



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-3415

July 7, 1998

[REDACTED]

7C

SUBJECT: ALLEGATION REPORT [REDACTED]

10 [REDACTED]

This is in reference to our April 26, 1998, letter which indicated that we would initiate action to review your technical concerns regarding Auxiliary Control Panel (ACP) testing, procedure revisions not in accordance with Technical Specifications (TS), and deletion of shutdown requirements from selected TS surveillances at Shearon Harris Nuclear Power Plant. Your concern regarding ACP testing dealt with improper testing of 17 interposing relays and additionally with hundreds of relay contact closures that must occur during a transfer to the ACP that were not physically verified to operate in the plant testing program. Your concern regarding procedure revisions dealt with the plant's editorial change process not satisfying TS requirements. Your concern regarding deletion of shutdown requirements for selected surveillances dealt with performing surveillances during operation that were required to be performed during shutdown. The NRC has completed its follow up in response to the concerns you brought to our attention. The enclosure to this letter lists your concerns and describes how the NRC resolved the concerns you raised.

[REDACTED]

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On April 26, 1998, we requested additional information from you on the ACP testing and plant editorial change concerns. The ACP testing issue regarding the 17 interposing relays was reviewed and substantiated, however we could not substantiate that hundreds of contact closures were not physically verified. Our review of the closure folder for LER 97-012, which addressed ACP testing issues, identified that a review of other ACP transfer circuits was performed and TS requirements were met except for the 17 interposing relays identified in your December 11, 1997, letter. The inspector found a sheet of paper in the LER 97-012 closure folder describing the ACP circuit testing sample review which indicated that the 17 relay circuits represented the only noncompliance. This description of the ACP circuit sample review agreed with the conclusions of LER 97-012 and [REDACTED]. Our April 26, 1998, letter to you transmitted LER 97-012 and [REDACTED] regarding the ACP sample review and asked for further clarification about the hundreds of additional testing deficiencies. As yet we have received no response from you to this letter. The NRC staff has completed its review of your concern. Our evaluation report of your concern is enclosed. Based on the information provided, your allegation regarding hundreds of ACP relay contact closures not physically verified was not substantiated.

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[REDACTED] X 7c

In our April 26, 1998, letter we provided you a copy of LER 97-018 regarding temporary procedure changes not properly reviewed and approved in accordance with TS requirements and requested that you tell us if your concern regarding editorial procedure changes was included within the scope of the LER. LER 97-018 was initiated in response to the condition described as Issue 5 of your December 11, 1997, letter and was substantiated. As yet we have received no response from you to our April 26, 1998, letter. The NRC staff has completed its review of your concern. Our evaluation report of your concern is enclosed. Based on the information provided, your allegation regarding editorial changes not meeting TS requirements was not substantiated.

The NRC staff has completed its review of your concern regarding deletion of selected shutdown requirements from TS. Our evaluation report of your concern is enclosed. Based on the information provided, your allegation was substantiated. A TS amendment was approved to delete the shutdown requirements from TS and enforcement action is pending on this issue.

Thank you for informing us of your concerns. We feel that our actions in this matter have been responsive to those concerns. We take our safety responsibilities to the public very seriously and will continue to do so within the bounds of our lawful authority. Unless the NRC receives additional information that suggests that our conclusions should be altered regarding the hundreds of contact closures in ACP relays not physically verified or the editorial procedure changes not meeting TS requirements, we plan no further action on this matter. Should you have any additional questions, or if I can be of further assistance in this matter, you may contact me at 800-577-8510 or 404-562-4540 or by mail at P.O. Box 845, Atlanta, Georgia 30301.

Sincerely,

Michael E. Ernstes

Michael E. Ernstes, Acting Chief
Reactor Projects Branch 4
Division of Reactor Projects

Enclosure: Allegation Evaluation Report
and Attachments A-H

Certified Mail No. P 257 835 844
RETURN RECEIPT REQUESTED

July 8, 1998

7C [REDACTED]
SUBJECT: ALLEGATION REPORT [REDACTED]

7C Dear [REDACTED]

This is in reference to our April 26, 1998, letter which indicated that we would initiate action to review your technical concerns regarding Auxiliary Control Panel (ACP) testing, procedure revisions not in accordance with Technical Specifications (TS), and deletion of shutdown requirements from selected TS surveillances at Shearon Harris Nuclear Power Plant. Your concern regarding ACP testing dealt with improper testing of 17 interposing relays and additionally with hundreds of relay contact closures that must occur during a transfer to the ACP that were not physically verified to operate in the plant testing program. Your concern regarding procedure revisions dealt with the plant's editorial change process not satisfying TS requirements. Your concern regarding deletion of shutdown requirements for selected surveillances dealt with performing surveillances during operation that were required to be performed during shutdown. The NRC has completed its follow up in response to the concern you brought to our attention. The enclosure to this letter lists your concerns and describes how the NRC resolved the concern you raised.

7C [REDACTED]
On April 26, 1998, we requested additional information from you on the ACP testing and plant editorial change concerns. The ACP testing issue regarding the 17 interposing relays was reviewed and substantiated, however we could not substantiate that hundreds of contact closures were not physically verified. Our review of the closure folder for LER 97-012, which addressed ACP testing issues, identified that a review of other ACP transfer circuits was performed and TS requirements were met except for the 17 interposing relays identified in your December 11, 1997, letter. The inspector found a sheet of paper in the LER 97-012 closure folder describing the ACP circuit testing sample review which indicated that the 17 relay circuits represented the only noncompliance. This description of the ACP circuit sample review agreed with the conclusions of LER 97-012 and [REDACTED]. Our April 26, 1998, letter to you transmitted LER 97-012 and [REDACTED] regarding the ACP sample review and asked for further clarification about the hundreds of additional testing deficiencies. As yet we have received no response from you to this letter. The NRC staff has completed its review of your concern. Our evaluation report of your concern is enclosed. Based on the information provided, your allegation regarding hundreds of ACP relay contact closures not physically verified was not substantiated.

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018 was initiated in response to the condition described as Issue 5 of your December 11, 1997, letter and was substantiated. As yet we have received no response from you to our April 26, 1998, letter. The NRC staff has completed its review of your concern. Our evaluation report of your concern is enclosed. Based on the information provided, your allegation regarding editorial changes not meeting TS requirements was not substantiated.

The NRC staff has completed its review of your concern regarding deletion of selected shutdown requirements from TS. Our evaluation report of your concern is enclosed. Based on the information provided, your allegation was substantiated. A TS amendment was approved to delete the shutdown requirements from TS and enforcement action is pending on this issue.

Thank you for informing us of your concerns. We feel that our actions in this matter have been responsive to those concerns. We take our safety responsibilities to the public very seriously and will continue to do so within the bounds of our lawful authority. Unless the NRC receives additional information that suggests that our conclusions should be altered regarding the hundreds of contact closures in ACP relays not physically verified or the editorial procedure changes not meeting TS requirements, we plan no further action on this matter. Should you have any additional questions, or if I can be of further assistance in this matter, you may contact me at 800-577-8510 or 404-562-4540 or by mail at P.O. Box 845, Atlanta, Georgia 30301.

Sincerely,

(Original signed by M. Ernstes)

Michael E. Ernstes, Acting Chief
Reactor Projects Branch 4
Division of Reactor Projects

Enclosure Allegation Evaluation Report
and Attachments A-H

Certified Mail No. P 257 835 844
RETURN RECEIPT REQUESTED

OFFICE	R11:DRP	R11:DRP	R11:EICS						
SIGNATURE									
NAME	JBrady alt	GMacDonald	ABoland						
DATE	7/ /98	7/ /98	7/ /98	7/ /98	7/ /98	7/ /98	7/ /98	7/ /98	7/ /98
COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY

DOCUMENT NAME: H5 [REDACTED] CLOSE.LTR

ALLEGATION EVALUATION REPORT

ALLEGATION [REDACTED] 7C

SHEARON HARRIS NUCLEAR PLANT

DOCKET NO. 50-400

An allegation letter dated December 11, 1997, identified [REDACTED] and five safety concerns. A second allegation letter received February 18, 1998, provided further clarification on the five safety concerns and raised one additional concern. The staff's review of the letters indicated that there were three safety concerns which were not resolved. Those three safety concerns are addressed in this Allegation Evaluation Report. 7C

CONCERN 2 - TESTING OF AUXILIARY CONTROL PANEL

(Part 1) Seventeen interposing relays located in the Auxiliary Control Panel (ACP) had not been properly tested and would require additional testing.

(Part 2) In the February 18, 1997, allegation letter a concern was raised that hundreds of other relay contact closures must happen on a transfer to the Auxiliary Control Panel that are not physically verified to operate in the plant testing program.

DISCUSSION:

(Part 1) The inspector performed followup inspection on this matter. See section M2.2 of NRC Inspection Report (IR) 50-400/97-04 (enclosure 1 - attachment A). The licensee subsequently issued Licensee Event Report (LER) 50-400/97-012-00 (enclosure 1 - attachment B). The inspector reviewed the licensee's corrective action and documented the inspections in enclosed IR report excerpts sections M2.1 and M8.5 (enclosure 1 - attachment C). This issue was identified as Non-Cited Violation (NCV) 50-400/97-06-08. The concern was substantiated, and NRC believes the licensee has taken adequate corrective action to correct the deficient surveillance procedures.

(Part 2) The inspectors reviewed the closure folder for LER 97-012 and noted that a sample of other ACP transfer circuits were reviewed to determine if any other TS testing deficiencies existed. The LER closure folder contained a document describing the ACP relay transfer circuitry review indicating that the only circuits which did not meet the testing requirements of TS were the 17 relays listed in LER 50-400/97-012-00 (enclosure 1 - attachment B). This document was [REDACTED] (enclosure 1 - attachment D). We transmitted this document and LER 50-400/97-012-00 to the alleege on April 26, 1998, and requested additional clarification since the alleege [REDACTED]. This contradicted the alleege's statement regarding hundreds of ACP relay contact closures not physically verified in the plant testing program. We have not received any response from the alleege regarding this April 26, 1998, letter. This part of safety concern no. 2 was not substantiated. 7C

CONCLUSION:

(Part 1) The concern regarding improper testing of 17 ACP relays was substantiated. LER 50-400/97-012-00 was written and the issue was identified as NCV 50-400/97-06-08.

