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

August 4, 2010

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

SUBJECT: OYSTER CREEK GENERATING STATION – NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000219/2010007

Dear Mr. Pacilio:

On July 1, 2010, the United States Nuclear Regulatory Commission (NRC) completed an inspection at your Oyster Creek Generating Station. The enclosed report documents the inspection results discussed with Mr. P. Orphanos, Plant Manager, and other members of your staff.

The inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems and compliance with the Commission's rules and regulations and the conditions of your license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel.

Based on the samples selected for review, the inspectors concluded that Exelon was generally effective in identifying, evaluating, and resolving problems. Exelon personnel identified problems and entered them into the corrective action program at a low threshold. Exelon prioritized and evaluated issues commensurate with the safety significance of the problems and corrective actions were generally implemented in a timely manner.

This report documents two NRC-identified findings of very low safety significance (Green). The inspectors determined that each of these findings also involved a violation of NRC requirements. However, because of the very low safety significance and because they were entered into your corrective action program, the NRC is treating these findings as non-cited violations, consistent with Section VI.A.1 of the NRC enforcement policy. If you contest these non-cited violations, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Oyster Creek Generating Station. In addition, if you disagree with the cross-cutting aspect assigned to any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the NRC Resident Inspector at Oyster Creek Generating Station.

M. Pacilio

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

Sincerely,

Ronald R. Bellamy

Ronald R. Bellamy, Ph. D., Chief
Projects Branch 6
Division of Reactor Projects

Docket No.: 50-219
License No.: DPR-16

Enclosure: Inspection Report 05000219/2010007
w/ Attachment: Supplemental Information

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Sincerely,

/RA/

Ronald R. Bellamy, Ph. D., Chief
Projects Branch 6
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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.:	50-219
License No.:	DPR-16
Report Nos.:	05000219/2010007
Licensee:	Exelon Nuclear
Facility:	Oyster Creek Generating Station
Location:	Forked River, NJ
Dates:	June 14, 2010 – July 1, 2010
Team Leader:	Carey Bickett, Senior Project Engineer, Division of Reactor Projects (DRP)
Inspectors:	Josephine Ambrosini, Oyster Creek Resident Inspector, DRP Justin Heinly, Project Engineer, DRP Edgardo Torres, Project Engineer, DRP
Approved By:	Ronald R. Bellamy, Ph. D, Chief Project Branch 6 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000219/2010007; 06/14/2010 – 07/01/2010; Oyster Creek Generating Station; Biennial Baseline Inspection of Problem Identification and Resolution. The inspectors identified one finding in the area of problem prioritization/evaluation and one finding in the area of effectiveness of corrective actions.

This NRC team inspection was performed by three regional inspectors and one resident inspector. The inspectors identified two findings of very low safety significance (Green) during this inspection and classified these findings as non-cited violations. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using NRC Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. Cross-cutting aspects associated with findings are determined using IMC 0310, "Components Within the Cross-Cutting Areas." The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Identification and Resolution of Problems

The inspectors concluded that Exelon was generally effective in identifying, evaluating, and resolving problems. Exelon personnel identified problems, entered them into the corrective action program at a low threshold, and prioritized issues commensurate with their safety significance. In most cases, Exelon appropriately screened issues for operability and reportability, and performed causal analyses that appropriately considered extent of condition, generic issues, and previous occurrences. The inspectors also determined that Exelon typically implemented corrective actions to address the problems identified in the corrective action program in a timely manner. However, the inspectors identified two violations of NRC requirements, one in the area of problem prioritization/evaluation and one in the area of effectiveness of corrective actions.

The inspectors concluded that, in general, Exelon adequately identified, reviewed, and applied relevant industry operating experience to Oyster Creek Generating Station (Oyster Creek) operations. In addition, based on those items selected for review, the inspectors determined that Exelon's audits and self-assessments were thorough.

Based on the interviews the inspectors conducted over the course of the inspection, observations of plant activities, and reviews of individual corrective action program and employee concerns program issues, the inspectors did not identify any indications that site personnel were unwilling to raise safety issues nor did they identify conditions that could have had a negative impact on the site's safety conscious work environment.

Cornerstone: Barrier Integrity

Green. The inspectors identified a finding of very low safety significance (Green) involving a non-cited violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for Exelon's failure to promptly identify and correct a condition adverse to quality associated with the January 2009 failure of the reactor building to torus vacuum breaker system. Specifically, Exelon did not promptly identify and correct an inadequate instrument air flow capacity condition associated with the reactor building to torus vacuum breaker trip valve. Due to the inadequate corrective actions, the reactor building to torus vacuum breaker system

experienced a subsequent failure in April 2009. Exelon entered this issue into their corrective action program as IR 1088325 to evaluate the corrective actions needed to address this issue.

The finding was determined to be more than minor because the performance deficiency was associated with the containment attribute of the barrier integrity cornerstone and adversely impacted the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. The inspectors evaluated the finding using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Table 4a, for the Barrier Integrity Cornerstone. Specifically, since all four containment barrier screening questions were answered "no," the finding was determined to be of very low safety significance (Green). In addition, the failure did not represent an actual open pathway in the physical integrity of the reactor containment. This finding has a cross-cutting aspect in the area of problem identification and resolution because Exelon failed to thoroughly evaluate the condition adverse to quality and appropriately address the cause. [P.1.(c)] [Section 4OA2.1.c.(1)]

Cornerstone: Mitigating Systems

Green. The inspectors identified a Green non-cited violation of Technical Specification 6.8.1 for Exelon's failure to follow MA-MA-716-009, "Preventive Maintenance Work Order Process." Specifically, Exelon closed work order R2120325 without completing the necessary work and did not take action to evaluate the acceptability of this action, contrary to MA-MA-716-009 requirements. Exelon entered this issue into their corrective action program as IRs 1085811 and 1088269 to evaluate the corrective actions needed to address this issue.

