete the actions. Actions reviewed included establishing room cooling, cross-tying vital AC power supplies and removing isolation logic during an SBO event. The walk down was conducted to ensure that operators had access and tools necessary to accomplish actions credited and they could perform the actions in the time frame described in the design basis. Additionally,

the team verified that the performance of operations procedures was consistent with the design and licensing bases.

Design. The team reviewed the mechanical, electrical, and instrumentation design of the HPCI and RCIC systems to verify that the systems and subsystems would function as required under design conditions. This included a review of the design basis, design changes, design assumptions, calculations, boundary conditions, and models as well as a review of selected modification packages. Instrumentation was reviewed to verify appropriateness of applications and set points based on the required equipment function. Additionally, the inspectors performed independent calculations and analyses in several areas, such as room heat-up and operating the pumps with no minimum flow valve, to verify the appropriateness of the design values.

Testing. The team reviewed records of selected periodic testing including technical specification surveillance tests, In-Service Testing (IST) for pumps and valves, post maintenance tests and calibration procedures. The team verified that the results obtained by system and component testing adequately demonstrated that the systems met operability requirements. The test results were compared against system calculations, drawings, and procedures. Test results were also reviewed to ensure automatic initiations occurred within required times and that testing was consistent with design basis information.

b. Findings

No findings of significance were identified.

4. System Components

a. Inspection Scope

The inspectors selected several risk significant components in the HPCI and RCIC systems to ensure equipment at the component level met design requirements. The components selected for detailed review included:

- RCIC lube oil system
- Division I Safeguard Batteries
- RCIC electrical control system
- RCIC pump
- RCIC minimum flow valve
- Division II Safeguard Batteries
- Division II Battery Chargers
- HPCI Auxiliary Oil Pump
- HPCI Main and Booster Pump
- HPCI Turbine

The inspectors inspected the following attributes of the HPCI and RCIC components: Component Degradation, Environmental Qualification, Equipment Protection,

Input/Output, and Operating Experience. The inspectors verified the above attributes met the requirements and design basis specifications identified in the UFSAR, technical specifications, licensee commitments, design basis documents, vendor technical manuals, calculations and plant drawings. A complete list of documents reviewed is included in the attachment to this report. The attributes were verified to meet system requirements as described below:

Component Degradation. The team reviewed selected maintenance and operations procedures to determine how potential age related degradation of the selected components was monitored and corrected. The team verified that component and/or component materials replacement were scheduled prior to exceeding its expected qualified life or allowed number of cycles.

Environmental Qualification. The team verified that the equipment was qualified to operate under the environment in which it expected to be subjected to under normal and accident conditions. These included a review of the temperatures, pressures, and humidity levels the components are exposed to during standby operation, normal operations, and events such as SBO, SBLOCA, and ATWS. The team reviewed design information, specifications, and documentation to evaluate the component qualification under the expected environment.

Protection. The team verified that the selected components were adequately protected from natural phenomenon and other hazards, such as high energy line breaks, fire, floods or missiles. The team reviewed design information, specifications, and documentation to ensure that system components were adequately protected from those hazards identified in the UFSAR which could impact their ability to perform their safety function. The team walked down the system to assess if potential interactions identified were accounted for in the design basis.

Input/Output. The team verified that the HPCI and RCIC system components input and output was adequate to provide the required signal strength to the receiving component during event or accident conditions. The team reviewed design information, specifications, and documentation to ensure component status information required to enable operators to make decisions and signals used for control of equipment operations as described in the UFSAR would be present during events.

Operating Experience. The team verified that insights from operating experience of similar systems had been reviewed and adequately evaluated by the licensee for the HPCI and RCIC components.

b. Findings

No findings of significance were identified.

2. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution

a. Inspection Scope

The team reviewed a sample of HPCI and RCIC system problems that were identified by the licensee and entered into the corrective action program. The team reviewed these issues to verify the licensee established an appropriate threshold for identifying issues and to evaluate the effectiveness of corrective actions related to design or qualification issues. In addition, condition reports written on issues identified during the inspection were reviewed to verify adequate problem identification and incorporation of the problem into the corrective action system. The specific corrective action documents that were sampled and reviewed by the team are listed in the attachment to this report.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

The lead inspector presented the inspection results on November 4, 2005, to Messrs. E. Callan and P. Orphanos, and other members of the licensee's staff. The inspection team verified that this inspection report does not contain proprietary information.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

R. DeGregorio, VP Limerick Generating Station (LGS)
C. Mudrick, Plant Manager LGS
E. Callan, Director of Engineering LGS
P. Orphanos, Director Operations
J. White, Director Training
R. Harding, Regulatory Assurance
T. Basso, Senior Manager Engineering
D. Doran, Manager ECCS Systems
R. George, Manager Electric Design

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

None.

LIST OF DOCUMENTS REVIEWED

Calculations

6300E.28, Voltage Verification - DC System, Rev. 1
6470E.26, Maximum Control Circuit Cable Length for Switchgear and DC MCC, Rev. 9
6600E.08, Verify Ground Detector Relay Pick-Up Current, Rev. 3
6600E.09, Perform a Load Study on the 125/250VDC System, Rev. 8E
6600E.10, Perform Short Circuit Study for DC System, Rev. 4
6900E.15, 125/250VDC System Fuse Selection and Coordination, Undervoltage Relay Setting and Safeguards Short Circuit Calculation, Rev. 9
ECR LG 02-00731, HPCI/RCIC Automatic Pump Suction Transfer Delay Timer, Rev. 0
EE-26 LGS, Determine Voltage Drop of Each DC Component, Rev. 2
LE-0052, Class IE Battery Load Duty Cycle Determination
LE-0069, Class IE 125VDC System Voltage Analysis, Rev. 16
LE-0111, Starting Current Transient Transformer Inrush and Motor Starting Current Transient During EDG Cross-Tie, Rev. 0
LE-030, Determination of Component Replacement Intervals for MEQ Equipment in the HPCI System, Rev. 0
LE-052, Class 1E Battery Load Duty Cycle Determination, Rev. 10
LEAM-0008, HPCI Flow To RPV w/Single Disch Path Open, Rev. 0
LM 400, HPCI and RCIC Pump Room Temperature Response Following A Small Break LOCA, Rev. 4
LM-0049, Differential Pressure Calculations for Motor Operated Valves in the RCIC System, Rev. 5
LM-0052, NRC GL 89-10, Rev. 6
LM-0379, Power Rerate Evaluation-SBO analysis, Rev. 1

LM-041, Suppression Pool Heatup During A Station Blackout Event at Limerick Generating Station, Rev. 1
LM-060, Limerick Generating Station Blackout Analysis RCIC Room, Rev. 1
LM-52, Attachment 4, Byron Jackson HPCI Pump Curves
M-49-03, RCIC Pump Discharge Pressure Drop, Rev. 3
M-49-04, RCIC Pump Pressure, Rev. 10
M-49-12, RCIC Pump Maximum Discharge Pressure and Restricting Orifice F00-49-1(2)-D005, Rev. 5
M-49-16, Sizing of RCIC Test Line Orifices, Rev. 6
M-49-18, Transient Analysis Review of the Reactor Core Isolation System
M-49-20, RCIC System Other Flow Orifices and Pressure Relief Valve Data
M-49-24, RCIC Nominal Trip Setpoint for LIS-49-1/2N635A, E (CST Low Water Level), Rev. 2
M-50-03, RCIC Restricting Orifice, 1D009, Delta P and Pressure Control Valve PV-C 1F015, Rev. 4
M-55-10, HPCI Line Sizing Check, Rev. 7
M-55-20, HPCI Pump Discharge Maximum Pressure, Rev. 4
M-55-22, HPCI Pump Suction NPSH and Pipe Volume, Rev. 11
M-55-23, Attachment 2, Cooling Water Subsystem Flow Orifices D008 and D009
M-55-23, Restricting Orifices Of The HPCI System, Rev. 9
M-55-29, HPCI System P-300 Review, Rev. 5
M-55-33, HPCI/RCIC Automatic Pump Suction Transfer Delay Timer
M-55-37, Establish HPCI/RCIC CST Piping Head Losses, Rev. 3
M-55-9, HPCI Cooling System Pressure Loss, Rev. 1
M-76-82, RCIC Room Heat up (Appendix R- Units 1 & 2), Rev. 1
M-76-83, HPCI Room Heat up (Unit 2), Rev. 3
M-76-92, ECCS and RCIC Room Temperature for Appendix R Shutdown Conditions
M-76-93, Transient Temperature Response of HPCI and RCIC Rooms, Rev. 0
M-78-29, Control Structure Battery Rooms Avg. Annual Normal Room Temp., Rev. 5
MEL-0142, WS13 (U2), Determination of the vortex limits for LPCI, HPCI, Core Spray and RCIC, Rev. 0
MEL-0144, EPG/SAG (U1), NPSH for RHR, CS, HPCI and RCIC, Rev. 0
MEL-0145, EPG/SAG (U2), NPSH for RHR, CS, HPCI and RCIC, Rev. 0
MIDA Calc, Midas 2005.44, HV-049-1(2)F013, -1F045
Misc-15, HPCI/RCIC Pump Turbine Steam Supply Line Valve Closing Forcing Function, Rev. 3
NE-C-301, Selection of Thermal Overload Relay (TOR) Heater Coils, Rev. 5
NE-C-301-4A, Heater Coil Selection Tables for Westinghouse Type-A TOR Design Guide for Thermal Overload Relay LGS, Units 1 and 2, Rev. 0

