

## Limerick 2

### 3Q/2003 Plant Inspection Findings

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## Initiating Events

**Significance:**  Nov 04, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

### **Unit 2 Reactor Level Transient**

The inspectors identified a non-cited violation of Technical Specification 6.8.1., "Procedures," because operators failed to follow procedures while placing a reactor feed pump in service, which led to a significant reactor level transient. This finding involved a human performance error because control room operators performed procedural steps out of sequence during a non-routine pump evolution.

This finding was determined to have very low safety significance by the Reactor Inspection Findings for At-Power Situations Significance Determination Process because it did not contribute to the likelihood of a loss of coolant accident initiator, the unavailability of mitigation equipment, or fire and flooding events. (Section 1R14)

Inspection Report# : [2002005\(pdf\)](#)

**Significance:**  Nov 04, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

### **Main Turbine Retrofit and Associated Change to GP-5, "Steady State Operations"**

The inspectors identified a non-cited violation of 10 CFR 50.59, because Exelon staff did not analyze the effect of the increased condensate temperature on all components potentially impacted. Exelon engineering and chemistry personnel did not correctly follow procedures when conducting a 10 CFR 50.59 screening for a change to Procedure GP-5, "Steady State Operations." Consequently, Exelon did not perform a safety evaluation when required. The procedure change contributed to an unplanned reactor shutdown due to degrading condenser vacuum on July 23, 2002. This finding involved a human performance error because engineering and chemistry personnel did not correctly evaluate whether the proposed change affected the Safety Analysis Report.

This finding was determined to have very low safety significance by the Reactor Inspection Findings for At-Power Situations Significance Determination Process, because although the finding contributed to an unplanned reactor shutdown, it did not affect the availability of mitigation equipment, it did not contribute to the likelihood of a loss of coolant accident initiator, and it did not contribute to the likelihood of a fire or flood event. (Section 1R17)

Inspection Report# : [2002005\(pdf\)](#)

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## Mitigating Systems

**Significance:**  Sep 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Did Not Follow Chemistry Procedure CH-1010**

The inspectors identified a finding of very low safety significance that is also a NCV of TS 6.8.1, "Procedures," because chemistry staff did not follow procedures. Specifically, spray pond water samples were not analyzed for soluble manganese within the required weekly frequency and when manganese in the spray pond water was above 100 parts-per-billion (ppb), the actions specified in the procedure were not taken.

The finding is more than minor because it is similar to example 4.a in App. E of NRC IMC 0612. This finding was determined to have very low safety significance by Phase 1 of the Reactor Inspection Findings for At-Power Situations Significance Determination Process because the performance deficiency did not result in a loss of safety function and is not potentially risk significant due to a seismic, flood, fire, or severe weather initiating event.

The inspectors also identified that a contributing cause of this finding involved a human performance error because neither a chemistry technician nor the technician's supervisor followed the steps prescribed by the procedure.

Inspection Report# : [2003004\(pdf\)](#)



**Significance:** Jun 28, 2003

Identified By: NRC

Item Type: FIN Finding

### **Performing Preventive Maintenance Prior to Required Surveillance Testing of Recirculation Pump Trip Breakers and Safety-Related Battery Chargers**

The insp. identified a finding of very low significance (Green) because Exelon's practice of performing preventive maintenance prior to required surveillance testing of recirc pump trip breakers and safety-related battery chargers masked the as-found conditions of these components, and this practice had not been evaluated.

The finding is considered more than minor because it affected the ability to detect component degradation which would adversely impact the reliability of the RPT breakers and battery chargers to respond to initiating events and prevent undesirable consequences. This finding is of very low safety significance because it involved inadequate testing and did not degrade the capability of these components to perform their safety functions.

The inspectors also identified that a contributing cause of this finding was related to the cross-cutting area of Problem Identification and Resolution. After the inspectors noted the MSIV preconditioning issue in February 2003, Exelon's corrective action included a review of other outage-related activities for unacceptable preconditioning. Exelon's corrective action was narrow in scope and did not identify the RPT breaker and battery charger preconditioning issues.