This finding is more than minor because it affects the equipment performance attribute of the mitigating systems cornerstone and affects the cornerstone objective of ensuring the availability, reliability, and dependability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the fire diesel is the credited backup source of makeup water to the isolation condensers and the failure to perform scheduled preventive maintenance challenges the availability and reliability of the diesel.
This finding affects the fire protection defense-in-depth strategies involving fire suppression and screens to Green using IMC 0609, Appendix F, "Fire Protection Significance Determination Process." Because of the fire diesel function as an isolation condenser makeup source, the inspectors reviewed the Mitigating Systems Cornerstone as well and found it also screened to Green because the finding is not a design or qualification deficiency confirmed not to result in loss of operability, does not represent a loss of system safety function, does not represent the actual loss of safety function of a single train for greater than its allowed outage time, does not represent an actual loss of safety function of one or more non-technical specification trains of equipment designated as risk significant per 10 CFR 50.65 for greater than 24 hours, and does not screen as potentially risk significant due to seismic, flooding, or severe weather initiating event. This finding has a cross-cutting aspect in the area of human performance because Exelon personnel did not follow procedures. Specifically, when Exelon did not follow or refer to procedure MA-MA-716-009, "Preventive Maintenance Work Order Process," they did not develop an evaluation to consider the impacts of omitting portions of the work package for the two-year fire diesel preventive maintenance [H.4(b)] [Section 4OA2.1.c.(2)]

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution (71152B)

.1 Assessment of Corrective Action Program Effectiveness

a. Inspection Scope

The inspectors reviewed the procedures that describe Exelon's corrective action program at Oyster Creek. Exelon identified problems for evaluation and resolution by initiating and processing issue reports (IRs) using the Passport web-based computer application. Exelon screened problems for operability and reportability, categorized the issues based on significance (1 for the most significant to 5 for the least significant), and assigned the level for the cause evaluation based on significance and level of uncertainty of the cause. When work was necessary to correct a problem, the station used their Plant Information Management System (PIMS), to generate action requests or work orders. As such, the work management and engineering change processes were part of the corrective action program and were utilized to correct identified conditions when deemed appropriate.

To assess the effectiveness of the corrective action program at Oyster Creek, the inspectors reviewed performance in three primary areas: problem identification, prioritization and evaluation, and corrective action implementation. The inspectors compared performance in these three areas to the requirements and standards contained in 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," and Exelon procedure LS-AA-125, "Corrective Action Program Procedure." The scope of the inspectors' review for each of these areas is described below. Documents reviewed during this inspection are listed in the Attachment.

(1) Effectiveness of Problem Identification

The inspectors reviewed a sample of Plan-of-the-Day, Management Review Committee, and Station Ownership Committee meeting packages, as well as results of Nuclear Safety Review Board meetings. The inspectors also attended multiple Plan-of-the-Day, Management Review Committee, and Station Ownership Committee meetings to ensure that Exelon entered issues discussed at these meetings into the corrective action program for evaluation and resolution as appropriate.

The inspectors reviewed IRs selected across the seven cornerstones of safety in the NRC's Reactor Oversight Process to determine if site personnel properly identified, characterized, and entered problems into the corrective action program for evaluation and resolution. The inspectors reviewed system health reports, a sample of completed preventive and corrective maintenance work orders, completed surveillance test procedures, operator logs, and periodic trend reports. The inspectors also completed field walkdowns of various systems on site, such as the standby gas treatment and instrument air systems. Additionally, the inspectors reviewed a sample of IRs written to document issues identified through internal self-assessments, audits, emergency preparedness drills, and the operating experience program. The inspectors completed this review to verify that Exelon entered conditions adverse to quality into their corrective action program as appropriate.

(2) Effectiveness of Prioritization and Evaluation of Issues

The inspectors reviewed the evaluation and prioritization of a sample of IRs issued since the last NRC biennial Problem Identification and Resolution inspection completed in August 2008. The inspectors considered risk insights from the station's risk analysis and ensured that selected IRs were properly distributed across the seven cornerstones of safety and the emergency preparedness, engineering, maintenance, operations, physical security, chemistry, and radiation safety functional areas.

The inspectors also observed two daily IR screening meetings conducted by the Station Ownership Committee. During these meetings, Exelon personnel reviewed new and existing IRs for prioritization and assignment. The inspectors reviewed IRs that were assigned lower levels of significance that did not include formal cause evaluations to ensure they were properly classified. The inspectors' review included the appropriateness of the assigned significance, the scope and depth of the causal analysis, and the timeliness of resolution. The inspectors assessed whether the evaluations identified likely causes for the issues and developed appropriate corrective actions to address the identified causes. Further, the inspectors reviewed equipment operability determinations, reportability assessments, and extent-of-condition reviews for selected problems to verify these processes adequately addressed equipment operability, reporting of issues to the NRC, and the extent of problems. The inspectors also observed two Management Review Committee meetings during which Exelon managers reviewed completed root cause evaluations, as well as selected apparent cause evaluations and corrective action assignments.

(3) Effectiveness of Corrective Actions

The inspectors selected a risk-informed sample of IRs issued since the last NRC biennial Problem Identification and Resolution inspection completed in August 2008. The inspectors considered risk insights from Oyster Creek's risk analysis and ensured that the selected IRs were appropriately distributed across the seven cornerstones of safety and the emergency preparedness, engineering, maintenance, operations, physical security, chemistry, and radiation safety functional areas. The inspectors reviewed Exelon's completed corrective actions through documentation review and, in some cases, field walkdowns.

The inspectors reviewed IRs for adverse trends and repetitive problems to determine whether corrective actions were effective in addressing the broader issues. The inspectors reviewed Exelon's timeliness in implementing corrective actions and effectiveness in precluding recurrence for significant conditions adverse to quality. The inspectors also reviewed a sample of IRs associated with selected non-cited violations and findings to verify that Exelon personnel properly evaluated and resolved these issues. In addition, the inspectors expanded the corrective action review to five years to evaluate Exelon's actions related to instrument air system deficiencies and chemistry lab heating, ventilation, and air conditioning issues.