(Part 2) The concern regarding additional relay contact testing discrepancies in the ACP was not substantiated.

CONCERN 3 - PROCEDURE REVISIONS NOT IN ACCORDANCE WITH TECHNICAL SPECIFICATION REQUIREMENTS

(Part 1) Temporary procedure changes made in the form of the Harris Plant's handwritten procedure change process were not safety reviewed and approved by management within 14 days as required by the plant's Technical Specifications (TS).

(Part 2) The plant's editorial change process did not satisfy TS requirements and hundreds of procedure changes had been processed in violation of TS requirements.

DISCUSSION:

(Part 1) The licensee issued LER 50-400/97-018-00 (enclosure 1 - attachment E) regarding the temporary procedure changes not properly reviewed. The inspector performed followup inspection on this issue. See section 08.2 of NRC IR 50-400/97-12 (enclosure 1 - attachment F). The licensee determined the root cause and took adequate corrective action to resolve this issue. The NRC issued NCV 50-400/97-12-03 for this issue. This part of concern no. 3 was substantiated.

(Part 2) The plant's editorial change process did not satisfy TS requirements. In our April 26, 1998, letter we requested additional information on this issue and requested that the alleged notify us if this issue was covered by the scope of LER 50-400/97-018-00. We have received no reply from the alleged on this issue and did not find evidence of this concern during our review and closure of the temporary procedure changes issue detailed in LER 50-400/97-018-00. This part of concern no. 3 was not substantiated.

CONCLUSION:

(Part 1) The concern regarding temporary procedure changes was substantiated. LER 50-400/97-018-00 was written and the issue was identified as NCV 50-400/97-12-03.

(Part 2) The concern regarding editorial changes was not substantiated.

CONCERN 4 - DELETION OF SHUTDOWN REQUIREMENTS FROM SELECTED SURVEILLANCES

Prior to RFO-6 selected TS surveillances were performed online rather than during shutdown as required by TS. A TS change request was submitted in March 17, 1997, to request that during shutdown the requirements be removed from TS. Prior to NRC approval of the TS amendment request, and prior to RFO-7, selected TS surveillances were performed online rather than during shutdown as required by TS.

DISCUSSION:

The inspectors reviewed this issue and found examples which substantiated this concern. The licensee submitted and received approval of a TS amendment to delete the during shutdown requirement from selected TS surveillance requirements. The licensee subsequently reported on this issue in LER 50-400/98-005-00 (enclosure 1 - attachment G). Unresolved Item (URI) 50-400/98-04-03 was opened to track this issue. See section M7.1 of NRC IR 50-400/98-04 (enclosure 1 - attachment H). NRC enforcement action is currently pending on this issue. This concern was substantiated.

CONCLUSION:

The concern regarding deletion of shutdown requirement for selected TS surveillances was substantiated. LER 50-400/98-005-00 was issued and the concern is tracked as URI 98-04-03 pending NRC enforcement action.

ATTACHMENT A

June 9, 1997

EA 97-231

Carolina Power & Light Company
ATTN: Mr. W. R. Robinson
- Vice President - Harris Plant
Shearon Harris Nuclear Power Plant
P. O. Box 165, Mail Code: Zone 1
New Hill, NC 27562-0165

SUBJECT: NRC INTEGRATED INSPECTION REPORT NO. 50-400/97-04
NOTICE OF VIOLATION.

Dear Mr. Robinson:

On May 10, 1997, the NRC completed an inspection at your Harris reactor facility. The enclosed report presents the results of that inspection.

Based on the results of this inspection, one apparent violation was identified and is being considered for escalated enforcement action in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600. As described in section M3.1 of the subject inspection report, the apparent violation involved a failure to meet the requirements of 10 CFR 50.59 for a maintenance procedure revision that allowed removal of the containment missile shields while in Mode 3. Although this failure was identified by your Nuclear Assessment Section and corrected prior to expiration of the Technical Specification Limiting Condition for Operation action statement, the NRC is concerned that your staff failed to recognize that the procedure change would require a change to the Technical Specifications. The circumstances surrounding the apparent violation, the significance of the issue, and the need for lasting and effective corrective action were discussed with members of your staff at the inspection exit meeting on May 15, 1997. As a result, it may not be necessary to conduct a predecisional enforcement conference in order to enable the NRC to make an enforcement decision. However, a Notice of Violation is not presently being issued for these inspection findings. Before the NRC makes its enforcement decision, we are providing you an opportunity to either (1) respond to the apparent violations addressed in this inspection report within 30 days of the date of this letter or (2) request a predecisional enforcement conference. Please contact Milton Shymlock at 404-562-4540 within 7 days of the date of this letter to notify the NRC of your intended response.

Your response should be clearly marked as a "Response to An Apparent Violation in Inspection Report No. 50-400/97-04" and should include for each apparent violation: (1) the reason for the apparent violation, (2) the corrective steps that have been taken or the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response should be submitted under oath or affirmation and may reference or include previous docketed correspondence, if the

correspondence adequately addresses the required response. If an adequate response is not received within the time specified or an extension of time has not been granted by the NRC, the NRC will proceed with its enforcement decision or schedule a predecisional enforcement conference.

In addition, please be advised that the number and characterization of apparent violations described in the enclosed inspection report may change as a result of further NRC review. You will be advised by separate correspondence of the results of our deliberations on this matter.

During the six weeks covered by this inspection period, our inspectors found three additional violations of NRC requirements. We are concerned that for violation A your staff did not adequately understand the intent of the Technical Specification 3.0.4. Even though your staff identified the violation, the resident inspector had to prompt the implementation of proper corrective actions. These violations are cited in the enclosed Notice of Violation, and the circumstances surrounding the violations are described in detail in the enclosed report. Please note that you are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response will be placed in the NRC Public Document Room (PDR). To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction

Sincerely,

(Original signed by R. Crlenjak for)

Jon R. Johnson, Director
Division of Reactor Projects

Docket No. 50-400
License No. NPF-63

Enclosures: 1. Notice of Violation
2. NRC Inspection Report

cc w/encls: (See page 3)

97-02600. The steam generators' vendor was evaluating their condition for operability at the end of the inspection period.

c. Conclusions

The inspectors concluded that licensee activities involving the detection and recovery of foreign objects in the "A" Steam Generator were conducted in an acceptable manner. The licensee performed an adequate analysis of the cause of the foreign objects, and a review of the potential for foreign objects entering the other steam generators. The licensee was evaluating the operability of the "A" steam generator for the degraded preheater condition at the end of the inspection period.

M2 Maintenance and Material Condition of Facilities and Equipment

M2.1 Surveillance Observation

a. Inspection Scope (61726)

The inspectors observed all or portions of the following surveillance tests:

- OST-1033, Daily Surveillance Requirements Daily Interval, Revision 12.
- OST-1091, Containment Closure Test Weekly Interval During Core Alterations and Movement of Irradiated Fuel Inside Containment, Revision 4.
- OST-1801, ECCS Throttle Valve, CSIP and Check Valve Verification, Revisions 10, 10/1, and 10/4.
- OST-1824, 1B-SB Emergency Diesel Generator Operability Test, Revision 11/1.
- EST-209, Type B Local Leak Rate Tests, Revision 9.
- MST-M0006, Emergency Diesel Generator Fuel Oil Tank Inspection, Revision 7.

b. Observations and Findings

The inspector found that the testing was adequately performed. During the loss of offsite power and safety injection actuation testing (procedure OST-1824), plant equipment responded as expected. Some of the outage-related surveillance procedures required temporary changes either immediately prior to or during their performances. The changes were either technical or administrative in nature, but indicated that some of the test conditions or requirements had not been fully thought out during the procedure development and review stages. Specific problems with certain surveillance tests are discussed in sections M2.2 and M2.3 below.

c. Conclusions

The surveillance performances were adequately conducted. However, many of the surveillance test procedures required temporary changes immediately prior to or during their performance indicating that many of the test conditions or requirements had not been thoroughly examined during the procedure development and review stages. The deficiencies were identified by licensee personnel and documented in condition reports.

M2.2 Problems with Remote Shutdown System Test Procedure

a. Inspection Scope (62700)

The inspectors reviewed and observed portions of Operations Surveillance Test OST-1813, Remote Shutdown System Operability, Revision 7/4.

b. Observations and Findings

OST-1813, an 18-month (outage) surveillance test, was performed to verify the ability to control plant cooldown from outside the main control room. Operability of transfer switches, monitoring instrumentation and annunciators were verified as required by Technical Specification 4.3.3.5.2. The inspectors observed the pre-briefing portions of Section 7.2 Test B: NNS Transfer Panel 1A-SA and Auxiliary Transfer Panel 1A-SA, and portions of Section 7.3 Test C: Transfer Panel 1B-SB and Auxiliary Transfer Panel 1B-SB. Observations were made from the transfer panels, the auxiliary transfer panels, and the auxiliary control panel. The inspectors noted that an approved, continuous use procedure was present and followed by the test personnel. Communications were established between the control room, auxiliary control panel, the auxiliary transfer panels, and the transfer panels. The steps were performed in sequence at the command of the test director, and the results recorded and evaluated.

The inspectors noted that some events such as equipment starts and annunciator alarms were not anticipated as the transfers were made. The inspectors considered that the procedure caused a number of unnecessary delays. In one case, upon the initiation of transfer of the SSPS, annunciator alarms (Low Pressurizer Pressure SI and Low Steam Line Pressure SI) were unexpectedly received. The licensee stopped the test and investigated the cause of the alarms. The alarms were determined to be valid but were not identified as expected by the procedure.

Subsequent to the test the licensee issued a condition report (CR) 97-01890 on anomalies of the test. Fifteen recommendations were made to improve the test consisting mostly of procedure changes to identify expected equipment responses and improve test sequences.

c. Conclusions

As a result of the procedure problems, the test performance was considered weak. This test has been performed at each of the previous six outages and procedure problems still existed.