Inspection Report# : [2003003\(pdf\)](#)



**Significance:** Mar 29, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Average Power Range Monitor Operability During Testing**

The inspectors identified a finding of very low significance (Green) that is also a non-cited violation of 10 CFR 50, Appendix B, Criterion V "Procedures," because Exelon's procedure governing local power range monitor (LPRM) maintenance did not include provisions to ensure that the associated average power range monitor (APRM) remained operable. Specifically, the procedure did not include steps to ensure the APRM remained within the technical specification required accuracy when changing the LPRM input configuration to the APRM and at the completion of the maintenance.

This finding was determined to have very low safety significance because it did not result in an actual loss of safety function, and it did not screen as risk significant due to a seismic, fire, flooding, or severe weather initiating event. (Section 1R19)

Inspection Report# : [2003002\(pdf\)](#)

**Significance:**  Mar 29, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Unexpected Scram Bypass Due to a Degraded Transistor**

The inspectors identified a finding of very low significance (Green) that is also a non-cited violation of 10 CFR 50, Appendix "B," Criterion XVI, because Exelon had not implemented adequate measures to preclude repetition of a significant condition adverse to quality, specifically a defective transistor in safety related protection system trip units that resulted in a portion of the reactor protection system being inoperable.

This finding was determined to have very low safety significance because it did not result in an actual loss of safety function, and it did not screen as risk significant due to a seismic, fire, flooding, or severe weather initiating event.

The inspectors identified that this finding involved a human performance error because the System Manager performing a review of the test data did not identify that one analog trip unit exceeded the repair criteria. (Section 4OA2)

Inspection Report# : [2003002\(pdf\)](#)

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## **Barrier Integrity**

**Significance:**  Sep 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Did Not Meet 10CFR 55.53(f)(2) When Reactivating Senior Operators to Support Fuel Handling**

The inspectors identified a non-cited violation of 10CFR55.53(f)(2) regarding the licensee's method used to reactivate senior operator licenses to support refueling. The operator licenses were reactivated without the required direct supervision being present during the shift under-instruction time.

This finding was determined to be more than minor but of very low safety significance. It is more than minor because it is similar to example 2h in App. E of IMC 0612. The performance deficiency is related to operator license conditions. The performance deficiency involved more than 20% of the senior operator license reactivations to support refueling operations not meeting the requirements of 10CFR55.53(f)(2). Accordingly, the performance deficiency was determined to be of very low safety significance.

Inspection Report# : [2003004\(pdf\)](#)

**Significance:**  Sep 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Performed Core Alterations Without Maintaining Secondary Containment Integrity**

A self-revealing NCV of TS 3.6.5.1.2 was identified because Exelon did not maintain refueling area secondary containment integrity while performing core alterations during a refueling outage.

The finding is more than minor because the issue was associated with the human performance attribute of the Barrier Integrity cornerstone, and it affected the cornerstone objective. The Barrier Integrity cornerstone objective was affected because secondary containment functionality was not maintained when required by TSs. This finding was determined to be of very low safety significance (Green) by NRC IMC 0609, App. G, Shutdown Operations Significance Determination Process. The plant conditions while secondary containment was breached did not require a phase 2 assessment and therefore screened as Green per the Appendix G, Section 1 guidance.

The inspectors also noted that a contributing cause of this finding was related to a human performance error because operators did not properly verify TSs compliance when breaching secondary containment.

Inspection Report# : [2003004\(pdf\)](#)

**Significance:**  Jun 28, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Exelon's Main Steam Isolation Valve Stroke Time Test Methodology**

The inspectors identified a finding of very low significance (Green) that is also a violation of 10 CFR 50 Appendix B, Criterion XI, "Test Control," because Exelon's MSIV stroke time test procedure did not include sufficient steps to assure that, when the MSIVs are in-service in Operational Conditions 1, the MSIV full closure times will meet TS requirements.