Assessment

(1) Effectiveness of Problem Identification

Based on the selected samples, plant walkdowns, and interviews of site personnel in multiple functional areas, the inspectors determined that Exelon identified problems and entered them into the corrective action program at a low threshold. Exelon staff at Oyster Creek initiated approximately 20,500 IRs between January 2008 and May 2010. The inspectors observed managers and supervisors at the Plan-of-the Day, Station Ownership Committee, and Management Review Committee meetings appropriately questioning and challenging IRs to ensure clarification of the issues. Based on the samples reviewed, the inspectors determined that Exelon trended equipment and programmatic issues, and appropriately identified problems in IRs. The inspectors verified that conditions adverse to quality identified through this review were entered into the corrective action program as appropriate. Additionally, the inspectors concluded that personnel were identifying trends at low levels. In general, the inspectors did not identify any issues or concerns that had not been appropriately entered into the corrective action program for evaluation and resolution. However, the inspectors did identify an observation with regards to the tracking of chemistry analysis equipment deficiencies.

The inspectors noted that the chemistry department uses an Instrument Deficiency Tracking Tool to maintain management awareness of the status of their analysis equipment. No formal procedure is used to maintain this tool. Additionally, in most cases, deficiencies entered into this matrix are not included in the station corrective action program. Instead, the chemistry department has established certain thresholds at which individuals would develop an IR for an instrument problem. Because this process is outside the corrective action program, the station could miss an opportunity both for trending of issues and to increase station visibility of instrument problems. Exelon has entered this issue into their corrective action program under IR 1086599.

(2) Effectiveness of Prioritization and Evaluation of Issues

The inspectors determined that, in general, Exelon appropriately prioritized and evaluated issues commensurate with the safety significance of the identified problem. Exelon screened IRs for operability and reportability, categorized the IRs by significance, and assigned actions to the appropriate department for evaluation and resolution. In most cases, causal analyses appropriately considered extent of condition, generic issues, and previous occurrences. The inspectors noted that Exelon's root cause analyses were generally thorough, and corrective and preventive actions addressed the identified causes. The IR screening process considered human performance issues, radiological safety concerns, repetitiveness, adverse trends, and potential impact on the safety conscious work environment during the conduct of the reviews. The inspectors also noted that the guidance provided by Exelon corrective action program implementing procedures appeared sufficient to ensure consistency in categorization of issues. However, the inspectors did note some observations in Exelon's prioritization and evaluation of the following issues:

Chemistry Laboratory Temperature Control

The inspectors determined that the station did not resolve a condition adverse to quality in a timely manner in accordance with Exelon procedure LS-AA-125, "Corrective Action Program." Specifically, Exelon has documented non-conformances with the Updated Final Safety Analysis Report (UFSAR) regarding temperature specifications inside the main chemistry laboratory areas in the Oyster Creek corrective action program since 1998. The UFSAR describes the following temperature specifications in the chemistry laboratory areas:

- Chemical Hot Laboratory: 72 ± 2°F
- Post Accident Sampling System Room: 76 ± 6°F
- Counting Room: 72 ± 2°F

Lack of temperature control in the main chemistry laboratory has the potential to cause temperature-related instrumentation issues that could affect Technical Specification chemistry sample requirements. Excessive temperatures can also affect the ability of the chemistry technicians to perform these chemistry samples due to the need to implement stay times in the lab. Inspectors confirmed this through review of IR 953163, which documented temperatures as high as 97°F in the hot chemistry lab and 96°F in the count room; review of logs documenting high and low temperatures in the lab areas routinely outside of the temperatures specified in the UFSAR; and interviews with chemistry technicians who confirmed that Technical Specification samples have almost been missed on multiple occasions due to instrument issues related to high temperatures in the lab. Additionally, IR 598553 recorded stay times for chemistry technicians in the main lab of 90 minutes due to temperature and humidity conditions.

IR 349339, written in June 2005, specifically documented that temperature in the chemistry lab areas was in non-conformance with the UFSAR. Per LS-AA-125, a non-conformance with the UFSAR is a condition adverse to quality which requires a 'corrective action' (CA) assignment in the IR. Attachment 3 of LS-AA-125 provides the following guidance regarding CA due dates: "Due dates should be established based on the risk associated with the condition, but should typically be done within 90 calendar days of issue identification. If action cannot be completed until plant conditions permit, schedule reference should be defined." This condition has existed at the station since approximately 1998. Inspectors determined this issue was minor because extreme temperature fluctuations in the chemistry lab have not challenged the validity of the chemistry sample results due to confirmatory methods available to verify the samples. Additionally, Exelon is currently implementing a plan to address temperature control issues in the chemistry lab areas.

Inadequate Technical Rigor in Operability Evaluation

The inspectors evaluated the operability determination associated with IR 981008 regarding standby gas treatment system fan EF 1-8 vibrations in the alert range. The inspectors noted that Exelon's 30-day mission time justification was based on engineering judgment and historical data that shows that the fan had run successfully in the past at vibration levels of 2.5 inches per second without adverse effects to its structural integrity. The inspectors determined that Exelon's evaluation lacked technical rigor in that it did not include a discussion of the actual vibration rate of change for the fan given that the station only runs the fan 10 hours per month and both of the bearings

with high vibrations demonstrated a rising trend at the 10-hour point. The inspectors also noted that the fan was running close to resonance frequencies that may amplify vibration forces and which, over time, may become a factor to consider. The inspectors determined this issue to be minor because the inspectors could not reasonably conclude that the fan would not have met its mission time based on the information available. In addition, Exelon has since performed a complete overhaul of fan EF 1-8.

Instrument Air System Maintenance Rule Performance Criteria

During a five year review of the instrument air system, the inspectors identified an inadequate Maintenance Rule (10 CFR 50.65) function criterion for the system. Specifically, the functional definition of the instrument air system states, in part, that the system must be able to maintain adequate air quality. The inspectors identified no documented specific criteria to evaluate the acceptability of the air quality in the instrument air system to determine if a maintenance preventable functional failure exists. Furthermore, the inspectors identified instances when the quality of the instrument air may have impacted the functionality of the system and been classified as a maintenance preventable functional failure. The inspectors determined this issue to be minor because despite these instances, Oyster Creek placed the instrument air system into (a)(1) status in a timely manner and actions were appropriately taken to address the performance issues of the system and return the system to (a)(2) status. In addition, the inspectors noted that Exelon took corrective actions to revise their instrument air procedures to include air quality criteria, but have not yet updated the Maintenance Rule criteria. Exelon entered this observation into their corrective action program as IR 1086670.

