

JUN 8 1988

In Reply Refer To:
Docket: 50-498
EA 88-112

Houston Lighting & Power Company
ATTN: J. H. Goldberg, Group Vice
President, Nuclear
P.O. Box 1700
Houston, Texas 77001

Gentlemen:

This documents the enforcement meeting held on May 26, 1988, in the Region IV office between members of your staff and Region IV representatives, as identified in attendance list. The meeting was held to discuss apparent violations of NRC requirements identified in Inspection Reports 50-498/88-11 dated April 28, 1988, and 50-498/88-24 dated May 24, 1988.

Houston Lighting & Power Company presented their views on the apparent violations including the causes and corrective actions either taken or planned.

The topics covered are described in the enclosed meeting summary.

It is our opinion that this meeting was beneficial and provided a better understanding of the concerns identified during the inspection.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter will be placed in the NRC's Public Document Room.

Should you have any questions concerning this letter, we will be pleased to discuss them with you.

Sincerely,

Original Signed By:

L. J. CALLAN
L. J. Callan, Director
Division of Reactor Projects

Enclosures:

1. Meeting Notice
2. Meeting Summary

cc: (see next page)

RIV:C/PSD
LConstable/cjg
6/1/88

D:DRP
LJCallan
6/1/88

Houston Lighting & Power Company

-2-

cc w/enclosures:

Houston Lighting & Power Company
ATTN: M. A. McBurnett, Manager
Operations Support Licensing
P.O. Box 289
Wadsworth, Texas 77483

Newman & Holtzinger, P.C.
ATTN: J. R. Newman, Esquire
1615 L Street, N.W.
Washington, D.C. 20036

Houston Lighting & Power Company
ATTN: Gerald E. Vaughn, Vice President
Nuclear Operations
P.O. Box 289
Houston, Texas 77001

Houston Lighting & Power Company
ATTN: S. L. Rosen
P.O. Box 289
Wadsworth, Texas 77483

Houston Lighting & Power Company
ATTN: J. T. Westermeier, General Manager
South Texas Project
P.O. Box 289
Wadsworth, Texas 77483

Houston Lighting & Power Company
ATTN: R. W. Chewing, Chairman
Nuclear Safety Review Board
P.O. Box 289
Wadsworth, Texas 77483

Central Power & Light Company
ATTN: R. L. Range/R. P. Verret
P.O. Box 2121
Corpus Christi, Texas 78403

City Public Service Board
ATTN: R. J. Costello/M. T. Hardt
P.O. Box 1771
San Antonio, Texas 78296

City of Austin Electric Utility
ATTN: R. J. Miner, Chief Operating
Officer
721 Barton Springs Road
Austin, Texas 78704

Houston Lighting & Power Company

-3-

cc w/enclosures: (cont'd)
Houston Lighting & Power Company
ATTN: Licensing Representative
Suite 610
Three Metro Center
Bethesda, Maryland 20814

Texas Radiation Control Program Director

bcc w/enclosures:
bcc to DMB (IE01)
bcc distrib. by RIV:

DRP
R. D. Martin, RA
Section Chief (DRP/D)
MIS System
Lisa Shea, RM/ALF
R. Bachmann, OGC
G. Dick, NRR Project Manager
G. F. Sanborn, EO

RRI-OPS
DRS
RPSB-DRSS
RIV File
RSTS Operator
D. Hunnicutt



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION IV
 611 RYAN PLAZA DRIVE, SUITE 1000
 ARLINGTON, TEXAS 76011

MAY 20 1988

NOTICE OF SIGNIFICANT MEETING

Name of Licensee: Houston Lighting and Power

Name of Facility: South Texas Project

Docket Number: 50-498

Date and Time of Meeting: May 26, 1988, 10:00 a.m.
 10th Floor Conference Room

Location of Meeting: Region IV Office Arlington, Texas

Purpose of Meeting: Enforcement Conference to discuss three recent violations of NRC requirements: (1) The isolation of 7 of the 12 feedwater flow transmitters (FWFT) while the plant (Unit 1) was in operational Mode 3 as described in NRC Inspection Report 50-498/88-11, dated April 28, 1988, (2) inadequate review of low power physics test results and (3) improperly entering Technical Specification 3.0.3, when 3 of the 4 power operated relief valves (PORVs) were inoperable as described in NRC Inspection Report 50-498/88-24.