M2.3 Problems with High Head Safety Injection System Test

a. Inspection Scope (61726)

The inspector observed portions of OST-1801, ECCS Throttle Valve, CSIP, and Check Valve Verification, 18-Month Interval, Mode 6 Revision 10.

b. Observations and Findings

The inspectors observed operators perform Section 7.3 of OST-1801, which established a differential pressure for the "B" charging/safety injection pump (CSIP) to setup for collecting pump performance data. During the test, after operators started the pump and throttled the discharge isolation valve to obtain the desired differential pressure, the pressure exceeded the allowable band by 47 psid. The pump was secured and the procedure reviewed to determine if there was a problem with the system alignment. Plant personnel discovered that the "B" CSIP was aligned to the alternate cold leg injection path for this test which was a different alignment than had been specified in previous procedure revisions.

The procedure was revised to incorporate the normal flow path through the boron injection tank (BIT) and when the test was subsequently run, the pump performance data was still outside the acceptance criteria. The pump was again secured and troubleshooting began. Plant personnel determined that the seal injection flow path from the CSIPs was not in service, another anomaly that was different from the previous revisions of the procedure. The procedure was again changed and the test rerun with similarly unacceptable results. The procedure went through four temporary changes before the test data (which was still outside the acceptance criteria range established in the procedure) was presented to engineering for further evaluation.

Licensee personnel later determined that the pump's data matched the test performance curve with negligible degradation indicated; that the pump's operability was unaffected, and that the procedural acceptance criteria was erroneous (for either of the flow paths). Licensee personnel later informed the inspector that the flow and differential pressure criteria specified in the test procedure was the same criteria established in the procedure during the previous refueling outage and that test results then exceeded the allowable range as well.

c. Conclusions

The inspector concluded that although the licensee's actions to evaluate the data against the pump performance curve for operability before

NRC FORM 366
(4-95)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98

LICENSEE EVENT REPORT (LER)

(See reverse for required number of
digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATOR INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (D15C 0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

Harris Nuclear Plant Unit-1

DOCKET NUMBER (2)

50-400

PAGE (3)

1 OF 2

TITLE (4)

Auxiliary Control Panel surveillance testing deficiency.

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
5	5	97	97	012	00	6	4	97		05000
OPERATING MODE (9)		D	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)		0%	20.2201(b)			20.2203(a)(2)(v)			X 50.73(a)(2)(i)	50.73(a)(2)(viii)
			20.2203(a)(1)			20.2203(a)(3)(i)			50.73(a)(2)(ii)	50.73(a)(2)(x)
			20.2203(a)(2)(i)			20.2203(a)(3)(ii)			50.73(a)(2)(iii)	73.71
			20.2203(a)(2)(ii)			20.2203(a)(4)			50.73(a)(2)(iv)	OTHER
			20.2203(a)(2)(iii)			50.36(c)(1)			50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 355A
			20.2203(a)(2)(iv)			50.36(c)(2)			50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME

Michael Verrilli Sr. Analyst - Licensing

TELEPHONE NUMBER (include Area Code)

(919) 362-2303 *X 572*

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE).

X NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On May 5, 1997, with the plant defueled for refueling outage 7, a condition related to inadequate testing of control power circuitry for the Auxiliary Control Panel (ACP, EIS Code:EB-REL/FU) was determined to be reportable. Specifically, on a transfer to the ACP from the main control board, there are 17 interposing relays that energize and actuate to transfer the control power supply path through alternate fuses in several 6.9KV and 480V Emergency Bus Panels. These alternate control power fuses provide a back-up power supply path in the event that a fire in the main control room causes a failure of the primary fuses.

Investigation determined that previous ACP testing had not verified the operability of the interposing relays and the subsequent transfer function to the alternate control power fuses.

This condition was caused by an incorrect interpretation of Technical Specification testing requirements and an incomplete understanding of the function of the interposing relays. The failure to test these components has existed since initial surveillance test procedure development.

Corrective actions included a review of other ACP circuits and testing of the ACP interposing relays and their subsequent actuation functions. Procedures will also be revised to ensure that future surveillance testing includes verification of this function.

NRC FORM 366A
(4-95)LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Shearon Harris Nuclear Plant - Unit #1	50-400	97	012	00	2 OF 2

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

EVENT DESCRIPTION:

On May 5, 1997, with the plant defueled for refueling outage 7, a condition related to inadequate testing of control power circuitry for the Auxiliary Control Panel (ACP, EIIS Code:EB-REL/FU) was determined to be reportable. Specifically, on a transfer to the ACP from the main control board, there are 17 interposing relays that energize and actuate to transfer the control power supply path through alternate fuses in several 6.9KV and 480V Emergency Bus Panels. These alternate control power fuses provide a back-up power supply path in the event that a fire in the main control room causes a failure of the primary fuses.

Investigation determined that previous ACP testing had not verified the operability of the interposing relays and the subsequent transfer function to the alternate control power fuses.

CAUSE:

This condition was caused by an incorrect interpretation of Technical Specification testing requirements and an incomplete understanding of the function of the interposing relays. The failure to test these components has existed since initial surveillance test procedure development.

SAFETY SIGNIFICANCE:

There were no actual safety consequences associated with this event. Special testing was completed on May 30, 1997, which verified the operability of the interposing relays and the subsequent transfer of control power fuses. This testing provides confidence that an alternate control power supply path would have existed if a fire had occurred in the control room causing a failure of the primary control power fuses.

This event is being reported as a condition prohibited by Technical Specifications per 10CFR50.73.a.2.i.B.

PREVIOUS SIMILAR EVENTS:

Previous Harris Nuclear Plant (HNP) LERs related to inadequate surveillance testing have been submitted. These include LERs 94-001, 95-001, 95-003, 95-007, and 96-002. Corrective actions contained in LER 95-007 stated that HNP would perform a comprehensive review of the implementation of Technical Specification surveillance requirements. This review was in progress when the NRC issued Generic Letter 96-01. Surveillance testing deficiencies identified as a result of Generic Letter 96-01 were documented in LER 96-002. A review of surveillance test procedures will continue in conjunction with HNP's conversion to the new Standard Technical Specifications for Westinghouse Plants (NUREG-1431)

CORRECTIVE ACTIONS COMPLETED:

1. A sample review of other remote shutdown panel transfer circuitry was performed during the investigation of this condition. This review concluded that the requirements of TS 4.3.3.5.2. had been met with the exception of the 17 circuits identified in this LER.
2. Special testing was completed on May 30, 1997 per OST-9005T, which verified the operability of the interposing relays and the subsequent transfer of control power fuses.

CORRECTIVE ACTIONS PLANNED:

1. Surveillance test procedures will be revised or developed to ensure that future testing verifies the operability of the interposing relays and the subsequent transfer of control power fuses. This will be completed prior to the next scheduled performance of this testing in refueling outage 8.
2. A review of surveillance test procedures will continue in conjunction with HNP's conversion to the new Standard Technical Specifications for Westinghouse Plants (NUREG-1431)

July 18, 1997

EA 97-288

Carolina Power & Light Company
ATTN: Mr. W. R. Robinson
Vice President - Harris Plant
Shearon Harris Nuclear Power Plant
P. O. Box 165, Mail Code: Zone 1
New Hill, NC 27562-0165

SUBJECT: NRC INTEGRATED INSPECTION REPORT NO. 50-400/97-06
NOTICE OF VIOLATION

Dear Mr. Robinson:

On June 21, 1997, the NRC completed an inspection at Carolina Power & Light Company's (CP&L) Harris facility. The enclosed report presents the results of that inspection.

During the six weeks covered by this inspection period, our inspectors found that your staff generally took a safety conscious approach to the activities conducted at the Harris Plant. Three violations of NRC requirements were identified during the period. These violations are cited in the enclosed Notice of Violation, and the circumstances surrounding the violations are described in detail in the enclosed report. Violation C is of concern because your planned corrective actions would not have satisfied Technical Specification requirements for Mode 3 entry. Please note that you are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In addition, an apparent violation was identified and was considered for escalated enforcement action in accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600. The apparent violation involved the failure to conduct a 10 CFR 50.59 safety evaluation for emergency diesel generator circuitry deficiencies that have existed since initial plant operation as discussed in detail in Section E8.1 of the enclosed report. This apparent violation will be addressed in a separate correspondence.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room (PDR).

Sincerely,

(Original signed by L. Plisco for)

Jon R. Johnson, Director
Division of Reactor Projects

Docket No. 50-400
License No. NPF-63

Enclosures: 1. Notice of Violation
2. NRC Inspection Report

cc w/encls;
D. B. Alexander, Manager
Performance Evaluation and
Regulatory Affairs OHS7
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D. B. Alexander, Supervisor
Licensing/Regulatory Programs
Carolina Power & Light Company
Shearon Harris Nuclear Power Plant
P. O. Box 165, Mail Zone 1
New Hill, NC 27562-0165

(cc w/encls cont'd - See page 3)

quality control personnel were present whenever required by procedure. When applicable, appropriate radiation control measures were in place.

c. Conclusions

The maintenance performances were adequately conducted.