Weaknesses in Documentation in the Corrective Action Program

- IR 918656 documents actions taken by the station in response to the March 2009 site safety culture survey. One of the assignments in this IR was to develop an improvement plan in response to results of a follow-up chemistry department safety culture survey and present the results to senior management. Though a plan was presented to management, the plan was never actually documented in the IR. In addition, the station was unable to locate meeting minutes from the meeting in which the plan was presented to management. Through discussions with the Chemistry Manager and review of performance improvement integrated matrices for the chemistry department, the inspectors determined that the station is taking actions to satisfy the original IR assignment. Exelon wrote IR 1081494 to document this issue.

- IR 1005311 documents that the maintenance department had overdue issue report assignments. However, the IR did not document what the content or impact of the overdue assignments were or if the assignments were completed. After further investigation, the inspectors determined that the issue report assignments were not corrective actions associated with either significant conditions adverse to quality or conditions adverse to quality. Exelon documented this issue in IR 1082096.

The inspectors independently evaluated all of the observations described above for significance in accordance with IMC 0612, Appendix B, "Issue Screening," and IMC 0612, Appendix E, "Examples of Minor Issues." The inspectors consider these issues to be of minor significance and, as a result, not subject to enforcement action in accordance with the NRCs Enforcement Policy.

In addition to the issues described above, the inspectors identified one example where ineffective evaluation of a problem contributed to a more than minor violation in which Exelon did not promptly correct a condition adverse to quality as required by 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions." This violation is documented in Section 4OA2.1.c.(1)

(3) Effectiveness of Corrective Actions

The inspectors concluded that corrective actions for identified deficiencies were generally timely and adequately implemented. For significant conditions adverse to quality, Exelon identified actions to prevent recurrence. The inspectors concluded that corrective actions to address the sample of NRC non-cited violations and findings since the last problem identification and resolution inspection were timely and effective.

The inspectors did identify some weaknesses in Oyster Creek's resolution of degraded conditions, documentation of actions, and completion of identified corrective actions which resulted in a minor violation associated with in-service testing of isolation condenser check valves. Specifically, the inspectors identified a minor violation of 10 CFR 50.55(a) when Exelon transitioned two isolation condenser check valves, V-11-12 and V-11-13, from quarterly in-service flow testing to a Check Valve Condition Monitoring Program as allowed by Appendix II of the American Society of Mechanical Engineers (ASME) OM Code, 1995 edition with the 1996 addenda.

When Exelon implemented a modification to include demineralized water as a source of makeup water to the isolation condensers, valves V-11-12 and V-11-13 would no longer be flow-tested each quarter. Exelon identified this issue in December 2008 (IRs 861162 and 861166), but did not formally enter the valves into the Condition Monitoring Program until February 13, 2009. Since the last flow tests that exercised these valves occurred on September 29, 2008 (V-11-12) and October 8, 2008 (V-11-13), the next tests would have been due in the fourth quarter of 2008. There was approximately a two week gap between when the grace period of the surveillance test expired and when Exelon entered the valves into their Condition Monitoring Program. Exelon did not recognize or analyze this delay at the time.

The inspectors independently evaluated this issue for significance in accordance with IMC 0612, Appendix B, "Issue Screening," and IMC 0612, Appendix E, "Examples of Minor Issues." The inspectors determined this issue was minor because Exelon did not need to perform any tests or physical actions to the check valves to enter them into the Condition Monitoring Program. Once in the Condition Monitoring Program, 10 CFR 50.55(a)3.(B)iv.(B) allows an "initial interval for tests and associated examinations [that] may not exceed two fuel cycles or 3 years, whichever is longer" during implementation. In addition, Exelon entered this issue into their corrective action program as IRs 1086757 and 1086793. As a result, this issue is not subject to enforcement action in accordance with the NRCs Enforcement Policy.

In addition to the issue described above, the inspectors identified one example where ineffective corrective actions contributed to a more than minor violation in which Exelon did not follow procedure MA-MA-716-009, "Preventive Maintenance Work Order Process," for maintenance on a fire diesel as required by Technical Specification 6.8.1. This finding is documented in Section 4OA2.1.c.(2)

b. Findings

(1) Inadequate Corrective Actions Associated with Vacuum Breaker Trip Valve Failures

Introduction. The inspectors identified a finding of very low safety significance (Green) involving a non-cited violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," for Exelon's failure to promptly identify and correct a condition adverse to quality associated with the January 2009 failure of the reactor building to torus vacuum breaker system. Specifically, Exelon did not promptly identify and correct an inadequate instrument air flow capacity condition associated with the reactor building to torus vacuum breaker trip valve.

Description. Oyster Creek has two fully redundant reactor building to torus vacuum breaker trains, operating in parallel, with a check valve and an air operated butterfly valve in each train. Butterfly valves V-26-16 and V-26-18 are automatically opened by differential pressure switches to prevent excessive vacuum in the torus, and these valves will also open on loss of instrument air pressure. Each butterfly valve contains an air-operated trip valve that receives input from a control device and redirects instrument air pressure to reposition the butterfly valve. Furthermore, the two butterfly valves are normally closed with positive or atmospheric pressure in the torus, and provide containment isolation, when required.

On November 2, 2008, reactor building to torus vacuum breaker butterfly valve V-26-16 failed to close during surveillance testing, as required to perform its containment isolation function. Exelon attributed the failure to the air-operated trip valve (V-6-3373) exhibiting a trip-reset cyclic failure. The trip-reset failure was evident due to instrument air being pulsed out of an exhaust port on the trip valve. Exelon's corrective actions were to replace the trip valve and repeat the surveillance test. The vacuum breaker butterfly valve passed the subsequent surveillance satisfactorily; however, the station did not identify a definitive cause of the trip valve failure.

