October 30, 2003

EA 03-194
EA 03-197

Mr. William R. Kanda
Vice President - Nuclear, Perry
FirstEnergy Nuclear Operating Company
P. O. Box 97, A210
10 Center Road
Perry, OH 44081

SUBJECT: PERRY NUCLEAR POWER PLANT
NRC INTEGRATED INSPECTION REPORT 05000440/2003006
PRELIMINARY WHITE FINDINGS

Dear Mr. Kanda:

On September 30, 2003, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Perry Nuclear Power Plant. The enclosed report documents the inspection findings which were discussed on October 2, 2003, with you and other members of your staff. We also discussed the two issues that appear to have low to moderate safety significance with you and your staff in separate additional conference calls on October 20, 2003, for the Emergency Preparedness issue, and October 27, 2003, for the emergency service water issue.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

This report discusses two findings that appear to have a low to moderate safety significance. The first finding, as described in Section 4OA5.1 of this report, relates to the failure of your Division 1 emergency service water (ESW) pump on September 1, 2003. This finding did present an immediate safety concern. However, the preliminary cause of the failure was promptly identified and the pump was repaired and returned to service on September 5, 2003. This finding was assessed using the NRC Phase 3 Significance Determination Process and was preliminarily determined to be White, i.e., a finding with some increased importance to safety, which may require additional NRC inspection. This finding was also determined to be an apparent violation of NRC requirements. Specifically, the apparent violation involved the failure to implement adequate procedures for ESW pump reassembly in that licensee procedure GMI-0039, "Disassembly of the Emergency Service Water Pumps," failed to completely incorporate the manufacturer's instructions for reassembly of the pump shaft couplings. As a result, at least two of the couplings for the Division 1 ESW pump had insufficient engagement between the key and coupling sleeve. Your staff's investigation concluded that the pump shaft coupling failed due to insufficient engagement of the key between the coupling and the shaft.

The second finding, as described in Section 4OA5.2 of this report, relates to an ALERT level event on April 24, 2003, in which undue delay in declaring the actual emergency condition was incurred when a shift manager did not follow the emergency classification and action level scheme as required by your emergency plan. This finding was assessed using the Emergency Preparedness Significance Determination Process and was preliminarily determined to be White, i.e., a finding with some increased importance to safety, which may require additional NRC inspection. This finding was also determined to be an apparent violation of NRC requirements. Specifically, the apparent violation involved the failure to follow Emergency Plan Instruction EPI-A1, “Emergency Action Levels,” which delineates licensee emergency response responsibilities in accordance with 10 CFR 50.47(b)(2), as well as the emergency action level scheme in accordance with 10 CFR 50.47(b)(4). These requirements were not met during the April 24, 2003, ALERT in that, the shift manager did not perform his responsibility to assume the duties of Emergency Coordinator and assess, identify, and classify the event in a timely manner.

The apparent violations of NRC requirements are being considered for escalated enforcement action in accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600. The current Enforcement Policy is included on the NRC’s website at **www.nrc.gov**.

We believe that sufficient information was considered to make the preliminary significance determinations. However, before we make a final decision on these issues, we are providing you an opportunity to present to the NRC your perspectives on the facts and assumptions used by the NRC to arrive at the findings and their significance at a Regulatory Conference or by a written submittal. If you choose to request a Regulatory Conference, it should be held within 30 days of the receipt of this letter and we encourage you to submit supporting documentation at least one week prior to the conference in an effort to make the conference more efficient and effective. If a Regulatory Conference is held, it will be open for public observation. If you decide to submit only a written response, such submittal should be sent to the NRC within 30 days of the receipt of this letter.

Please contact Mark A. Ring at 630-829-9703 within 10 business days of your receipt of this letter to notify the NRC of your intentions with respect to the Division 1 ESW pump issue. Please contact Kenneth Riemer of the Division of Reactor Safety, Plant Support Branch, at 630-829-9757 within 10 business days of your receipt of this letter to notify the NRC of your intentions with respect to the emergency preparedness issue. If we have not heard from you within 10 days, we will continue with our significance determinations and enforcement decisions and you will be advised by separate correspondence of the results of our deliberations on these matters.

Since the NRC has not made final determinations in these matters, no Notices of Violation are being issued for these inspection findings at this time. In addition, please be advised that the number and characterization of apparent violations described in the enclosed inspection report may change as a result of further NRC review.

This report also documents two NRC-identified findings of very low safety significance (Green). One of the findings was determined to involve a violation of NRC requirements. However, because of its very low safety significance and because it has been entered into your corrective action program, the NRC is treating this finding as a Non-Cited Violation in accordance with Section VI.A.1 of the NRC's Enforcement Policy.

If you contest the subject or severity of a Non-Cited Violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 801 Warrenville Road, Lisle, IL 60532-4351; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Perry Nuclear Power Plant.

In accordance with 10 CFR 2.790 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 by Patrick L. Hiland Acting for/

Steven A. Reynolds, Acting Division Director
Division of Reactor Projects

Docket No. 50-440
License No. NPF-58

Enclosure: Inspection Report 05000440/2003006
w/Attachment: Supplemental Information

See Attached Distribution

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-440
License No:	NPF-58
Report No:	05000440/2003006
Licensee:	FirstEnergy Nuclear Operating Company (FENOC)
Facility:	Perry Nuclear Power Plant, Unit 1
Location:	P.O. Box 97 A200 Perry, OH 44081
Dates:	July 1 through September 30, 2003
Inspectors:	R. Powell, Senior Resident Inspector J. Ellegood, Resident Inspector S. Campbell, Senior Resident Inspector, Fermi J. House, Senior Radiation Specialist R. Jickling, Emergency Preparedness Analyst B. Winter, Regional Inspector
Approved by:	Mark A. Ring, Chief Branch 1 Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000440/2003006; 07/01/2003 - 09/30/2003; Perry Nuclear Power Plant; Fire Protection; Maintenance Effectiveness; Other Activities.

The report covered a 3-month period of baseline resident inspection, an announced baseline inspection on radiation protection, and followup inspection activities on emergency preparedness. The inspection was conducted by Region III inspectors and the resident inspectors. This inspection identified two preliminary White findings and associated apparent violations (AVs), one Green Non-Cited Violation (NCV), and one Green finding (FIN). The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be "Green" or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified and Self-Revealed Findings

Cornerstone: Mitigating Systems

- To Be Determined. A self-revealed apparent violation of Technical Specification (TS) 5.4 occurred when the Division 1 emergency service water (ESW) pump failed during routine pump operation. The licensee rebuilt the pump in 1997 and during this reassembly, failed to properly reassemble the pump shaft connections. The improper reassembly led to pump failure on September 1, 2003.

  The NRC assessed this finding through Phase 3 of the Significance Determination Process and made a preliminary determination that it is an issue with low to moderate safety significance. (Section 4OA5.1)

- Green. The inspectors identified a Non-Cited Violation of 10 CFR 50.65(a)(1) for the failure of the licensee to monitor the performance of the rod control and information system (RCIS) against licensee established goals. The licensee Maintenance Rule expert panel approved re-categorization of the system function of manual rod insertion to (a)(1) on November 6, 2002. As of September 25, 2003, the licensee had failed to establish goals for system monitoring. The inspectors identified a similar deficiency with five additional systems or system functions currently classified as (a)(1) by the licensee.

  This finding is greater than minor because it was associated with the mitigating system cornerstone attribute of equipment reliability and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Although not suited for Significance Determination Process review, the finding was determined to be of very low safety significance in that the failure to establish goals and monitor system performance in accordance with 10 CFR 50.65(a)(1) did not directly result in additional system or function failures. (Section 1R12)

- Green. The inspectors identified a finding of very low safety significance for the failure of the licensee to promptly identify a degraded fire barrier between the Division 3 and Division 2 Emergency Diesel Generator (EDG) rooms. The inspectors observed that with the ventilation system operating as required for EDG operations, the fire door separating the two rooms would not close without assistance and thus, was an impairment or degradation of a fire protection feature.

  This finding is greater than minor because it is associated with fire protection equipment performance and degraded the ability to meet the cornerstone objective. This issue had very low safety significance because the separation of redundant trains of safe shutdown equipment was not compromised. (Section 1R05)

Cornerstone: Emergency Preparedness

- To Be Determined. The inspectors identified an apparent violation having preliminarily low to moderate safety significance when the licensee failed to follow the requirements of the Perry Emergency Plan during an ALERT level event on April 24, 2003. During this event, damage to irradiated fuel caused a high alarm on the fuel handling building ventilation exhaust gaseous radiation monitor.

  The finding was determined to be greater than minor because it affected the Emergency Preparedness Cornerstone objective of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The finding was preliminarily determined to be of low to moderate safety significance because the licensee failed to implement a risk significant planning standard (10 CFR 50.47(b)(4)) during an actual Alert emergency. (Section 4OA5.2)

B. Licensee-Identified Violations

No findings of significance were identified.

REPORT DETAILS

Summary of Plant Status

The plant began the inspection period at 100 percent power and remained there except for minor downpowers for rod line adjustments until August 14. At 4:10 p.m. on August 14, the plant scrammed due to a loss of all offsite power. The plant declared an Unusual Event at 4:20 p.m. due to the loss of all offsite power. The plant subsequently exited the Unusual Event after restoration of offsite power and initiation of shutdown cooling at 7:52 p.m. on August 15. The plant entered Mode 4 at 1:20 a.m. on August 16. After completing restart readiness activities, the plant entered Mode 2 at 1:50 a.m. on August 20, and reached criticality at 8:36 a.m. that same day. The plant synchronized to the grid at 1:23 a.m. on August 21, and reached 100 percent power on August 23. On September 14, the plant reduced power to 20 percent to repair a hydraulic leak on a bypass valve and began a power ascension later that day. During the downpower, the plant detected a leaking fuel pin which limited power to 90 percent until a rod line change could be performed. On September 18, the plant reduced power to 58 percent to adjust the rod line. On September 19, the plant returned to 100 percent power. On September 26, the plant reduced power to 67 percent to perform power suppression testing in order to identify the leaking fuel pin. On September 29, the plant returned to 100 percent power.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R04 Equipment Alignment (71111.04)

.1 Complete System Walkdown

a. Inspection Scope

The inspectors performed a complete walkdown of accessible portions of the ESW system to verify system operability during the week ending July 12. The ESW system was selected due to its risk significance. The inspectors used ESW system valve lineup instructions (VLIs) and system drawings to accomplish the inspection.