M2 Maintenance and Material Condition of Facilities and Equipment

M2.1 Surveillance Observation

a. Inspection Scope (61726, 70313)

The inspectors observed all or portions of the following work activities:

- OST-1004, Power Range Heat Balance, Computer Calculation, Daily Interval, Revision 13/2.
- OST-1823, 1A-SA Emergency Diesel Generator Operability Test 18 Month Interval, Revision 10/2.
- OST-1826, Safety Injection: ESF Response Time, Train B 18 Month Interval on a Staggered Test Basis, Revision 9/2.
- MST-I0072, Train "A" 18 Month Manual Reactor Trip Solid State Protection System Actuation Logic and Master Relay Test, Revision 7.
- MST-I0073, Train "B" 18 Month Manual Reactor Trip Solid State Protection System Actuation Logic and Master Relay Test, Revision 8.
- EPT-825T, Temporary Procedure for Boric Acid to Blender Flow Test, Revision 0.
- EST-724, Shutdown and Control Rod Drop Test Using Computer, Revision 5.
- OST-9005T, Temporary Procedure for OST-1813 Retest Modes 1-6, Revision 2/1
- EST-210, Periodic Containment Integrated Leak Rate Testing (Type A Test) Revision 8/2.

b. Observations and Findings

The inspector found that the testing was adequately performed. During the calibration of excore nuclear instrumentation under procedure OST-1004, which refers to procedure OP-105, Excore Nuclear Instrumentation, Revision 8/1, Attachment 2, the inspector observed the operator incorrectly record the as-left gain potentiometer setting for nuclear instrument N44. The operator corrected the error after being notified of it. The inspectors also noted that the course gain adjustment potentiometer was hard for the operators to use, and just unlocking the potentiometer caused a high flux rate trip for that nuclear instrument. During the performance of Safety Injection: ESF Response Time, Train "B" (OST-1826), plant equipment responded as expected.

OST-9005T was performed to retest sections of OST-1813 that could not be completed because of plant conditions and test parts of the control power circuitry for the Auxiliary Control Panel (ACP). OST-9005T was performed to verify the operability of the automatic reactor trip function associated with transfer relays (43T-4/SA and 43T-26/SB), the transfer switches and controls for valves 1SW-124 and 1SW-126, the transfer switches for Emergency Service Water Pump 1A-SA, the transfer switches for 43TDG1/SA through 43T-DG6/SA, and the control power fuses transferred by interposing relays on transfer to the ACP. These relays, switches, instrumentation, fuses, and annunciators were verified as required by Technical Specification (TS) 3.3.3.5.

Specific problems with certain surveillance test are discussed in sections M2.2 and M2.3 below.

c. Conclusions

The surveillance performances were adequately conducted. Plant personnel and equipment performed well during the 18-month integrated safeguards test and a retest of auxiliary control panel relays.

M2.2 Surveillance Test Procedure Causes Partial Safety Injection

a. Inspection Scope (61726)

The inspectors reviewed the root cause of the Safety Injection event discussed in paragraph 01.4 to determine common themes between it and other surveillance procedural problems in recent years.

b. Observations and Findings

Test Procedure MST-I0072, Train "A" 18 Month Manual Reactor Trip, Solid State Protection System Actuation Logic and Master Relay Test, Revision 7 had been revised several weeks before the event on May 14, 1997 to incorporate testing of General Warning circuits in the Solid State Protection System (SSPS). A General Warning condition could be caused by any one of several inputs including the loss of 48 VDC and 15VDC power supplies or a removed logic card. A General Warning condition on both trains of SSPS would generate a reactor trip signal. In 1996, the licensee identified during its Generic Letter 96-01 review that the General Warning inputs had not been independently verified or tested in the past. Licensee personnel considered that, although not required by Technical Specifications, such a test would be an enhancement to the procedure.

The General Warning circuit test was added to Section 7.1 of the procedure. Step 7.1.5, Row 3a in the associated table directed the technician to position the Memory Switch in the "A" train SSPS panel to position Number 1 from "off". When the technician performed this step on May 14, memory ground circuit continuity was broken which allowed previously blocked safety injection (SI) and reactor trip signals to become unblocked. The unblocked signals included Low Pressurizer

- M8.4 (Closed) VIO 50-400/97-01-04: Failure to have an adequate procedure for correctly calculating the moderator temperature coefficient.

Corrective actions described in the licensee's response, dated April 14, 1997, and supplemented on May 22, 1997 were reviewed and verified by the inspector. The procedure, EST-702 was revised on February 7 1997 to correct the error. The procedure is currently on administrative hold since it is not expected to be performed until June 1998. Prior to that time, further enhancements may be made. This item is closed.

- M8.5 (Closed) LER 50-400/97-012-00: Auxiliary Control Panel testing deficiency.

This LER was issued on May 5, 1997 to document a condition related to inadequate testing of control power circuitry for the Auxiliary Control Panel (ACP). Seventeen interposing relays that energize and actuate to transfer the control path through alternate fuses on a transfer to the ACP were not verified operable in previous ACP testing. This condition was caused by an incorrect interpretation of TS testing requirements and an incomplete understanding of the function of the interposing relays.

The licensee's corrective actions involved performing a sample review of other remote shutdown panel transfer circuitry and completing operational surveillance test OST-9005T, discussed in paragraph M2.1 of this inspection report, for those circuits that had not been tested. The inspectors verified that the corrective actions were completed. The licensee intends to combine OST-9005T with OST-1813 for the next refueling outage (Action Item Assignment 97-00735).

The failure to verify the operability of the 17 interposing relays and the subsequent transfer of control power through alternate fuses is a violation of TS 4.3.3.5.2. This licensee-identified and corrected violation is being treated as a Non-Cited Violation, consistent with Section VII.B.1 of the Enforcement Policy (NCV 50-400/97-06-08). This LER is closed.

- M8.6 (Closed) LER 50-400/97-014-00: Safety Injection during Solid State Protection System surveillance testing.

This LER documented the condition that resulted in the partial safety injection during Solid State Protection System surveillance testing. This event was discussed in this report, section 01.3 and M2.2 as a violation (50-400/97-06-06) of TS 6.5.1.2.1. The corrective actions will be reviewed during closure of the violation. This LER is closed.

- M8.7 (Closed) VIO 50-400/95-15-01: Failure to properly annotate surveillance test.

Corrective actions for this event were described in LER 50-400/95-008-00, issued September 28, 1995 and in the licensee's response letter, dated December 4, 1995.

A sample review of other remote shutdown panel transfer circuitry was performed during the investigation of this condition. This review concluded that the requirements of TS 4.3.3.5.2. had been met with the exception of the 17 circuits identified in this LER.



NRC FORM 368
(4-95)

NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-4 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0007, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Shearon Harris Nuclear Plant, Unit-1	DOCKET NUMBER (2) 50-400	PAGE (3) 1 OF 3
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TITLE (4)
Operation with procedures not properly reviewed and approved

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
07	01	97	97	018	00	07	31	97		05000

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 3: (Check one or more) (11)				
1	100	20.2201(b)	20.2203(a)(2)(v)	X	50.73(a)(2)(ii)	50.73(a)(2)(viii)
		20.2203(a)(1)	20.2203(a)(3)(i)		50.73(a)(2)(iii)	50.73(a)(2)(x)
		20.2203(a)(2)(i)	20.2203(a)(3)(ii)		50.73(a)(2)(iii)	73.71
		20.2203(a)(2)(ii)	20.2203(a)(4)		50.73(a)(2)(iv)	OTHER
		20.2203(a)(2)(iii)	50.36(c)(1)		50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 368A
		20.2203(a)(2)(iv)	50.36(c)(2)		50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME Mark Ellington Senior Analyst- Licensing	TELEPHONE NUMBER (include Area Code) (919) 362-2057
--	--

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On July 1, 1997, with the plant at approximately 100% power in Mode 1, an investigation determined that some Harris Nuclear Plant (HNP) procedures had not received proper reviews and approvals. Specifically, approximately 150 temporary procedure changes affecting over 100 procedures were not reviewed and approved within 14 days in accordance with Technical Specification (TS) 6.8.3 and 6.5.1. Additionally, many of these procedures were used to operate the plant without the required TS review and approval.

The cause of this TS violation is failure to comply with plant administrative procedure AP-006. Contributing factors were: (1) A misunderstanding of the basis of the requirements in the AP-006 by site personnel. (2) Inadequate management involvement once the problem was brought to management's attention as evidenced by not stopping the Handwritten Revision non-intent process once a problem was identified.

The following corrective actions have been performed: (1) HNP procedures identified as deficient have been properly reviewed and approved in accordance with TS, (2) Involved Site Management has been counseled that procedure non-compliance must be prevented and promptly corrected upon discovery, (3) Communications to appropriate site personnel have been made on how AP-006 implements TS requirements, (4) AP-006 has been revised to clarify implementation of TS requirements and (5) The Supervisor-Operations Support, involved in this event, has been disciplined by Plant Management.

A comprehensive review of the procedure change and review process will be completed by 9/1/97.

LICENSEE EVENT REPORT (LER)

TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (7)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Shearon Harris Nuclear Plant - Unit 1	50-400	97	018	00	2 OF 3

TEXT (If more space is required, see additional copies of NRC Form 366A) (17)

EVENT DESCRIPTION:

On July 1, 1997 with the plant at approximately 100% power in mode 1, an investigation determined some HNP procedures had not received the required TS reviews and approvals. Specifically, approximately 150 temporary procedure changes affecting over 100 procedures were not reviewed and approved within 14 days in accordance with TS 6.8.3. Additionally, many of these procedures were used to operate the plant without the required TS review and approval.

The plant definition for a temporary procedure change is a change that will eventually be removed from the procedure. ANSI N18.7 definition is somewhat different in that temporary procedure changes could be incorporated, as appropriate, into the next revision to the procedure.

In 1994 AP-006, "Procedure review and approval," was revised to include permanent, Handwritten Revision non-intent procedure changes that could take advantage of the 14-day limit for review and approval described in TS for temporary changes to procedures. AP-006 was revised to require the reviews and approvals described in TS for temporary changes to procedures, however the procedure did not reference TS. Consequently, involved site personnel did not understand that Handwritten Revision non-intent procedure changes were in fact temporary procedure changes as referenced in TS and ANSI N18.7.

During Refueling Outage 7 (RFO7), Handwritten Revision non-intent procedure changes were processed without review and approval within 14 days as required by AP-006, especially in the Operations organization. The Operations Procedure Coordinator informed his supervisor (Supervisor - Operations Support or S-OS) that the 14-day limit for review and approval of Handwritten Revision non-intent procedure changes would not be met due to the large volume (39) to be processed. The course of action determined by the S-OS was to direct the procedure coordinator to focus on temporary changes to procedures since they were required by TS and document the Handwritten Revision non-intent procedure changes that went overdue by a condition report. The situation grew worse due to mis-communication between the S-OS and site management. The S-OS informed site management of the problem and his course of action. At this time, he requested relief from the 14-day AP-006 requirement to perform required reviews and approvals of Handwritten Revision non-intent procedure changes. The relief was not granted, but no other course of action was directed or suggested. Without further guidance, the S-OS concluded his course of action was acceptable to plant management.