On January 29, 2009, reactor building to torus vacuum breaker butterfly valve, V-26-18, failed to close during surveillance testing. One train of the vacuum breaker system was declared inoperable and operators entered Technical Specification action statement 3.5.A.4.b. Exelon again attributed the failure of the vacuum breaker valve to the trip valve (V-6-3374) exhibiting a trip-reset cyclic failure. Exelon's initial corrective actions were to replace the trip valve and perform the surveillance test. The vacuum breaker butterfly valve failed the subsequent surveillance test with the identical trip-reset cyclic failure of the trip valve. Exelon implemented troubleshooting actions and identified no issues with the system. Exelon replaced the trip valve again and performed the surveillance test which passed satisfactorily. In response to the failures, Exelon performed an apparent cause evaluation to determine the cause of the trip valve failures. Exelon's PowerLab performed a failure analysis of the failed trip valve. PowerLab's report documented that they were unable to replicate the failure exhibited when the valve was in-service. The report did indicate that the failure symptoms of the trip valve were documented in the vendor manual as a potential flow capacity issue. Exelon's apparent cause evaluation was unable to identify a cause for the trip valve failures.

On April 30, 2009, the V-26-18 butterfly valve failed its surveillance test, identical to the November 2nd and January 29th failures. As a result of the additional failure, Exelon performed extensive troubleshooting actions to determine the cause of the trip valve

failures. Exelon's troubleshooting actions identified a 1/16 inch needle valve in the instrument air line directly upstream of the trip valve. A comparison of the as-found configuration to the plant design documentation revealed that this valve should be a 1/4 inch gate valve. Exelon replaced the 1/16 inch needle valve with the as-designed gate valve and retested the reactor building to torus vacuum breaker valve satisfactorily. Subsequently, Exelon updated the apparent cause evaluation and concluded that the cause of the trip valve failure was due to it being starved of air from an improperly sized needle valve upstream in the instrument air system. Exelon performed an extent of condition review of the V-26-16 valve and identified a 1/4 inch needle valve in service instead of the as-designed 1/4 inch gate valve. Station engineering performed a technical evaluation to document the acceptability of the non-conforming condition. Exelon also developed corrective actions to replace the valve with the as-designed gate valve during the upcoming outage, as documented in work order C2021164.

The inspectors identified that Exelon did not promptly identify the cause of the trip valve failure in January 2009. Specifically, the inspectors noted that the vendor manual for the trip valve contains a section on supply pressure requirements. This section provides specific instructions to ensure that an appropriate supply regulator be chosen to accommodate the required air flow for the trip valve. Furthermore, it notes that a regulator with insufficient capacity may allow supply pressure to drop and cause the trip valve to begin a trip-reset cycle. The in-service failure of the trip valve was identical to that described in the vendor manual. The inspectors determined that Exelon should have reasonably been able to identify and correct the adverse condition after the January 2009 failure.

Analysis. Exelon's failure to promptly identify and correct an inadequate air flow capacity issue with the reactor building to torus vacuum breaker trip valve was a performance deficiency. The finding was determined to be more than minor because the performance deficiency was associated with the containment attribute of the barrier integrity cornerstone and adversely impacted the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. The inspectors evaluated the finding using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Table 4a, for the barrier integrity cornerstone. Specifically, since all four containment barrier screening questions were answered "no," the finding was determined to be of very low safety significance (Green). In addition, the failure did not represent an actual open pathway in the physical integrity of the reactor containment.

This finding has a cross-cutting aspect in the area of problem identification and resolution because Exelon failed to thoroughly evaluate the condition adverse to quality and appropriately address the cause. [P.1.(c)]

Enforcement. 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and non-conformances are promptly identified and corrected. Contrary to the above, on January 29, 2009, Exelon failed to promptly identify and correct an inadequate air flow capacity issue with the reactor building to torus vacuum breaker trip valve. As a result, on April 30, 2009, Exelon experienced an additional failure of the trip valve. Since this finding was determined to be of very low safety significance (Green)

and has been entered into Exelon's corrective action program (IR 1088325) it is being treated as an NCV, consistent with the NRC Enforcement Policy. **(NCV 05000219/2010007-01, Inadequate Corrective Actions Associated With the Reactor Building to Torus Vacuum Breaker Trip Valve Failures)**

(2) Fire Diesel Incomplete Preventive Maintenance

Introduction. The inspectors identified a Green non-cited violation of Technical Specification 6.8.1 for Exelon's failure to follow MA-MA-716-009, "Preventive Maintenance Work Order Process." Specifically, Exelon closed work order R2120325 without completing the necessary work and did not take action to evaluate the acceptability of this action, contrary to MA-MA-716-009 requirements.

Description. On August 8, 2009, Exelon began preventive maintenance on the #1 fire diesel under work order R2120325. During the work, Exelon employees realized they could not complete all the planned actions without vendor support, so they generated IR 951056 to revise the preventive maintenance work order to include an action to obtain vendor support prior to the next system outage window and add an activity to complete the work at a later time. The actions that were not completed include opening and cleaning the cooling system heat exchanger; lube oil system maintenance; governor inspection and lubrication; control, safe shutdown, and engine protection device inspection; and generator and voltage regulator cleaning and inspection.

Exelon procedure MA-MA-716-009, "Preventive Maintenance Work Order Process," Revision 4, states that each preventive maintenance task shall be either performed as scheduled, dispositioned by the preventive maintenance coordinator, or evaluated as acceptable to go overdue prior to exceeding the grace period by the cognizant system manager. The fire diesel preventive maintenance activity exceeded its grace period in February 2010 as the tasks noted above were not complete.

