UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

ATTACHMENTS 2 AND 3 CONTAIN PROPRIETARY INFORMATION

October 7, 2005

EA-05-195

Florida Power and Light Company
ATTN: Mr. J. A. Stall, Senior Vice President
Nuclear and Chief Nuclear Officer
P. O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: TURKEY POINT NUCLEAR PLANT - NRC TRIENNIAL FIRE PROTECTION INSPECTION (FOLLOW UP) REPORTS 05000250/2005010 AND 05000251/2005010; PRELIMINARY WHITE FINDING AND EXERCISE OF ENFORCEMENT DISCRETION

Dear Mr. Stall:

On October 7, 2005, the U.S. Nuclear Regulatory Commission (NRC) completed a follow up inspection associated with triennial fire protection unresolved items (URIs) for your Turkey Point Nuclear Plant, Units 3 and 4. In summary, certain fire protection items were determined to result in a preliminary White finding as discussed below. The enclosed inspection report documents the inspection findings, which were discussed on October 7, 2005, with Mr. S. Greenlee and other members of your staff.

This inspection was an in-office examination of five unresolved items (URIs) which were identified in NRC Inspection Report 05000250, 251/2004007 (ADAMS Accession Number ML040890083) forwarded to you on March 26, 2004. The five URIs were: URI 05000251/2004007-001, Failure to Prevent Spurious Operation of Valve MOV-4-626 For a Severe Fire in 4B 4160 V Switchgear Room; URI 05000250, 251/2004007-002, Local Manual Operator Actions to Protect RCP Seal Package Cooling Not Timely; URI 05000251/ 2004007-003, Local Manual Operator Actions Not Evaluated for Loss of Security Card Key Access for a Severe Fire; URI 05000250,251/2004007-006, Local Manual Operator Actions to Protect RCP Thermal Barrier Cooling Valves MOV-3-716A and MOV-4-716A For Control Room Evacuation Not Timely; and URI 05000250, 251/2004007-007, Local Manual Operator Actions For Control Room Evacuation Not Evaluated for Availability of Security Support. These issues were unresolved pending a safety significance determination.

DOCUMENT TRANSMITTED HEREWITH CONTAINS SENSITIVE UNCLASSIFIED INFORMATION
WHEN SEPARATED FROM ATTACHMENTS 2 AND 3, THIS DOCUMENT IS DECONTROLLED

Based on the results of this inspection, the inspectors identified that the Turkey Point fire response procedures were not effective in ensuring a safe shutdown of Units 3 and 4 for severe fires in certain fire zones (FZs) (URIs 05000251/2004007-001, 05000250,251/2004007-002, and 05000250,251/2004007-006). Specifically, the control circuit of motor operated valve (MOV) MOV-4-626, "Reactor Coolant Pump (RCP) Thermal Barrier Component Cooling Water (CCW) Return Isolation Valve," was not protected nor would spurious operation be prevented during a fire in FZ 67, and could result in an RCP seal loss of coolant accident (LOCA); local manual operator actions to verify correct alignment of thermal barrier cooling valves MOV-3-716B, "RCP Thermal Barrier CCW Supply Isolation Valve," and MOV-3-626 in FZ 63 (and MOV-4-716B in FZ 67) would not be completed in a timely manner, and could result in an RCP seal LOCA; and local manual operator actions to verify correct alignment of valves MOV-3-716A and MOV-4-716A would not be completed in a timely manner for a fire in FA MM (FZs 106, 106R, or 97) and could result in an RCP seal LOCA. These inspection findings were collectively assessed using the applicable significance determination process (SDP) Appendix F Phase 1 and 2 Worksheets and preliminarily determined to be White (i.e., an issue with low to moderate safety significance, which may require additional NRC inspections) because they could affect fire protection defense in depth. Our SDP Phase 1 and 2 evaluations of these findings are provided in Attachment 3. The findings associated with URIs 05000251/2004007-001 and 05000250,251/2004007-002 were determined to be an apparent violation of 10 CFR Part 50, Appendix R, Section III.G.2 requirements and the finding associated with URI 05000250,251/2004007-006 was determined to be an apparent violation of 10 CFR Part 50, Appendix R, Section III.G.3 requirements.