As a result over 125 Handwritten Revision non-intent procedure changes affecting approximately 90 Operation's procedures were not properly reviewed and approved as required by TS 6.8.3. Additionally, many of these procedures were used by Operations without being properly reviewed and approved.

After combining procedure change deficiencies from other plant organizations with the Operations organization, the total number of procedure changes that did not receive proper review and approval was approximately 150, affecting approximately 100 procedures. Some of these violations occurred in 1996, but were not recognized as TS violations at that time.

CAUSE:

Failure to comply with plant administrative procedure, AP-006, caused these events. Contributing factors were: (1) A misunderstanding of the basis of the requirements in the AP-006 by site personnel and (2) Inadequate management involvement once the problem was brought to management's attention as evidenced by not stopping the Handwritten Revision non-intent process once a problem was identified.

SAFETY SIGNIFICANCE:

There were no safety consequences associated with this event. Subsequent review and approval of procedures specified in this report did not reveal operation of the plant outside its licensing or design basis. Additionally, the procedure changes did not require alteration as a result of the subsequent 10 CFR 50.59 reviews.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (2)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Shearon Harris Nuclear Plant - Unit #1	50-400	87	018	00	3 OF 3

TEXT (If more space is required, use additional copies of NRC Form 306A) (17)

PREVIOUS SIMILAR EVENTS:

No previous HNP events have been reported related to missing the 14-day TS requirement for temporary changes to procedures.

CORRECTIVE ACTIONS COMPLETED:

1. HNP procedures identified as deficient have been properly reviewed and approved in accordance with TS.
2. Involved Site Management has been counseled that procedure non-compliance must be prevented and promptly corrected upon discovery.
3. Communications to appropriate site personnel have been made on how AP-006 implements TS requirements.
4. AP-006 has been revised to clarify implementation of TS requirements.
5. The Supervisor-Operations Support, involved in this event, was disciplined by Plant Management.

CORRECTIVE ACTIONS PLANNED:

1. A comprehensive review of the procedure change and review process will be completed by 9/1/97.

December 31, 1997

Carolina Power & Light Company
ATTN: Mr. W. R. Robinson
Vice President - Harris Plant
Shearon Harris Nuclear Power Plant
P. O. Box 165, Mail Code: Zone 1
New Hill, NC 27562-0165

SUBJECT: NRC INTEGRATED INSPECTION REPORT 50-400/97-12
NOTICE OF VIOLATION

Dear Mr. Robinson:

On December 6, 1997, the NRC completed an inspection at your Harris reactor facility. The enclosed report presents the results of that inspection.

During the six weeks covered by this inspection period, our inspectors found that your staff generally took a safety conscious approach to the operation of the facility. Three violations were identified during the inspection. One violation with three examples was associated with Environmental Qualification (EQ) data package procedural requirements which would allow your data packages to be out-of-date for equipment installed in the plant. This is of concern since these are corporate procedures and would affect your Brunswick and Robinson sites as well. Your Brunswick site was the subject of a civil penalty (\$150,000) for EQ program problems in 1996. We are concerned that your corporate procedures would allow for this to happen, in light of your previous corporate experience.

These violations are cited in the enclosed Notice of Violation, and the circumstances surrounding the violations are described in detail in the enclosed report. Please note that you are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

The NRC has concluded that information regarding the reason for violations B and C, the corrective actions taken and planned to correct the violation and prevent recurrence are already adequately addressed on the docket in Inspection Report No. 50-400/97-12, which is Enclosure 2 to this letter. Therefore, you are not required to respond to this letter for those violations unless the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room (PDR).

Sincerely,

(Original signed by Pierce H. Skinner
for Milton B. Shymlock)

Milton B. Shymlock, Chief
Reactor Projects Branch 4
Division of Reactor Projects

Docket No. 50-400
License No. NPF-63

Enclosures: 1. Notice of Violation
2. NRC Inspection Report

cc w/encls:
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Performance Evaluation and
Regulatory Affairs OHS7
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(cc w/encls cont'd - See page 3)

this LER that will update their corrective actions. This item remains open pending review of the supplement.

- 08.2 (Closed) Licensee Event Report 50-400/97-18: Operation with procedures not properly reviewed and approved. A licensee investigation instituted on July 1, 1997 determined that over 100 procedures had temporary handwritten changes outstanding for longer than the TS required 14 days. In addition, the changes were used to operate the plant without receiving the required TS 6.8.3.c review and approval. On April 22, 1997, a manager informed licensee management that the 14 day requirement contained in Administrative Procedure AP-006, Procedure Review and Approval, would not be met. The inspector attended the PNSC meeting where this item was discussed. A communication breakdown occurred in that the manager thought he had gotten approval to exceed the time limits, while management believed that they had told him to meet the timeliness requirements. Licensee management did not initiate any actions at the time to address the potential nonconformance. A report to the NRC was made in accordance with 10 CFR 50.73 and Condition Report 97-2829 was issued.

By August 15, 1997, the licensee had performed proper review and approval of the outstanding changes. Site management was counseled on allowing the nonconforming condition to exist without taking prompt actions for correction, expectations for temporary change usage was communicated sitewide, a revision to the administrative procedure was issued to clarify the requirement, and the supervisor who allowed the nonconformance to persist was disciplined. TS 6.8.3.c states, in part, that temporary changes to procedures may be made provided that the change is documented, reviewed in accordance with TS 6.5.1, and approved within 14 days of implementation by the Plant General Manager, or by the Manager of the functional area affected by the procedure. This requirement is implemented through adherence to procedure AP-006. The inspector noted the large number of nonconformances and management failure to promptly address those nonconformances. These failures to document, review, and obtain management approval for 128 temporary changes in accordance with TS 6.8.3.c and procedure AP-006 is a violation. This non-repetitive, licensee-identified and corrected violation is being treated as a Non-Cited Violation, consistent with Section VII.B.1 of the NRC Enforcement Policy and is identified as NCV 50-400/97-12-03, Greater Than 100 Outstanding Temporary Procedure Changes.

The inspector reviewed the LER, unit affirmations of compliance with TS 6.8.3.c, related procedures, root cause investigation, CRs, and the temporary change process review, based on completion of the licensee corrective actions and issuance of the above violation, this item is closed.

ATTACHMENT G

<p>NRC FORM 366 (4-95)</p> <p style="text-align: center;">U.S. NUCLEAR REGULATORY COMMISSION</p> <p style="text-align: center;">LICENSEE EVENT REPORT (LER)</p> <p style="text-align: center;">(See reverse for required number of digits/characters for each block)</p>		<p style="text-align: center;">APPROVED BY OMB NO. 3150-0104 EXPIRES 04/30/98</p> <p>ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-8 F33, U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001), AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.</p>																												
<p>FACILITY NAME (1)</p> <p style="text-align: center;">Harris Nuclear Plant Unit-1</p>		<p>DOCKET NUMBER (2)</p> <p style="text-align: center;">50-400</p>	<p>PAGE (3)</p> <p style="text-align: center;">1 OF 7</p>																											
<p>TITLE (4)</p> <p>Technical Specification verbatim non-compliance.</p>																														
<p>EVENT DATE (5)</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>MONTH</th> <th>DAY</th> <th>YEAR</th> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">20</td> <td style="text-align: center;">98</td> </tr> </table>		MONTH	DAY	YEAR	4	20	98	<p>LER NUMBER (6)</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>YEAR</th> <th>SEQUENTIAL NUMBER</th> <th>REVISION NUMBER</th> </tr> <tr> <td style="text-align: center;">98</td> <td style="text-align: center;">005</td> <td style="text-align: center;">00</td> </tr> </table>		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	98	005	00	<p>REPORT DATE (7)</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>MONTH</th> <th>DAY</th> <th>YEAR</th> </tr> <tr> <td style="text-align: center;">05</td> <td style="text-align: center;">20</td> <td style="text-align: center;">98</td> </tr> </table>		MONTH	DAY	YEAR	05	20	98	<p>OTHER FACILITIES INVOLVED (8)</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>FACILITY NAME</th> <th>DOCKET NUMBER</th> </tr> <tr> <td> </td> <td style="text-align: center;">05000</td> </tr> </table>		FACILITY NAME	DOCKET NUMBER		05000	
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<p>OPERATING MODE (9)</p> <p style="text-align: center;">1</p>		<p>POWER LEVEL (10)</p> <p style="text-align: center;">100%</p>		<p>THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td><input type="checkbox"/> 20.2201(b)</td> <td><input type="checkbox"/> 20.2203(a)(2)(v)</td> <td><input checked="" type="checkbox"/> 50.73(a)(2)(i)</td> <td><input type="checkbox"/> 50.73(a)(2)(viii)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(1)</td> <td><input type="checkbox"/> 20.2203(a)(3)(i)</td> <td><input type="checkbox"/> 50.73(a)(2)(ii)</td> <td><input type="checkbox"/> 50.73(a)(2)(x)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(i)</td> <td><input type="checkbox"/> 20.2203(a)(3)(ii)</td> <td><input type="checkbox"/> 50.73(a)(2)(iii)</td> <td style="text-align: center;">73.71</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(ii)</td> <td><input type="checkbox"/> 20.2203(a)(4)</td> <td><input type="checkbox"/> 50.73(a)(2)(iv)</td> <td style="text-align: center;">OTHER</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(iii)</td> <td><input type="checkbox"/> 50.36(c)(1)</td> <td><input type="checkbox"/> 50.73(a)(2)(v)</td> <td rowspan="2" style="font-size: small;">Specify in Abstract below or in NRC Form 366A</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(iv)</td> <td><input type="checkbox"/> 50.36(c)(2)</td> <td><input type="checkbox"/> 50.73(a)(2)(vii)</td> </tr> </table>				<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(2)(v)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(x)	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(iii)	73.71	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iv)	OTHER	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)
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<p>NAME</p> <p style="text-align: center;">Michael Verrilli Sr. Analyst - Licensing</p>		<p>TELEPHONE NUMBER (Include Area Code)</p> <p style="text-align: center;">(919) 362-2303 <i>XLTG</i></p>																												
<p>COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)</p>																														
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS																					
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<p>ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)</p> <p>On April 20, 1998, with the plant at approximately 100% power in Mode 1, several instances of past non-compliance with Technical Specification (TS) requirements were determined to be reportable. These TS violations were self-identified as a result of investigations initiated to ensure verbatim compliance with the most conservative and literal meaning of TS requirements. The following sequence of events led to this LER; On February 24, 1998, the NRC issued its SALP Report for the Harris Nuclear Plant (HNP). This SALP report contained a statement regarding "the lack of clear understanding of some Technical Specification requirements." As a result of this statement, HNP management issued a memorandum reemphasizing the need for verbatim compliance with the literal meaning of TS requirements and initiated an investigation into the matter. While reviewing the HNP management memo, Operations personnel questioned past compliance with TS 3.8.1.1 for "required, redundant features." Guidance for this TS requirement was contained in a HNP Technical Specification Interpretation (TSI 89-003). A second investigation to resolve this TS compliance issue, as well as other TS that may have been adversely impacted by TSIs was immediately initiated. Subsequent to the initiation of this investigation, the Senior NRC Resident questioned if past testing of the Component Cooling Water System had been performed with the plant at power, rather than "During Shutdown," as required by TS prior to removal of the "During Shutdown" requirement by a pending license amendment request. A third investigation was initiated to resolve this TS testing question.</p> <p>These conditions were each caused by an incorrect interpretation of Technical Specification requirements. Four non-compliance conditions were related to improper HNP Technical Specification Interpretations and were caused by a combination of; (1) conflicting and/or ambiguous TS requirements, (2) an ingrained culture at HNP that TSIs were appropriate and that it was acceptable to rely on the inferred intent of the TS, and (3) a belief that TS changes were not always required. Four non-compliance conditions related to testing "During Shutdown" were caused by a failure to follow the literal requirement to perform these tests while the plant was in a shutdown mode.</p> <p>Immediate corrective actions included the management memorandum mentioned above, the issuance of an Operations Night Order to clarify the use of TSIs, and the cancellation of TSIs which were in contradiction with the literal meaning of TS. Further actions will include training and procedure revisions.</p>																														