The corrective actions for IR 951056 consisted of an action to add an activity to contact the vendor prior to the execution of the work, but had no explicit action to add the remaining work from R2120325 to another work order. Exelon closed this IR by its due date of September 7, 2009. With both the work order and IR closed, there was nothing to prompt Exelon to complete the work they intended to do as preventive maintenance on the #1 fire diesel. Exelon can choose to change or omit work activities related to preventive maintenance, but MA-MA-716-009 requires an evaluation to explain the changes and there was no justification for the incomplete fire diesel preventive maintenance.

Exelon has experienced previous difficulties with incomplete preventive maintenance work orders being reported as complete. In April 2009, Oyster Creek Nuclear Oversight identified several preventive maintenance work orders closed without completion of all work activities (IR 902659). Additionally in April 2009, Exelon's corporate Nuclear Oversight organization issued an elevation letter to maintenance departments fleet-wide for the continued failure to follow work package instructions (IR 911051). In July 2009, Oyster Creek Nuclear Oversight issued an additional IR (938285) because the maintenance department response to IR 902659 did not fully address the issue. Corrective actions for IR 938285 included training for maintenance on proper work package documentation, which was not fully completed until January 2010 despite the

continued difficulties. In addition, Exelon issued revision 5 of MA-MA-716 which requires that the "entire scope of work associated with a preventive maintenance task shall be completed prior to taking a preventive maintenance task to" a completed status.

Analysis. Exelon's failure to follow the preventive maintenance procedure was a performance deficiency. This finding is more than minor because it affects the equipment performance attribute of the mitigating systems cornerstone and affects the cornerstone objective of ensuring the availability, reliability, and dependability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the fire diesel is the credited backup source of makeup water to the isolation condensers and the failure to perform scheduled preventive maintenance challenges the availability and reliability of the diesel. This finding affects the fire protection defense-in-depth strategies involving fire suppression and screens to Green using IMC 0609, Appendix F, "Fire Protection Significance Determination Process." Because of the fire diesel function as an isolation condenser makeup source, the inspectors reviewed the Mitigating Systems Cornerstone as well and found it also screened to Green because the finding is not a design or qualification deficiency confirmed not to result in loss of operability, does not represent a loss of system safety function, does not represent the actual loss of safety function of a single train for greater than its allowed outage time, does not represent an actual loss of safety function of one or more non-technical specification trains of equipment designated as risk significant per 10 CFR 50.65 for greater than 24 hours, and does not screen as potentially risk significant due to seismic, flooding, or severe weather initiating event.

This finding has a cross-cutting aspect in the area of human performance because Exelon personnel did not follow procedures. Specifically, when Exelon did not follow or refer to procedure MA-MA-716-009, "Preventive Maintenance Work Order Process," they did not develop an evaluation to consider the impacts of omitting portions of the work package for the two-year fire diesel preventive maintenance [H.4(b)]

Enforcement. Technical Specification 6.8.1, "Procedures and Programs," states, in part, that written procedures will be established, implemented, and maintained covering procedures recommended in NRC Regulatory Guide 1.33, Appendix A. NRC Regulatory Guide 1.33, Appendix A, Section 9 includes procedures for preventive maintenance such as MA-MA-716-009. Exelon did not follow MA-MA-716-009 in August 2009 when they closed a work order without completing all of the assigned tasks for the #1 fire diesel and did not take action to evaluate the acceptability of this action. Because this violation was of very low safety significance, and has been entered into Exelon's corrective action program as IRs 1085811 and 1088269, this violation is being treated as an NCV, consistent with the NRC Enforcement Policy. **(NCV 05000219/2010007-02, Failure to Follow Preventive Maintenance Procedure Leading to Incomplete Fire Diesel Maintenance)**

.2 Assessment of the Use of Operating Experience

a. Inspection Scope

The inspectors reviewed a sample of operating experience issues to confirm that Exelon appropriately evaluated the operating experience information for applicability to Oyster Creek and had taken appropriate actions, when warranted. The inspectors reviewed IRs which evaluated operating experience documents associated with a sample of NRC

generic communications and industry operating experience. A list of the documents reviewed is included in the Attachment to this report.

b. Assessment

The inspectors determined that, in general, Exelon appropriately considered industry operating experience information for applicability and used the information to identify corrective and preventive actions and prevent similar issues when appropriate.

c. Findings

No findings of significance were identified.

.3 Assessment of Self-Assessments and Audits

a. Inspection Scope

The inspectors reviewed a sample of audits, including the most recent audit of the corrective action program, departmental self-assessments, and assessments performed by independent organizations. Inspectors performed these reviews to determine if Exelon entered problems identified through these assessments into the corrective action program, when appropriate, and whether Exelon initiated corrective actions to address identified deficiencies. The inspectors evaluated the effectiveness of the audits and assessments by comparing audit and assessment results against self-revealing and NRC-identified observations made during the inspection. A list of documents reviewed is included in the Attachment to this report

b. Assessment

The inspectors concluded that self-assessments, audits, and other internal Exelon assessments were generally critical, thorough, and effective in identifying issues. The inspectors observed that Exelon personnel knowledgeable in the subject completed these audits and self-assessments in a methodical manner. Exelon completed these audits and self-assessments to a sufficient depth to identify issues which were entered into the corrective action program for evaluation. In general, the station implemented corrective actions associated with the identified issues commensurate with their safety significance.

c. Findings

No findings of significance were identified.