In this case, your staff was aware of the fire induced circuit failure vulnerabilities in early 2001 and implemented local manual operator actions to compensate for these vulnerabilities which, upon inspection, the NRC determined to be non-feasible. As such, the NRC concluded that enforcement discretion was not warranted because corrective actions in response to the vulnerabilities were not prompt, comprehensive or effective. This apparent violation is being considered for escalated enforcement action in accordance with the Enforcement Policy, because it is associated with a White finding. The current Enforcement Policy is included on the NRC's Web site at http://www.nrc.gov/reading-rm/adams.html.

These findings presented an immediate safety concern. In response to the findings, the licensee implemented immediate corrective and compensatory actions. These actions effectively reduced the risk to very low (Green).

Before we make a final decision on this matter, we are providing you an opportunity to (1) present to the NRC your perspectives on the facts and assumptions, used by the NRC to arrive at the finding and its significance, at a Regulatory Conference or (2) submit your position on the finding to the NRC in writing. If you 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 response should be sent to the NRC within 30 days of the receipt of this letter.

Please contact Mr. D. Charles Payne at (404) 562-4669 within seven days of the date of this letter to notify the NRC of your intentions regarding the regulatory conference for the preliminary White finding.

If we have not heard from you within 10 days, we will continue with our significance determination and associated enforcement processes on this finding, and you will be advised by separate correspondence of the results of our deliberations on this matter.

Since the NRC has not made a final determination in this matter, no Notice of Violation is being issued for the inspection finding at this time. In addition, please be advised that the number and characterization of the apparent violation described in the referenced inspection report may change as a result of further NRC review. For administrative purposes, this letter is issued as a separate NRC Inspection Report No. 05000250,251/2005010 and the above apparent violation is identified as AV 0500250,251/2005010-01, Unprotected Post-Fire Safe Shutdown Cables and Related Non-feasible Local Manual Operator Actions. Accordingly, URIs 05000251/2004007-001, 05000250,251/2004007-002, and 05000250,251/2004007-006 are closed.

In addition, this report documents closure of URIs 05000251/2004007-003 and 05000250, 251/2004007-007 in Attachment 2. For URI 05000251/2004007-003, a violation of 10 CFR 50, Appendix R, requirements was identified involving circuit analysis issues for which the NRC is exercising enforcement discretion and reactor oversight process discretion (i.e. not subjecting the violation to the SDP). The basis for the enforcement discretion is NRC Enforcement Manual Section 8.1.7.1 (c), Fire Induced Circuit Failures. One of the conditions for applying discretion is that the circuit vulnerabilities be corrected within a reasonable time frame. NRC Inspection Manual Chapter 0305, Operating Reactor Assessment Program, Section 06.06.2, Violations in Specified Areas of Interest Qualifying for Enforcement Discretion, states that violations related to certain circuit issues which are eligible for enforcement discretion shall also be eligible for reactor oversight process discretion. The conditions for applying discretion were met because you did not dispute the violation, entered it into your corrective action program and completed timely corrective action. No findings were identified associated with URI 05000250, 251/2004007-007. Accordingly, URIs 05000251/2004007-003 and 05000250,251/ 2004007-007 are closed.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, portions of the enclosure, and your response (if any) 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). However, the NRC is continuing to review the appropriate classification of Attachments 2 and 3 under our records management program, considering changes in our practices following the events of September 11, 2001. Using our interim guidance, Attachments 2 and 3 have been marked as Proprietary Information or Sensitive Information in accordance with Section 2.390(d) of Title 10 of the Code of Federal Regulations and will not be placed in the PDR. Please control the document accordingly (i.e., treat the document as if you had determined that it contained trade secrets and commercial or financial information that you considered privileged or confidential).