The finding was considered more than minor, in that the issue was associated with the Maintain Functionality of Containment Procedure Quality attribute of the Barrier Integrity cornerstone, and it affected the cornerstone objective. The Barrier Integrity cornerstone objective was affected because the inadequate testing procedures adversely affect assurance that the containment would protect the public from radionuclide releases caused by accidents or events. This finding was also associated with the Procedure Quality attribute of the Mitigating Systems cornerstone, and it affected the cornerstone objective. The cornerstone objective was affected because the testing did not ensure the reliability of the MSIV's to respond to initiating events to prevent undesirable consequences.

This finding was determined to have very low safety significance (Green) by Phase 2 of the Reactor Inspection Findings for At-Power Situations Significance Determination Process. This finding was determined to be of very low safety significance because the issue involved inadequate testing and did not degrade the MSIVs capability to perform its safety function. Therefore, no mitigation equipment or sequences in Phase 2 were adversely impacted.

Inspection Report# : [2003003\(pdf\)](#)

**Significance:**  Mar 29, 2003

Identified By: NRC

Item Type: FIN Finding

#### **Main Steam Isolation Valve Surveillance Test Preconditioning**

The inspectors identified a finding of very low significance (Green) because Exelon's practice of performing preventative maintenance prior to required surveillance testing of the MSIVs masked the as-found conditions of the valves and this practice had not been evaluated by Exelon.

This finding was determined to be of very low safety significance because the issue involved inadequate testing and did not degrade the MSIVs capability to perform its safety function. (Section 1R22)

Inspection Report# : [2003002\(pdf\)](#)

**Significance:**  Mar 29, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Dropped New Fuel Bundles**

The inspectors identified a finding of very low safety significance that is also a non-cited violation of Technical Specification 6.8.1, "Procedures," because maintenance technicians did not follow procedures while performing an inspection of new fuel bundles.

This finding was determined to have very low safety significance because fuel barrier findings screen as Green.

The inspectors identified that this finding involved a human performance error because technicians did not follow a maintenance procedure. Additionally, ineffective supervisory oversight, another human performance factor, contributed to this event. (Section 1R20)

Inspection Report# : [2003002\(pdf\)](#)

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## **Emergency Preparedness**

**Significance: SL-IV** Sep 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Did Not Perform a 10 CFR 50.54(q) Review Resulting in Removal of a Provision Without Prior NRC Approval**

The inspector identified a SL IV NCV of 10 CFR 50.54(q) because the licensee decreased the effectiveness of its emergency plan in one area by removing a provision to provide volunteer bus drivers to two school districts within the 10 mile Emergency Planning Zone for evacuating students during a radiological event. The change was implemented without NRC approval.

Changing emergency plan provisions without prior NRC approval impacts the NRC's ability to perform its regulatory function and is therefore processed through traditional enforcement as specified in Section IV.A.3 of the Enforcement Policy, issued May 1, 2000 (65 FR 25388). According to Supplement VIII of the Enforcement Policy, this finding was determined to be a SL IV violation because it involved a failure to meet a requirement not directly related to assessment and notification. This NCV was also determined to have very low safety significance since Exelon had maintained a list of volunteers that would have been able to perform the function if needed.

Inspection Report# : [2003004\(pdf\)](#)

**Significance: SL-IV** Sep 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Did Not Retain a Record of the 10 CFR 50.54(q) Review of the Deleted Portions of the Emergency Plan**

The inspector identified a SL IV non-cited violation of 10 CFR 50.54(q). During the implementation of a new Standard Emergency Plan, Exelon did not retain a record that determined whether a decrease-in-effectiveness had or had not occurred when Exelon generated the new Standard Emergency Plan that deleted portions of the previous Combined Limerick/Peach Bottom Emergency Plan.

Changing emergency plan provisions without documentation impacts the NRC's ability to perform its regulatory function and is therefore processed through traditional enforcement as specified in Section IV.A.3 of the Enforcement Policy, issued May 1, 2000 (65 FR 25388). According to Supplement VIII of the Enforcement Policy, this finding was determined to be a SLI IV because it involved a failure to meet a requirement not directly related to assessment and notification.

Inspection Report# : [2003004\(pdf\)](#)

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## **Occupational Radiation Safety**

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## **Public Radiation Safety**

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## **Physical Protection**

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## **Miscellaneous**

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