NRC Attendees:

L. J. Callan, Director, Division of Reactor Projects
 A. B. Beach, Deputy Director, Division of Reactor Projects
 G. L. Constable, Chief, Project Section D
 D. R. Carpenter, Senior Resident Inspector
 J. Bess, Resident Inspector
 H. Scott, Acting Enforcement Officer
 G. Dick, Project Manager, NRR

Licensee Attendees:

J. Goldberg, Group Vice President
 G. Vaughn, Vice President, Nuclear Operations
 W. Kinsey, Plant Manager
 M. McBurnett, Manager, Support Licensing

NOTE: Attendance at this meeting by NRC personnel other than those listed above should be made known by 4 p.m. on May 25, 1988, via telephone call to G. L. Constable FTS 728-8151.

880527091

2/10/88

Notice of Significant Licensee
Meeting

2

Distribution:

J. M. Taylor, DEDRO
T. E. Murley, D/NRR
F. J. Miraglia, ADP/NRR
ADT/NRR, (P-415)
J. Lieberman, D/OE
L. J. Chandler, Asst. GC for Enf.
P. Kadambi, Project Manager, NRR
T. O. Martin, DEDRO Staff
R. D. Martin, RIV
J. Gilliland, PAO, RIV
NRC Attendees
DMB (IE45)

MEETING - MAY 26, 1988

Licensee: Houston Lighting & Power Company (HL&P)
Facility: South Texas Project (STP), Unit 1
Docket: 50-498 Operating License: NPF-76
Subject: Enforcement Conference
Concerning NRC Inspection Findings (NRC Inspection Reports
50-498/88-11; 50-498/88-24

On May 26, 1988, representatives of HL&P met with NRC Region IV and NRR personnel in the NRC office in Arlington, Texas, to discuss the findings documented in NRC Inspection Report 50-498/88-11, dated April 28, 1988, and 50-498/88-24, dated May 24, 1988. The attendance list and the licensee presentation material are attached. The meeting was held at the request of the NRC, Region IV.

The licensee discussed root causes for the events and corrective actions to preclude recurrence.

The NRC staff expressed particular concern regarding the three events discussed below:

- a. Voluntary Entry Into Technical Specification (TS) 3.0.3 on April 24, 1988, to Test Steam Generator PORV's

The licensee agreed that a shift supervisor should not voluntarily enter TS 3.0.3 and they have taken appropriate corrective action to prevent future occurrence. HL&P management said that an important root cause of this violation was the ambiguous wording of the technical specification.

The licensee believes that they self identified this issue although their reaction to the violation did not appear to begin until after the issue was raised to a shift supervisor by the NRC Senior Resident Inspector.

- b. Seven of Twelve Feedwater Flow Transmitters Found Isolated While in Mode 3 - TS 3.3.2

The licensee found that their program for system alignment was weak. This problem was self identified and no additional examples were found during a 100 percent double verification. Extensive corrective actions were described which appeared to be adequate. Although this

was clearly a violation of NRC requirements when it occurred, the licensee has requested and received approval to delete this requirement from the TS.

c. Calculation Error - Isothermal Temperature Coefficient of Reactivity

The licensee acknowledged the violation. Inadequate reviews of test data was a significant cause of the event. No other tests were affected and a review of 63 other tests did not disclose any significant errors.

The licensee also discussed their evaluation of two additional violations.