.4 Assessment of Safety Conscious Work Environment

a. Inspection Scope

During interviews with station personnel, the inspectors assessed the safety conscious work environment at Exelon. Specifically, the inspectors interviewed personnel to determine whether they were hesitant to raise safety concerns to their management and/or the NRC. The inspectors also interviewed the station Employee Concerns Program coordinator to determine what actions are implemented to ensure employees

were aware of the program and its availability with regards to raising safety concerns. The inspectors reviewed the Employee Concerns Program files to ensure that Exelon entered issues into the corrective action program when appropriate.

b. Assessment

During interviews, Oyster Creek staff expressed a willingness to use the corrective action program to identify plant issues and deficiencies and stated that they were willing to raise safety issues. The inspectors noted that no one interviewed stated that they personally experienced or were aware of a situation in which an individual had been retaliated against for raising a safety issue. All persons interviewed demonstrated an adequate knowledge of the corrective action program and the Employee Concerns Program. Based on these limited interviews, the inspectors concluded that there was no evidence of an unacceptable safety conscious work environment and no significant challenges to the free flow of information.

c. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

On July 1, 2010, the inspectors presented the inspection results to Mr. P. Orphanos, Plant Manager, and other members of the Oyster Creek staff. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

P. Orphanos, Plant Manager
W. Brortow, Vibration Engineer
T. Busk, Senior Reactor Operator
R. Csillag, System Engineer
E. DeMonch, FIN Supervisor
C. Ehrnstrom, Manager, Maintenance
A. Faranga, Manager, Emergency Preparedness
G. Fehring, Manager, Site Security Operations
M. Ford, Senior Reactor Operator
J. Frank, Engineering Supervisor
R. Gayley, IST Engineer
M. Jamano, Maintenance Rule Coordinator
J. Kandasamy, Manager, Chemistry
K. Leonard, Engineering Analyst
G. Malone, Engineering Manager
S. Markos, Engineering Supervisor
M. McKenna, Shift Operations Superintendent
F. Meyer, Pre-Defined Coordinator (ST)
T. Michalak, NOS Assessor and ECP Representative
M. Murra, Chemist
M. Nixon, Supervisor, RW/Environmental
S. Schwartz, System Engineer
J. Tabone, Component Engineer
G. Test, Chemist
T. Trettle, System Engineer
R. Wiebenga, Chemist

State of New Jersey Bureau of Nuclear Engineering

R. Zak

NRC Personnel

F. Arner, Senior Reactor Inspector, Region I
C. Cahill, Senior Reactor Analyst, Region I
C. Cauffman, Reactor Operations Engineer, Office of Nuclear Reactor Regulation

LIST OF ITEMS OPEN, CLOSED, AND DISCUSSED

Opened and Closed

05000219/2010007-01	NCV	Inadequate Corrective Actions Associated With the Reactor Building to Torus Vacuum Breaker Trip Valve Failures
05000219/2010007-02	NCV	Failure to Follow Preventive Maintenance Procedure Leading to Incomplete Fire Diesel Maintenance

LIST OF DOCUMENTS REVIEWED

Procedures
116, Surveillance Testing Program, Revision 87
205.0, Reactor Refueling, Revision 72
2400-GMM-3900.52, Inspection and Torquing of Bolted Connections, Revision 4
301.2, Reactor Recirculation System, Revision 72
322, Service Water System, Revision 77
333, Plant Fire Protection System, Revision 101
604.4.015, Reactor Building to Torus Vacuum Breaker Check Valve, Revision 19
609.4.010, 'A' Isolation Condenser Makeup Line Check Valve In-Service Test, Revision 12
610.3.006, Core Spray Isolation Valve Actuation Test and Calibration, Revision 56
610.4.003, Core Spray Valve Operability and IST, Revision 39
610.4.021, Core Spray 1 Pump Operability and IST, Revision 15
610.4.022, Core Spray 2 Pump Operability and IST, Revision 16
645.4.004, Fire Suppression Water System Valve Lineup, Revision 2
651.4.002, Standby Gas Treatment System 10-Hour Run – System 1, Revision 4
CC-AA-112, Temporary Configuration Changes, Revision 16
CC-AA-309-101, Engineering Technical Evaluations, Revision 11
CY-AA-130-230, Control of Volume Devices, Revision 5
CY-AA-130-900, Operation of the Dionex Ion Chromatograph Utilizing Chromeleon, Revision 0
CY-AB-120-100, Reactor Water Chemistry, Revision 10
CY-OC-130-510, Radiochemical Instrumentation Genie 2K Gamma Spectroscopy, Revision 4
CY-OC-130-9080, Conductivity, Revision 5
EI-AA-1, Safety Conscious Work Environment, Revision 2
EI-AA-101, Employee Concerns Program, Revision 8
EI-AA-101-1001, Employee Concerns Program Process, Revision 9
EI-AA-101-1002, Employee Concerns Program Trending Tool, Revision 5
EP-AA-121, Emergency Response Facility and EP Readiness, Revision 9
ER-AA-321-1005, Condition Monitoring for Inservice Testing of Check Valves, Revision 4
ER-AA-302-1006, Generic Letter 96-05 Program MOV Maintenance and Testing Guidelines, Revision 8
HU-AA-1211, Briefings, Revision 4
LS-AA-1003, NRC Inspection Preparation and Response, Revision 10
LS-AA-1012, Safety Culture Monitoring, Revision 0
LS-AA-115, Operating Experience Program, Revision 15
LS-AA-115-1001, Processing of Significant Level 1 OPEX Evaluations, Revision 2

LS-AA-115-1002, Processing of Significant Level 2 OPEX Evaluations, Revision 1
LS-AA-115-1003, Processing of Significant Level 3 OPEX Evaluations, Revision 1
LS-AA-115-1004, Processing of NERs and NNOEs, Revision 1
LS-AA-120, Issue Identification and Screening Process, Revision 12
LS-AA-125, Corrective Action Program, Revision 14
LS-AA-125-1001, Root Cause Analysis Manual, Revision 7
LS-AA-125-1002, Common Cause Analysis Manual, Revision 6
LS-AA-125-1003, Apparent Cause Evaluation Manual, Revision 8
LS-AA-125-1004, Effectiveness Review Manual, Revision 4
LS-AA-125-1005, Coding and Analysis Manual, Revision 7
LS-AA-126, Self-Assessment Program, Revision 6
LS-AA-126-1001, Focused Area Self Assessments, Revision 5
LS-AA-126-1002, Management Observations of Activities, Revision 1
LS-AA-126-1005, Check-In Self Assessments, Revision 4
LS-AA-126-1006, Benchmarking Program, Revision 2
LS-AA-127, Passport Action Tracking Management Procedure, Revision 9
MA-MA-716-009, Preventive Maintenance (PM) Work Order Process, Revision 4
MA-MA-716-009, Preventive Maintenance (PM) Work Order Process, Revision 5
MA-MA-716-010-1000, PIMS Work Order Process Manual, Revision 4
NO-AA-101-1005, Qualification and Employee Concerns Personnel, Revision 4
NO-AA-21, Nuclear Oversight Audit Process Description, Revision 4
NO-AA-210, Nuclear Oversight Regulatory Audit Procedure, Revision 1
NO-AA-210-1001, Nuclear Oversight Audit Handbook, Revision 1
NO-AA-210-1002, Nuclear Oversight Audit Templates, Revision 1
OP-AA-102-104, Pertinent Information Program, Revision 1
OP-AA-108-115, Operability Determinations (CM-1), Revision 9

