February 7, 2006

Mr. W. Pearce
Acting Vice President
FirstEnergy Nuclear Operating Company
Perry Nuclear Power Plant
10 Center Road, A290
Perry, OH 44081

SUBJECT: PERRY NUCLEAR POWER PLANT
NRC INTEGRATED INSPECTION REPORT 05000440/2005010

Dear Mr. Pearce:

On December 31, 2005, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Perry Nuclear Power Plant. The enclosed report documents the inspection findings that were discussed on January 6, 2006, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel. In addition to the routine NRC inspection and assessment activities, Perry performance is being evaluated quarterly as described in the Assessment Follow-up Letter - Perry Nuclear Power Plant, dated August 12, 2004. Consistent with Inspection Manual Chapter (IMC) 0305, "Operating Reactor Assessment Program," plants in the "Multiple/Repetitive Degraded Cornerstone" column of the NRC's Action Matrix are given consideration at each quarterly performance assessment review for (1) declaring plant performance to be unacceptable in accordance with the guidance in IMC 0305; (2) transferring to the IMC 0350, "Oversight of Operating Reactor Facilities in a Shutdown Condition with Performance Problems," process; and (3) taking additional regulatory actions, as appropriate. On December 1, 2005, the NRC reviewed Perry operational performance, inspection findings, and performance indicators for the third quarter of 2005. Based on this review, we concluded that Perry is operating safely. We determined that no additional regulatory actions, beyond the already increased inspection activities and management oversight, are currently warranted.

Based on the results of this inspection, three findings of very low safety significance, all of which involved violations of NRC requirements, were identified. However, because of their very low safety significance and because they have been entered into your corrective action program, the NRC is treating these violations as non-cited violations (NCVs) in accordance with Section VI.A.1 of the NRC's Enforcement Policy.

If you contest the subject or severity of these non-cited violations, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the 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, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; 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 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at **http://www.nrc.gov/reading-rm/adams.html** (the Public Electronic Reading Room).

Sincerely,

/RA/

Mark A. Satorius, Director
Division of Reactor Projects

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

Enclosure: Inspection Report 05000440/2005010
w/Attachment: Supplemental Information

cc w/encl: G. Leidich, President - FENOC
J. Hagan, Chief Operating Officer, FENOC
D. Pace, Senior Vice President Engineering and Services, FENOC
Director, Site Operations
Director, Regulatory Affairs
M. Wayland, Director, Maintenance Department
Manager, Regulatory Compliance
T. Lentz, Director, Performance Improvement
J. Shaw, Director, Nuclear Engineering Department
D. Jenkins, Attorney, First Energy
Public Utilities Commission of Ohio
Ohio State Liaison Officer
R. Owen, Ohio Department of Health

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-440
License No:	NPF-58
Report No:	05000440/2005010
Licensee:	FirstEnergy Nuclear Operating Company (FENOC)
Facility:	Perry Nuclear Power Plant, Unit 1
Location:	Perry, Ohio
Dates:	October 1, 2005, through December 31, 2005
Inspectors:	R. Powell, Senior Resident Inspector M. Franke, Resident Inspector M. Bielby, Senior Operations Engineer R. Jickling, Emergency Preparedness Analyst R. Smith, Resident Inspector, Davis-Besse D. Jones, Reactor Engineer R. Ruiz, Reactor Engineer C. Brown, Reactor Engineer
Approved by:	E. Duncan, Chief Projects Branch 6 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000440/2005010; 10/1/2005-12/31/2005; Perry Nuclear Power Plant; Post-Maintenance Testing

This report covers a 3-month period of baseline inspection. The inspection was conducted by the resident and regional inspectors. This inspection identified three Green findings, all of which involved associated non-cited violations. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process". Findings for which the Significance Determination Process 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

- Green. A finding of very low safety significance and an associated non-cited violation of Technical Specification 5.4, "Procedures," was self-revealed during Division 2 Emergency Diesel Generator (EDG) post-maintenance testing on September 15, 2005, when the engine-driven fuel oil pump was discovered air bound after licensee personnel failed to implement appropriate procedures for the fill and vent of the pump suction and discharge lines following pump maintenance activities. As a result of operating the pump for about 40 minutes without proper fuel oil flow, the engine-driven fuel oil pump required replacement, which extended the Division 2 EDG maintenance outage by about 24 hours and incurred about 15 hours of unnecessary unavailability. As part of their corrective actions, the licensee removed the EDG from service, replaced the engine-driven fuel oil pump, and successfully re-tested the EDG on September 16, 2005. The primary cause of this finding was related to the cross-cutting area of Human Performance since licensee personnel failed to develop an appropriate fill and vent procedure for the engine-driven fuel oil pump.

  This finding was more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance because: (1) it did not represent an actual loss of safety function of a system; (2) it did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time; (3) it did not represent an actual loss of safety function of one or more non-Technical Specification trains of equipment designated as risk-significant per 10 CFR 50.65 for greater than 24 hours; and (4) it did not screen as potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event. (Section 1R19.1)

- Green. A finding of very low safety significance and an associated non-cited violation of Technical Specification 5.4, "Procedures," was self-revealed on October 30, 2005, when licensee personnel failed to develop an appropriate procedure for the replacement of the 'B' Emergency Closed Cooling (ECC) pump oil bearing reservoir, which resulted in an oil

leak and unnecessary pump unavailability. As part of their corrective actions, licensee personnel completed repairs to the pump on November 1, 2005, which included establishing a correct reservoir height and performing post-maintenance testing with satisfactory results. The primary cause of this finding was related to the cross-cutting area of Human Performance because licensee personnel failed to develop appropriate oil reservoir maintenance procedures.

This finding was more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance because: (1) it did not represent an actual loss of safety function of a system; (2) it did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time; (3) it did not represent an actual loss of safety function of one or more non-Technical Specification trains of equipment designated as risk-significant per 10 CFR 50.65 for greater than 24 hours; and (4) it did not screen as potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event. (Section 1R19.2)

- Green. A finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was self-revealed on November 19, 2005, when licensee personnel failed to promptly correct a condition adverse to quality associated with the development of appropriate procedures for oil reservoir replacement, which resulted in an oil leak on the 'A' ECC pump, incurring unnecessary pump unavailability. As part of their corrective actions, licensee personnel completed repairs to the pump on November 29, 2005, which included establishing a correct reservoir height and performing post-maintenance testing with satisfactory results. The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution because licensee personnel failed to correct an inadequate oil reservoir maintenance procedure in a timely manner.

  This finding was more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance because: (1) it did not represent an actual loss of safety function of a system; (2) it did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time; (3) it did not represent an actual loss of safety function of one or more non-Technical Specification trains of equipment designated as risk-significant per 10 CFR 50.65 for greater than 24 hours; and (4) it did not screen as potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event. (Section 1R19.3)

B. Licensee-Identified Violations

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

REPORT DETAILS

Summary of Plant Status

The plant began the inspection period at 100 percent power. On October 8, 2005, operators reduced reactor power to 95 percent to isolate a main condenser train to address a condenser tube leak and returned to 100 percent power later the same day. On October 12, 2005, operators reduced reactor power to 65 percent in order to perform a condenser tube repair and control rod sequence exchange. After several power maneuvers for rod alignment, operators returned the reactor to 100 percent power on October 15, 2005. The plant remained at 100 percent power for the remainder of the inspection period with the exception of planned downpowers for routine surveillance testing and rod sequence exchanges.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity and Emergency Preparedness

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

The inspectors reviewed the licensee's procedures and preparations for cold weather conditions. The inspectors reviewed winterization procedures, severe weather procedures, and performed general area walkdowns. During walkdowns conducted the week of October 17, 2005, the inspectors toured selected buildings and areas to determine whether the licensee had identified all discrepant conditions such as damaged doors, windows, or vent louvers. The inspectors reviewed documentation to determine whether licensee procedure PTI-GEN-P0026, “Preparations For Winter Operation,” Revision 2, had been completed prior to the onset of cold weather. Additionally, the inspectors observed housekeeping conditions and verified that materials capable of becoming airborne missile hazards during high wind conditions, or impacting snow removal, were appropriately located and restrained. Finally, the inspectors reviewed the licensee’s cold weather readiness to determine whether cold weather protection features such as heat tracing and space heaters were monitored and functional.