Procedures

ARC-MCR-107, Alarm Responses for Steam Leak Detection System, Rev. 0
ARC-MCR-116, Alarm Responses for Panel 10C848 (RCIC), Rev. 1
ARC-MCR-117, Alarm Responses for Panel 10C847 (HPCI), Rev. 1
CC-AA-112, Temporary Configuration Changes, Rev. 10
E-1, Loss of All AC Power (Station Blackout), Rev. 28
E-10/20, Loss of Offsite Power, Rev. 36
ER-AA-321, Rev. 6

L-T-13, Station Blackout, Rev. 2
M-095-006, Preventive Maintenance Procedure for Battery Chargers, Rev. 3
PECO Specification P-300, Rev. 44
S11.0.A, Abnormal Operation of ESW System, Rev. 24
S49.1.A, Normal RCIC Line-up for Automatic Operation, Rev. 18
S49.1.B, Recovery from RCIC Steam Line Isolation and Resultant Turbine Trip, Rev. 15
S49.1.C, Recovery from RCIC Turbine Trip, Rev. 13
S49.1.D, RCIC System Full Flow Functional Test and Turbine Oil Priming, Rev. 31
S49.7.A, Transfer of RCIC from Pressure Control Mode to Injection Mode & Back, Rev. 7
S49.9.A, Routine Inspection of RCIC System, Rev. 22
S55.1.A, Normal HPCI Line-up for Automatic Operation, Rev. 29
S55.1.B, Recovery from HPCI Steam Line Isolation and Resultant Turbine Trip, Rev. 16
S55.1.C, Recovery from HPCI Turbine Trip, Rev. 14
S55.1.D, HPCI System Full Flow Functional Test, Rev. 32
S55.2.A, HPCI Shutdown from Automatic or Manual Initiation, Rev. 11
S55.7.A, Transfer of HPCI from Pressure Control Mode to Injection Mode & Back, Rev. 7
S55.9.A, Routine Inspection of HPCI System, Rev. 31
S92.8.A, Installing/Removing 4KV Breakers, Rev. 31
SE-1, Remote Shutdown, Rev. 54
SE-4, Flood, Rev. 5
SE4-1, Reactor Enclosure Flooding, Rev. 6
ST-049-100-1, RCIC Logic System Functional Simulated Automatic Actuation Test, Rev. 8
ST-049-100-2, RCIC Logic System Functional Simulated Automatic Actuation Test, Rev. 9
ST-049-101-1, RCIC Logic System Functional Simulated Automatic Actuation Test, Rev. 10
ST-049-101-2, RCIC Logic System Functional Simulated Automatic Actuation Test, Rev. 10
ST-2-055-100-1, HPCI Logic System Functional Simulated Automatic Actuation, Rev. 10
ST-2-055-100-2, HPCI Logic System Functional Simulated Automatic Actuation, Rev. 8
ST-2-055-101-1, HPCI Logic System Functional Isolation Logic Test, Rev. 6
ST-2-055-101-2, HPCI Logic System Functional Isolation Logic Test, Rev. 11
ST-4-095-901-1, Division I 1A1D101 Visual Inspection Cell To Cell and Terminal Tightness and Resistance Check, Rev. 1
ST-4-095-901-1, Division I 2A2D101 Visual Inspection Cell To Cell and Terminal Tightness and Resistance Check, Rev. 3
ST-4-095-901-2, Division I 2A1D101 Visual Inspection Cell To Cell and Terminal Tightness and Resistance Check, Rev. 2
ST-4-095-902-1, Division I 1A2D101 Visual Inspection Cell To Cell and Terminal Tightness and Resistance Check, Rev. 1
ST-4-095-904-1, Division II 1B2D101 Visual Inspection Cell to Cell and Terminal Tightness and Resistance Check, Rev. 2
ST-4-095-941-1, Division I 1A1D101 Safeguard Battery Performance Test, Rev. 1
ST-4-095-941-2, Division I 2A1D101 Safeguard Battery Performance Test, Rev. 0
ST-4-095-942-1, Division I 1A2D101 Safeguard Battery Performance Test, Rev. 1
ST-4-095-942-2, Division I 2A2D101 Safeguard Battery Performance Test, Rev. 0
ST-4-095-951-1, Division I 1A1D101 Safeguard Battery Modified Performance Test, Rev. 8,
ST-4-095-951-2, Division I 2A1D101 Safeguard Battery Modified Performance Test, Rev. 4, Completed 3/9/05