The inspectors observed selected switch and valve positions, electrical power availability, component labeling, and general material condition. The inspectors also reviewed open system engineering issues as identified in the licensee's quarterly system health reports, outstanding maintenance work requests, and a sampling of licensee condition reports (CRs) to verify that problems and issues were identified, and corrected, at an appropriate threshold. The documents used for the walkdown and issue review are listed in the attached List of Documents Reviewed.

b. Findings

No findings of significance were identified.

.2 Partial System Walkdowns

a. Inspection Scope

The inspectors conducted partial walkdowns of the system trains listed below to verify that the systems were correctly aligned to perform their designed safety function. The inspectors used licensee VLIs and system drawings during the walkdowns. The walkdowns included selected switch and valve position checks, and verification of electrical power to critical components. Finally, the inspectors evaluated other elements, such as material condition, housekeeping, and component labeling. The documents used for the walkdowns are listed in the attached List of Documents Reviewed. The inspectors reviewed the following three systems:

- the high pressure core spray (HPCS) system, including the Division 3 EDG, on August 11, during a planned reactor core isolation cooling (RCIC) system maintenance outage;
- the EDG support systems, on August 20, during a period of heightened attention to electrical grid stability; and
- the Division 2 and Division 3 switchgear, on September 5, during a Notice of Enforcement Discretion (NOED) for an inoperable Division 1 ESW system.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope

The inspectors walked down the following 11 areas to assess the overall readiness of fire protection equipment and barriers:

- Fire Area 1AB-1f, HPCS Pump Room;
- Fire Zone 1AB-2, Unit 1 Auxiliary Building, 599'-0";
- Fire Zones 1AB-3a and 1AB-3b, Unit 1 Auxiliary Building - EL. 620'-6";
- Fire Area 2CC-3, Units 1 and 2 Control Complex and Diesel Generator (DG) Buildings Elev. 620'-6";
- Fire Zone IB-1, Intermediate Building Elevation 574'-10";
- Fire Zone IB-2, Intermediate Building Elevation 599'-0";
- Fire Area 1DG-1a, Division 2 DG Room;
- Fire Area 1CC-4, Control Complex Elevation 638'-6";
- ESW pumphouse;
- Fire Area 1CC-5, Control Complex Elevation 654'-6"; and
- Fire Area CC-2, Control Complex Elevation 599'-0".

Emphasis was placed on the control of transient combustibles and ignition sources, the material condition of fire protection equipment, and the material condition and operational status of fire barriers used to prevent fire damage or propagation.

The inspectors looked at fire hoses, sprinklers, and portable fire extinguishers to verify that they were installed at their designated locations, were in satisfactory physical condition, and were unobstructed. The inspectors also evaluated the physical location and condition of fire detection devices. Additionally, passive features such as fire doors, fire dampers, and mechanical and electrical penetration seals were inspected to verify that they were in good physical condition. The documents listed in the Supplemental Information (attachment to this report) were used by the inspectors during the assessment of this area.

b. Findings

Introduction: The inspectors identified a finding of very low safety significance (Green) for the failure of the licensee to promptly identify a degraded fire barrier between the Division 3 and Division 2 EDG rooms. The finding was not considered a violation of regulatory requirements. The inspectors observed that with the ventilation system operating as required for EDG operations, the fire door separating the two rooms would not close without assistance and thus, was an impairment or degradation of a fire protection feature.

Description: On July 25, during operation of the Division 2 EDG, the inspectors noted that the fire door separating the Division 2 and Division 3 EDGs required assistance to close and latch. If assistance was not provided, the door remained open approximately 1 inch and air flow could be felt from the Division 2 EDG room. Although several members of the licensee staff were present in the room, none of them identified the failure to latch as a degradation of a fire barrier. After the inspectors notified the licensee of the condition, the licensee declared the door impaired and initiated a notification to repair the door. This door provided part of the fire barrier between the Division 2 EDG, which was safe shutdown equipment, and the Division 3 EDG.

Subsequent to the inspectors identification of this issue, the licensee identified a similar condition with respect to the Division 3 EDG hallway door. On August 27, the licensee identified that the door would not close without assistance while the EDG was running. The licensee tested the door from 90 degrees, 45 degrees, and 15 degrees and the door failed each test.

Analysis: The inspectors noted several deficiencies with respect to licensee performance. First, numerous members of the licensee staff were in the area, yet none identified that the fire door did not operate as required. In addition, the door inspection procedure did not require that door closure be verified with the most challenging ventilation lineup. In this instance, the door would not perform its required function during EDG operation even though the door functioned with the ventilation system in its normal lineup.

The inspectors determined that the finding was more than minor using guidance in Appendix B, of IMC 0612. Specifically, the inspectors concluded that the finding was associated with fire protection equipment performance and degraded the ability to meet the cornerstone objective since it was associated with the impairment or degradation of a fire protection feature. This issue had very low safety significance (Green) because the separation of redundant trains of safe shutdown equipment was not compromised.

Enforcement: Because fire barriers are not subject to the requirements of 10 CFR Part 50, Appendix B, no violation of regulatory requirements occurred. This finding **(FIN 05000440/2003006-01)** was entered in the licensee's corrective action system as CR 03-04401.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

During the week ending August 9, the inspectors reviewed design basis and licensee documentation concerning common mode flooding of the emergency core cooling system (ECCS) equipment rooms. In selected pump rooms, the inspectors verified that watertight doors and selected room penetrations were intact. Additionally, the inspectors reviewed licensee maintenance procedures for door inspection and maintenance against established vendor guidance. Finally, the inspectors reviewed ECCS pump room sump level high alarm response instructions and verified that actions prescribed in the procedure could reasonably be used to achieve the desired effects.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

a. Inspection Scope

The resident inspectors observed licensed operator performance in the plant simulator. The inspectors evaluated crew performance in the areas of: clarity and formality of communication; ability to take timely action in the safe direction; prioritizing, interpreting, and verifying alarms; correct use and implementation of procedures, including alarm response procedures; timely control board operation and manipulation, including high-risk operator actions; and group dynamics. The inspectors also observed the licensee's evaluation of crew performance to verify that the training staff had observed important performance deficiencies and specified appropriate remedial actions. The inspectors observed the following two evaluated simulator scenarios:

- operating crew #2 on September 10; and
- operating crew #4 on September 24.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed the licensee's implementation of the Maintenance Rule requirements to verify that component and equipment failures were identified and

scoped within the Maintenance Rule and that select structures, systems, and components (SSCs) were properly categorized and classified as (a)(1) or (a)(2) in accordance with 10 CFR 50.65. The inspectors reviewed station logs, maintenance work orders, selected surveillance test procedures, and a sample of CRs to verify that the licensee was identifying issues related to the Maintenance Rule at an appropriate threshold and that corrective actions were appropriate. Additionally, the inspectors reviewed the licensee's performance criteria to verify that the criteria adequately monitored equipment performance and to verify that licensee changes to performance criteria were reflected in the licensee's probabilistic risk assessment. During this inspection period, the inspectors reviewed the following four areas:

- safety-related instrument air, instrument air, and service air systems;
- control room, battery room, and emergency closed cooling (ECC) pump area ventilation systems;
- direct current electrical systems; and
- RCIS.

The problem identification and resolution CRs reviewed are listed in the attached List of Documents Reviewed.

b. Findings

Introduction: The inspectors identified an NCV of 10 CFR 50.65(a)(1) for the failure of the licensee to monitor the performance of the RCIS against licensee established goals. The licensee Maintenance Rule expert panel approved re-categorization of the system function of manual rod insertion to (a)(1) on November 6, 2002. As of September 25, 2003, the licensee had failed to establish goals for system monitoring. The inspectors identified a similar deficiency with five additional systems or system functions currently classified as (a)(1) by the licensee.

Description: On September 25, the inspectors attended a licensee maintenance rule expert panel meeting. The meeting was the first such meeting conducted since March 2003. Based on information presented at the meeting, subsequent record review, and discussions with licensee personnel, the inspectors determined that the licensee had not established performance monitoring goals for six systems which the licensee had categorized as (a)(1). Specifically, as of September 25, performance monitoring goals had not been established for:

- Maintenance Rule function C11-02, manually insert control rods, despite the function being categorized as (a)(1) on November 6, 2002;
- Maintenance Rule function C11-00-PL, control rod drive forced loss rate due to scram discharge volume valve rework, despite the function being categorized as (a)(1) on December 23, 2002;
- Maintenance Rule function C11-13, scram discharge vent and drain; despite the function being categorized as (a)(1) on November 13, 2002;
- Maintenance Rule function E22-00, HPCS pump failure to start in October 2002, despite the function being categorized as (a)(1) on November 13, 2002;
- Maintenance Rule function N32-02, reactor/turbine generator trip forced loss rate criterion, despite the function being categorized as (a)(1) on November 13, 2002; and

- Maintenance Rule function R51-01, plant party line page, despite the function being categorized as (a)(1) on January 8, 2003.

Analysis: This finding is greater than minor because it was associated with the mitigating system cornerstone attribute of equipment reliability and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Although not suited for SDP review, the finding was determined to be of very low safety significance in that the failure to establish goals and monitor system performance in accordance with 10 CFR 50.65(a)(1) did not directly result in additional system or function failures.