We will inform you if the classification of these documents changes as a result of our ongoing assessments. ADAMS is accessible from the NRC web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

If you have any questions regarding this letter, please contact me at 404-562-4600.

Sincerely,

/RA/

Victor M. McCree, Director
Division of Reactor Safety

Docket Nos. 50-250, 50-251
License Nos. DPR-31, DPR-41

Enclosure: Inspection Report 05000250/2005010 and 05000251/2005010
w/Attachment:
1. Supplemental Information
2. Closure of URIs 05000251/2004007-003 and 05000250, 251/2004007-007
3. SDP Phase 1 and 2 worksheets

cc w/encl:

cc w/encl:
T. O. Jones
Site Vice President
Turkey Point Nuclear Plant
Florida Power and Light Company
Electronic Mail Distribution

Walter Parker
Licensing Manager
Turkey Point Nuclear Plant
Florida Power and Light Company
Electronic Mail Distribution

Michael O. Pearce
Plant General Manager
Turkey Point Nuclear Plant
Florida Power and Light Company
Electronic Mail Distribution

David Moore, Vice President
Nuclear Operations Support
Florida Power & Light Company
Electronic Mail Distribution

Rajiv S. Kundalkar
Vice President - Nuclear Engineering
Florida Power & Light Company
Electronic Mail Distribution

M. S. Ross, Managing Attorney
Florida Power & Light Company
Electronic Mail Distribution

Marjan Mashhadi, Senior Attorney
Florida Power & Light Company
Electronic Mail Distribution

Attorney General
Department of Legal Affairs
The Capitol
Tallahassee, FL 32304

William A. Passetti
Bureau of Radiation Control
Department of Health
Electronic Mail Distribution

County Manager
Metropolitan Dade County
Electronic Mail Distribution

Craig Fugate, Director
Division of Emergency Preparedness
Department of Community Affairs
Electronic Mail Distribution

Curtis Ivy
City Manager of Homestead
Electronic Mail Distribution

Distribution w/encl:
B. Moroney, NRR
L. Trocine, OE
L. Slack, RII EICS
RIDSNRRDIPMLIPB
PUBLIC

☐ SISP REVIEW COMPLETE: Initials: _____ ☐ SISP REVIEW PENDING*: Initials: _____ *Non-Public until the review is complete
☐ PUBLICLY AVAILABLE X☐ NON-PUBLICLY AVAILABLE X☐ SENSITIVE ☐ NON-SENSITIVE
ADAMS: ☐ Yes ACCESSION NUMBER:_____

OFFICE	DRP:RII	DRP:RII	DRP:RII	DRP:RII	DRP:RII	DRP:RII	DRP:RII
SIGNATURE	/RA/	/RA/					
NAME	SNinh	JMunday					
DATE	10/6/05	10/6/05					
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICE	DRS:RII	DRS:RII	DRS:RII	EICS			
SIGNATURE	/RA/	/RA By CPayne for/	/RA/	/RA/			
NAME	WRogers	RRodriguez	CPayne	CEvans			
DATE							
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: E:\Filenet\ML052840069.wpd

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos:	50-250, 50-251
License Nos:	DPR-31, DPR-41
Report Nos:	05000250/2005010 and 05000251/2005010
Licensee:	Florida Power & Light Company (FP&L)
Facility:	Turkey Point Nuclear Plant, Units 3 & 4
Location:	9760 S. W. 344th Street Florida City, FL 33035
Dates:	August 1, 2005 - October 7, 2005
Inspectors:	R. Rodriguez, Reactor Inspector W. Rogers, Senior Reactor Analyst S. Ninh, Senior Project Engineer
Approved by:	D. Charles Payne, Chief Engineering Branch 2 Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000250/2005-010, 05000251/2005-010; 08/01/2005 - 10/07/2005; Turkey Point Nuclear Power Plant, Units 3 and 4; Significance Determination of Unresolved Items and Closure of Two Unresolved Items from Triennial Fire Protection Inspection.