ST-4-095-952-1, Division I 1A2D101 Safeguard Battery Modified Performance Test, Rev. 7, Completed 3/11/04
ST-4-095-952-2, Division I 2A2D101 Safeguard Battery Modified Performance Test, Rev. 4, Completed 3/9/05
ST-4-095-953-1, Division II 1B1D101 Safeguard Battery Modified Performance Test, Rev. 7
ST-4-095-953-2, Division II 2B1D101 Safeguard Battery Modified Performance Test, Rev. 4
ST-4-095-954-1, Division II 1B2D101 Safeguard Battery Modified Performance Test, Rev. 7
ST-4-095-954-2, Division II 2B2D101 Safeguard Battery Modified Performance Test, Rev. 4
ST-4-095-961-1, Division I 1A1D103 Safeguard Battery Charger 24 Month Load Test, Rev. 2, Completed 3/13/04
ST-4-095-961-2, Division I 2A1D103 Safeguard Battery Charger 24 Month Load Test, Rev. 3, Completed 3/12/05
ST-4-095-962-1, Division I 1A2D103 Safeguard Battery Charger 24 Month Load Test, Rev. 2, Completed 3/12/04
ST-4-095-962-2, Division I 2A2D103 Safeguard Battery Charger 24 Month Load Test, Rev. 3, Completed 3/11/05
ST-4-095-963-1, Division II 1B1D103 Safeguard Battery Charger 24 Month Load Test, Rev. 2
ST-4-095-963-2, Division II 2B1D103 Safeguard Battery Charger 24 Month Load Test, Rev. 3
ST-4-095-964-1, Division II 1B2D103 Safeguard Battery Charger 24 Month Load Test, Rev. 2
ST-4-095-964-2, Division II 2B2D103 Safeguard Battery Charger 24 Month Load Test, Rev. 3
ST-4-095-971-1, Division I 1A1D101 Safeguard Battery Service Test, Rev. 0, Completed 3/20/02
ST-4-095-971-2, Division I 2A1D101 Safeguard Battery Service Test, Rev. 2, Completed 3/7/03
ST-4-095-972-1, Division I 1A2D101 Safeguard Battery Service Test, Rev. 0, Completed 3/14/02
ST-4-095-972-2, Division I 2A2D101 Safeguard Battery Service Test, Rev. 2, Completed 3/5/03
ST-6-049-200-2, RCIC Valve Test, Rev. 35, Completed 9/7/05
ST-6-055-200-1, HPCI Valve Test, Rev. 54
ST-6-055-200-2, HPCI Valve Test, Rev. 40
ST-6-055-230-1, HPCI Pump, Valve, and Flow Test Data, Rev. 22, Completed 3/11/94
ST-6-055-230-2, HPCI Pump, Valve, and Flow Test Data, Rev. 17, Completed 11/94
ST-6-055-230-2, HPCI Pump, Valve, and Flow Test, Rev. 48
ST-6-095-905-1, Unit 1 Safeguard Battery Weekly Inspection, Rev. 15
T-100, S - Scram/Scram Recovery, Rev. 17
T-101, RC - RPV Control, Rev. 19
T-102, PCC - Primary Containment Control, Rev. 19
T-103, SCC - Secondary Containment Control, Rev. 16
T-111, LR - Level Restoration/ Steam Cooling, Rev. 13
T-116, RF - RPV Flooding, Rev. 15
T-117, LO - Level/ Power Control, Rev. 15
T-209, Injection from Standby Liquid Control (SLC) Storage Tank with RCIC, Rev. 12
T-230, Suppression Pool to CST by Way of HPCI or RCIC, Rev. 14
T-242, Defeat of HPCI/RCIC Isolation Logic, Rev. 7
T-246, HPCI High Suppression Pool Level Suction Swapover Bypass, Rev. 6
T-247, RCIC Low Steam Pressure Isolation Bypass, Rev. 8