Attendees
South Texas Project Unit 1
Enforcement Conference
May 26, 1988

Houston Lighting & Power

J. H. Goldberg, Group Vice President, Nuclear
G. E. Vaughn, Vice President Nuclear Operations
W. H. Kinsey, STP Plant Manager
M. A. McBurnett, Manager, Operations Support Licensing

Central Power & Light Company

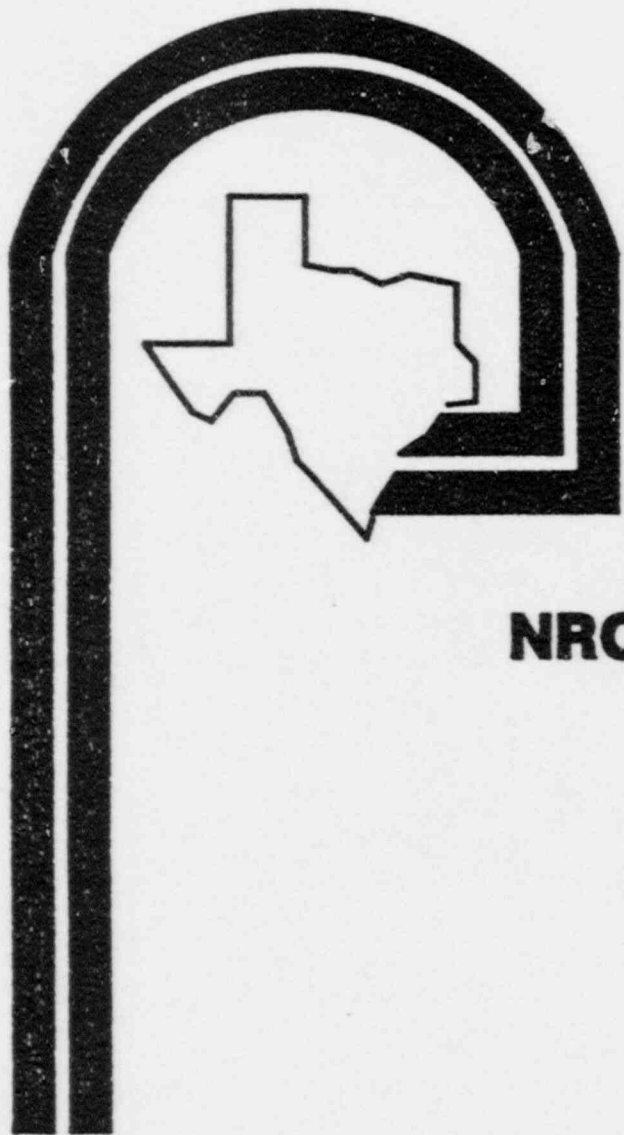
B. McLaughlin, STP Activities

City Public Service Board - San Antonio

M. T. Hardt, Director, Nuclear Division

U.S. Nuclear Regulatory Commission

L. J. Callan, Director, Division of Reactor Projects (DRP)
J. L. Milhoan, Director, Division of Reactor Safety (DRS)
H. L. Scott, Enforcement
G. L. Constable, Chief, Projects Section D (DRP)
G. F. Sanborn, Enforcement Officer
D. R. Carpenter, Senior Resident Inspector (DRP)
J. E. Bess, Resident Inspector (DRP)
E. J. Holler, Chief, Project Section C (DRP)
J. B. Baird, Technical Assistant (DRP)
G. Dick, Project Manager (NRR)
J. P. Clausner, French Atomic Energy Commission
W. C. Seidle, Chief, Test Programs Section (DRS)
A. R. Johnson, Reactor Inspector (DRS)
D. M. Hunnicutt, Senior Projects Engineer (DRP)
T. F. Stetka, Chief, Plant Systems Section (DRS)