This in-office review was conducted by two regional inspectors and a senior reactor analyst. One preliminary White finding with an apparent violation was identified. 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-Revealing Findings

Cornerstone: Initiating Events and Mitigating Systems

- Preliminary White. The inspectors identified an apparent violation (AV) of 10 CFR 50, Appendix R requirements for failure to: 1) protect the control circuit of motor operated valve (MOV) MOV-4-626, "Reactor Coolant Pump (RCP) Thermal Barrier Component Cooling Water (CCW) Return Isolation Valve" and to prevent its spurious operation during a fire in fire zone (FZ) 67; 2) ensure that local manual operator actions used to verify correct alignment of MOV-3-716A and MOV-4-716A, "RCP Thermal Barrier CCW Supply Isolation Valves," and MOV-3-626, were completed in a timely manner for fires in either FZ 63 or FZ 67; and 3) to ensure local manual operator actions to verify correct alignment of MOV-3-716A and MOV-4-716A were completed in a timely manner for a fire in FZ 106. These conditions could result in an RCP seal loss of coolant accident (LOCA).

  This finding is greater than minor because it degraded the defense in depth for fire protection and also because it is associated with the protection against external factors attribute and degraded the reactor safety mitigating systems cornerstone objective. The finding adversely affected the reliability and capability of equipment required to achieve and maintain a safe shutdown condition following a severe fire in Fire Zones 61, 63, 67, 70, 98 and 106. (Section 4OA5)

B. Licensee-Identified Violations.

None

REPORT DETAILS

4. OTHER ACTIVITIES

4OA5 Other

.1 (Closed) URI 05000251/2004007-001, Failure to Prevent Spurious Operation of Valve MOV-4-626 For a Severe Fire in 4B 4160 V Switchgear Room

(Closed) URI 05000250,251/2004007-002, Local Manual Operator Actions to Protect RCP Seal Package Cooling Not Timely

(Closed) URI 05000250,251/2004007-006, Local Manual Operator Actions to Protect RCP Thermal Barrier Cooling Valves MOV-3-716A and MOV-4-716A For Control Room Evacuation Not Timely

Introduction. An apparent violation (AV) of 10 CFR 50, Appendix R requirements was identified for failure to: 1) protect the control circuit of motor operated valve (MOV) MOV-4-626, "Reactor Coolant Pump (RCP) Thermal Barrier Component Cooling Water (CCW) Return Isolation Valve" and to prevent its spurious operation during a fire in fire zone (FZ) 67; 2) ensure that local manual operator actions used to verify correct alignment of MOV-3-716A and MOV-4-716A, "RCP Thermal Barrier CCW Supply Isolation Valves and MOV-3-626 were completed in a timely manner for fires in either FZ 63 or FZ 67; and 3) ensure local manual operator actions to verify correct alignment of valves MOV-3-716A and MOV-4-716A were completed in a timely manner for a fire in FZ 106. These conditions could result in an RCP seal loss of coolant accident (LOCA).

Description. Pursuant the safe shutdown analysis report (SSAR), thermal barrier cooling is the assured method for protecting the RCP seals during a severe fire in FZ 67 because charging pump seal injection flow may be terminated by operator action or lost due to the fire. Valve MOV-4-626 is a motor operated valve in the thermal barrier CCW header returning from all three Unit 4 RCPs. The valve can be controlled from either the main control room (MCR) (FZ 106) or the alternate safe shutdown panel (ASP) [which is located in the 4B 4160V switchgear room (FZ 67)]. Because the control cable for this valve terminates at the ASP and the cable is unprotected, thermal insult to the control circuit for the valve could cause it to spuriously close. Closure of the valve would stop thermal barrier cooling return flow from all three Unit 4 RCPs. Guidance in 0-ONOP-016.10, "Pre-fire Plan Fire Zone 67," directs local manual operator actions to prevent, or recover from, spurious closure of MOVs that could interrupt thermal barrier cooling. For FZ 67, thermal barrier cooling valves MOV-4-716B and MOV-4-626 could be subject to spurious operation but the inspectors found that MOV-4-626 was not included in the procedure.