Enforcement: 10 CFR 50.65(a)(1) requires in part that licensees shall monitor the performance or condition of systems, structures, and components (SSCs) against licensee established goals, in a manner sufficient to provide reasonable assurance that such SSCs, as defined in 10 CFR 50.65(b), are capable of fulfilling their intended functions. Further, (a)(1) requires that such goals shall be established commensurate with safety and, where practical, take into account industry-wide operating experience. When the performance or condition of a structure, system, or component does not meet established goals, appropriate corrective action shall be taken.

Contrary to the above, the licensee failed to establish goals for the RCIS system after categorizing the system as (a)(11) on November 6, 2002. The inspectors also identified five additional examples of the licensee's failure to establish performance monitoring goals for systems or functions categorized as (a)(1). Because of the very low safety significance and because the issue has been entered into the licensee's corrective action program, the issue is being treated as a NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy **(NCV 05000440/2003006-02)**.

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

a. Inspection Scope

The inspectors reviewed the licensee's evaluation of plant risk, scheduling, configuration control, and performance of maintenance associated with planned and emergent work activities, to verify that scheduled and emergent work activities were adequately managed. In particular, the inspectors reviewed the licensee's program for conducting maintenance risk assessments to verify that the licensee's planning, risk management tools, and the assessment and management of on-line risk and shutdown risk were adequate. The inspectors also reviewed licensee actions to address increased on-line risk when equipment was out of service for maintenance, such as establishing compensatory actions, minimizing the duration of the activity, obtaining appropriate management approval, and informing appropriate plant staff, to verify that the actions were accomplished when on-line risk was increased due to maintenance on risk-significant SSCs. The following seven assessments and/or activities were reviewed:

- the maintenance risk assessment for the week of July 21, which was modified due to an emergent issue with the Division 2 EDG, which resulted in an unplanned entry into the "Yellow" risk category;
- the risk assessment and work planning associated with the emergent maintenance

activities on regulating transformer 1R25-S0027 which powered essential 120 V bus EB-1-B1 conducted August 2 and 3;
- the maintenance risk assessment and work progression associated with a planned RCIC outage conducted the week of August 11;
- the shutdown risk associated with a forced outage resulting from loss of offsite power (LOOP) on August 14;
- the maintenance risk assessment for the week of August 25, which included entry into an elevated risk profile due to planned testing of the Division 2 remote shutdown functions;
- the risk assessment and work planning associated with the failure of the Division 1 ESW pump; and
- the maintenance risk assessment for the week of September 8, which included planned motor driven feedpump maintenance, retesting of the Division 2 remote shutdown functions, and Division 1 and 2 ECCS waterleg pump testing.

b. Findings

No findings of significance were identified.

1R14 Operator Performance During Non-Routine Evolutions and Events (71111.14)

.1 Response to Alarms Received While Shifting Motor Control Center Power Supply

a. Inspection Scope

On August 5, the licensee received unexpected fuel handling building radiation and evacuation alarms and manhole 20 effluent monitor alarms coincident with shifting the power supply for 480 V motor control center F1C08 from normal to emergency for planned maintenance activities. The inspectors reviewed licensee immediate and supplemental actions. Specifically, the inspectors verified the licensee's actions were consistent with operating instructions, alarm response instructions, and off-normal instructions (ONIs).

b. Findings

No findings of significance were identified.

.2 Waterleg Pump and Piping Venting Evolutions

a. Inspection Scope

On the afternoon of September 11, and morning of September 12, the inspectors observed performance of operations evolution orders designed to vent the low pressure core spray (LPCS)/residual heat removal (RHR) 'A' and RHR 'B'/RHR 'C' waterleg pumps and associated system piping. The evolutions were conducted as part of a root cause team investigation of the August 14 air binding of the LPCS/RHR 'A' waterleg pump. The inspectors reviewed the licensee's work planning, observed the pre-job briefings, and verified the actual work met licensee standards and expectations with respect to procedure usage, crew communications, and work control.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors selected CRs related to potential operability issues for risk significant components and systems. These CRs were evaluated to determine whether the operability of the components and systems was justified. The inspectors compared the operability and design criteria in the appropriate sections of the Technical Specifications (TSs) and Updated Safety Analysis Report (USAR) to the licensee's evaluations, to verify that the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors verified that the measures were in place, would work as intended, and were properly controlled. Additionally, the inspectors verified, where appropriate, compliance with bounding limitations associated with the evaluations. The inspectors reviewed:

- an operability determination of steam tunnel thermocouples due to ambiguities in TS basis;
- an operability determination on primary containment isolation valves outside their qualified life;
- an immediate investigation on non-conservatism in power to flow map stability regions;
- an operability determination on improper voltage to ground on a TOPAZ inverter;
- an operability determination on water hammer in the LPCS water leg; and
- an operability determination concerning common cause failure susceptibility of the Division 3 ESW pump relative to the failure of the Division 1 ESW pump on September 1.

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds (71111.16)

a. Inspection Scope

The inspectors reviewed selected operator workarounds (OWAs) to determine whether there was any impact on the operator's ability to properly respond to plant transients and accidents and to implement ONIs and plant emergency instructions in response to an initiating event. The two OWAs reviewed were:

- adjustments to maximum fraction limiting power density to account for errors in single loop thermal limiting calculations performed by 3D Monicore; and
- operator actions to reset the RCIC overspeed trip due to sympathetic tripping following manual trips of the turbine.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors evaluated the following post-maintenance testing (PMT) activities for risk significant systems to assess the following (as applicable): the effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed; acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate; tests were performed as written; and equipment was returned to its operational status following testing. The inspectors evaluated the activities against TSs, the USAR, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications. In addition, the inspectors reviewed CRs associated with PMT to determine if the licensee was identifying problems and entering them in the corrective action program. The specific procedures reviewed are listed in the attached List of Documents Reviewed. The following seven post-maintenance activities were reviewed:

- LPCS operation following breaker reinsertion on July 18;
- Division 2 EDG testing following repairs to the motor operated controller on July 25;
- breaker EH2104 testing after a cell switch adjustment completed on July 28;
- regulating transformer 1R25-S0027 testing after a capacitor replacement completed on August 3;
- RCIC testing performed August 20 and 21 following planned system maintenance activities and emergent work associated with the gland seal compressor;
- Division 1 ESW pump testing following pump repairs conducted September 5; and
- scram time testing following replacement of hydraulic control unit accumulators conducted on September 15.

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage Activities (71111.20)

a. Inspection Scope

The inspectors observed activities associated with a forced outage initiated on August 14, when the plant scrammed due to a loss of all offsite power, and continued through August 21 when the plant synchronized to the grid. The inspectors assessed the adequacy of forced outage-related activities, including implementation of risk management, conformance to approved site procedures, and compliance with TS requirements. The following major activities were observed or performed:

- On August 15 and 16, the inspectors observed the licensee's shutdown and cooldown of the reactor. The inspectors observed shift briefings, operator

performance, shift management coordination of plant activities, and conformance with TS requirements including cooldown limitations.

- From August 16 through August 20, the inspectors reviewed licensee restart readiness activities to verify emergent issues were appropriately identified as restart restraints and that restart restraint issues were appropriately resolved prior to mode changes.

- On August 20, the inspectors observed the licensee's reactor startup. The inspectors observed shift briefings, operator performance, shift management coordination of plant activities, and conformance with TS requirements including heatup limitations and mode change requirements.

b. Findings

No findings of significance were identified. Inspection activities associated with the equipment anomalies involving the Division 1 EDG and LPCS/RHR 'A' waterleg pump were completed as part of NRC Special Inspection, 05000440/2003009, which was chartered on August 27.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed surveillance testing or reviewed test data for risk-significant systems or components to assess compliance with TSs, 10 CFR Part 50, Appendix B, and licensee procedure requirements. The testing was also evaluated for consistency with the USAR. The inspectors verified that the testing demonstrated that the systems were ready to perform their intended safety functions. The inspectors reviewed whether test control was properly coordinated with the control room and performed in the sequence specified in the surveillance instruction (SVI), and if test equipment was properly calibrated and installed to support the surveillance tests. The procedures reviewed are listed in the attached List of Documents Reviewed. The five specific surveillance activities assessed were:

- electromagnetic interference testing of various electrical equipment conducted July 9;
- RHR 'A' pump and valve operability test conducted July 15;
- RCIC turbine overspeed trip testing conducted August 13;
- Division 1 EDG testing conducted August 21; and
- average power range monitor B weekly calibration conducted on September 30.

b. Findings

The inspection activity associated with the Division 1 EDG surveillance test failure was completed as part of NRC Special Inspection, 05000440/2003009, which was chartered on August 27.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed the licensee's temporary installation of blowers to improve air mixing in the turbine building to verify that the temporary modifications did not affect system operability or availability. The inspectors reviewed screening and evaluation in accordance with 10 CFR 50.59. The inspectors reviewed post-installation temperature data to verify that the temporary modification performed as expected.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01)

.1 Plant Walkdowns and Radiological Boundary Verifications

a. Inspection Scope

The inspectors conducted walkdowns of the radiologically protected area to verify the adequacy of radiological area boundaries and postings. Specifically, the inspectors walked down radiologically significant work area boundaries (high and locked high radiation areas) in the Radwaste and Fuel Handling Buildings, and performed confirmatory radiation measurements to determine if these areas were properly posted and controlled in accordance with 10 CFR Part 20, licensee procedures, and TSs. The inspectors also evaluated the radiological condition of those areas walked down to assess radiological housekeeping and contamination controls.

The inspectors also reviewed the licensee's physical and programmatic controls for highly activated and/or contaminated materials (non-fuel) stored within spent fuel or other storage pools.

b. Findings

No findings of significance were identified.