SOUTH TEXAS PROJECT

NRC ENFORCEMENT CONFERENCE

ARLINGTON, TEXAS

MAY 26, 1988

AGENDA

- INTRODUCTION – J.H. GOLDBERG
- ENFORCEMENT ISSUES – W.H. KINSEY
 - VOLUNTARY ENTRY INTO T.S. 3.0.3 / 4-24-88
 - ENTRY INTO MODE 3 WITH FEEDWATER TRANSMITTERS VALUED OUT / 2-9-88
 - INADEQUATE REVIEW OF LOW POWER PHYSICS TESTS
 - RECOGNITION OF T.S. CONDITIONS FOR ENTRY INTO T.S. 3.0.3 / 2-12-88
 - CONCERNS WITH LIFTED WIRE, JUMPER, & FUSE CONTROL PROGRAM
- QUESTIONS / ANSWERS

EVENT

- VOLUNTARY ENTRY INTO TECHNICAL SPECIFICATION 3.0.3 ON APRIL 24, 1988 TO TEST STEAM GENERATOR PORV'S 1B AND 1C
- CONCERN ABOUT VOLUNTARY ENTRIES INTO T.S. 3.0.3 RAISED ON MAY 1, 1988
- COMMENCED UNIT SHUTDOWN ON MAY 1, 1988

ROOT CAUSE

- THE SHIFT SUPERVISOR MADE AN INTERPRETATION OF THE TECHNICAL SPECIFICATION. AFTER CAREFUL REVIEW OF THE BASES HE CONCLUDED THAT IN THIS PARTICULAR CASE HE WAS IN COMPLIANCE

CORRECTIVE ACTION

- OPERATIONS SUPERVISOR ISSUED NIGHT ORDER ON MAY 2, 1988 PROHIBITING INTENTIONAL ENTRY INTO T.S. 3.0.3 TO PERFORM MAINTENANCE OR TESTING.
- PLANT MANAGER MET WITH ALL UNIT ONE SHIFT SUPERVISORS ON MAY 11, 1988 TO DISCUSS EVENT AND TO ENSURE PROPER UNDERSTANDING ON ENTRY INTO T.S. 3.0.3
- PLANT MANAGER ISSUED MEMORANDUM ON SUBJECT ON MAY 12, 1988
- TECHNICAL SPECIFICATION INTERPRETATION PREPARED ON MAY 12, 1988
- PLANT CONDUCT OF OPERATIONS PROCEDURE, OPGP03-ZO-0004 TO BE REVISED TO REFLECT PROPER PHILOSOPHY ON ENTRY INTO T.S. 3.0.3 BY JUNE 6, 1988

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

3/4.0 APPLICABILITY

LIMITING CONDITION FOR OPERATION

3.0.1 Compliance with ...

3.0.2 Noncompliance with ...

3.0.3 When a Limiting Condition for Operation is not met, except as provided in the associated ACTION requirements, within 1 hour action shall be initiated to place the unit in a MODE in which the specification does not apply by placing it, as applicable, in:

- a. At least HOT STANDBY within the next 6 hours,
- b. At least HOT SHUTDOWN within the following 6 hours, and
- c. At least COLD SHUTDOWN within the subsequent 24 hours.

Where corrective measures are completed that permit operation under the ACTION requirements, the action may be taken in accordance with the specified time limits as measured from the time of failure to meet the Limiting Conditions for Operation. Exceptions to these requirements are stated in the individual specifications.

This specification is not applicable in MODE 5 or 6.

3.0.4 Entry into ...

3.4.0 APPLICABILITY

BASES (Continued)

limits of the ACTION requirements are applicable when this limit expires if the surveillance has not been completed. When a shutdown is required to comply with ACTION requirements, the plant may have entered a MODE in which a new specification becomes applicable. In this case, the time limits of the ACTION requirements would apply from the point in time that the new specification becomes applicable if the requirements of the Limiting Condition for Operation are not met.

Specification 3.0.2 establishes that noncompliance with a specification exists when the requirements of the Limiting Condition for Operation are not met and the associated ACTION requirements have not been implemented within the specified time interval. The purpose of this specification is to clarify that (1) implementation of the ACTION requirements within the specified time interval constitutes compliance with a specification and (2) completion of the remedial measures of the ACTION requirements is not required when compliance with a Limiting Condition for Operation is restored within the time interval specified in the associated ACTION requirements.