This review represented one inspection sample.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

The inspectors conducted partial walkdowns of the system trains listed below to determine whether the systems were correctly aligned to perform their designed safety

function. The inspectors used licensee valve lineup instructions (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 systems:

- the Control Complex Chilled Water (CCCW) system 'B' while CCCW 'A' was unavailable due to planned maintenance during the week of October 3, 2005; and
- the Division 1 Emergency Diesel Generator (EDG) and support systems on November 16, 2005, following completion of a Division 1 maintenance outage.

These reviews represented two inspection samples.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05AQ)

a. Inspection Scope

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

- Fire Zone 1DG-1A, Unit 1 Division 2 Diesel Generator Building elevation 620'-6" and 646'-6";
- Fire Zone 1DG-1C, Unit 1 Division 1 Diesel Generator Building elevation 620'-6" and 646'-6";
- Fire Zone 1AB-1A, Unit 1 - Low Pressure Core Spray System;
- the turbine building (all zones); and
- the heater bay (all zones).

Emphasis was placed on evaluating the licensee's 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 utilized the general guidelines established in licensee procedures Fire Protection Instruction (FPI)-A-A02, "Periodic Fire Inspections," Revision 3; Perry Administrative Procedure (PAP)-1910, "Fire Protection Program," Revision 11; and PAP-0204, "Housekeeping/Cleanliness Control Program," Revision 15; as well as basic National Fire Protection Association Codes, to perform the inspection and to determine whether the observed conditions were consistent with procedures and codes.

The inspectors observed fire hoses, sprinklers, and portable fire extinguishers to determine whether 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 determine whether they were in good physical condition. The documents listed at the end of this report were used by the inspectors during the assessment of this area.

These reviews represented five inspection samples.

b. Findings

No findings of significance were identified.

1R07 Heat Sink (71111.07)

a. Inspection Scope

The inspectors reviewed Residual Heat Removal (RHR) 'A' and RHR 'C' heat exchanger performance testing conducted December 1, 2005. The inspectors reviewed the licensee's preliminary test results and reviewed historical trending data to verify that current testing frequency was sufficient to detect degradation of heat exchanger performance.

This review represented one inspection sample.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

.1 Annual Operating Test Results

a. Inspection Scope

The inspector reviewed the overall pass/fail results of the annual operating examination, which consisted of Job Performance Measure (JPM) and simulator operating tests (required to be given per 10 CFR 55.59(a)(2)) administered by the licensee. The operating testing was conducted in November and December 2005. The results were compared with the significance determination process in accordance with NRC Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP)."

This review represented one inspection sample.

b. Findings

No findings of significance were identified.

.2 Quarterly Inspection

a. Inspection Scope

On November 22, 2005, 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 reviewed the licensee's evaluation of crew performance to determine whether the training staff had identified performance deficiencies and specified appropriate remedial actions.

This review represented one inspection sample.

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 determine whether 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 (WOs), selected surveillance test procedures, and a sample of condition reports (CRs) to determine whether 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 determine whether the criteria adequately monitored equipment performance and to determine whether licensee changes to performance criteria were reflected in the licensee's probabilistic risk assessment. During this inspection period, the inspectors reviewed the following SSCs:

- the DC (direct current) electrical system;
- the electrical switchyard; and
- the reactor core isolation cooling system.

These reviews represented three inspection samples.

b. Findings

No findings of significance were identified.

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 determine whether scheduled and emergent work activities were adequately managed in accordance with 10 CFR 50.65(a)(4). In particular, the inspectors reviewed the licensee's program for conducting maintenance risk assessments to determine whether the licensee's planning, risk management tools, and the assessment and management of on-line 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 determine whether the actions were accomplished when on-line risk was increased due to maintenance on risk-significant SSCs. The following assessments and/or activities were reviewed:

- the licensee's management of emergent work activities associated with a high pressure condenser tube leak and planned switchyard activities during the week of October 10, 2005;
- the maintenance risk assessment and risk management actions associated with emergent work on the Division 2 EDG governor control switch on October 18, 2005;
- the licensee's risk management of work activities associated with the Division 1 EDG extended outage during the weeks of October 31, 2005, and November 7, 2005;
- the maintenance risk assessment and risk management actions associated with the replacement of the Division 2 EDG jacket water cooling pump on December 7, 2005; and
- the licensee's risk management of work activities associated with planned maintenance of the Emergency Closed Cooling (ECC) 'B' Pump on December 27, 2005.

These reviews represented five inspection samples.

b. Findings

No findings of significance were identified.

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

.1 Condenser Tube Leak

a. Inspection Scope

The inspectors reviewed the licensee's response to increasing condensate conductivity on October 7, 2005. The inspectors reviewed the licensee's immediate and supplemental actions to determine whether they were consistent with actions specified in licensee Off-Normal Instruction (ONI)-N61, "Condenser Tube Leak/Organic Intrusion," Revision 9. The inspectors also observed licensee actions associated with leak isolation and repair.

This review represented the first of two inspection samples.

b. Findings

No findings of significance were identified.

.2 Offgas Building Radiation Monitor Alarms

a. Inspection Scope

The inspectors observed the licensee's response to offgas building radiation monitor alarms during maintenance on the offgas system on December 21, 2005. The inspectors observed the licensee's immediate and supplemental actions to determine whether they were consistent with actions specified in ONI-D17, "High Radiation Levels Within Plant," Revision 10.

This review represented the second of two inspection samples.

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 (TS) and Updated Safety Analysis Report (USAR) to the licensee's evaluations, to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures were in place, would function as intended, and were properly controlled.

Additionally, the inspectors determined, where appropriate, compliance with bounding

limitations associated with the evaluations. The inspectors reviewed the following issues:

- the licensee's conclusions regarding the operability of the Division 1 EDG after the identification of a 25 drop-per-minute jacket water leak on October 5, 2005;
- the licensee's assessment of the affect of degrading Division 2 EDG jacket water keep-warm pump seal leakage on Division 2 EDG operability on October 25, 2005;
- the licensee's justification for an operability determination request after identifying an oil leak associated with the ECC 'B' pump on October 30, 2005; and
- the licensee's evaluation of nonconforming conditions associated with the EDG exhaust corridor heat shield during the week of November 7, 2005.

These reviews represented four inspection samples.

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds (71111.16)

a. Inspection Scope

During the week ending October 15, 2005, the inspectors performed a semiannual review of the cumulative effects of operator workarounds (OWAs). The list of open OWAs was reviewed to identify any potential effect on the functionality of mitigating systems. Inspection activities included, but were not limited to, a review of the cumulative effects of the OWA on the availability and the potential for improper operation of the system, for potential impacts on multiple systems, and on the ability of operators to respond to plant transients or accidents. Additionally, the inspectors conducted a review of recent CRs to ensure that OWA related issues were entered into the corrective action program when required.

This review represented one inspection sample.

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 TS, the USAR, 10 CFR 50 requirements, licensee procedures, and various NRC generic communications. In addition, the inspectors reviewed CRs associated with PMTs to determine whether the licensee was identifying problems and entering them in the corrective action program. The specific procedures and CRs reviewed are listed in the attached List of Documents Reviewed. The following post-maintenance activities were reviewed:

- testing of the Division 1 EDG following planned maintenance on September 14, 2005;
- testing of the CCCW 'A' system following maintenance on October 6, 2005;
- testing of the Division 2 EDG governor control switch following switch replacement on October 18, 2005;
- testing of the Division 1 EDG logic control board following replacement on November 9, 2005; and
- testing of the ECC 'A' pump following emergent maintenance conducted November 29, 2005.

These reviews represented five inspection samples.

b. Findings

.1 Inadequate Fill and Vent Procedure Resulted in Division 1 EDG Unavailability

Introduction: A finding of very low safety significance (Green) and an associated non-cited violation (NCV) of TS 5.4, “Procedures,” was self-revealed during Division 2 EDG post-maintenance testing on September 15, 2005, when the engine-driven fuel oil pump was discovered air bound after licensee personnel failed to develop appropriate procedures for the fill and vent of the engine-driven fuel oil pump suction and discharge lines following pump maintenance activities. As a result of operating the pump for about 40 minutes without proper fuel oil flow, the engine-driven fuel oil pump required replacement, which extended the Division 2 EDG maintenance outage by about 24 hours and incurred about 15 hours of unnecessary unavailability.