T-249, HPCI/RCIC High Area Temperature Isolation, Rev. 30
T-250, Remote Manual Primary Containment Isolations, Rev. 30
T-251, Establish an HPCI Injection Flow Path via Feedwater Only, Rev. 12
T-260, Reactor Pressure Vessel Venting, Rev. 15
T-270, Terminate and Prevent Injection into the RPV, Rev. 10

Information/Corrective Action Reports

094171	314260	A1483562	AR 00279167
100158	316185	A1491372	AR 00279188
104528	320092	A1494486	AR 00285118
110720	342691	A1494520	AR 00286220
116400	349708	A1506159	AR 00307936
123874	352664	A1530022	AR 00308096
148895	364053	AR 00100013	AR 00319338
158382	371101	AR 00110896	AR 00346466
166621	384461	AR 00112825	AR 00370669
176803	387682*	AR 00114147	AR 00370994
185353	387705*	AR 00121946	AR 00371466
185363	388712*	AR 00121964	AR 00387331*
186420	394194*	AR 00122906	AR 00387674*
201336	A1058743	AR 00124819	AR 00388121*
209626	A1058752	AR 00136259	AR 00389643*
216396	A1201906	AR 00153192	AR 00389654*
225431	A1304397	AR 00162284	AR 00392431*
243433	A1334500	AR 00176020	AR 00393325*
247422	A1383749	AR 00202156	AR 00393649*
267085	A1387639	AR 00215819	AR 00393662*
283081	A1390925	AR 00220816	AR 00394125*
283277	A1417010	AR 00221771	AR 00522222
284472	A1464946	AR 00231251	
297729	A1465859	AR 00260892	
297853	A1466303	AR 00271104	

Note: *Indicates IR/AR generated as result of this inspection.

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8031-M-50, sheet 2, RCIC Pump / Turbine, Unit 2, Rev. 11
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8031-M-55, sheet 2, High Pressure Coolant Injection, Unit 2, Rev. 51
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E51-1040-E-002, Reactor Core Isolation, Rev. 18
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LIST OF ACRONYMS

ADAMS	Agencywide Documents Access and Management System
AR	Action Request
ATWS	Anticipated Transient Without Scram
CAP	Corrective Action Process
CFR	Code of Federal Regulations
DBD	Design Basis Document
DBE	Design Basis Event
ECCS	Emergency Core Cooling Systems
HPCI	High Pressure Coolant Injection
IMC	Inspection Manual Chapter
IR	Information Request
LGS	Limerick Generating Station
MOV	Motor Operated Valve
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
PCIV	Pressure Control Isolation valve
PI&R	Problem Identification & Resolution
PRA	Probabilistic Risk Assessment
SLOCA	Small Break Loss of Coolant Accident
SBO	Station Blackout
SDP	Significance Determination Process
SRA	Senior Risk Analyst

SSC	Systems, Structures and Components
ST	Surveillance Test
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
WO	Work Order