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EVENT DESCRIPTION:

On April 20, 1998, with the plant at approximately 100% power in Mode 1, several instances of past non-compliance with Technical Specification (TS) requirements were determined to be reportable. These TS violations were self-identified as a result of investigations initiated to ensure verbatim compliance with the most conservative and literal meaning of TS requirements. The following sequence of events led to this LER. On February 24, 1998, the NRC issued its SALP Report for the Harris Nuclear Plant (HNP). This SALP report contained a statement regarding "the lack of clear understanding of some Technical Specification requirements." As a result of this statement, HNP management (the Plant General Manager) issued a memorandum on March 18, 1998, reemphasizing the need for verbatim compliance with the literal meaning of TS requirements and initiated an investigation into the matter. While reviewing the HNP management memo, Operations personnel questioned past compliance with TS 3.8.1.1 (Electrical Power Systems - A.C. Sources). This compliance question was in regards to the verification of the required redundant features statement in Action Statement 3.8.1.1.b.4. Guidance for this TS requirement had previously been provided in a HNP Technical Specification Interpretation (TSI 89-003). A second investigation to resolve this TS compliance issue, as well as others that may have been impacted by TSIs was immediately initiated. The results of this investigation are listed below. Subsequent to the initiation of this investigation, the Senior NRC Resident questioned if past testing of the Component Cooling Water System had been performed with the plant at power, rather than "During Shutdown" as required by TS prior to removal of the "During Shutdown" requirement by a pending license amendment request (submitted to the NRC on March 17, 1997). Specifically, TS 4.7.3.b.3 (Component Cooling Water System) states that "At least once per 18 months during shutdown: each automatic valve serving the gross failed fuel detector actuates to its correct position on a low surge tank level test signal." To resolve the NRC Resident's question, a third investigation was initiated.

This LER provides the reportable aspects of each of the three investigations performed related to the overall TS compliance issue. The following eight instances were identified during these investigations where the literal meaning of the TS were not complied with in a verbatim manner. The first four instances involved inadequate Technical Specification Interpretations that resulted in a reportable condition. In order to identify any actual Technical Specification violations, we reviewed historical plant data and records for a period of one year or until a violation was identified.

1. TSI 91-004 "Metal Impact Monitoring System Channel Definition" - clarified the definition of "channel" in TS 3/4.3.3.9 "Metal Impact Monitoring System"
 TS 3.3.3.9 requires that "With one or more Metal Impact Monitoring System (MIMS) channels inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status." Guidance provided in TSI 91-004 incorporated the definition of "channel" contained in NRC Regulatory Guide 1.133, without revising the specific words of TS. As a result the following condition occurred. Channel #751 of the Metal Impact Monitoring System monitors the "Reactor Vessel Upper" collection region. In July 1997, intermittent noise was experienced in the MIMS Main Control Room Cabinet and the channel was declared inoperable on July 19, 1997. Troubleshooting determined that the most probable source of this noise was the Channel #751 pre-amplifier/accelerometer sensor located in containment. To eliminate this source of intermittent noise and enhance the operational reliability of MIMS during plant full power operation, a temporary plant modification was developed to lift the cable leads for this sensor from the back of the Main Control Room MIMS cabinet. By lifting these leads the Channel #751 pre-amplifier/accelerometer sensor was separated from the system eliminating the source of noise. This channel was considered to be a spare and was not being used to monitor the presence of a loose part or to detect metal impact. The redundant channel (Channel #750) for the "Reactor Vessel Upper" collection region has remained fully operational. Based on the guidance of Regulatory Guide 1.133, this condition was not originally considered as an inoperable MIMS "channel". Following additional review and application of the literal meaning of the exact words in the Technical Specification LCO, (regarding the word "channel") it was determined that the channel #751 inoperability was reportable. A Special Report was submitted on May 14, 1998. However, this condition is reportable as a TS violation for not meeting the initial 10-day reporting requirement starting on July 19, 1997. A license amendment request to address this issue is planned.

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2. TSI 96-002 "Loss of Off-Site Power" - provided guidance for TS 3/4.3.2 "Engineered Safety Features Actuation System Instrumentation."
 TS 3/4.3.2 requires a minimum of two channels per bus operable for the loss of offsite power 6.9 kV emergency bus undervoltage relays. Each safety bus has three primary and three secondary undervoltage relay. There is no specific action statement for less than 2 channels (primary and/or secondary relays). Guidance provided in TSI 96-002 stated that "with more than one primary or secondary undervoltage relay inoperable on the same safety bus, then the associated bus and diesel generator are inoperable and the actions associated with the inoperable bus and diesel generator are applied." This TSI was based on the fact that during a loss of off-site power, the safety bus undervoltage relays only provide input to one train's function. Therefore, if more than one undervoltage relay is inoperable on one safety bus, only that bus is affected. The other safety bus remains operable under the requirements of TS 3.3.2 Table 3.3-3, Item 9. Thus, the effect of having two or more undervoltage relays inoperable on the same safety bus is to make the associated safety bus and diesel generator inoperable. The HNP design for performing a trip actuating device operational test (TADOT) results in both the primary and secondary 6.9 Kv emergency bus undervoltage relays being blocked by actuation of a test relay and associated contacts. During the time that this test relay is energized and blocking the relay outputs, the primary and secondary emergency bus undervoltage relays will be unable to perform their required safety function and, therefore, must be considered inoperable. Because this condition actually only affected one safety bus, the guidance of TSI 96-002 was considered to be valid. However, this guidance ignored the specific action requirement of TS 3.3.2, Table 3.3-3, Item 9. As a result, past testing of these relays actually resulted in TS 3.0.3 entry, which is reportable as a TS violation. A license amendment has been submitted to the NRC to resolve this testing issue, but has not yet been approved. TADOT testing for each of the 6.9 kV emergency bus relays (and the resulting TS 3.0.3 entries) was most recently performed on May 8, 1998. NRC approval and HNP implementation of the license amendment is expected prior to the next scheduled TADOT test.

3. TSI 89-003 "Requirements for Operable Emergency Power Sources" - provided guidance for TS 3/4.8.1.1 "Electrical Power Systems - A.C. Sources"
 Action statement b.4 of TS 3/4.8.1.1 requires that "With one diesel generator inoperable: Verify required feature(s) powered in the OPERABLE diesel generator are OPERABLE. If required feature(s) powered from the OPERABLE diesel generator are discovered to be inoperable at any time while in this condition, restore the required feature(s) to OPERABLE status within 4 hours from discovery of inoperable required feature(s) or declare the redundant required feature(s) powered from the inoperable A.C. source as inoperable and be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours or within the ACTION time of the applicable ACTION statement(s) for the inoperable required feature(s), whichever is more limiting." Guidance provided in TSI 89-003 defined those components that would be considered inoperable if their associated diesel generator was inoperable and excluded required feature(s) that were powered from the DC busses or the inverters, or which could perform their function without AC power. It also excluded components whose individual TS would be less restrictive with both trains inoperable. This guidance contradicts a conservative and literal meaning of the words of TS 3.8.1.1.b.4. The most conservative interpretation of the required redundant feature of the specification would require a plant shutdown when both Fuel Handling Building Emergency Exhaust (FHBEES) Fans are inoperable due to the loss of electrical power. However, the FHBEES LCO would only require suspension of fuel movement. During a period from July 21, 1997 until October 2, 1997, the E-12 A-Train Fuel Handling Building Emergency Exhaust Fan was inoperable. Within this period, on August 13, 1997, the B-Train Emergency Diesel Generator was also inoperable for a period of greater than 10 hours. The operators applied the FHBEES LCO and did not apply the most conservative required redundant feature interpretation, which violated the TS requirement to be in hot standby. This condition is reportable as TS violation. A license amendment request was submitted on October 29, 1997 to address this issue.