Description: On September 14, 2005, the licensee commenced a planned Division 2 maintenance outage. Planned maintenance activities included the Division 2 EDG and EDG support systems, including the fuel oil system. Licensee personnel completed EDG maintenance on September 15, 2005, and after restoring EDG support systems, the licensee declared the EDG available. The licensee commenced post-maintenance EDG testing at about 5:45 p.m. During the test, the “FUEL PUMP/OS DRIVE FAILURE” alarm was received shortly after the EDG was started and the EDG was stopped in accordance with the governing alarm response instruction. Subsequently, on September 16, 2005, the EDG was again started at 00:54 a.m. to obtain additional data. The “FUEL PUMP/OS DRIVE FAILURE” alarm was again received and pump discharge pressure was noted to be only about 5 pounds per square inch gauge (psig). The licensee removed the EDG from service, replaced the engine-driven fuel oil pump, and successfully tested the EDG. The EDG was declared available at 6:43 p.m. on September 16, 2005 after successful post-maintenance testing and declared operable later that same day.

Subsequent licensee review identified that the fill and vent procedure specified in Section 0600, step 2, of WO 200135325, dated September 14, 2005, which was used to restore the fuel oil system, was inadequate since the use of the direct current (DC) fuel oil booster pump to prime the system did not fill piping upstream of the engine-driven fuel oil pump discharge check valves. The inspectors determined that failure to develop appropriate procedures for the fill and vent of the engine-driven fuel oil pump suction and discharge lines was a performance deficiency warranting a significance determination.

Analysis: The inspectors concluded that the finding was greater than minor in accordance with Appendix B, "Issue Screening," of IMC 0612, "Power Reactor Inspection Reports," dated September 30, 2005. The finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, licensee personnel failed to develop an appropriate procedure for the fill and vent of the engine-driven fuel oil pump suction and discharge lines that extended the Division 2 EDG maintenance outage by about 24 hours and incurred about 15 hours of unnecessary Division 2 EDG unavailability. The finding also affected the cross-cutting area of Human Performance since licensee personnel failed to develop an appropriate fill and vent procedure.

The inspectors completed a significance determination of this issue using Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," of IMC 0609, "Significance Determination Process (SDP)," dated November 22, 2005. The inspectors determined that the issue was of very low safety significance, in accordance with the Phase 1 screening worksheet, because: (1) it did not represent an actual loss of safety function of a system; (2) it did not represent an actual loss of safety function of a single train for greater than its TS allowed outage time; (3) it did not represent an actual loss of safety function of one or more non-TS trains of equipment designated as risk-significant per 10 CFR 50.65 for greater than 24 hours; and (4) it did not screen as potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Enforcement: Technical Specification 5.4, "Procedures," requires, in part, that written procedures be implemented covering applicable procedures recommended by Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)," Revision 2, dated February 1978. Regulatory Guide 1.33, Appendix A, paragraph 9a, stated, "Maintenance that can affect the performance of safety-related equipment should be properly preplanned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances." Contrary to this requirement, the licensee failed to implement procedures that were appropriate to the circumstances in that the instructions provided in Section 0600, step 2, of WO 200135325, dated September 14, 2005, resulted in an inadequate fill and vent of the Division 2 EDG engine-driven fuel oil pump suction and discharge lines following maintenance. However, because of the very low safety significance of the issue and because the issue has been entered into the licensee's corrective action program (CR 05-06668), the issue is being treated as a non-cited violation (NCV) consistent with Section VI.A.1 of the NRC Enforcement Policy (NCV 05000440/2005010-01).

As part of their corrective actions, licensee personnel removed the EDG from service, replaced the engine-driven fuel oil pump, and successfully re-tested the EDG on September 16, 2005.

.2 Inappropriate Procedure Implementation Resulted in 'B' ECC Pump Unavailability

Introduction: A finding of very low safety significance (Green) and an associated NCV of TS 5.4, "Procedures," was self-revealed on October 30, 2005, when licensee personnel failed to develop an appropriate procedure for the replacement of a 'B' Emergency Closed Cooling (ECC) pump oil reservoir, which resulted in an oil leak and incurred unnecessary pump unavailability.

Description: On September 14, 2005, licensee personnel performed maintenance on the 'B' ECC pump that installed a re-designed Trico oil reservoir on the inboard and outboard pump bearings. Subsequently, licensee operating logs documented oil additions to the 'B' ECC pump on September 28, 2005, and October 30, 2005.

On October 29, 2005, licensee personnel determined that the pump leaked oil when in operation. Licensee personnel questioned the ability of the pump to perform its design basis function, subsequently declared the pump inoperable, and removed the pump from service for repair. Licensee personnel replaced the pump outboard bearing seal to address the oil leakage. On October 31, 2005, the licensee conducted post-maintenance testing and noted that the pump continued to leak oil. After further investigation, licensee personnel determined that the reservoir replacement maintenance activity had resulted in an incorrect installation height for the pump outboard bearing oil reservoir. This resulted in a higher than required oil level in the pump and led to increased pump temperature and seal leakage. As part of their corrective actions, licensee personnel completed repairs to the pump on November 1, 2005, which included establishing a correct reservoir height and performing post-maintenance testing with satisfactory results.

The inspectors reviewed WO 200075252 that was used to replace the 'B' ECC pump bearing oil reservoirs on September 14, 2005. The WO prescribed the use of Preventive Maintenance Instruction (PMI)-0050, "Preventive Maintenance Lubricating Guidelines," Revision 3, to install the reservoir. Section 5.3.2 of PMI-0050, "Opto-Matic Oiler Bottles (Motors, Pumps, Gear Reducers, ect. [sic])," referenced Attachment 2, "Plastic Opto-Matic Oilers," for guidance. Attachment 2 was a copy of the September 1989 Trico manufacturer's instructions for installation of Opto-Matic oilers. Attachment 2, step 8, instructed operators to start the machine after oil reservoir installation and observe whether proper oil level was maintained. If oil was not at the proper level, the instruction returned operators to steps 6 and 7 for additional oil reservoir height adjustments.

However, the inspectors noted that Section 5.3.2 of PMI-0050 stated that Attachment 2 "may be referred to for guidance on Opto-matic oiler (oil reservoir) alignment," and, as such, the instructions were optional. Section 5.3.2 only required operators to install the reservoir, add oil, and then run the pump for 10 minutes and note any oil leakage. Section 5.3.2 contained no steps to check for proper oil level after oil was added to the pump or after the pump was run. The inspectors noted that the procedure steps in Section 5.3.2 were inconsistent with the vendor guidance in Attachment 2 to check for

proper oil level after oil reservoir installation and pump run to verify that the reservoir height was correct. The licensee's performance of PMI-0050 resulted in an incorrect reservoir installation height at the completion of the maintenance. The licensee's post-maintenance testing failed to detect the flawed condition.

The licensee concluded that improper installation of the oil reservoir for the 'B' ECC outboard pump bearing led to an oil level that was about 1/4-inch too high. This resulted in an oil leak from the bearing seal.

The inspectors determined that the licensee's failure to implement appropriate procedures for the replacement of the oil reservoir on September 14, 2005, which resulted in pump oil leakage and unavailability when the pump was removed from service for necessary repairs, was a performance deficiency warranting a significance evaluation.

Analysis: The inspectors concluded that the finding was greater than minor in accordance with Appendix B, "Issue Screening," of IMC 0612, "Power Reactor Inspection Reports," dated September 30, 2005. Specifically, the finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The improper pump oil reservoir installation resulted in an oil leak and unnecessary pump unavailability. The finding affected the cross-cutting area of Human Performance because licensee personnel failed to develop appropriate procedures for the oil reservoir replacement activity.

The inspectors completed a significance determination of this issue using Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," of IMC 0609, "Significance Determination Process (SDP)," dated November 22, 2005. The inspectors determined that the finding was of very low safety significance, in accordance with the Phase 1 screening worksheet, because: (1) it did not represent an actual loss of safety function of a system; (2) it did not represent an actual loss of safety function of a single train for greater than its TS allowed outage time; (3) it did not represent an actual loss of safety function of one or more non-TS trains of equipment designated as risk-significant per 10 CFR 50.65 for greater than 24 hours; and (4) it did not screen as potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Enforcement: Technical Specification 5.4, "Procedures," required the implementation of the applicable procedures recommended in Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)," Revision 2, dated February 1978. Regulatory Guide 1.33 Appendix A, Part 9a, stated, "Maintenance that can affect the performance of safety-related equipment should be properly preplanned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances." Contrary to this requirement, the licensee failed to implement procedures that were appropriate to the circumstances during the replacement of the 'B' ECC pump outboard bearing oil reservoir on September 14, 2005, which resulted in an incorrect reservoir installation height and an oil leak that led to unnecessary pump inoperability and unavailability. However, because of the very low safety significance of

the issue and because the issue has been entered into the licensee's corrective action program (CR 05-07379), the issue is being treated as a non-cited violation (NCV) consistent with Section VI.A.1 of the NRC Enforcement Policy (NCV 05000440/20050010-02).