2OS2 As Low As Is Reasonably Achievable Planning And Controls (71121.02)

.1 Source-Term Reduction and Control

a. Inspection Scope

The inspectors reviewed licensee records to determine the historical trends and current status of tracked plant source terms (STs) and determined that the licensee was making

allowances and had developing contingency plans for expected changes in the ST due to changes in plant fuel performance issues or changes in plant primary chemistry.

The inspectors verified that the licensee had developed an understanding of the plant ST, that this included knowledge of input mechanisms to reduce the ST and that the licensee had an ST control strategy in place that included a cobalt reduction strategy and shutdown ramping and operating chemistry plan which was designed to minimize the ST external to the core. Other methods used by the licensee to control the ST including component and system decontamination, and use of shielding were evaluated.

The licensee's identification of specific sources was reviewed along with exposure reduction actions and the priorities the licensee had established for implementation of those actions. The results that had been achieved against these priorities since the last refueling cycle were reviewed. For the current assessment period, source reduction evaluations were verified along with actions taken to reduce the overall ST compared to the previous year.

b. Findings

No findings of significance were identified.

.2 Declared Pregnant Workers

a. Inspection Scope

The inspectors reviewed dose records of declared pregnant workers for the current assessment period to verify that the exposure results and monitoring controls employed by the licensee complied with the requirements of 10 CFR Part 20.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation and Protective Equipment (71121.03)

.1 Rescue Capabilities During Use of One-Piece Atmosphere Supplying Respiratory Protection Devices

a. Inspection Scope

The inspectors reviewed the licensee's respiratory protection and confined space entry procedures and discussed their implementation relative to the requirements of 10 CFR 20.1703(f) for standby rescue persons whenever one-piece atmosphere supplying suits, or any combination of respiratory protection and personnel protective equipment were used from which the wearer may have difficulty extricating himself.

The inspectors discussed with radiation protection (RP) management, proposals for enhancing the radiation work permit and the as-low-as-is-reasonably-achievable

(ALARA) planning process and for developing safety plans for those jobs not performed in confined space atmospheres to formally address work provisions for standby rescuers.

b. Findings

No findings of significance were identified.

Cornerstone: Public Radiation Safety

2PS2 Radioactive Material Processing and Transportation (71122.02)

.1 Radioactive Waste System

a. Inspection Scope

The inspectors reviewed the liquid and solid radioactive waste system description in the USAR for information on the types and amounts of radioactive waste (radwaste) generated and disposed. The inspectors reviewed the scope of the licensee's audit program with regard to radioactive material processing and transportation programs to verify that it met the requirements of 10 CFR 20.1101(c).

b. Findings

No findings of significance were identified.

.2 Radioactive Waste System Walkdowns

a. Inspection Scope

The inspectors performed walkdowns of the liquid and solid radwaste processing systems to verify that the systems agreed with the descriptions in the USAR and the Process Control Program, and to assess the material condition and operability of the systems. The inspectors reviewed the status of radwaste process equipment that was not operational and/or was abandoned in place. The inspectors reviewed the licensee's administrative and physical controls to ensure that the equipment would not contribute to an unmonitored release path or be a source of unnecessary personnel exposure.

The inspectors reviewed the current processes for transferring waste resin into shipping containers to determine if appropriate waste stream mixing and/or sampling procedures were utilized. The inspectors also reviewed the methodologies for waste concentration averaging to determine if representative samples of the waste product were provided for the purposes of waste classification in 10 CFR 61.55. During this inspection, the inspectors were unable to observe waste processing; see Section 2OS1(.1) of IR 50-440/02-05(DRP) for observations.

b. Findings

No findings of significance were identified.

.3 Waste Characterization and Classification

a. Inspection Scope

The inspectors reviewed the licensee's radiochemical sample analysis results for each of the licensee's waste streams, including dry active waste (DAW), spent resins and filters. The inspectors also reviewed the licensee's use of scaling factors to quantify difficult-to-measure radionuclides (e.g., pure alpha or beta emitting radionuclides). The reviews were conducted to verify that the licensee's program assured compliance with 10 CFR 61.55 and 10 CFR 61.56, as required by Appendix G of 10 CFR Part 20. The inspectors also reviewed the licensee's waste characterization and classification program to ensure that the waste stream composition data accounted for changing operational parameters and thus remained valid between the annual sample analysis updates.

b. Findings

No findings of significance were identified.

.4 Shipment Preparation

a. Inspection Scope

The inspectors observed selected aspects of the preparation of a Sealand container and the survey of an empty incoming trailer. This included observations of radiation worker practices to verify that the workers had adequate skills to accomplish each task. The inspectors reviewed the records of training provided to personnel responsible for the conduct of radwaste processing and radioactive shipment preparation activities. The review was conducted to verify that the licensee's training program provided training consistent with NRC and Department of Transportation (DOT) requirements.

b. Findings

No findings of significance were identified.

.5 Shipping Records

a. Inspection Scope

The inspectors reviewed five non-excepted package shipment manifests/documents completed in 2002/2003 to verify compliance with NRC and DOT requirements (i.e., 10 CFR Parts 20 and 71 and 49 CFR Parts 172 and 173).

b. Findings

No findings of significance were identified.

.6 Identification and Resolution of Problems

a. Inspection Scope

The inspectors selectively reviewed 2002 and 2003 CRs, audits and self-assessments that addressed radwaste and radioactive materials shipping program deficiencies, to verify that the licensee had effectively implemented the corrective action program and that problems were identified, characterized, prioritized and corrected. The inspectors also verified that the licensee's self-assessment program was capable of identifying repetitive deficiencies or significant individual deficiencies in problem identification and resolution.

The inspectors also reviewed selected corrective action reports from the radioactive material and shipping programs since the previous inspection, interviewed staff and reviewed documents to determine if the following activities were being conducted in an effective and timely manner commensurate with their importance to safety and risk:

- initial problem identification, characterization, and tracking;
- disposition of operability/reportability issues;
- evaluation of safety significance/risk and priority for resolution;
- identification of repetitive problems;
- identification of contributing causes;
- identification and implementation of effective corrective actions;
- resolution of NCVs tracked in corrective action system(s); and
- implementation/consideration of risk significant operational experience feedback.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

Cornerstones: Mitigating Systems

4OA1 Performance Indicator Verification (71151)

a. Inspection Scope

The inspectors reviewed reported second quarter 2003 data for high pressure injection system unavailability and RHR system unavailability performance indicators using the definitions and guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Indicator Guideline," Revision 2. The inspectors reviewed station logs, surveillance procedures, maintenance records, and TS logs to verify the accuracy of the licensee's data submission.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

As discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that they were being entered into the licensee's corrective action program at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed.

b. Findings

No findings of significance were identified.

.2 Annual Sample Review

a. Inspection Scope

The inspectors reviewed the implementation of licensee corrective actions in the area of inappropriate use of operability determinations pertaining to steam stop valve 1N11F0020B. Specifically, the inspectors reviewed the corrective actions documented in CR 02-03939, "Operability Determination Decision Questioned by NRC Resident."

b. Findings

Although PYBP-SITE-0014, "Operability Determination Reference Guide," Revision 0, had been updated to include direction to not write operability determinations when a SSC failed an American Society of Mechanical Engineers (ASME) or TS required test, as specified in Corrective Action 3, the guide remained weak. For example, a previous NRC finding **(NCV 05000440/2003002-03)** identified that an evaluation was not done to characterize pipe elbow flaws in Train B of the ESW system and Perry personnel wrote an operability determination to address the issue. This use of an operability determination was contrary to Generic Letter 91-18 guidance. Despite this example, the subject of flaw evaluations had not been addressed in the reference guide. Also, the guide did not cover, in detail, all topics listed in Generic Letter 91-18. For example, issues involving treatment of single failure operability determinations and environmental qualifications were not included. The inspectors concluded that a potential vulnerability still existed with respect to the licensee's use of operability evaluations. The inspectors noted that a more comprehensive extent of condition review could have identified these potential vulnerabilities.

The inspectors noted that the experience review and extent of condition reviews were essential in measuring the effectiveness of a corrective action program. The inspectors determined that the experience review section documented in the root cause report for CR 02-03939 was weak in that the extent of review was not documented, such as a review of currently open operability determinations and an historical review of previously written operability determinations. The experience review stated that no other instance of inappropriate use of an operability determination had occurred in recent Perry plant performance. The inspectors considered recent performance as within 3 years and

reviewed all operability determinations generated since year 2001. Operability determinations had been requested and accepted for failure of the RCIC First Test Valve to CST 1E51F0022 to operate from the control room (CR 01-01993) and failure of HPCS CST Test Thermal Expansion Check E21F0039 (CR 02-00773) to satisfy an exercise test. Both of these issues involved failures during ASME testing. These issues were not identified in the experience review as unacceptable use of operability determinations and should have been so identified. The inspectors determined that had a comprehensive experience review been done, the licensee could have obtained additional information with which to assess the effectiveness of the corrective action program and correct potential inadequacies in the program, as necessary.

4OA3 Event Followup (71153)

.1 Seismic Event

a. Inspection Scope

The inspectors observed control room personnel responding to a seismic event which occurred June 27. The inspectors arrived in the control room within minutes of the event and observed the followup actions by the licensee including operator briefings, monitoring of plant conditions, completion of required ONI actions, and emergency plan review. The inspectors reviewed the licensee's emergency plan to verify the event was appropriately characterized as an Unusual Event and that notification of county, state, and federal agencies occurred in a timely manner.

Although the activation of the licensee's Technical Support Center (TSC) was not procedurally required at the Unusual Event threshold, the licensee chose to staff the facility to coordinate plant walkdowns and system operability evaluations. The inspectors observed TSC personnel performance to verify adequacy of communications and assess effectiveness of recovery plan actions.

b. Findings

No findings of significance were identified.