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4. TSI 95-004 "Personnel Airlock Interlock Operability" - provided guidance for TS 3/4.6.1.3 "Containment Airlocks"
 TS 3.6.1.3 contains no specific actions for an inoperable Personnel Airlock (PAL) interlock. In the absence of this needed information, TSI 95-004 was generated to provide guidance on operability of the PAL interlock and what actions were required in the event that the interlock became inoperable. This guidance was based on the corresponding airlock LCO contained in the new Westinghouse Standard Technical Specifications (NUREG-1431). Nevertheless, the TSI guidance contradicted the literal meaning of TS 3.6.1.3 by providing an alternative solution to allow continued airlock operability when the electrical interlock is inoperable. When the interlock is inoperable, a more conservative action would have been to declare the airlock inoperable and apply TS 3.6.1.3 action b. The alternative solution provided by the TSI did not actually return the containment airlock to an operable status. Application of this inadequate guidance caused the following reportable condition. On July 25, 1997, the PAL interlock was declared inoperable due to the failure of the inner PAL door to open and the resulting need for local, manual operation of the door. The actions provided by TSI 95-004 were taken as a result. This included verifying the operable PAL door closed within one hour and hanging a caution tag on the RAB side local door control panel. The PAL interlock was then repaired, tested satisfactorily and restored to operable status on July 30, 1997. By applying the TSI guidance, the requirement to restore operability in 24 hours, or be in at least hot standby in the next 6 hours and cold shutdown within the following 30 hours was violated. A license amendment request to address this issue is planned.

The next four reportable instances involved a failure to comply with the TS requirement to perform testing "During Shutdown." A license amendment request was submitted to the NRC on March 17, 1997 to remove the "During Shutdown" stipulation for testing that could be safely performed at power. However, the provisions of this amendment request were inappropriately implemented prior to NRC approval of the amendment request.

1. Testing to verify that CCW is isolated to the Gross Failed Fuel Detector on a CCW Surge Tank low level per TS 4.7.3.b.3 has been performed by MST-I0178 and MST-I0179. These MSTs have been routinely performed at power while in Mode-1. The NRC Senior Resident questioned this possible testing deficiency and immediate investigation determined that satisfactory testing had been performed during the most recent test interval while shutdown on September 6, 1996 (MST-I0178) and during RFO7 on May 22, 1997 (MST-I0179). However, testing to verify this isolation function has not been normally performed while shutdown during previous Refueling Outages. This constitutes a violation of the TS surveillance requirement to perform this test "during shutdown." This condition has existed since the initial development and scheduling of MST-I0178 and MST-I0179.
2. Testing to verify that the both EDGs start on a SI test signal and operates in standby for 5 minutes per TS 4.8.1.1.2.f.5 has been satisfactorily performed by OST-1825 or OST-1826 during each of the previous Refueling Outages except RFO6. A revision was performed prior to RFO6 that removed the "A" EDG test portion from the scope of OST-1825 and placed testing of the "A" EDG into OST-1085, which was performed just prior to RFO6 on August 30, 1995. This constitutes a violation of the TS surveillance requirement to perform this test "during shutdown."

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- Testing to verify that the AFW Pressure Control Valves "respond as required" per TS 4.7.1.2.1.b.1 has been performed in the past by OST-1087. This testing ensures that the PCVs control AFW pump discharge pressure and prevent a pump run-out condition. OST-1087 was satisfactorily performed and demonstrated that the AFW PCVs performed as required during Refueling Outages 1, 2, 3 and 4. However, prior to Refueling Outage 5, OST-1087 was revised to no longer take credit for testing the AFW PCVs. In Refueling Outages 5 and 6, OST-1825 and OST-1826 were credited for verifying AFW PCV operability, but this was incorrect in that the PCVs were not being tested in a sequence that would actually verify operability. This deficiency was identified in CR #96-2578 and was reported to the NRC in LER 96-02. As a result of this CR and LER, OST-1087 was revised to once again properly test the AFW PCVs. However, OST-1087 was not performed while shutdown during RFO7. OST-1087 was performed on April 1, 1997, which was four days prior to the start of RFO7. This constitutes a violation of the TS surveillance requirement to perform this test "during shutdown."
- Testing to verify the operability of 3SC-41 (Screen Wash Isolation Valve) per TS 4.7.4.b.1 has been satisfactorily performed in the past by OST-1214 since June 1995. However, this testing has routinely been performed at power while in Mode-1. Prior to June 1995 a testing deficiency existed in that 3SC-41 was only being stroke time tested to satisfy ISI requirements and was not being tested via the Screen Wash Pump auto start contacts. This condition was identified in CR #95-3542 and reported to the NRC in LER #95-03. As a result of the CR and LER, OST-1214 was revised to properly test 3SC-41. However, OST-1214 has not been performed while the plant was shutdown. This constitutes a violation of the TS surveillance requirement to perform this test "during shutdown."

In addition to the above described reportable conditions, the following TSIs were determined by investigation to contradict the literal meaning of TS requirements. Research into these TSIs and the effect they may have had on operability of plant equipment did not reveal further instances of TS non-compliance.

- TSI 87-002 "HVAC Operability Requirements" provided guidance to determine the effect of out of service ventilation units powered by the safety busses on equipment required by TS. There are no specific TS requirements pertaining to safety related ventilation units. However, the guidance contained in TSI 87-002 regarding the AH-12 and AH-13 (Switchgear Room Air Handling Units) implemented a 72 hour LCO period which was less restrictive than the actual most limiting LCO. The engineering judgement used to initially establish the 72 hour LCO period has been brought into question, since the support equipment has a more limiting LCO.
- TSI 87-006 "Gaseous Waste Processing System - Recombiner Instrumentation" provided guidance related to the operability requirements for the hydrogen recombiner to oxygen and hydrogen monitors. However, the guidance contained in TSI 87-006 regarding compensatory grab samples contradicts TS 4.11.2.5 requirements by allowing grab samples to be performed once per 24 hours rather than once per 12 hours.
- TSI 89-005 "Sequencer and SSPS" provided guidance on the inoperability of the solid state protection system (SSPS) and the emergency safeguards sequencer. However, TS 3.3.2 has specific minimum requirements and associated action statements for when those requirements are not met. The guidance contained in TSI 89-005 contradicts TS 3.3.2 by allowing application of the LCO for the specific TS component affected by the inoperable SSPS relay. The TSI further contradicts TS 3.3.2 by stating that inoperabilities should not result in more restrictive action requirements than the component itself would require.

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4. TSI 95-002 "Post-Maintenance Leak Testing of RCS Pressure Isolation MOVs" clarified the types of maintenance activities that warranted the performance of a subsequent leak test. The guidance contained in TSI 95-002 contradicts TS 4.4.6.2.c, by allowing a leak seat test to be waived for a valve packing adjustment if an Engineering Service Request (evaluation) indicates seat leakage is unaffected. This waiver is not consistent with the literal words of TS 4.4.6.2.2.c which requires a leak test to be done for maintenance, repair or replacement work on the valve.
5. TSI 95-003 "Ultimate Heat Sink" clarified actions to be taken related to main and auxiliary reservoir level and temperature. The guidance contained in TSI 95-003 contradicts TS 3.7.5. However, the TSI imposes more conservative level and temperature limitations to ensure continued Emergency Service Water System and Diesel Generator operability.

CAUSE:

Each of these conditions were caused by an incorrect interpretation of Technical Specification requirements. The first four non-compliance conditions were related to improper HNP Technical Specification Interpretations and were caused by a combination of; (1) conflicting and/or ambiguous TS requirements, (2) an ingrained culture at HNP that TSIs were appropriate and that it was acceptable to rely on the inferred intent of the TS, and (3) a belief that TS changes were not always required.

The next four non-compliance conditions were related to testing "During Shutdown" and were caused by a failure to follow the literal requirement to perform these tests while the plant was in a shutdown mode. An incorrect philosophy existed at HNP in the past among plant personnel and plant management that contributed to this non-compliance. In certain cases, it was considered acceptable to perform testing at power as long as it was within the 18 month surveillance interval, was consistent with safe plant operation, and plant conditions would allow satisfactory test completion. This was evidenced by the approach taken during the initial development and scheduling of OST-1214 to test 3SC-41 and also MST-I0178 and MST-I0179 testing of the isolation of CCW to the Gross Failed Fuel Detector. These tests have never been regularly scheduled to be performed while shutdown.

It was also considered acceptable in some cases to satisfy the "During Shutdown" Technical Specification requirement if the last test or portion of testing was completed while the plant was in a shutdown mode. This applied to TS surveillances that required multiple test procedures to be performed at different times in different modes to fully satisfy the TS requirement. In these cases, a portion of the multiple tests would be performed while at power and the TS requirement would be considered "met" when the final portion of testing was completed during an outage. This philosophy appeared to be consistent with industry practice in the 1995 time frame and also led to the development of OST-1844 in August 1995. OST-1844 (Slave Relay Component Operability Verification) gathers information from previously completed surveillance tests and documents the completion of the final portion of slave relay testing while shutdown. This philosophy was further indicated as acceptable by plant management in March 1995, when a proposed Technical Specification Change (TSC #94-09) was canceled prior to submittal to the NRC. This TSC was written to remove the "during Shutdown" requirement from Technical Specifications where appropriate, but was considered by management to be an unnecessary clarification. Subsequently, the TSC was re-developed and submitted to the NRC on March 17, 1997.

SAFETY CONSEQUENCES:

There were no actual safety consequences resulting from the failure to comply in a verbatim manner with the literal meaning of the applicable TS requirements. The four violations resulting from inadequate TSIs had no adverse impact on plant operation or safety. In the four "during shutdown" TS violations, adequate testing had been performed to verify operability of the components in question, however, it was not performed while the plant was in a shutdown mode as required. These conditions are being reported as conditions prohibited by Technical Specifications per 10CFR50.73.a.2.i.B.