As part of the licensee's corrective actions, on November 1, 2005, the licensee established a correct oil reservoir height and performed post-maintenance testing with satisfactory results.

.3 Failure to Correct an Identified Procedure Issue Resulted in 'A' ECC Pump Unavailability

Introduction: A finding of very low safety significance (Green) and an associated NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was self-revealed on November 19, 2005, when licensee personnel failed to promptly correct a condition adverse to quality associated with the development of appropriate procedures for oil reservoir replacement, which resulted in an oil leak on the 'A' ECC pump and unnecessary pump unavailability.

Description: On September 14, 2005, licensee personnel performed maintenance on the 'B' ECC pump that installed a re-designed Trico oil reservoir on the inboard and outboard pump bearings. The pump subsequently leaked oil and was declared inoperable and unavailable. The licensee performed maintenance to replace the pump shaft seal to address the oil leakage. Following this maintenance, the licensee noted that the pump continued to leak oil. On October 31, 2005, the licensee identified that the reservoir replacement maintenance activity had resulted in an incorrect reservoir installation height and that this caused the pump to leak oil. Revision 3 of PMI-0050, "Preventive Maintenance Lubricating Guidelines," was the procedure used to install the reservoir.

On November 3, 2005, the licensee performed maintenance on the 'A' ECC pump that installed the revised Trico oil reservoir design. Licensee personnel used the same procedure, PMI-0050, Revision 3, to install the reservoir. The pump leaked oil during post-maintenance testing on November 5, 2005, and the licensee determined that this was the result of an incorrect oil reservoir installation height. The licensee performed an adjustment to the reservoir height and declared the pump operable.

Subsequently, the November 19, 2005, operator log entries identified that oil was "being slung from the shaft" of the 'A' ECC pump. On November 20, 2005, operators declared the 'A' ECC pump inoperable and shut it down for maintenance. On pump shutdown, the operator logs identified that the inboard bearing was "spraying a mist of oil" and that the reservoir oil level was "at the bottom of the glass." The licensee identified that the leakage was due to an incorrect oil reservoir height adjustment on the inboard bearing, performed work to correct the condition, and declared the pump operable later the same day.

Subsequently on November 28, 2005, the licensee declared the 'A' ECC pump inoperable due to oil leakage from the outboard bearing. The licensee determined that this was caused by an improper oil reservoir height on the outboard bearing. As part of their corrective actions, licensee personnel completed repairs to the pump on

November 29, 2005, which included establishing a correct reservoir height and performing post-maintenance testing with satisfactory results.

The inspectors noted that the licensee had also performed work to replace the oil reservoirs on the 'A' Turbine Building Closed Cooling Water (TBCCW) pump, a safety-significant pump. This again produced improper oil reservoir installations. On November 15, 2005, the pump reservoirs were replaced. On November 16, 2005, significant oil leakage was noted from the 'A' TBCCW pump and the operator logs identified that the outboard bearing oil reservoir was empty. Condition Report 05-07633, "TBCC Pump A Failed PMT," dated November 16, 2005, stated that "oil covered the floor in the Turbine Building." Work was performed to address an improper oil reservoir installation on the pump the same day. Subsequently, on November 19, 2005, the 'A' TBCCW pump was again noted to be leaking oil due to an incorrect reservoir height. The licensee repaired the pump on November 22, 2005, with satisfactory results.

In summary, the licensee identified that the performance of the oil reservoir replacement maintenance procedure in PMI-0050, Revision 3, resulted in incorrect oil reservoir installations on the 'B' ECC pump. The licensee then subsequently performed the same procedure on other equipment and caused degraded conditions on the 'A' ECC and 'A' TBCCW pumps. Additionally, initial post-maintenance testing for both the 'A' ECC and the 'A' TBCCW pumps identified that the maintenance had resulted in improper reservoir installation height. This provided an additional opportunity to address the appropriateness of the reservoir maintenance procedure prior to returning the equipment to service. Therefore, the inspectors determined that reasonable opportunities existed to address the reservoir maintenance issues before performing work on additional safety-related or safety-significant systems, and before returning equipment to service with a degraded condition. The inspectors determined that the failure to promptly correct the deficiencies associated with the reservoir maintenance procedures was a performance deficiency warranting a significance evaluation.

Analysis: The inspectors concluded that the finding was greater than minor in accordance with Appendix B, "Issue Screening," of IMC 0612, "Power Reactor Inspection Reports," dated September 30, 2005. Specifically, the finding was associated with the Mitigating Systems cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The failure to promptly correct deficiencies in the reservoir maintenance procedure led to additional safety system degradation and unavailability. The finding affected the cross-cutting area of Problem Identification and Resolution because licensee personnel failed to promptly correct the deficiencies associated with the reservoir maintenance procedure in a timely manner, which resulted in additional incorrect reservoir installations.

The inspectors completed a significance determination of this issue using Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," of IMC 0609, "Significance Determination Process (SDP)," dated November 22, 2005. The inspectors determined that the issue was of very low safety significance, in accordance with the Phase 1 screening worksheet, because: (1) it did not represent an actual loss of safety function of a system; (2) it did not represent an actual loss of safety function of a

single train for greater than its TS allowed outage time; (3) it did not represent an actual loss of safety function of one or more non-TS trains of equipment designated as risk-significant per 10 CFR 50.65 for greater than 24 hours; and (4) it did not screen as potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Enforcement: 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. Contrary to this requirement, on October 31, 2005, during maintenance on the 'B' ECC pump, licensee personnel identified that oil reservoir maintenance procedure PMI-0050, "Preventive Maintenance Lubricating Guidelines," Revision 3, was inadequate in that it resulted in an incorrect reservoir installation height. The licensee failed to correct the procedure in a timely manner and, as a result, on November 3, 2005, applied the same procedure to the 'A' ECC pump, resulting in unnecessary pump inoperability and unavailability. However, because of the very low safety significance of the issue and because the issue has been entered into the licensee's corrective action program (CR 05-07688), the issue is being treated as an NCV consistent with Section VI.A.1 of the NRC Enforcement Policy (NCV 05000440/20050010-03).

As part of their corrective actions, licensee personnel completed repairs to the pump on November 29, 2005, which included establishing a correct reservoir height and performing post-maintenance testing with satisfactory results.

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 TS; 10 CFR 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 determined 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 surveillance activities assessed were:

- main steam isolation valve and logic functional testing conducted October 22, 2005;
- CCCW 'B' pump and valve testing conducted October 28, 2005;
- remote shutdown panel control operability test for RHR 'A,' ESW 'A,' and ECC 'A' conducted during the week of October 31, 2005;
- high pressure core spray (HPCS) pump and valve operability test on November 15, 2005;
- the Division 1 EDG monthly surveillance conducted December 28, 2005.

These reviews represented five inspection samples.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed the documentation for a contingency temporary configuration change associated with installation of an alternate air charging system for the Division 2 EDG. The inspectors reviewed the temporary configuration change and the 10 CFR 50.59 screening and evaluation information against the design basis, the USAR and the TS as applicable. The inspectors walked down the locations of all staged equipment associated with this modification to determine whether plant safety systems were adversely impacted.

This review represented one inspection sample.

b. Findings

No findings of significance were identified.

1EP2 Alert and Notification System Testing (71114.02)

a. Inspection Scope

The inspectors discussed with Emergency Preparedness (EP) staff the operation, maintenance, and periodic testing of the Alert and Notification System (ANS) in the Perry Nuclear Power Plant's plume pathway Emergency Planning Zone to determine whether the ANS equipment was adequately maintained and tested in accordance with Emergency Plan commitments and procedures. The inspectors reviewed records of 2004 and 2005 preventative, non-scheduled maintenance activities and weekly operability test results.