On September 9, 2003, the licensee identified an error in the safe shutdown analysis (SSA) Essential Equipment List. They found that valve MOV-4-626 was not properly classified as being required to assure safe shutdown (SSD). As a result, the fire response procedure failed to include MOV-4-626 as part of the mitigation strategy against spurious valve operation. The issue was entered into the licensee's corrective action program (CAP) as condition report (CR) 03-1330-1. The need to review and

update 0-ONOP-016.10 was entered into the CAP as CR 04-0292; but this deficiency was not resolved prior to the inspection. During the inspection, the licensee resolved this concern by issuing an on-the-spot-change to 0-ONOP-016.10 which specified manual actions to de-energize and verify open MOV-4-626. The licensee documented this action in its CAP as CR 04-0610.

Thermal barrier cooling is also the assured method for protecting the RCP seals during a severe fire in FZ 63 because charging pump seal injection flow may be terminated by operator action or lost due to the fire. In lieu of protecting the control circuits and cables for the RCP thermal barrier cooling valves (MOV-3-716B and MOV-3-626 in FZ 63; and MOV-4-716B in FZ 67), guidance in 0-ONOP-016.10 directed local manual operator actions to prevent, or recover from, spurious closure of the MOVs. When evaluating the feasibility of the manual actions using the guidance in NRC inspection procedure (IP) 71111.05T, Fire Protection [Triennial], the inspectors identified that procedure 0-ONOP-016.10 allowed 20 minutes to complete the operator actions for verification of thermal barrier cooling valve alignment. However, industry analyses [Westinghouse Direct Work No. DW-94-011; Westinghouse WCAP-10541, Revision 2; and Westinghouse WCAP-15603, Revision 1-A] have determined that seal package damage could occur within 13 minutes of loss of all seal package cooling. Thus, the operator guidance provided in procedure 0-ONOP-016.10 does not provide timely action and could result in an RCP seal LOCA. Loss of reactor coolant system (RCS) inventory due to an RCP seal LOCA could be beyond the capacity of equipment dedicated to achieve and maintain post-fire safe shutdown. The licensee entered the finding into its CAP as CR 04-0688 and resolved this concern by revising procedure 0-ONOP-016.10.

Fire Area (FA) MM includes the MCR, the MCR roof, and the Unit 3 and 4 mechanical equipment room. Per the SSAR, thermal barrier cooling is the assured method for protecting the RCP seals during a severe fire in FA MM because charging pump seal injection flow may be terminated by operator action or lost due to the fire. Guidance in procedure 0-ONOP-105 directs local manual operator actions to prevent, or recover from, spurious closure of MOVs that could interrupt thermal barrier cooling. The inspectors identified that 0-ONOP-105, Attachment 7 (Unit 3) and Attachment 8 (Unit 4) allowed 20 minutes to complete the operator actions for verifying that MOV-3-716A and MOV-4-716A were open. However, industry analyses [Westinghouse Direct Work No. DW-94-011; Westinghouse WCAP-10541, Revision 2; and Westinghouse WCAP-15603, Revision 1-A] have determined that seal package damage could occur within 13 minutes of loss of all seal package cooling. Thus, the operator guidance provided in procedure 0-ONOP-105 does not provide timely action and could result in an RCP seal LOCA. Loss of RCS inventory due to an RCP seal LOCA could be beyond the capacity of equipment dedicated to achieve and maintain post-fire safe shutdown. The licensee entered the finding into its CAP as CR 04-0688 and resolved this concern by revising procedure 0-ONOP-105.