Specification 3.0.3 establishes the shutdown ACTION requirements that must be implemented when a Limiting Condition for Operation is not met and the condition is not specifically addressed by the associated ACTION requirements. The purpose of this specification is to delineate the time limits for placing the unit in a safe shutdown MODE when plant operation cannot be maintained within the limits for safe operation defined by the Limiting Conditions for Operation and its ACTION requirements. It is not intended to be used as an operational convenience which permits (routine) voluntary removal of redundant systems or components from service in lieu of other alternatives that would not result in redundant systems or components being inoperable. One hour is allowed to prepare for an orderly shutdown before initiating a change in plant operation. This time permits the operator to coordinate the reduction in electrical generation with the load dispatcher to ensure the stability and availability of the electrical grid. The time limits specified to reach lower MODES of operation permit the shutdown to proceed in a controlled and orderly manner that is well within the specified maximum cooldown rate and within the cooldown capabilities of the facility assuming only the minimum, required equipment is OPERABLE. This reduces thermal stresses on components of the primary coolant system and the potential for a plant upset that could challenge safety systems under conditions for which this specification applies.

If remedial measures permitting limited continued operation of the facility under the provisions of the ACTION requirements are completed, the shutdown may be terminated. The time limits of the ACTION requirements are applicable from the point in time there was a failure to meet a Limiting Condition for Operation. Therefore, the shutdown may be terminated if the ACTION requirements have been met or the time limits of the ACTION requirements have not expired, thus providing an allowance for the completion of the required actions.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

June 17, 1987

MEMORANDUM FOR: William T. Russell, Regional Administrator, Region I
J. Nelson Grace, Regional Administrator, Region II
A. Bert Davis, Regional Administrator, Region III
Robert D. Martin, Regional Administrator, Region IV
John B. Martin, Regional Administrator, Region V

FROM: Thomas E. Murley, Director
Office of Nuclear Reactor Regulation

SUBJECT: INTENTIONAL ENTRY INTO TECHNICAL SPECIFICATION
LIMITING CONDITION FOR OPERATION 3.0.3

This is in response to Region V's memorandum of March 18, 1987, (Enclosure 1) wherein they referred to an inappropriate use of Technical Specification Limiting Condition for Operation (LCO) 3.0.3 by the Palo Verde licensee. It was suggested that it might be beneficial for NRC to issue some generic communication to reiterate MPC's position on the intended purpose of LCO 3.0.3 and clarify the NRC's expectation concerning licensee management control of entry into it.

LCO 3.0.3 is not intended to be used as an operational convenience which permits redundant safety systems to be out of service for a limited period of time. Its intended purpose is to provide guidance on the time limits for an "orderly" shutdown when the individual Limiting Conditions for Operation or ACTION statements in other specifications cannot be complied with. Voluntary entry into LCO 3.0.3 deliberately removes the last echelon of defense against deleterious events by allowing removal of a system from service when its redundant counterpart is already out of service or inoperable. An action such as this would show a significant disregard for plant safety and is unacceptable. It should also be emphasized that removal of a system from service is justified only for test, maintenance, or repair purposes.

On June 4, 1987 as part of the short term Technical Specifications Improvement Program we issued Generic Letter 87-09 which, among other things, addresses this subject in a rewritten BASES for LCO 3.0.3 (Enclosure 2). Additionally, we recommend that all Regions increase communication with resident inspectors and plant management on this subject, thereby promoting a heightened awareness by the inspectors, licensee management and plant personnel of the intended limited use of LCO 3.0.3. We believe these actions will be sufficient to address this problem.