These activities represented one inspection sample.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization Augmentation Testing (71114.03)

a. Inspection Scope

The inspectors reviewed and discussed with plant EP staff the emergency plan commitments, emergency implementing procedures (EPI), and other instructions that addressed the primary and alternate methods of initiating an Emergency Response Organization (ERO) activation to augment the on-shift ERO, as well as the provisions for maintaining the plant's ERO call-out roster and emergency telephone directory. The inspectors also reviewed reports and a sample of corrective action program records of unannounced off-hour augmentation tests, which were conducted in 2004 and 2005, to determine the adequacy of the drills' critiques and associated corrective actions. The inspectors also reviewed the EP training records of a sample of 17 Perry Power Plant ERO personnel, who were assigned to key and support positions, to determine whether they were currently trained for their assigned ERO positions.

These activities represented one inspection sample.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspectors performed a screening review of portions of Revisions 22 and 23 of the Perry Nuclear Plant Emergency Plan to determine whether the changes made in these revisions decreased the effectiveness of the licensee's emergency planning. This screening review did not constitute an approval of the changes and, as such, the changes are subject to future NRC inspection to ensure that the emergency plan continues to meet NRC regulations.

These activities represented one inspection sample.

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies (71114.05)

a. Inspection Scope

The inspectors reviewed Nuclear Oversight staff's 2004 and 2005 reviews of the licensee's EP program to verify that these independent assessments met the requirements of 10 CFR 50.54(t). The inspectors reviewed a sample of CR records associated with those reviews to determine whether Nuclear Oversight concerns were being addressed. The inspectors also reviewed critique reports and samples of CR records associated with the 2004 biennial exercise in order to verify that the licensee fulfilled its annual drill commitments and to evaluate the licensee's efforts to adequately identify, track, and resolve concerns identified during these activities.

These activities represented one inspection sample.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors observed activities in the simulator control room, the technical support center, the emergency operations facility, and operations support center during an emergency preparedness drill conducted on October 11, 2005. The inspection focused on the ability of the licensee to appropriately classify emergency conditions, complete timely notifications, and implement appropriate protective action recommendations in accordance with approved procedures.

This review represented one inspection sample.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

a. Inspection Scope

Cornerstone: Emergency Preparedness

The inspectors reviewed the licensee's records associated with the three EP performance indicators (PIs) listed below. The inspectors verified that the licensee accurately reported these indicators in accordance with relevant procedures and Nuclear Energy Institute guidance endorsed by the NRC. Specifically, the inspectors reviewed licensee records associated with PI data reported to the NRC for the period July 2004 through September 2005. Reviewed records included procedural guidance on assessing opportunities for the three PIs; assessments of PI opportunities during pre-designated Control Room Simulator training sessions, the 2004 biennial exercise, and other drills; revisions of the roster of personnel assigned to key ERO positions; and results of periodic Alert and Notification System (ANS) operability tests. The following PIs were reviewed:

- ANS;
- ERO Drill Participation; and
- Drill and Exercise Performance.

These activities represented three inspection samples.

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 determine whether 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.

This is not an inspection sample.

b. Findings

No findings of significance were identified.

.2 Annual Sample Review - 10 CFR 50.59 Review

a. Inspection Scope

As discussed in NRC Inspection Report 05000440/2005003, dated July 8, 2005, a finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was NRC-identified when licensee personnel failed to adequately address a nonconforming condition in the design of the EDGs. This condition made the EDGs vulnerable to damage in response to a loss of offsite power (LOOP) signal under certain scenarios. The licensee contested this violation by letter dated August 8, 2005, with one of the reasons given that a LOOP start was not an "emergency" start. During NRC followup of the contested violation, the NRC requested the safety evaluation associated with PNPP [Perry Nuclear Power Plant] Change Request 88-127, dated December 17, 1988, which revised the wording for Final Safety Analysis Report (FSAR) Section 8.3.1.1.3.2.b.7(e) from "emergency start signal" to "LOCA [Loss of Coolant Accident] start signal." Following that request, licensee personnel were unable to locate either the change request or the safety evaluation for this change and generated CR 05-06193 "USAR Change Request and 10 CFR 50.59 Review Paperwork Could Not Be Located," to document this issue. By letter dated September 7, 2005, the NRC disputed the licensee's denial of NCV 05000440/2005003-14 because the NRC found that a LOOP signal was, in fact, an emergency start signal, as was stated in numerous other FSAR/Updated Safety Analysis Report (USAR) sections.

After further review, the licensee located Change Request 88-127 and Safety Evaluation 88-179; the 10 CFR 50.59 review package referenced in CR 05-06193.

On September 14, 2005, the licensee initiated CR 05-06622, "NRC Denial of Disputed NCV 2005003-14 (EDG Design Basis Issue)," to address the design changes to be implemented to address the start of the EDGs during the first 2 minutes following an engine shutdown. In CR 05-06622, the licensee noted that Change Request 88-127 had been evaluated as an administrative change rather than a technical change; therefore, the 10 CFR 50.59 review may have been inadequate. The licensee initiated CR 05-07104, "Inadequate 10 CFR 50.59 Evaluation of USAR Change," on October 12, 2005, to document the issue. CR 05-07104 was closed to the investigation and corrective actions associated with CR 05-06622, since this CR would direct any necessary changes to bring the EDG starting signal back into compliance with the USAR. The licensee initiated an action to prepare an engineering change to correct the EDGs failure to start from an under-voltage, or a degraded voltage signal from an associated bus, during the 2 minutes after an engine shutdown. In CR 05-06622, the licensee completed a technical review of Safety Evaluation 88-179, which found the evaluation to be correct.

The inspectors selected CR 05-06193, "USAR Change Request and 10 CFR 50.59 Review Paperwork Could Not Be Located," dated August 23, 2005, for detailed review.

This review represented one inspection sample.

b. Findings and Observations

No findings of significance were identified.

The inspectors reviewed the licensee's 10 CFR 50.59 evaluation, including Change Request 88-127 and Safety Evaluation 88-179, and determined that since the USAR section being revised was strictly associated with the response of an EDG to a LOCA signal, the change was appropriate. However, the inspectors also noted, as was identified in other sections of the USAR, the EDGs are required to automatically start upon receipt of a signal other than a LOCA signal, such as an under-voltage signal, or a degraded voltage signal from the EDG's associated bus.

Therefore, the inspectors concluded that although the licensee's 10 CFR 50.59 evaluation was adequate and the licensee's evaluations in CR 05-6622 were correct when limited to USAR Section 8.3.1.1.3.2.b.7; the overall starting requirements for the EDGs were more extensive, as was reflected in other sections of the USAR.

.3 Semi-Annual Trend Review

a. The inspectors reviewed monthly performance reports, self-assessments, quality assurance assessment reports, performance improvement initiatives and CRs to identify any trends that had not been adequately evaluated or addressed by proposed corrective actions.

These reviews did not constitute an inspection sample.

b . Findings

No findings of significance were identified.

.4 Problem Identification and Resolution Biennial Review

This review was completed by reference during the Perry IP 95003 supplemental inspection conducted from January through May 2005 and documented in NRC Inspection Report 05000440/2005003.

4OA3 Event Followup (71153)

.1 (Closed) Licensee Event Report (LER) 2005-03-00: Lack of Suction Path Causes High Pressure Core Spray to be Inoperable. A discussion of this event, and an associated licensee-identified NCV, is contained in Section 4OA7 of this report.

This review represented the first of two samples for this inspection procedure.

.2 Reportable Events and Configuration Control Issues During Scheduled Division 1 Maintenance Outage

On November 3 and November 4, 2005, the licensee responded to several emergent configuration control issues associated with plant safety systems. The issues included: (1) a tagout that inadvertently rendered a nuclear closed cooling containment isolation valve as well as the 'A' annulus exhaust gas treatment system inoperable; (2) a breaker found open that affected the operability of the 'A' emergency service water remote shutdown system; and (3) a breaker found open associated with the 'A' standby liquid control system. The inspectors observed the licensee response and reviewed the licensee's actions to determine compliance with licensee procedures, TS, and the reporting requirements of 10 CFR 50.72. Two violations of very low safety significance (Green) were identified by the licensee and are documented in Section 4OA7 of this report.

This review represented the second of two inspection samples for this inspection procedure.

4OA5 Other (71114.03)

Use of Adjustment Factors to Meet ERO Staffing Timeliness Goals (URI 05000440/2005003)

The inspectors discussed with licensee staff the Perry IP 95003 supplemental inspection report, which identified an unresolved item (URI) regarding the use of adjustment factors to meet ERO staffing timeliness goals. The inspectors advised the licensee that this issue will continue to be evaluated during the follow-up to the IP 95003 Supplemental Inspection early in 2006.

This is not an inspection sample.