.2 Loss of Offsite Power

On August 14, the plant scrammed due to a LOOP. When the scram occurred, the inspectors were in the control room and observed the licensee's immediate response to the scram and LOOP. The inspectors observed the licensee's declaration of an Unusual Event and their actions to restore offsite power and recovery of offsite power.

The licensee activated their TSC and the inspectors observed TSC personnel performance and coordination between the TSC and the control room. The inspectors observed the licensee's processes to prioritize restoration of power to plant loads and the recovery of ECCSs.

b. Findings

No findings of significance were identified. Inspection activities associated with the equipment anomalies involving the Division 1 EDG and LPCS/RHR 'A' waterleg pump were completed as part of NRC Special Inspection, 05000440/2003009, which was chartered on August 27.

.3 **(Closed) Licensee Event Report (LER) 05000440/2003-001-00**: Manual Actuation of the Reactor Protection System With All Control Rods Inserted During Testing. On May 10, while conducting LOOP/loss-of-coolant accident (LOCA) testing, the licensee inserted a manual scram due to failure of the instrument air system containment isolation valve to reopen. At the time of the test, the plant was in Mode 5 with all rods inserted. The licensee entered the ONI for loss of instrument air and inserted a scram when unable to restore instrument air. The licensee's review determined that a failed relay prevented the valve from reopening when operators manually repositioned the LOCA override control switch. The inspectors reviewed the LER and this LER is closed.

b. Findings

No findings of significance were identified.

4OA5 Other Activities

.1 Review of Events Leading to a Notice of Enforcement Discretion

a. Inspection Scope

The inspectors reviewed the licensee's activities in response to a failure of the Division 1 ESW pump and the licensee's submission of a request for a NOED. The inspectors observed maintenance activities and inspected pump components.

b. Findings

Introduction: A self-revealed apparent violation (AV) of TS 5.4 occurred when the Division 1 ESW pump failed during routine pump operation. The licensee rebuilt the pump in 1997 and during this reassembly, failed to properly reassemble the pump shaft connections. The improper reassembly led to pump failure on September 1. The NRC assessed this finding in accordance with IMC 0609 and made a preliminary determination that it is an issue with some increased importance to safety.

Description: On September 1, 2003, the licensee started the Division 1 ESW pump to provide dilution for draining a leaking sodium hypochlorite line. At 5:17 p.m., the control room received several alarms associated with the Division 1 ESW pump. Subsequent investigation revealed that the pump shaft had failed. The licensee investigated the shaft failure and concluded that a coupling had failed due to insufficient engagement of a key between the coupling and the shaft. The pump shaft consisted of four sections with five couplings to connect the sections and transfer power from the motor to the pump. Each of the couplings consisted of a two-piece split ring, a coupling sleeve, two keys and two setscrews. To achieve proper engagement between the coupling sleeve, keys, and shaft, the mechanic must locate the sleeve vertically on the shaft such that the setscrews

align with a groove machined into the split ring. During the last pump reassembly, the licensee failed to align the coupling sleeve with the groove in the split ring causing insufficient engagement between the key and the coupling sleeve. The reduced engagement caused the stresses in the coupling sleeve to exceed the allowable stresses and the resulting high stresses led to stress corrosion cracking of the sleeve and eventual failure of the sleeve. The licensee restored the pump to operability at 6:55 p.m. on September 5.

During the licensee's initial evaluation of the condition, the licensee identified that the procedure used to reassemble the pump failed to completely incorporate the manufacturer's instruction for reassembly of the coupling. Specifically, the licensee's procedure did not require alignment of the setscrew holes with the groove in the split ring. As a result, at least two of the couplings for the Division 1 ESW pump had insufficient engagement between the key and coupling sleeve. Even though the procedure was not adequate, the licensee's extent of condition concluded that failure of either the Division 2 or 3 pump was not imminent. The licensee rebuilt the Division 2 pump in April of this year and the mechanics reported that upon completion, the setscrews were flush with the coupling sleeve, indicating proper alignment. The licensee also reported that the Division 3 pump had not been rebuilt by the licensee since its installation in 1985 and therefore, the licensee's deficient procedure had not been used on this pump.

Analysis: The inspectors evaluated this finding under the SDP. The inspectors concluded that this finding directly effected the mitigating system cornerstone objective of safety system availability. The inspectors evaluated the finding under Phase 1 of the SDP process and determined a Phase 2 evaluation was needed. The inspectors based this conclusion on the loss of the Division 1 ESW safety function. With the shaft broken, the Division 1 ESW system could not perform its safety function. In addition, the loss of ESW resulted in inoperability of numerous supported systems including the Division 1 EDG, RHR 'A', and LPCS systems. The Division 1 ESW pump was considered to be unavailable for a duration of 14 days. This was based on the assumption that the Division 1 ESW pump was considered unavailable from August 22 to September 5, following restoration to service. The pump was secured from service on August 23, following an extended period of operation to support the LOOP caused by grid instability. Following August 23, the pump was operated twice for a short period of time. As the typical probabilistic risk assessment mission time is a 24-hour duration, the regional senior risk analyst concluded that 24 hours prior to securing the pump following extended service was the last time there was any confidence that the pump could perform its function for the full mission time of 24 hours.

The initial Phase 2 risk assessment characterized this finding as Yellow using the site specific Risk-Informed Inspection Notebook. However, a Phase 3 analysis performed by the senior risk analyst determined the issue was a White finding, after providing additional consideration for duration and cross-tying capability of the EDGs.

Enforcement: Technical Specification 5.4 states, in part, that procedures shall be established, implemented and maintained as recommended in Regulatory Guide 1.33. Regulatory Guide 1.33 recommended the establishment of written procedures, appropriate to the circumstances, for performing maintenance that can affect performance of safety related equipment. The licensee failed to establish a written

procedure appropriate to the circumstances for pump reassembly. Specifically, the vendor procedure specified that the setscrew holes would align with the groove in the slip ring such that the setscrews should be flush with the coupling sleeve. The licensee failed to transfer this requirement to the procedure for pump reassembly resulting in improper alignment of the coupling components. Pending completion of a final safety significance review, this issue is identified as **AV 05000440/2003006-03**. The licensee has entered this apparent violation into its corrective action program as CR 03-05065.

.2 (Closed) URI 05000440/2003004-04 (formerly URI 50-440/2003004-04): Failure to Classify an Alert Within 15 Minutes.

Introduction: A preliminary White finding and an associated apparent violation were identified for failure to follow the requirements of the Perry Emergency Plan during an ALERT event on April 24, 2003, when damage to irradiated fuel caused a high alarm on the fuel handling building ventilation exhaust gaseous radiation monitor.

Description: On April 24, 2003, the inspectors observed control room personnel respond to fuel handling building and evacuation alarms received after an irradiated fuel rod was damaged during licensee inspection activities. Following the declaration of an ALERT emergency due to the event, the inspectors identified that the emergency classification was not made in a timely manner. Specifically, during the first 50 minutes of the event with conditions warranting an Alert classification, the shift manager (SM), for a period in this time interval, did not use the emergency classification scheme required by the Perry Emergency Plan in accordance with 10 CFR 50.47(b)(4). More specifically, Section 4.1 of the plan required that the SM declare an appropriate emergency classification whenever plant status (as determined by the classification scheme values in emergency plan implementing procedure EPI-A1, Attachment 1, Category GA2) warrants a declaration. Emergency plan instruction EPI-A1, "Emergency Action Levels," required, in part, that the SM classify an emergency event when actual or potential plant conditions dictate and ensure required actions are implemented. An Alert classification was met when damage to irradiated fuel caused a high alarm on the fuel handling building ventilation gas radiation monitor.

Analysis: The inspectors determined the licensee's failure to implement its emergency classification and action level scheme in a timely manner as required by the Perry Emergency Plan was a performance deficiency. Traditional enforcement does not apply because the issue did not have any actual safety consequences or potential for impacting the NRC's regulatory function and was not the result of any willful violation of NRC requirements or FirstEnergy procedures. The inspectors determined that the issue was associated with the emergency response organization performance attribute of the Emergency Preparedness Cornerstone and affected the cornerstone objective of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Therefore, the finding was determined to be more than minor.

The finding was determined to be associated with an actual event implementation problem, and its significance was assessed using Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process (SDP)." Using the Emergency Preparedness SDP Sheet 2, "Actual Event Implementation Problem," the inspectors determined that the actual event was not an Unusual Event, but the event was

an Alert. The finding was associated with the improper implementation of a risk significant planning standard (10 CFR 50.47(b)(4), standard emergency classification and action level scheme). Therefore, the finding was determined preliminarily to be of low to moderate safety significance (White).

Enforcement: 10 CFR 50.54(q) requires, in part, that a licensee shall follow and maintain in effect emergency plans which meet the standards in 10 CFR 50.47(b). 10 CFR 50.47(b)(4) requires, in part, that a standard emergency classification and action level scheme is used. The Emergency Plan for Perry sets forth, among other things, on-shift facility licensee responsibilities for emergency response and delineates the standard emergency classification and action level scheme in use by the licensee (in accordance with 10 CFR 50.47(b)(4)). Section 4.1 of the Emergency Plan states, in part, that the classification system provided in Emergency Plan Instruction EPI-A1, provides for implementation of certain actions applicable to specific indications, and identifies that the Emergency Coordinator shall declare the emergency classification and the actions to be taken. Emergency Plan Instruction EPI-A1, "Emergency Action Levels," requires that the Control Room Shift Supervisor be designated the Emergency Coordinator, place high priority on classifying an emergency plan event when actual or potential plant conditions dictate, and ensure required actions are implemented. On April 24, 2003, a shift manager did not follow the emergency classification and action level scheme as required by the emergency plan when actual plant conditions warranted an Alert emergency classification. Specifically, the shift manager did not carryout the duties of the Emergency Coordinator and assess, identify, and classify the event in a timely manner. This is considered an apparent violation **(AV 05000440/2003006-04)**.