Thomas E. Murley, Director
Office of Nuclear Reactor Regulation

Enclosures:
As stated

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V

1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94598

ENCLOSURE 2

MAR 18 1987

MEMORANDUM FOR: Harold R. Denton, Director
Office of Nuclear Reactor Regulation

FROM: J. B. Martin, Regional Administrator
Region V

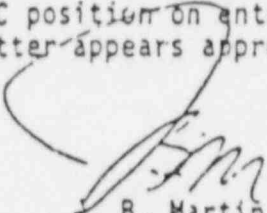
SUBJECT: INTENTIONAL ENTRY INTO TECHNICAL SPECIFICATION
LIMITING CONDITION FOR OPERATION 3.0.3

As the result of our review of a recent event which occurred at the Palo Verde site, wherein a shift supervisor intentionally bypassed an engineered safety feature as an apparent operational convenience, and thereby entered limiting condition for operation (LCO) 3.0.3, Region V has concluded that it may be beneficial for the NRC to reiterate to both the NRC staff and power reactor licensees, the intent of LCO 3.0.3 and our expectations concerning licensee management control of entry into LCO 3.0.3. Licensee entry into this section of the Technical Specifications appears to occur for one of the following three reasons:

- Unintentional entry due to equipment failure, design error, procedural error, or personnel error, which places the facility outside the ACTION statement of other LCO's.
- Intentional entry to perform a maintenance or surveillance task on equipment with some type of unusual design feature which necessitates entry into LCO 3.0.3 to perform the task.
- Intentional entry for operational convenience.

Region V recognizes that occasional entry into LCO 3.0.3 for surveillance or maintenance purposes may be appropriate, however, this activity should be well thought-out in advance and strictly controlled by management oversight and appropriate procedures. Further, licensees should be encouraged to eliminate, where practical, those design features which result in repeated entries into LCO 3.0.3. Region V contends that intentional entry into LCO 3.0.3 for operational convenience should not be made, except under extremely unusual circumstances where a detailed review by the licensee has concluded that no reduction in safety will result.

Although this issue may have been addressed in past NRC guidance to licensees, a reiteration of the NRC position on entry into LCO 3.0.3 via an Information Notice or a Generic Letter appears appropriate.


J. B. Martin, Regional Administrator
Region V

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BASES

Specification 3.0.3 establishes the shutdown ACTION requirements that must be implemented when a Limiting Condition for Operation is not met and the condition is not specifically addressed by the associated ACTION requirements. The purpose of this specification is to delineate the time limits for placing the unit in a safe shutdown MODE when plant operation cannot be maintained within the limits for safe operation defined by the Limiting Conditions for Operation and its ACTION requirements. It is not intended to be used as an operational convenience which permits (routine) voluntary removal of redundant systems or components from service in lieu of other alternatives that would not result in redundant systems or components being inoperable. One hour is allowed to prepare for an orderly shutdown before initiating a change in plant operation. This time permits the operator to coordinate the reduction in electrical generation with the load dispatcher to ensure the stability and availability of the electrical grid. The time limits specified to reach lower MODES of operation permit the shutdown to proceed in a controlled and orderly manner that is well within the specified maximum cooldown rate and within the cooldown capabilities of the facility assuming only the minimum required equipment is OPERABLE. This reduces thermal stresses on components of the primary coolant system and the potential for a plant upset that could challenge safety systems under conditions for which this specification applies.

If remedial measures permitting limited continued operation of the facility under the provisions of the ACTION requirements are completed, the shutdown may be terminated. The time limits of the ACTION requirements are applicable from the point in time there was a failure to meet a Limiting Condition for Operation. Therefore, the shutdown may be terminated if the ACTION requirements have been met or the time limits of the ACTION requirements have not expired, thus providing an allowance for the completion of the required actions.