4OA6 Meetings

.1 Exit Meeting

On January 6, 2006, the resident inspectors presented the inspection results to Mr. W. Pearce, Acting Vice President, and other members of his staff who acknowledged the findings.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

.2 Interim Exit Meetings

Exit meetings were conducted for:

- Operator Requalification Program Examination Result Review with Mr. W. O'Malley on December 16, 2005 by telephone.

- Emergency Preparedness inspection with Messrs. W. Pearce, R. Anderson, F. von Ahn, and other members of licensee management on December 9, 2005. A telephone exit was held on December 16, 2005, with Messrs. V. Higaki, Fleet Operations Manager; and L. Burgwald, Emergency Preparedness Senior Specialist.

4OA7 Licensee-Identified Violations

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

Cornerstone: Barrier Integrity

- Technical Specification 5.4, "Procedures," required the implementation of the applicable procedures recommended in Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)," Revision 2, dated February 1978. Regulatory Guide 1.33, Appendix A, Part 1.c, recommended procedures for equipment control. Contrary to this requirement, on November 3, 2005, licensee personnel failed to control the impact of a clearance that removed logic fuses associated with Group 2A containment isolation valves and failed to enter numerous required TS action statements. The licensee entered the issue into their corrective action program as CR 05-07442. The inspectors determined that the issue was of very low safety significance because it: (1) did not represent a degradation of the barrier function of the control room against smoke or toxic atmosphere; and (2) did not represent an actual open pathway in the physical integrity or reactor containment, or involve an actual reduction in defense-in-depth for the atmospheric pressure control or hydrogen control functions of the reactor containment.

Cornerstone: Mitigating Systems

- Technical Specification 5.4, “Procedures,” required the implementation of the applicable procedures recommended in Regulatory Guide 1.33, “Quality Assurance Program Requirements (Operation),” Revision 2, dated February 1978. Regulatory Guide 1.33, Appendix A, Paragraph 4, required procedures for the operation of safety-related boiling water reactor systems. Similarly, Paragraph 8.b.(2)(j) required specific procedures for ECC system surveillance tests. Contrary to this requirement, on September 20, 2005, licensee personnel identified that SVI-E22-T2001, “HPCS [High Pressure Core Spray] Pump and Valve Operability Test,” Revision 17, prescribed steps that simultaneously closed both HPCS suction valves without HPCS being declared inoperable. The licensee subsequently identified that SOI-E22A, “High Pressure Core Spray System,” Revision 13, prescribed steps in the HPCS system operating instruction for swapping the suction source from the suppression pool to the condensate storage tank that resulted in the same condition. The licensee determined that an inadvertent manual start or non-time-delayed automatic start of the HPCS pump with both suction valves closed could prevent the HPCS system from performing its intended function or could result in equipment damage. Licensee log reviews estimated that the system was in this vulnerable configuration (no aligned suction source) for about 14 hours over the past 3 years. Licensee personnel determined that the primary cause of the event was a personnel knowledge deficiency and inadequate procedural guidance.

  The inspectors determined the issue was more than minor in that the unrecognized system inoperability was related to the maintenance risk assessment and risk management issues specified in Appendix B, “Issue Screening,” of IMC 0612, “Power Reactor Inspection Reports,” dated September 30, 2005. The inspectors performed a Phase 1 review in accordance with Appendix A, “Determining the Significance of Reactor Inspection Findings for At-Power Situations,” of IMC 0609, “Significance Determination Process (SDP),” dated November 22, 2005. The inspectors determined that a Phase 2 review was required because the finding represented a loss of system safety function. The inspectors conducted a Phase 2 review and determined that a Phase 3 review was required. The Region III Senior Reactor Analyst performed a Phase 3 evaluation of the finding assuming that the HPCS pump was unavailable for 14 hours. The Perry Simplified Plant Analysis Risk (SPAR) analysis, Revision 3.21, was used to perform the evaluation. The result was a change in core damage frequency (CDF) significantly less than 1E-6. The dominant sequence involved a loss of offsite power, failure of the emergency power system, failure of the HPCS system, and the failure to recover offsite power. As such, the finding was determined to be of very low safety significance. The licensee entered this finding into their corrective action program as CR 05-6751.

- Technical Specification 5.4, “Procedures,” required the implementation of the applicable procedures recommended in Regulatory Guide 1.33, “Quality Assurance Program Requirements (Operation),” Revision 2, dated February 1978. Regulatory Guide 1.33, Appendix A, Part 1.c., recommended procedures for equipment control. Contrary to this requirement, on November 3, 2005, licensee personnel identified that a breaker affecting the ESW 'A' remote shutdown

ventilation system was incorrectly left in the open position. The licensee determined that a clearance restoration incorrectly restored the breaker to the “off” position on March 27, 2005. This breaker affected the back-up control power required to be available for the 'A' ventilation train. For a control room fire hot short scenario, if power had been selected to the back-up source, the ESW ventilation system would have shut down and the ESW pumphouse could have exceeded its maximum operating temperature. The licensee restored the breaker on November 3, 2005, and entered the issue into their corrective action program as CR 05-07435. The inspectors used Appendix F, “Fire Protection Significance Determination Process,” dated February 28, 2005 of IMC 0609, “Significance Determination Process,” dated November 22, 2005, to assess the significance. The inspectors determined that the issue was of very low safety significance because it was categorized as a “Cold Shutdown“ finding per Step 1.1 and was bounded by Step 1.3 in that it only affected the ability to reach and maintain cold shutdown conditions.

ATTACHMENT: SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

W. Pearce, Acting Vice President
F. von Ahn, General Manager, Nuclear Power Plant Department
R. Anderson, Vice President, Operations
N. Bonner, Manager, Perry Oversight
F. Cayia, Director, Performance Improvement
K. Cimorelli, Manager, Work Management
V. Higaki, Manager, Fleet Operations
J. Lausberg, Manager, Regulatory Compliance
T. Lentz, Director, Performance Improvement Initiative
J. Messina, Manager, Operations
J. Shaw, Director, Engineering
M. Wayland, Maintenance Manager

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000440/2005010-01	NCV	Inadequate Fuel Oil Pump Procedures Resulted in Division 2 EDG Unavailability (Section 1R19.1)
05000440/2005010-02	NCV	Inadequate Oil Reservoir Maintenance Procedure Implementation for ECC 'B' Pump Resulted In Oil Leak (Section 1R19.2)
05000440/2005010-03	NCV	Failure to Correct an Oil Reservoir Maintenance Procedure Issue Resulted In ECC ‘A’ Oil Leak (Section 1R19.3)

Closed

2005-03-00	LER	Lack of Suction Path Causes High Pressure Core Spray to be Inoperable (Section 4OA3)

Discussed

05000440/2005003-01	URI	Use of Adjustment Factors to Meet ERO Staffing Timeliness Goals (Section 4OA5)

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.

Section 1R01: Adverse Weather Protection

IOI-15; Seasonal Variations; Revision 7
ONI-R36-2; Extreme Cold Weather; Revision 1
PTI-GEN-P0026; Preparations for Winter Operation; Revision 2
PTI-GEN-P0027; Cold Weather Support System Startup; Revision 7
PTI-GEN-P0027; Cold Weather Support System Startup; Revision 8
SOI-R36; Heat Trace and Freeze Protection System; Revision 6
SOI-P45/49; Emergency Service Water and Screen Wash Systems; Revision 11

Section 1R04: Equipment Alignment

VLI-P47; Control Complex Chilled Water System; Revision 6
SOI-P47; Control Complex Chilled Water System; Revision 13
VLI-R47; Division 1 and 2 Diesel Generator Lube Oil; Revision 5
VLI-R44; Division 1 and 2 Diesel Generator Starting Air System (Unit 1); Revision 4
VLI-R48; Division 1 and 2 Diesel Generator Exhaust, Intake and Crankcase Systems; Revision 6
VLI-R46; Division 1 and 2 Diesel Generator Jacket Water Systems (Unit 1); Revision 3
VLI-R45; Division 1 and 2 Diesel Generator Fuel Oil System (Unit 1); Revision 4
WO 200161353; Level Element for Division 1 EDG Fuel Oil Storage Tank; dated July 21, 2005

Section 1R05: Fire Protection

FPI-1DG; Diesel Generator Building; Revision 4
FPI-TB; Turbine Building; Revision 2
FPI-HB; Heater Bay; Revision 1
FPI-1AB; Auxiliary Building Unit 1; Revision 2