Issue Reports *(* indicates that IR was generated as a result of this inspection)*

2004-0647	347648	349339	359889
382974	449613	475294	496919
504297	590126	592859	598553
599694	632065	642467	711216
714928	753907	777105	777334
779599	785785	786435	790294
794100	801408	802962	803941
805475	807160	808623	811067
811817	812549	814095	815403
815832	820935	822884	824015
824272	825768	825807	826998
827672	838997	839166	839996
842131	843672	844219	844470
844926	845551	846972	851471
854525	856719	858338	858504
861162	861166	864370	864933
865606	873482	874896	876096
878484	878594	879452	881749
882225	882787	883384	885578
888469	888536	889879	890190
890316	892752	893768	896246
897322	901160	901285	901479
903350	905959	907372	907734

908689	909167	909233	913746
914659	916654	917484	918242
918580	918656	918870	924060
929416	929947	930183	932736
932736	932841	932846	933296
933326	935136	937248	941043
941761	942417	942833	947700
950478	951056	951058	952152
953163	955503	957299	959034
964584	965690	971534	972228
973549	979935	981008	982504
982517	985272	985358	987643
988331	993895	994446	995487
998444	999655	1000236	1004647
1005305	1005311	1010089	1010514
1015330	1022783	1022923	1023276
1026122	1027856	1028585	1038481
1044648	1046178	1046179	1046202
1046500	1047022	1048255	1048278
1051127	1053030	1065233	1071992
1079239	1081724	1081494*	1082096*
1085811*	1081724*	1081752*	1086670*
1085261*	1086599*	1085142*	1085261*

Work Orders

A0707019	A0707122	A0707130	A2045273
A2045458	A2045709	A2101779	A2131783
A2163473	A2178017	A2179653	A2182678
A2185240	A2185569	A2191463	A2191470
A2208463	A2210212	A2212890	A2218387
A2218388	C2016222	C2016637	C2020904
R2114610	R2120325	R2120331	R2138419
R2138420	R2153513	A2199278	A2120643
A2162061	A2157402	C2021954	C2014392
C2021099	C2020747	C2020673	A2091595
A2045273	A2204972	A2204092	A2216191
A0700735	A2223149	A2223274	C2021164
C2015179	C2018963	C2022413	A2199278
A2120643	A2162061	A2157402	A2235313
A2217140	A2217140	C2021954	C2014392
C2021099	C2020747	C2020673	C2022089
C2022156	C2022160	C2021417	

Self–Assessments and Audits

NOSA-OYS-09-01, Corrective Action Program Audit Report, May 2009
Oyster Creek Nuclear Station Organizational Effectiveness Deep Dive (10/6 – 11/6/09)
Oyster Creek Safety Culture March 2009 Survey Results
Preparation for 2010 NRC Problem Identification and Resolution Inspection

NRC Non-Cited Violations and Findings

05000219/2008005-01, Conduct of Maintenance Procedure Not Properly Implemented

05000219/2008005-02, 2008005, Core Alterations without Source Range Monitor
05000219/2009003-02, Inadequate Evaluation Results In Instrument Air Transient
05000219/2009003-03, Improper Solder Joint Causes Safety Related Station Battery Charger Failure
05000219/2009003-06, Loss of Secondary Containment Integrity during Maintenance on Reactor Building Roof
05000219/2009007-02, Inadequate Design Control for RBCCW Containment Isolation Valve Modification
05000219/2009009-02, Failure to Identity and Correct a Degraded Condition Leading to #1 EDG Inability to Perform Its Safety Function
05000219/2009009-03, Failure to Control Foreign Material in Isolation Condenser
05000219/2010002-02, Failure to Declare the Rod Worth Minimizer Inoperable

Miscellaneous Documents
Calculation C-1302-212-5310-091 Rev. 1
Chemistry Instrument Deficiency Tracking Tool, Jun 2010
ECR 05-672
ECR 08-288
ECR 09-372
ECR OC-07-00945
ECR OC-07-00997
ECR OC-08-00362
Engineering Evaluation 93-004
Eppendorf Standard Operating Procedure for Pipettes, 2007
ICS -2000 Ion Chromatography System Operator's Manual, Revision 3
ISO 8655, Piston-operated volumetric apparatus Part 6, 2002
IST Program Check Valve Condition Monitoring Plan V-11-12
IST Program Check Valve Condition Monitoring Plan V-11-13
IST Program Check Valve Condition Monitoring Plan V-11-42
Main Chemistry Laboratory Temperature Log
Main Office Building HVAC System Maintenance Rule Performance
OP 334, Instrument Air and Service Air System
Operability Evaluation OC-2008-OE-0010
OYS-14686
OYS-34003
OYS-47563
TDR829, "Pipe Integrity Inspection Program" Revision 6
Vendor Manual – "377 Series Trip Valves" September 2004
Vendor Manual – "Whitney Forged Body Regulating and Shut-off Valves"

LIST OF ACRONYMS

ADAMS	Agency-Wide Documents Access and Management System
ASME	American Society of Mechanical Engineers
CA	Corrective Action
CFR	Code of Federal Regulations
DRP	Division of Reactor Projects
IMC	Inspection Manual Chapter
IR	Issue Report
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
PARS	Publicly Available Records
PIMS	Plant Information Management System
SDP	Significance Determination Process
UFSAR	Updated Final Safety Analysis Report