.3 Unusual Crud Buildup on the Reactor Vessel Interior Walls

The inspectors confirmed the status of the NRC's review of the licensee's identification of uneven deposits of a grey or white film on the reactor vessel interior walls during the cycle 9 refueling outage. The inspectors confirmed that the Office of Nuclear Reactor Regulation (NRR) and region based specialist inspectors had reviewed reports and photographs provided by the licensee. The inspectors noted that NRR personnel concluded that an immediate safety issue did not exist, but that long term effects were still under investigation. It was also noted that the condition is not unique to Perry in that it has been observed at other plants that have some combination of hydrogen water chemistry, noble metals addition, or zinc addition. The inspectors confirmed the issue was entered into the licensee's corrective action program as CR 03-01995.

4OA6 Meetings

.1 Exit Meeting

The inspectors presented the inspection results to Mr. W. Kanda, Site Vice President, and other members of licensee management at the conclusion of the inspection on October 2. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

The inspectors re-exited with Mr. W. Kanda and other members of licensee management by telephone on October 20, to present the preliminary significance determination of the emergency preparedness issue.

The inspectors re-exited with Mr. Kanda on October 27, to present the preliminary significance determination of the Division 1 ESW pump issue.

.2 Interim Exit Meetings

- Access Control, ALARA and Radwaste/Transportation with Mr. T. Rausch on August 8.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

W. Kanda, Vice President-Nuclear
D. Bauguess, Emergency Preparedness Unit Supervisor
R. Coad, Radiation Protection Manager
V. Higaki, Manager, Regulatory Affairs
T. Lentz, Director Nuclear Engineering
J. Lausberg, Supervisor, Compliance
M. Medakovich, Radwaste Shipping Supervisor
T. Rausch, General Manager, Nuclear Power Plant Department
A. Schwenk, Radwaste Superintendent
R. Strohl, Superintendent, Plant Operations

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000440/2003006-01	FIN	Failure to Maintain Fire Barriers (1R05)
05000440/2003006-02	NCV	Failure to Establish Performance Criteria for (A)(1) Systems (1R12)
05000440/2003006-03	AV	Improper Maintenance Causes Emergency Service Water Pump Failure (4OA5.1)
05000440/2003006-04	AV	Failure to Classify an Alert Within 15 Minutes (4OA5.2)

Closed

05000440/2003006-01	FIN	Failure to Maintain Fire Barriers (1R05)
05000440/2003006-02	NCV	Failure to Establish Performance Criteria for (A)(1) Systems (1R12)
05000440/2003-001-00	LER	Manual Actuation of the Reactor Protection System With All Control Rods Inserted During Testing (4OA3)
05000440/2003004-04	URI	Failure to Classify an Alert Within 15 Minutes (4OA5.2)

Discussed

05000440/2003002-03	NCV	Failure to Perform Adequate Design Reviews for Installation of Half-Couplings on a 'B' Train Emergency Service Water Elbow (4AO2.2)

LIST OF DOCUMENTS REVIEWED

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

1R04 Equipment Alignment

SOI-P45/49; Emergency Service Water and Screen Wash System; Rev. 7

Drawing 302-0791-00000; Emergency Service Water System; Rev. LL

Drawing 302-0792-00000; Emergency Service Water System; Rev. HH

SVI-P45-T1254; Emergency Service Water System Valve Position Verification; Rev. 3

VLI-P45; Emergency Service Water System; Rev. 6

SDM-P45; Emergency Service Water System; Rev. 9

System Health Report; Fourth Quarter 2002

Drawing 302-09701-00000; High Pressure Core Spray System; Rev. DD

VLI-E22A; High Pressure Core Spray (Unit 1); Rev. 5

VLI-R44/E22B; Division 3 DG Starting Air System (Unit 1); Rev. 4

VLI-R44; Division 1 and 2 Diesel Generator Starting Air System (Unit 1); Rev. 4

VLI-R45/E22B; Division 3 DG Fuel Oil System (Unit 1); Rev. 3

VLI-R45; Division 1 and 2 Diesel Generator Fuel Oil System (Unit 1); Rev. 4

VLI-R46/E22B; Division 3 DG Jacket Water System (Unit 1); Rev. 5

VLI-R46; Division 1 and 2 Diesel Generator Jacket Water Systems (Unit 1); Rev. 3

VLI-R47; Division 1 and 2 Diesel Generator Lube Oil; Rev. 5

VLI-P45; Emergency Service Water System; Rev. 6

SOI-P45/49; Emergency Srvice Water and Screen Wash Systems; Rev. 7

SDM R10; Plant Electrical System; Rev. 10

SDM R23/24/25; 480 volt AC Electrical Power; Rev. 4

1R05 Fire Protection

Drawing E-023-002; Fire Protection Evaluation - Unit 1 Auxiliary and Reactor Buildings Plan- Elev. 574’-10"; Rev. 12

Drawing E-023-003; Fire Protection Evaluation - Unit 1 Intermediate and Fuel Handling Buildings Plan - Elev. 574’-10"; Rev. 12

Drawing E-023-005; Fire Protection Evaluation - Unit 1 Auxiliary and Reactor Buildings Plan - Elev. 599’-0" and 599’ - 9"; Rev. 12

Drawing E-023-007; Fire Protection Evaluation Units 1 and 2 Control Complex Plan Elev. 599’-0"; Rev. 12

Drawing E-023-010; Fire Protection Evaluation - Unit 1 Auxiliary and Reactor Buildings Plan - Elev. 620’-6"; Rev. 12

Drawing E-023-011; Fire Protection Evaluation - Units 1 and 2 Control Complex and Diesel Generator Buildings Elev. 620’-6"; Rev. 12

Drawing E-023-015; Fire Protection Evaluation - Units 1 and 2 Control Complex and Diesel Generator Building Roof Plan - Elevations 638’-6" and 646’-6"; Rev. 12

Drawing E-023-019; Fire Protection Evaluation Units 1 and 2 Control Complex Plan Elev. 654’-0" and 679’-6"; Rev. 12

Drawing E-023-034; Fire Protection Evaluation - Units 1 and 2 Emergency Service Water Pumphouse - Plans and Sections; Rev. 12

USAR Section 9A.4.2.1.6; Fire Area 1AB-1f

USAR Section 9A.4.2.1.8; Fire Zone 1AB-2

USAR Section 9A.4.2.1.9; Fire Zone 1AB-3a

USAR Section 9A.4.2.1.10; Fire Zone 1AB-3b

USAR Section 9A.4.3.1; Fire Zone IB-1

USAR Section 9A.4.3.2; Fire Zone IB-2

USAR Section 9A.4.4.2; Unit 1 and 2 Fire Areas, Floor 2

USAR Section 9A.4.4.3.2.1; Fire Area 2CC-3

USAR Section 9A.4.4.4; Fire Areas, Floor 4

USAR Section 9A.4.4.5.1.1; Fire Area 1CC-5a

USAR Section 9A.4.5.1.1; Fire Area 1DG-1a

USAR Section 9A.4.6.1; Emergency Service Water Pumphouse

PTI-P54-P0041; Semiannual Fire Door Inspection; rev. 5

I-03-DG-0350; DG-116 Fire Door; dated July 25, 2003

1R06 Flood Protection Measures

ARI-H13-P601-18; Leak Detection; Rev. 5

W.O. 02-2179; Functional Check of Limit Switches and Watertight Door Seal Chalk Test

USAR Section 6.3.2.6; Protection Provisions

USAR Section 9.3.3; Equipment and Floor Drainage System

W.O. 01-15069; Lube-Inspect Watertight Doors LP Core Spray; dated December 7, 2001

Vendor Manual File #663; Watertight Doors; Rev. 3

Drawing D-911-617; Auxiliary Building Dirty Radwaste Drains; Rev. 12

RLI-G61(FDSS); Floor Drain Sump System; Rev. 0

1R12 Maintenance Effectiveness

System Health Report, fourth quarter 2002

USAR Section 6.4; Habitability Systems

USAR Section 6.8; Safety-Related Instrument Air

USAR Section 9.3.1; Compressed Air Systems

Drawing D-302-271; Safety-Related Instrument Air; Rev. 12

VLI-P57; Safety Related Instrument Air System; Rev. 7

SOI-P57; Safety Related Instrument Air System; Rev. 6

PTI-P57-P0001; Loss of Air Test For Safety-Related Instrument Air System; Rev. 4

ONI-P52; Loss of Service and/or Instrument Air; Rev. 5

CR 02-00333; Control Room Emergency Recirc System Operability Not Timely; dated January 31, 2002

CR 02-00419; Potential For Repeat Maintenance - Part Failure - Safety Relief Valve on Instrument Air Compressor; dated February 11, 2002

CR 02-01190; Didn’t Receive Expected Alarm When Shutting Down CR Ventilation to Secured Status; dated April 20, 2002

CR 02-02047; Smoke in the RPS Alternate “A” Power Supply; dated June 25, 2002

CR 02-02781; M25-0255B Shows Dual Indication After Shifting From ER to Normal; dated August 16, 2002

CR 02-03032; M25 B006B Heater Controller Power Cable Heat Damage; dated September 1, 2002

CR 02-03687; Broken 0M25 Damper Springs Found During Inspection; dated October 7, 2002

CR 03-00029; 1/16" Pin Hole Leak Found on Unit 1 Service Air Compressor Tubing; dated January 5, 2003

CR 03-00168; Tornado Damper 0M25F0001A Broken Spring; dated January 14, 2003

CR 03-03130; Instrument Air Containment Isolation Valve Failed to Re-Open During LOOP/LOCA; dated May 10, 2003

CR 03-03138; Leakage Outside of Allowable Value During SVI-P57-T2004; dated May 10, 2003