Section 1R07: Heat Sink

WO 200150844; RHR Exchangers 'A' And 'C' Performance Testing; dated December 1, 2005
PTI-E12-P0002; RHR Heat Exchanger 'A' and 'C' Performance Testing Trend Chart; dated December 20, 2000

Section 1R12: Maintenance Effectiveness

CR 05-06331; Incorrect Functional Location in Order; dated August 30, 2005
CR 05-05822; RFA [Request for Assistance] - As Found Contact Resistance High; dated August 3, 2005

CR 05-05697; WO Given to Operations for Restoration Prior to Post Maint Requirements Completion; dated July 28, 2005
CR 05-05560; PCR [Procedure Change Request] - Deficiency ONI-R42-5; dated July 23, 2005
CR 05-04861; Bus ED-2-C Ground Detection; dated June 16, 2005
CR 05-04567; Category "A" Limits Not Met on Unit 1 Division 2; dated May 31, 2005
CR 05-02416; ED-1-B Ground Alarm in Control Room; dated March 16, 2005
CR 05-01350; Loss of D1B07; dated February 23, 2005
CR 05-05622; Evaluate NRC Information Notice 2005-21 - Switchyard Maintenance Issues/Effects; dated July 26, 2005
CR 05-05500; Fleet Focused Self-Assessment On Switchyard, Transformer & Grid Reliability; dated July 21, 2005
CR 05-03354; OE19195 - Switchyard Disconnect Switches Indicate Higher Than Normal Temperature; dated April 13, 2005
CR 05-02232; Inadequate Communication of Changes in Transmission Switchyard Work; dated March 14, 2005
CR 05-02046; PII [Performance Improvement Initiative] B Work Management Action: Improve Program Interface with Switchyard Work; dated March 10, 2005
CR 04-02014; RCIC Turbine Exhaust Pressure Runs High; dated April 19, 2004
CR 04-02384; Leakage Identified Associated with RCIC System; dated May 11, 2004
CR 04-03680; 1E51F0022 Failed to Meet its Stroke Time Close; dated July 15, 2004
CR 04-03721; RCIC Governor Valve Stuck During SVI-E51T2001; dated July 17, 2004
CR 04-03789; Reactor Core Isolation Cooling Periodic Maintenance/Test Scope/Frequency Review; dated July 20, 2004
CR 04-05756; PII Latent Issues Review Identified 1E51F015 Not Tested or Maintained; dated November 2, 2004
CR 04-05790; PII Latent Issues RCIC Review - USAR Table 6.2-32 Update; dated November 4, 2004
CR 04-05975; PII LIR Calculation ECA-068 Assumption Not Justified; dated November 16, 2004
CR 04-06169; RCIC System Walkdown Deficiency; dated November 10, 2004
CR 04-06252; Planned Performance of Testing on Protected Equipment (RCIC) During Div 1 Outage; dated November 29, 2004

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

On-Line Probabilistic Safety Assessment; Week 11, Period 2; Revision 2
PAP [Perry Administrative Procedure] -1924; Risk-Informed Safety Assessment and Risk Management; Revision 4
Main Condenser Leak Downpower Schedule; dated October 12, 2005
On-Line Probabilistic Safety Assessment; Week 12, Period 2; Revision 1
Perry Work Implementation Schedule; Week 7, Period 3

Section 1R14: Operator Performance During Non-routine Evolutions and Events
ONI [Off-Normal Instruction] -N61; Condenser Tube Leak/Organic Intrusion; Revision 9
REC-0104; Chemistry Specifications; Revision 15
SOI [System Operating Instruction] -N71; Circulating Water/Condenser Mechanical Cleaning System; Revision 11

Section 1R15: Operability Evaluations

CR 05-07098; Division 1 Diesel Left Bank 4 Cylinder Has Jacket Water Leakage; dated October 5, 2005
CR 01-0531; Diesel Generator Jacket Water Leakage; dated February 15, 2001
Calculation R46T03; NonSafety-Related Setpoint Tolerance Calculation for 1R46N0062A(B) Diesel Jacket Water Stand Pipe Water Level; Revision 3
CR 04-02772; Division 2 Jacket Water Keepwarm Pump Leak; dated May 27, 2004
CR 05-07314; Sensitivity and Timely Response on Lower Level Issues Associated with Safety-Related Equipment; dated October 26, 2005
CR 05-07467; Diesel Hallway Insulation Unistrut Loose Bolt; dated November 6, 2005
CR 05-07340; 3 Loose Fasteners in DG Exhaust Hallway Near Construction Opening; dated October 27, 2005

Section 1R16: Operator Workarounds

CR 05-05079; Benchmarking Trip to Monticello Nuclear Power Plant Report; dated June 29, 2005
CR 05-05605; M&C 14, Work Arounds Policy, is Not Effective; dated July 25, 2005
CR 05-05867; 2nd Quarter Assessment of Control Room Deficiencies, Work Arounds, and Burdens; dated August 8, 2005
CR 05-06962; Operator Workarounds Dropped at T+10 Due to Uncompleted ECP; dated September 30, 2005
List of Operator Burdens; dated October 4, 2005

Section 1R19: Post-Maintenance Testing

WO 200138847; Calibration Check for OM26N0711A; dated October 6, 2005
WO 200097190; Control Room Emergency Recirculation A; dated October 5, 2005
WO 200138846; Calibration Check for OM26N0708A; dated October 6, 2005
WO 200134210; Control Room Emergency Recirculation A PMT; dated October 6, 2005
FTI-F0036; Post-Maintenance Test Manual; Revision 3
WO 200173745; Replace S8 on 1H13P877; dated October 18, 2005
PTI-R43-P0006-A; Division 1 Diesel Generator Pneumatic Logic Board Functional Check; Revision 5
CR 05-07511; Failure of a Newly Installed Pneumatic Logic Board for Division 1 Diesel Generator; dated November 8, 2005
CR 05-07505; Procedure Errors in PTI-R43P0006A; dated November 9, 2005
PMI-0050; Preventative Maintenance Lubricating Guidelines; Revision 3
WO 200188113; Emergency Closed Cooling Pump Outboard Bearing Oil Bubbler; dated November 29, 2005
CR 05-07371; ECC Pump 1P42C0001B Outboard Pump Bearing Oil Leak; dated October 29, 2005
CR 05-07383; Oil Leak on Outboard Oil Seal; dated October 31, 2005
CR 05-07379; Failed PMT for ECC B; dated October 31, 2005
CR 05-07404; Operability Determination Extension Requested; dated October 31, 2005
CR 05-07685; Emergency Closed Cooling Pump A Inboard Bearing Bubbler Adjustment; dated November 19, 2005

WO 200187088; ECC Pump A Bubbler Rework; dated November 28, 2005
WO 200146833; ECC Pump A Bubbler Replacement; dated November 5, 2005
WO 200075252; ECC Pump B Maintenance and Bubbler Replacement; dated September 14, 2005
CR 05-07633; TBCC Pump A Failed PMT [Post Maintenance Test]; dated November 16, 2005
CR 05-07683; TBCCW Pump A - Failed PMT/Repeat Maintenance; dated November 19, 2005

Section 1R22: Surveillance Testing

SVI-C71-T0039; MSIV [Main Steam Isolation Valve] Closure Channel Functional; Revision 6
SVI-P47-T2001-B; Control Complex Chilled Water B Pump and Valve Operability Test; Revision 3
SVI-C61-T1201; Remote Shutdown Panel 1C61-P001 Control Operability Test RHR A, ESW A, And ECC A; Revisions 1, 2, 3, and 4
SVI-E22-T2001; HPCS Pump and Valve Operability Test; Revision 18
CR 05-07711; NRC Procedural Concern During Performance of SVI-C61-T1201; dated November 22, 2005
SVI-R43-T1317; Diesel Generator Start and Load Division 1; Revision 12

Section 1R23: Temporary Plant Modifications

Alternate Diesel Generator Starting Air Supply Temporary Modification; dated November 4, 2005

Section 1EP2: Alert and Notification System (ANS) Testing

The Siren Alerting System for the Perry Nuclear Power Plant; dated June 1985
Perry Prompt Alert Siren System History; dated 1996 through 2005
PSI-0021; Prompt Alert System; dated September 9, 2005
Letter from FEMA [Federal Emergency Management Agency] to NRC; Perry Prompt Alert and Notification System Approval Letter; dated September 8, 1986
PNPP [Perry Nuclear Power Plant] 6813; Prompt Alert System Annual Maintenance Checklist; dated June 28 through October 14, 2004
PNPP 6814; Prompt Alert System Maintenance Checklist; dated November 12 through December 17, 2004, and May 15 through June 24, 2005
PNPP 6817; Perry Plant Prompt Alert System Repair Report; dated October 4, 2004 through September 24, 2005
2004 Emergency Planning Zone Siren System Test Schedule
CR 05-04947; Lake County Siren Activation Failure; dated June 20, 2005