Analysis. These findings degraded the defense in depth for fire protection and also they are associated with the protection against external factors attribute and degraded the reactor safety mitigating systems cornerstone objective. The findings adversely affected the reliability and capability of equipment required to achieve and maintain a SSD condition following a severe fire. The findings are applicable to post-fire SSD from the MCR or the ASP during a fire in Unit 3 and Unit 4 control room, cable spreading room,

switchgear rooms, or motor control center rooms. In this case, your staff was aware of the fire induced circuit failure vulnerabilities in early 2001, but implemented local manual operator action that were determined to be non-feasible. As such, the NRC concluded that enforcement discretion was not warranted because corrective actions in response to the vulnerabilities were not prompt, comprehensive or effective. Therefore, Reactor Oversight Process (ROP) discretion was not warranted as well. Accordingly, these inspection findings were assessed using the applicable SDP. As discussed below, these findings were preliminarily determined to be White (i.e., an issue with low to moderate increased importance to safety, which may require additional NRC inspections.)

Because the findings affect fire protection, they were assessed in accordance with the NRC Reactor Oversight Process's SDP as described in NRC Inspection Manual Chapter 0609, Appendix F (MC 0609, App. F). In the Phase 1, the findings were associated with post-fire safe shutdown, they were assigned a high degradation rating and they existed for more than 30 days. As a result, a Phase 2 Risk Evaluation was required.

Summary of Phase 2 SDP Analysis

This evaluation was performed by Region II inspectors with the assistance of the regional SRA. The Turkey Point Phase 2 SDP Analysis is included in this inspection report as Attachment 3.

The fire protection Phase 2 analysis involves a quantitative assessment of core damage frequency (CDF) increase given a finding. There are nine analysis steps and five screening checks. The assessment includes quantification of a Fire Frequency, Fire Damage State, Non-Suppression Probability and Conditional Core Damage Probability (CCDP).

Preliminary risk significance of the inspection finding was determined to be of low to moderate safety significance (White) for Unit 3 and Unit 4. The critical assumptions of SDP Phase 2 are as follows:

> FZ 106, MCR. A fire will need to progress for approximately 10 minutes before procedure 0-ONOP-105 would have to be enacted. Ten minutes was selected because this would provide adequate time to put out the fire with emergency plan activation considerations. Therefore, the probability of non-suppression (PNS) = 0.09.
>
> FZ 98, cable spreading room (CSR). Operators will not enter into procedure 0-ONOP-105 until some evaluation of the fire is performed. The fires resulting in 0-ONOP-105 being implemented would be those still in progress after Halon actuation fails to suppress the fire or to control it. Therefore, the probability of non-suppression = 0.05 and the credit for manual suppression = 0.31 for 10 minutes after which 0-ONOP-105 will be used.
>
> FZs 98 and 106. The ASP does not provide LOCA mitigation capability in the event of MCR evacuation. Therefore, CCDP is assigned as 1.0.

FZs 61, 63, 67, and 70. The licensee's full scope model quantification results for these FZs determined CCDP = 1E-3. Upon review, the senior risk analyst (SRA) concluded that this was a representative value of CCDP and will be used in place of the Turkey Point SDP Phase 2 notebook results. Recovery credit of 1 point is given for operator action to open hot leg injection valve. This CCDP of 1E-3 will be used for FZs 61, 63, 67, and 70.

FZ 70, Unit 3 switchgear room. Same procedure omission existed. Will be treated similar to FZ 67.

FZ 106R, MCR roof and FZ 97, HVAC equipment room. These FZs have no credible ignition sources, and therefore, these FZs are not being evaluated.