CR 03-03908; Control Room Ventilation Train B Damper Lineup; dated June 16, 2003

CR 03-04233; Trip of Unit 2 Service Air Compressor During Startup From High Oil Temperature; dated July 11, 2003

Root Cause Analysis Report; Failure of Instrument Air Isolation Valve 1P52-F200 to Reopen During LOOP/LOCA per SVI-R43-T5366; dated June 6, 2003

SAP listing of R42 Notifications, printed September 8, 2003

SDM R42, DC Electrical Systems; Rev. 7

Maintenance Rule Database for R42, printed September 8, 2003

SOI R42; Div 2 DC Distribution, buses ED-1-B and ED-2-B; Batteries, Chargers and Switchgear; Rev. 3

Selected Operator Logs; September 2001 through August 2003

CR 02-02566; Unit 1 Division 2 Reserve Charger DC Breaker Will not Rack In; dated August 1, 2002

CR 03-04219; Battery Charger Output Fuses Blown During Functional Testing; dated July 10, 2003

1R13 Maintenance Risk Assessments and Emergent Work Control

PAP-1924; On-line Safety and Configuration Risk Management; Rev.3

Week 3, Period 2 Risk Profile

Week 6, Period 2 Risk Profile

RCIC Outage Schedule; dated August 10

Problem Solving Plan associated with the division 2 EDG inoperability

Division 2 Diesel Troubleshooting Plan; dated July 24, 2003

ONI-R25-1; Loss of an Essential 120V Bus; Rev. 4

W.O. 200045423; Troubleshoot/Rework Cause of Div 2 Power Anomaly; dated August 3, 2003

Drawing D-206-054; Class 1E 120V AC Panels EB-1-B1, EK-1-B1, EK-1-C1; Rev. KK

CR 02-00031; Failed PMT on RCIC Turbine; dated January 3, 2002

CR 03-04717; Repeat Maintenance on RCIC Turbine; dated August 12, 2003

CR 03-04719; Human Red Tag for RCIC Oil Leak; dated August 12, 2002

CR 03-04769; Clarification of Risk Level in Shutdown Safety Needed

NOP-OP-1005; Shutdown Safety; Rev. 3

Daily Shutdown Safety Status Reports; dated August 15 and August 16, 2003

1R14 Operator Performance During Nonroutine Plant Evolutions and Events

Operator Logs; dated August 5, 2003

ELI-R24; 480 Volt MCC; Rev. 8

ELI-R25; 120, 240, and 480V AC Distribution System; Rev. 11

CR 03-04583; Unexpected Alarms When Transferring F1C08 to Emergency; dated August 5, 2003

ONI-D17; High Radiation Levels Within Plant; Rev. 6

ARI-H13-P902-1; Common Airborne Radiation Monitoring Panel; Rev. 3

Operations Evolution Order; Water Leg Pump Test For CR 03-4764; dated September 7, 2003

Operations Evolution Order; RHR B/C Water Leg Pump Test For CR 03-4764; dated September 10, 2003

1R15 Operability Evaluation

CR 03-04258; M51 System Solenoids Have Exceeded Their Qualified Life; dated July 14, 2003

CR 03-04195; Leak Detection in the Turbine Building; dated July 9, 2003

Calc. 2.4.6.14; Turbine Building Temperature Response to Steam Leaks; rev. 0

LCO 3.3.6.1; Primary Containment and Drywell Isolation Instrumentation

CR 02-04790; ICA's on Power to Flow Map May not be as Conservative as Previously Understood; dated December 17, 2002

CR 03-04279; ICA's on Power to Flow Map May not be as Conservative as Previously Understood; dated July 16, 2003

CR 03-04425; Div 2 Analog Instrumentation Power Perturbation; dated July 28, 2003

Instruction and Operating Manual for Model 86 Temp-Matic Thermocouple Monitor; Rev 1

DWG D302-0971-00000; Feedwater Leakage Control System; Rev. J

DWG 302-0082-00000; Feedwater System; Rev. JJ

DWG D 302-0705-00000; Low Pressure Core Spray System; Rev. Z

Calc N27-45; Flow Requirement for Feedwater Leakage Control System; Rev. 2

CR 03-05165; Potential for Water Hammer within Feedwater Leakage Control System, Div. 1; dated September 9, 2003

1R16 Operator Workarounds

CR 03-03764; Single Loop Operation (SLO) LHGR Limits for Perry Cycle 10 Need Correcting; dated June 6, 2003

1R19 Post-Maintenance Testing

SOI-E21; Low Pressure Core Spray; Rev. 9

PY-SVI-E21-T1196; LPCS Pump Discharge Flow (Bypass) Channel; dated July 18, 2003

SVI-R43-T1318; Diesel Generator Start and Load Test; dated July 25, 2003

Operation Manual Static Exciter Regulator; dated August 16, 1977

WO 200044835; Digital Process Tachometer “A” for 1R4; dated July 25, 2003

WO 200044842; Digital Process Tachometer “B” for 1R4; dated July 24 2003

WO 200044839; Standby Diesel Generator Control Panel; dated July 25, 2003

WO 200045423; Troubleshoot/Rework Cause of Div 2 Power Anomaly; dated August 3, 2003

Work in Progress Log; Order 200045423; dated August 3, 2003

Instruction Manual; Single Phase Regulating Transformers Model No. RTF-480/120-15; Rev. 1

WO 01-0173000-000; Uncouple RCIC Pump From RCIC Turbine; dated August 11, 2003

WO 03-002773-000; Change Oil and Filter, Sample Oil - RCIC Turbine; dated August 11, 2003

SVI-E51-T2001; RCIC Pump and Valve Operability Test; Rev. 14

Order 200003985; ESW Pump A; dated September 2, 2003

SVI-C11-T1006;Control Rod Maximum Insertion Time ; Rev. 8

1R20 Refueling and Other Outage Activities

IOI-1; Cold Startup; Rev. 11

IOI-3; Power Changes; Rev. 12

IOI-6; Cooldown - Main Condenser Not Available; Rev. 6

CR 03-04763; Observations Made on Isolated Phase Bus Duct Support Structure Just North of TB; dated August 15, 2003

CR 03-04764; RHR-A/LPCS Water-Leg Pump, Not Supplying Adequate Pressure; dated August 14, 2003

CR 03-04772; Loss of Off-Site Power and Generator Trip Due to Underfrequency Condition; dated August 14, 2003

CR 03-04775; Document Div 1 DG Reverse Power Trip During Unloading/Divorcing From Parallel Op; dated August 15, 2003

CR 03-04778; Unable to Reset RCIC Turbine Trip Remotely; dated August 14, 2003

CR 03-04798; Control Rod 30-51 Possibly Slow to Settle; dated August 17, 2003

CR 03-04779; Indications Received during C11 Restoration after LOOP; dated August 15, 2003

CR 03-04793; Control Rod 22-35 Was Slow to Settle; dated August 17, 2003

CR 03-04800; Post Loop Panel Walkdown Found Valve 1M51F090 Open; dated August 15, 2003

CR 03-04803; RFACR For 1C11N0602C Slow to Reset; dated August 16, 2003

CR 03-04810; Control Rod 22-35 Drifted Out to Position 02 Following Rod Testing; dated August 17, 2003

CR 03-04838; RC&IS Position Indication Problems; dated August 19, 2003

Post Scram Restart Report; dated August 17, 2003

1R22 Surveillance Testing

PY-SVI-E12T2001; RHR Pump Operability Test; dated July 14, 2003

LCO 3.5.1; ECCS Operating

WO 200005875; Adjust Cell Switch EH2104 per GEI-0135; dated July 28, 2003

GEI-0135; ABB Power Circuit Breakers 5 KV Types 5HK250 and 5HK530 Maintenance; Rev. 4

PTI-E51-P0003; RCIC Terry Turbine Overspeed Trip Test; Rev. 2

EMI Diagnostics Report; dated August 12, 2003

SVI-C61-T1201; Remote Shutdown Control Test- Division 2 RHR, ECC and ESW; Rev. 1

DWG 208-0055-00045; Shutdown Cooling Upper Pool MOV F037B (Throttle Valve); Rev. V

LCO 3.3.3.2; Remote Shutdown System

SVI-C51-T0033-B; APRM B Flow Channel Calibration for 1C51-K605B; Rev. 0

ICI-C-C51-11; APRM Calibration/Adjustment; Rev. 01

1R23 Temporary Plant Modifications

USAR 9.4.4; Turbine Building Area Ventilation System

DWG E-001-0030; Final Plant Layout Plan Above El. 620'-6" Turbine Room (East End) and Heater Bay and Auxiliary Boiler Building; Rev. C

DWG D-922-784;Turbine Bldg El. 577'-6" East; Rev. C

TM-1-03-011; Operation of Temporary Ventilation Fans in the Turbine Building; dated July 18, 2003

2OS1 Access Control to Radiologically Significant Areas

FTI-A0017; Non-Special Nuclear Material Pool Inventory Mechanism; Revision 0

Proposal; Perry Nuclear Power Plant Removal Of Candidate Low Level Radioactive Waste From The Fuel Pool

2OS2 As Low As Is Reasonably Achievable Planning And Controls

HPI-B0003; Processing Of Personnel Dosimetry, Pages 6, 7 and 13; Revision 10

PAP-0114; Radiation Protection Program, Pages 6, and 8-9; Revision 6

Dosimetry Records for Declared Pregnant Workers

CR 03-03880; Root Cause Analysis Report: Investigate Chemistry Causes For The Elevated Dose Rates In RFO9; dated July 25, 2003

2OS3 Radiation Monitoring Instrumentation and Protective Equipment

NOP-LP-3005; FENOC Confined Space Entry Program; Revision 0

2PS2 Radioactive Material Processing and Transportation

03-3033; Shipment Of Radioactive Material/Waste: Shipping Papers; dated May 12, 2003