Section 1EP3: Emergency Response Organization (ERO) Augmentation Testing

Perry Emergency Plan; Section 6.1; Activation of Emergency Organizations; Revision 24
Perry Emergency Plan; Section 8.8.4; Frequency of Drills and Exercises; Revision 24
EPI-B1; Form PNPP 9100; Emergency Notification System Pager Messages; Revision 17
PSI-0016; Testing of Plant Support Callout Scenarios; Revision 2
PSI-0022; Attachments 1 and 2; Emergency Plan Training Program Course Listing and Requirements; Revision 0
PTI-GEN-P0003; Quarterly Testing of the Emergency Pager System; Revision 6

771PYRC2005; ERO [Emergency Response Organization] Off Hours Unannounced Drill Self-Assessment Report, dated August 19, 2005
759PYRC2005; ERO Off Hours Unannounced Drill Self-Assessment Report; dated June 10, 2005
724PYRC2004; ERO Off Hours Unannounced Drill Self-Assessment Report; dated November 18, 2004
672RAS2004; ERO Off Hours Unannounced Drill Self-Assessment Report; dated April 2, 2004
Perry Emergency Telephone Directory; Revision 2005-3/4
Integrated On Call Report for Emergency Response Organization; dated December 7, 2005
CR 05-07966; Two Radiation Protection Individuals' Qualifications Indicate Past Due and They are Still in the Emergency Telephone Directory; dated December 8, 2005
CR 05-06260; Lapsed Emergency Response Organization Qualifications; dated August 25, 2005

Section 1EP4: Emergency Action Level and Emergency Plan Changes

Emergency Plan for Perry Nuclear Power Plant; Revision 23
Emergency Plan for Perry Nuclear Power Plant; Revision 22
Emergency Plan for Perry Nuclear Power Plant; Revision 21

Section 1EP5: Correction of Emergency Preparedness Weaknesses and Deficiencies

IPA 764PYRC2005; First Half 2005 Integrated Performance Assessment; dated August 2, 2005
PY-C-05-03; Perry Nuclear Quality Oversight Assessment Quarterly Audit Report; dated November 23, 2005
PY-C-04-04; Perry Nuclear Quality Assessment Quarterly Audit Report; dated February 17, 2005
PY-C-04-03; Perry Nuclear Quality Assessment Quarterly Audit Report; dated November 5, 2004
PY-C-04-02; Perry Nuclear Quality Assessment Quarterly Audit Report; dated July 23, 2004
PY-C-04-01; Perry Nuclear Quality Assessment Quarterly Audit Report; dated April 23, 2004
PY-C-03-04; Perry Nuclear Quality Assessment Quarterly Audit Report; dated February 4, 2004
PY-C-03-03; Perry Nuclear Quality Assessment Quarterly Audit Report; dated October 22, 2003
PY-C-03-02; Perry Nuclear Quality Assessment Quarterly Audit Report; dated July 22, 2003
PY-C-03-01; Perry Nuclear Quality Assessment Quarterly Audit Report; dated March 19, 2003
753PYRC2005; June 20, 2005 ERO Team 'C' Training Drill Self-Assessment; dated July 28, 2005
713RAS2004; October 5, 2004, ERO Team 'A' Evaluated Exercise Self-Assessment Report; dated November 4, 2004
CR 05-07313; CADAP Time Requirements in EPI-A1 May Not Be Met Under All Circumstances; dated October 26, 2005
CR 05-05657; Observation of Training EPlan TSC [Technical Support Center] Operation Manager Overall Unsat Rating; dated July 27, 2005
CR 05-04753; RIS 2005-08 Endorsement NEI [Nuclear Energy Institute] Guidance for Sheltering Protective Action Recommendations; dated June 9, 2005
CR 05-00107; PII B Re-Examine Respiratory Protection Qualification for ERO; dated January 6, 2005
CR 04-05953; CO2 System Actuation Results in Emergency Plan Entry; dated November 12, 2004

Section 1EP6: Drill Evaluation

Controller's Handbook; Team "A" ERO Drill; dated October 11, 2005

Section 4OA1: Performance Indicator (PI) Verification

Perry Emergency Plan; Section 7.4; Prompt Alert Siren System; Revision 24
PYBP-RAS-0004; Appendix A; NRC Performance Indicators; Emergency Response Organization Drill Participation; Revision 1
PYBP-RC-0004; Figure 1(l); NRC Performance Indicators; ERO Drill Participation, Document and Data Review Form; dated July 2004 through September 2005
PYBP-RAS-0004; Appendix A; NRC Performance Indicators; ERO Drill/Exercise Performance; Revision 2
PYBP-RC-0004; Figure 1(k); NRC Performance Indicators; Emergency Preparedness Drill/Exercise Performance; Document and Data Review Form; dated July 2004 through September 2005
PYBP-EPU-0028; Prompt Alert Siren System Emergency Planning Zone Testing; Revision 1
PYBP-RC-0004; Figure 1(m); NRC Performance Indicators; Alert and Notification System Reliability; Document and Data Review Form; dated July 2004 through September 2005
PSI-0021; Attachment 3; Prompt Alert System Siren Test Reports; dated July 2004 through September 2005
CR 05-07916; Credit Taken Incorrectly for Emergency Response Performance Indicator (DEP) [Drill and Exercise Performance]; dated December 6, 2005
CR 05-06779; Alert and Notification System Reliability Indicator Reference Data Inaccurate; dated September 21, 2005

Section 4OA2: Identification and Resolution of Problems

CR 05-07173; Declining Site Performance Noted by CAP Predictive Trending; dated October 18, 2005
CR 05-07100; Declining Site Performance Noted by CAP Predictive Trending; dated October 11, 2005
CR 05-06994; September Cognitive Trending for Maintenance Section - Work Package Errors; dated October 4, 2005
CR 05-06216; Cognitive Trend of T+6 Meeting Observations Deemed Unsatisfactory; dated August 19, 2005
CR 05-06067; Containment Airlock Rework Trending; dated August 16, 2005
CR 05-06066; Declining Trend in Procedure Use and Adherence Issues Found During Section IPA; dated August 16, 2005
CR 05-06065; Declining Trend in FME Issues Found During Section Integrated Performance Assessment; dated August 16, 2005
CR 05-05650; Negative Trends Identified in Emergency Planning; dated July 27, 2005
Perry Nuclear Oversight Assessment Quarterly Audit Report PY-C-05-01; dated May 31, 2005
Perry Nuclear Oversight Assessment Quarterly Audit Report PY-C-05-02; dated August 19, 2005

Section 4OA3: Event Followup

LER [Licensee Event Report] 2005-003; Lack of Suction Flow Path Causes High Pressure Core Spray to be Inoperable; dated November 18, 2005
CR 05-07435; M32 A Breaker Found Open; dated November 3, 2005
CR 05-07442; Failure to Identify All Applicable TSs and Required Actions; dated November 3, 2005

LIST OF ACRONYMS USED

ANS	Alert and Notification System
CCCW	control complex chilled water
CFR	*Code of Federal Regulations*
CR	condition report
DC	direct current
ECC	emergency closed cooling
EDG	emergency diesel generator
EP	Emergency Preparedness
EPI	emergency implementing procedures
ERO	Emergency Response Organization
ESW	emergency service water
FPI	Fire Protection Instruction
FSAR	Final Safety Analysis Report
FENOC	FirstEnergy Nuclear Operating Company
HPCS	high pressure core spray
IMC	Inspection Manual Chapter
LER	Licensee Event Report
NCV	non-cited violation
NRC	Nuclear Regulatory Commission
ONI	Off-Normal Instruction
OWA	operator work around
PAP	Perry Administrative Procedure
PI	Performance Indicator
PMI	Preventive Maintenance Instruction
PMT	post-maintenance testing
RHR	residual heat removal
SDP	significance determination process
SSC	structures, systems, and components
SVI	surveillance instruction
TBCCW	Turbine Building Closed Cooling Water
TS	Technical Specification
USAR	Updated Safety Analysis Report
VLI	valve lineup instruction
WO	work order