The probability of no small break LOCA = 0.8

The probability of thermal shock small break LOCA = 0.2

Units 3 and 4 SDP Phase 2 results are summarized in the table as follows. Detailed SDP Phase 1 and 2 worksheets are in Attachment 3:

Performance Deficiency: Failure to implement Westinghouse Technical Bulletin Guidance on RCP seal LOCA	Unit affected	Fire Zones Affected	SDP Phase 1 and 2
URI 2004007-01	4	61 and 67	Yes
URI 2004007-02	3 & 4	61, 63, 67, 70	Yes
URI 2004007-06	3 & 4	98 and 106	Yes

Unit 4 Fire Zones	SDP Phase 2 Results	Unit 3 Fire Zones	SDP Phase 2 Results
61 - Unit 4 MCC	**1.52E-7**	63 - Unit 3 MCC	**1.34E-7**
67 - Unit 4 Switchgear Room	**2.0E-8**	70- Unit 3 Switchgear Room	**2.0E-8**
98 - Unit 4 CSR Portion	**6.0E-7**	98 - Unit 3 CSR Portion	**5.3E-7**
106- Unit 4 MCR Portion	**5.8E-6**	106- Unit 3 MCR Portion	**4.0E-6**
Total Delta CDF for Unit 4	**6.57E-06**.	Total Delta CDF for Unit 3	**4.68E-06**

SDP/Enforcement Review Panel (SERP) Evaluation

The total change in CDF due to the performance deficiency was found to be 6.57E-06/yr for Unit 4 and 4.68E-06/yr for Unit 3. The color associated with this magnitude of change in CDF is White. Therefore, the SERP has preliminarily determined this issue to be a preliminary White finding.

Enforcement. 10 CFR 50.48 (b)(1) requires, in part, that all nuclear power plants licensed to operate prior to January 1, 1979, must satisfy the applicable requirements of Appendix R, Section III.G. Section III.G.2 states, in part, that where cables or equipment, including associated non-safety circuits that could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground, of redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area outside of primary containment, one of three means of ensuring that one of the redundant trains is free of fire damage shall be provided. Section III.G.3 states that alternative shutdown capability should be provided where the protection of systems whose function is required for hot shutdown, does not satisfy the requirements of III.G.2. Section III.L of Appendix R provides requirements to be met by alternative shutdown methods. Section III.L.2.b states, in part, that "The reactor coolant makeup function shall be capable of maintaining the reactor coolant level...within the level indication in the pressurizer in PWRs."

Contrary to the above, on February 13, 2004, the inspectors identified three examples where 10 CFR 50, Appendix R requirements were not met:

a. The licensee failed to protect control circuits and cables that could cause maloperation of MOV-4-626, "RCP Thermal Barrier Component Cooling Water System Return Isolation Valve" in FZ 67. This condition existed since at least September 9, 2003, when it was first identified by the licensee.

b. The licensee failed to protect control circuits and cables that could cause maloperation of necessary RCP thermal barrier component cooling system valves MOV-3-716B and MOV-3-626 in FZ 63; and MOV-4-716B valve in FZ 67. This condition has existed since at least February 9, 2001, when the applicable procedure page was last revised.

c. The licensee failed to protect control circuits and cables that could cause maloperation of necessary RCP thermal barrier component cooling system valves in FZ 106; and did not meet the alternative shutdown capability requirements. Specifically, the licensee's procedure may not mitigate a spurious closure of valves MOV-3-716A and MOV-4-716A in a timely manner, possibly resulting in an RCP seal LOCA, and pressurizer level dropping below the indicating range. This condition has existed since at least April 24, 2002, when the applicable procedure pages were last revised.

These findings were an immediate safety concern and the licensee immediately initiated corrective actions to mitigate or correct these issues before the inspection team left the site. The licensee revised plant fire response procedures to include MOV-4-626 and the 13-minute requirement for the completion of local manual operator actions to verify the RCP thermal barrier return valve and supply valves alignment in the affected fire zones. In this case, your staff was aware of the fire induced circuit failure vulnerabilities in early 2001, but implemented local manual operator actions that were determined to be non-feasible. As such, the NRC concluded that enforcement discretion was not warranted because corrective actions in response to the vulnerabilities were not prompt, comprehensive and effective. Therefore, these issues are collectively identified as Apparent Violation (AV) 05000250,251/2005010-01, Unprotected Post-Fire Safe Shutdown Cables and Related Non-feasible Local Manual Operator Actions. Accordingly, URIs 05000251/2004007-001, 05000250,251/2004007-002, and 05000250,251/2004007-006 are closed.