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PREVIOUS SIMILAR EVENTS:

On 2-24-98 the NRC issued Inspection Report No. 50-400/98-99, the SALP for the Harris Plant. The report contained the following statement in the Plant Operations functional area: "The lack of clear understanding of some Technical Specifications requirements by licensed operators and management staff has been demonstrated during several events." This is the subject of another root cause investigation under CR-98 00652.

Several HNP LERs (94-01, 95-01, 95-03, 95-07, 96-02, 97-08, 97-11) have been submitted to the NRC and were caused by Technical Specification Surveillance testing deficiencies. A comprehensive surveillance test review project is currently in progress in conjunction with HNP's conversion to the new MERITS standard Technical Specifications, to help resolve these testing problems.

CORRECTIVE ACTIONS COMPLETED:

- Following the NRC SALP Report issued on February 24, 1998, a memorandum was issued by the HNP Plant General Manager on March 18, 1998 to reemphasize the need to comply with the literal meaning of TS requirements in a verbatim manner.
- An Operations Night Order was issued on May 8, 1998 to provide interim guidance and prevent the use of the conflicting TSIs.
- The following Technical Specification Interpretations that contradicted the literal meaning of the TS requirements have been canceled; 87-002, 87-006, 89-003, 89-005, 91-004, 95-002, 95-003, 95-004, and 96-002. This was completed on May 20, 1998.
- License Amendment 77 to the Harris Plant Operating License was approved and issued by the NRC on April 14, 1998. The amendment was implemented on April 15, 1998 to remove the "During Shutdown" requirement where appropriate.

CORRECTIVE ACTIONS PLANNED:

- Training will be conducted on TS compliance and NRC Generic Letter 91-18 for licensed individuals, Operations and Maintenance procedure writers, System Engineers, and key station management, including PNSC members. This training will be completed by August 15, 1998.
- Plant Procedure OST-1325 "Safety Injection - ESF Response Time Testing, 18 month Interval" will be revised to ensure proper testing per TS 4.8.1.1.2.f.5 during Refueling Outage 8, which is currently scheduled to begin in October 1998.
- The remaining TSIs which do not conflict with TS will be canceled by May 29, 1998.
- Plant procedures AP-013 "Plant Nuclear Safety Committee" and AP-107 "Technical Specification Interpretations" will be revised to clarify TS verbatim compliance requirements. This will be completed by May 29, 1998.

NRC FORM 366A (4-95)

UNITED STATES
NUCLEAR REGULATORY COMMISSIONREGION II
ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-3415

June 18, 1998



Carolina Power & Light Company
ATTN: Mr. W. R. Robinson
Vice President - Harris Plant
Shearon Harris Nuclear Power Plant
P. O. Box 165, Mail Code: Zone 1
New Hill, NC 27562-0165

SUBJECT: NRC INTEGRATED INSPECTION REPORT 50-400/98-04
NOTICE OF VIOLATION

Dear Mr. Robinson:

On May 23, 1998, the NRC completed an inspection at your Harris reactor facility. The enclosed report presents the results of that inspection.

During the six weeks covered by this inspection period, our inspectors found that your staff generally took a safety-conscious approach to the operation of the facility. During this period, one violation was identified for failing to properly execute an equipment clearance.

The violation is cited in the enclosed Notice of Violation, and the circumstances surrounding the violation are described in detail in the enclosed report. Please note that you are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room (PDR).

Sincerely,

(Original signed by M. Ernstes)

Michael E. Ernstes, Acting Chief
Reactor Projects Branch 4
Division of Reactor Projects

Docket No. 50-400
License No. NPF-63

Enclosures: 1. Notice of Violation
2. NRC Inspection Report

cc w/encls: (See page 2)

- MST-I0128 Main Steam Line Loop 2 Protection Set II Testing
- LP-F-0156A Reactor Coolant Pump 1A Flow Transmitter Calibration
- PIC-I105 Time Delay Relay 62-2/2703 Calibration
- PIC-I105 Time Delay Relay 62-1/2703 Calibration
- PIC-I105 Time Delay Relay 62-2/2709 Calibration

b. Observations and Findings

The inspectors found that the test equipment was properly calibrated, test procedures were followed, and testing was performed satisfactorily. The inspectors observed that the technicians received permission from the shift operations supervisor to commence each surveillance, identified the components to be surveillance tested, turned off electricity as required, performed the tests, asked a second person for an independent verification if required, recorded the results, restored the electricity, and removed the test equipment. Technicians who performed the work were experienced, skillful, and knowledgeable.

c. Conclusions

Thirteen surveillances were adequately conducted. Maintenance and operations personnel performing the surveillances were skillful and knowledgeable.

M7 Quality Assurance in Maintenance Activities

M7.1 Completion of Surveillance Tests

a. Inspection Scope (61726)

The inspectors reviewed selected records of tests that were conducted to satisfy TS surveillance requirements. The inspectors also reviewed whether the test were conducted in the required operating mode. The inspectors identified the procedures which were used to satisfy those surveillances, examined plant records to determine when those procedures had been completed, and compared those completion dates to shutdown dates.

b. Observations and Findings

The inspectors noted that TS 4.7.3.b.3 requires that CCW flow paths be demonstrated operable at least once per 18 months during shutdown, by verifying that each automatic valve serving the gross failed fuel detector actuates to its correct position on a low surge tank level test signal. The inspectors determined that according to document MS-970171, Revised Surveillance Test/Technical Specifications Cross Reference, TS 4.7.3.b.3 was satisfied by procedures MST-I0178, Component Cooling Surge Tank - Tank 1 (L-0670) Calibration and MST-I0179, Component Cooling

Surge Tank - Tank 2 (L-0676) Calibration. The inspectors examined records and found that since January 1, 1994, both MST-I0178 and MST-I0179 had been completed five times. However, by comparing the procedure completion dates with shutdown dates, the inspectors determined that during this period, MST-I0178 was completed during shutdown only once, on September 6, 1996. Similarly, the inspectors determined that during this period, MST-I0179 had also been completed during shutdown only once, on May 22, 1997. The failure to consistently complete these procedures at least once per 18 months during shutdown was contrary to TS 4.7.3.b.3. The licensee initiated condition report 98-01044 to address this issue and review other similar TSs for generic considerations.

On May 20, 1998, the licensee reported their initial findings in LER 50-400/98-005-00. The LER (see Section 08.4) reported that three other surveillance tests were performed at power instead of at shutdown, as required by the TSs:

- TS 4.8.1.1.2.f.5 required testing to be performed at least once per 18 months during shutdown to verify that both emergency diesel generators start on a safety injection test signal and operate in standby for five minutes. Testing had been normally performed during each of the refueling outages prior to RF06. However, the licensee failed to perform that testing during RF06. Instead, it was performed on August 30, 1995, just prior to RF06.
- TS 4.7.1.2.1.b.1 required testing to be performed at least once per 18 months during shutdown to verify that the auxiliary feedwater (AFW) pressure control valves (PCVs) respond as required. Testing had been performed to satisfy this requirement during refueling outages (RFOs) 1, 2, 3, and 4. However, the licensee failed to perform testing to satisfy this requirement during RFOs 5, 6, and 7.
- TS 4.7.4.b.1 required testing to be performed at least once per 18 months during shutdown to verify the operability of emergency service water valve 3SC-41 (screen wash isolation valve). This testing was routinely performed at power while in mode 1, rather than during shutdown since initial startup.

The licensee's root cause investigation was issued on May 26, 1998, after the end of the inspection period. This issue is considered unresolved pending NRC review of the root cause investigation, the assessment of the relation of this issue to the multiple other issues reported in the LER, and the subsequent determination of safety and regulatory significance. This unresolved item is designated 50-400/98-04-03, Technical Specification Literal Compliance.

The licensee submitted a technical specification change request on March 17, 1997 to delete specific restrictions from TS 4.1.2.2.c, 4.5.2.e, 4.6.2.1.c, 4.6.2.2.c, 4.6.3.2, 4.7.1.2.1.b, 4.7.3.b, and

4.7.4.b. which require the surveillance tests to be accomplished while the unit is shutdown. The licensee requested that NRC expedite approval of the change after the inspector's finding. Approval was received on April 14, 1998.

c. Conclusions

An unresolved item was opened in relation to technical specification surveillance requirements that were required to be accomplished at shutdown and were being conducted at power. One example was identified in relation to testing of the gross failed fuel detector CCI isolation valves on low surge tank level. The licensee had identified three others by the end of the period as reported in LER 50-400/98-005.

III. Engineering

E1 Conduct of Engineering

E1.1 Engineering Service Requests

a. Inspection Scope (37551)

The inspectors reviewed ESR 9800158.R0, "Operability Evaluation for Valve IRC-905," to determine if procedure NGR-NGGC-005, Engineering Service Requests (ESR), Revision 5, was being followed.

b. Observations and Findings

Valve IRC-905 was the combined reactor vessel head and pressurizer steam space vent valve. The valve had been declared inoperable on May 28, 1997, due to the valve having dual indication when opened during the performance of surveillance test procedure OST-1043, Reactor Coolant System Vent Path Quarterly Interval. The need to perform an operability evaluation on April 8, 1998, was due to a problem with PSI 89-003, and that the head vent valve was considered a redundant required feature in relation to TS 3.8.1.1 for loss of a diesel generator or off-site power circuit (see also Section 08.4). Consequently, when the opposite train diesel generator was out-of-service, the action statement for TS 3.8.1.1 required the redundant required feature (in this case the head vent valve) be restored to operable in 4 hours or declare the redundant required feature powered from the inoperable A.C. source as inoperable and be in at least Hot Standby within the next 6 hours. This was more restrictive than TS 3.4.11, which allowed a 72-hour action time with both trains of head vents inoperable.

The inspectors found that the operability evaluation was adequately performed in accordance with the procedure. The inspectors also found that the operability evaluation could have been performed shortly after the condition was found in May 1997, which would have eliminated operators having to work around the inoperability of valve IRC-905. The inspectors observed that plant management had been willing to live with the inoperable valve until it was discovered that the head vent valve