03-1012; Shipment Of Radioactive Material/Waste: Shipping Papers; dated July 23, 2003

03-1008; Shipment Of Radioactive Material/Waste: Shipping Papers; dated July 8, 2003

03-3041; Shipment Of Radioactive Material/Waste: Shipping Papers; dated July 18, 2003

03-3024; Shipment Of Radioactive Material/Waste: Shipping Papers; dated April 22, 2003

02-1008; Shipment Of Radioactive Material/Waste: Shipping Papers; dated May 23, 2002

ODCM; Offsite Dose Calculation Manual; Revision 8

PCP; Process Control Program; Revision 7

RWI-G51; Solid Radwaste Solidification System; Revision 5

NOP-OP-2002; Shipment Of Radioactive Material/Waste; Revision 1

CHI-0022; Reagent, Sample And Source Preparation; Revision 1

RECS-02-00050; Memorandum: Scaling Factors For Waste Streams; dated April 11, 2003

PAP-0305; 10 CFR 50.59 Applicability Check: 01-0036; dated November 20, 2001

PAP-0520; Change Request (USAR); dated October 24, 2001

PAP-0305; 10 CFR 50.59 Safety Evaluation: 01-0034; dated October 17, 2001

PAP-0520; Change Request (USAR); dated October 17, 2001

CR 02-02449; Basic Cause Analysis Report; dated September 4, 2002

PA 02-05; Audit Report: Radwaste Processing; dated June 27, 2002

SA-448-RECS-2002; Self Assessment: Radwaste Shipping; dated December 30, 2002

CR/CA 02-00851; Incoming Radioactive Material Shipment Exceeded DOT Contamination Limits; dated March 21, 2002

CR/CA 02-01145; OSSC Yard Quarterly Inspection Was Not Completed Per Instructions; dated April 17, 2002

CR/CA 02-01466; Kindrick Trailer Found To Have Fixed Contamination; dated May 14, 2002

CR/CA 02-04211; Greater Than 1000R/Hr Filter Generated During IFTS Work; dated November 7, 2002

CR/CA 02-04817; Radwaste Equipment Returned Contaminated From Davis-Besse; dated December 18, 2002

CR/CA 03-00793; Required Verification Was Missed For Inoperable Component During Radwaste Discharge; dated February 18, 2003

CR/CA 03-02444; Truck Scheduled For Framatome Rad Shipment Without Approval; dated April 22, 2003

CR/CA 03-02524; Radioactive Material Shipment Delayed At Canadian Border Due To Manifest Issues; dated April 27, 2003

CR/CA 03-02970; DAW Sealand Container Packaged In Excess Of DOT Radiation Limits; dated May 6, 2003

CR/CA 02-01460; Audit PA-0205, Radwaste Shipping And Handling RFA; dated May 13, 2002

CR/CA 02-01640; Audit PA-0205, RFA For Shipping Process Improvement; dated May 16, 2002

CR/CA 02-03953; RFA: Radwaste Shipping Self Assessment Findings; dated October 3, 2002

CR/CA 03-00190; RFA: Request WMG Software Training, Radwaste Shipping; dated January 16, 2003

CR/CA 02-01175; Laundry Shipment Receipt Radiation Survey Differs From The Vendor's Survey; dated April 18, 2002

CR/CA 02-01598; Unnecessary Dose Was Received During The RWCU HIC Shipment Survey; dated May 22, 2002

CR/CA 03-00373; Improper Count Of Sample Prior To Shipment; dated January 23, 2003

CR/CA 03-02449; Document Need To Decon Fuel Sipping Skid Prior To Shipment; dated April 22, 2003

CR/CA 03-04545; Reports Required By 10 CFR Part 110 May Not Have Been Made As Required; dated August 4, 2003

TMP-2105; Radwaste Operations/Support Unit Training And Certification Programs; Revision 9

FENOC Integrated Training System Successful Completion Reports (Selected); dated August 7, 2003

4OA1 Performance Indicator Verification

Plant Narrative Logs; October 1, 2002 through June 30, 2003

Engineering system unavailability tracking logs; second quarter 2003

Engineering system unavailability tracking logs; first quarter 2003

SVI-E22-T1200; HPCS Pump Discharge Pressure - High (Bypass) Channel Functional for 1E22-N651; Rev. 3

SVI-E22-T1202; HPCS System Flow Rate - Low (Bypass) Channel Functional for 1E22-N656; Rev. 4

SVI-E22-T2001; HPCS Pump and Valve Operability Test; Rev. 15

SVI-E12-T2001; RHR A Pump and Valve Operability Test; Rev. 12

SVI-E12-T2002; RHR B Pump and Valve Operability Test; Rev. 12

4OA2 Identification and Resolution of Problems

CR 02-03939: Operability Determination Decision Questioned by NRC Resident; dated October 21, 2002

CR 01-1660; Documentation Discrepancies With SRV Nuts; dated March 26, 2001

CR 02-02176; OE14030 Review Identifies Potential Non-Conservative MSIV Testing For USAR Data; dated July 2, 2002

CR 01-1647; LPCS VT-2 Inspection Not Completed; dated March 26, 2001

CR 01-1939; E51-F019 Exercise Closed Time Unsat for SVI-E51-T2001; dated April 25, 2001

CR 01-2606; HPCS Pump Suction &&TE Indication During SVI; dated July 12, 2001

CR 01-1682; G41F0280 Operability Determination Due To Not Stroking Open During SVI-G41-T2001; dated March 29, 2001

CR 01-1993; RCIC Test Return To CST Will Not Stroke Using Control Switch; dated April 30, 2001

CR 02-00773;During Performance of SVI-E22-T2001, Valve 1E22F039 Failed To Open; dated March 16, 2002

PAP-0205; Operability of Plant Systems; Rev. 13

Root Cause Analysis Report for Condition Report 02-03939; dated November 27, 2002

PYBP-SITE-0014; Operability Determination Reference Guide, Rev. 0

SVI-E22-T2001; HPCS Pump and Valve Operability Test; Rev. 15

NRC Inspection Manual Part 9900: Technical Guidance, “Maintenance - Preconditioning of Structures, Systems, and Components Before Determining Operability; dated September 28, 1998

Drawing D-302-701; High Pressure Core Spray System; Rev. BB

4OA3 Event Followup

LER-2003-001; Manual Activation of the Reactor Protection System with All Control Rods Inserted During Testing; dated July 3, 2003

Operator Logs; dated May 5 -10, 2003

ONI-P52; Loss of Service And/or Instrument Air; Rev 5

CR 03-03130; 1P52F0200 Fails Closed during Division 1 LOOP/LOCA; dated May 10, 2003

VLI-R44; Division 1 and 2 Diesel Generator Starting Air System (Unit 1); Rev. 4

ONI-D51; Earthquake; Rev. 5

EPI-A1; Emergency Action Levels; Rev. 6

CR 03-04078; Seismic Event; dated June 30, 2003

ONI-C71-1; Reactor Scram; Rev. 7

ONI-R10; Loss of AC Power; Rev. 7

PEI-B13; Reactor Pressure Vessel Control; Rev. 6

4OA5 Other Activities

GMI-0039; Disassembly of the Emergency Service Water Pump; rev. 5

PY-CEI/NRR-2735L; Request for Enforcement Discretion Regarding Technical Specification (TS) 3.7.1, Emergency Service Water (ESW) System- Division 1 and 2; and TS 3.8.1, AC Sources-Operating; dated September 8, 2003

CR 03-05065; ESW Pump A Failed; dated September 1, 2003

DWG 22-0125-00000; Large Emergency Service Water Pumps; Rev. 2

Gould Pumps Installation, Operation and Maintenance Instruction Manual; Received May 1, 1985

Sections 3.0, 4.0 and 5.0; Perry Emergency Plan; Rev. 17

EPI-A1; Emergency Action Levels; Rev. 6

EPI-A2; Emergency Actions Based On Event Classification; Rev. 8

CR 03-02408; Emergency Classification Declaration Not Timely and Cause Analysis; dated April 24, 2003

CR 03-02415; Drywell/Containment Radiological Recovery Plan From Fuel Handling Building Fuel Pin Bubble; dated April 24, 2003

CR 03-02422; Lessons Learned During Alert Emergency Classification; dated April 24, 2003

CR 03-02483; Fuel Handling Building Evacuation Alarm; dated April 24, 2003

CR 03-01995; Unusual Crud Buildup on the Reactor Vessel Interior Walls; dated April 10, 2003

LIST OF ACRONYMS USED

ALARA	As-Low-As-Is-Reasonably-Achievable
ASME	American Society of Mechanical Engineers
CFR	*Code of Federal Regulations*
CR	condition report
DAW	Dry Active Waste
DG	diesel generator
DOT	Department of Transportation
ECC	emergency core cooling
ECCS	emergency core cooling system
EDG	emergency diesel generator
EPI	Emergency Plan Instruction
ESW	emergency service water
FIN	finding
HPCS	high pressure core spray
IMC	Inspection Manual Chapter
LER	Licensee Event Report
LOCA	loss-of-coolant accident
LOOP	loss of offsite power
LPCS	low pressure core spray
NCV	non-cited violation
NOED	Notice of Enforcement Discretion
NRC	Nuclear Regulatory Commission
ONI	Off-Normal Instruction
OWA	operator workaround
PMT	post-maintenance testing
RCIC	reactor core isolation cooling
RCIS	rod control and information system
RHR	residual heat removal
RP	radiation protection
SDP	significance determination process
SM	Shift Manager
SSC	structure, system, and component
ST	source-term
SVI	Surveillance Instruction
TS	Technical Specification
TSC	Technical Support Center
URI	unresolved item
USAR	Updated Safety Analysis Report
VLI	Valve Lineup Instruction