.2 Unapproved Local Manual Operator Actions for Post-Fire Safe Shutdown

In response to the inspection findings, the licensee took immediate compensatory actions (some of which included procedural revisions to perform local manual operator actions in a different manner) to reduce the risk associated with the inspectors' findings. Although these changes appear to reduce the risk to the Green threshold, the current status of the facility still includes manual operator actions which do not meet the requirements of Appendix R, Section III.G.2, and for which the licensee failed to obtain NRC approval. In this case, the licensee put in place various unapproved local manual operator actions as compensatory measures to meet the requirements of Appendix R, Section III.G.2

Because the compensatory measures did not include one of the three means of ensuring that one of the redundant trains is free of fire damage (as required by Appendix R, Section III.G.2), and because no prior approval from the Commission had been obtained, this issue is being reviewed by NRC and is tracked as URI 05000250,251/2005010-02, Unapproved Local Manual Operator Actions for Post-Fire Safe Shutdown.

.3 (Closed) URI 05000251/2004007-003. Local Manual Actions Not Evaluated for Loss of Security Card Key Access for a Severe Fire in 4B 4160V Switchgear Room.

(Closed) URI 05000250.51/2004007-007. Local Manual Action For Control Room Evacuation Not Evaluated For Availability of Security Support

Discussions of URIs pertains to sensitive information. Consequently, the details for closing these two URIs is contained in Attachment 2.

4OA6 Meeting, Including Exit

On October 7, 2005, the inspection results of this report were discussed with Mr. S. Greenlee and other members of his staff who acknowledged the findings. No proprietary information was provided or examined during the inspection.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel:
W. Parker, Licensing Manager
M. Pearce, Plant General Manager
S. Greenlee, Acting Plant General Manager

NRC personnel:
C. Payne, Chief, Engineering Branch 2, Region II
S. Stewart, Senior Resident Inspector, Turkey Point

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000250,251/2005010-01	AV	Unprotected Post-Fire Safe Shutdown Cables and Related Non-feasible Local Manual Operator Actions (Section 4OA5.1)
05000250,251/2005010-02	URI	Unapproved Local Manual Operator Actions for Post-Fire Safe Shutdown (Section 4OA5.2)

Closed

05000251/2004007-001	URI	Failure to Prevent Spurious Operation of Valve MOV-4-626 For a Severe Fire in 4B 4160 V Switchgear Room. (4OA5.1)
05000250,251/2004007-002	URI	Local Manual Operator Actions to Protect RCP Seal Package Cooling Not Timely. (4OA5.1)
05000251/2004007-003	URI	Local Manual Operator Actions Not Evaluated for Loss of Security Card Key Access for a Severe Fire. (Attachment 2)
05000250,251/2004007-006	URI	Local Manual Operator Actions to Protect RCP Thermal Barrier Cooling Valves MOV-3-716A and MOV-4-716A For Control Room Evacuation Not Timely. (Section 4OA5.1)
05000250, 251/2004007-007	URI	Local Manual Operator Actions For Control Room Evacuation Not Evaluated for

Availability of Security Support.
(Attachment 2)

LIST OF DOCUMENTS REVIEWED

Applicable Codes and Standards

NFPA 72E, Standard on Automatic Fire Detectors, 1987 Edition

CRs Reviewed

CR 04-0683, Inconsistency Identified in Manual Actions Prescribed in the Safe Shutdown Analysis and the Operations Safe Shutdown Manual Actions for Fire Zone 63 in 0-ONOP-16.10

CR 04-0686, Ceiling Level Fire Detectors in the 4B Switchgear Room (Fire Zone 67) Do Not Meet the Spacing Guidelines per NRC MC 0609F, Attachment 2 and Is Not Consistent With UFSAR Section 3.5.1.

End Attachment 1