PWR STS

Oper Nuc Lic	
MAM	
Action	Info
✓	✓
RMW	
RMW	
SMH	
CAA	
LJM	
TO ALL LIGHT WATER REACTOR LICENSEES AND APPLICANTS	



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 WASHINGTON, D. C. 20555

June 4, 1987

ST-AE-HL- 91301
 File #: 13.8
 Recd: 6/23/87

MAM ✓
 JWB
 SMH
 Rms

Gentlemen:

SUBJECT: SECTIONS 3.0 AND 4.0 OF THE STANDARD TECHNICAL SPECIFICATIONS (STS) ON THE APPLICABILITY OF LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS (Generic Letter 87-09)

As a part of recent initiatives to improve Technical Specifications (TS), the NRC, in cooperation with the Atomic Industrial Forum (AIF), has developed a program for TS improvements. One of the elements of this program is the implementation of short-term improvements to resolve immediate concerns that have been identified in investigations of TS problems by both NRC and AIF. The guidance provided in this generic letter addresses three specific problems that have been encountered with the general requirements on the applicability of Limiting Conditions for Operation (LCO) and Surveillance Requirements in Sections 3.0 and 4.0 of the STS.

There are five enclosures to this Generic Letter. Enclosure 1 applies to both PWR and BWR STS and provides a complete discussion of the three problems and the staff's position on acceptable modifications of the TS to resolve them. These modifications should result in improved TS for all plants and are consistent with the recommendations of NUREG-1024, "Technical Specifications -- Enhancing the Safety Impact" and the Commission Policy Statement on Technical Specification Improvements. Enclosures 2 and 4 provide Sections 3.0 and 4.0 of the PWR and BWR STS, respectively, which incorporate the modifications being made by this Generic Letter. Enclosures 3 and 5: (a) provide the staff's update of the bases for the PWR and BWR STS, respectively; (b) reflect the modifications of Sections 3.0 and 4.0 of the STS; and (c) include improved bases for the unchanged requirements in these sections.

The staff concludes that these modifications will result in improved TS for all plants. Licensees and applicants are encouraged to propose changes to their TS that are consistent with the guidance provided in the enclosures; however, these changes are voluntary for all licensees and current OL applicants.

The staff would like to point out three important points connected with the present TS effort. First, it is aware that the TS can be clarified, simplified, and streamlined both as a whole and with respect to the specifications that are the subject of this Generic Letter. Nonetheless, in keeping with its short-term and purposefully narrow focus, it decided to keep these proposed modifications: (a) focused on the three problems; (b) relatively simple; and (c) consistent with the phrasing of existing TS. Second, after the resolution of these and other identified TS problems, the staff will notify licensees and applicants of its conclusions and resulting proposals for additional short-term TS improvements. Finally, the staff is not proposing to formally amend the STS at this time. Instead the changes will be factored into the development of the new STS anticipated as a part of the implementation of the Commission's Policy Statement on Technical Specification Improvements.

The following is a summary of the three problems covered by the enclosures. The first problem involves unnecessary restrictions on mode changes by Specification 3.0.4 and inconsistent application of exceptions to it. The practical solution is to change this specification to define the conditions under which its requirements apply. With respect to unnecessary mode changes, Specification 3.0.4 unduly restricts facility operation when conformance with Action Requirements provides an acceptable level of safety for continued operation. For an LCO that has Action Requirements permitting continued operation for an unlimited period of time, entry into an operation mode or other specified condition of operation should be permitted in accordance with the Action Requirements. The solution also resolves the problem of inconsistent application of exceptions to Specification 3.0.4: (a) which delays startup under conditions in which conformance to the Action Requirements establishes an acceptable level of safety for unlimited continued operation of the facility; and (b) which delays a return to power operation when the facility is required to be in a lower mode of operation as a consequence of other Action Requirements.

The second problem involves unnecessary shutdowns caused by Specification 4.0.3 when surveillance intervals are inadvertently exceeded. The solution is to clarify the applicability of the Action Requirements, to specify a specific acceptable time limit for completing a missed surveillance in certain circumstances, and to clarify when a missed surveillance constitutes a violation of the Operability Requirements of an LCO. It is overly conservative to assume that systems or components are inoperable when a surveillance has not been performed because the vast majority of surveillances do in fact demonstrate that systems or components are operable. When a surveillance is missed, it is primarily a question of operability that has not been verified by the performance of a Surveillance Requirement. Because the allowable outage time limits of some Action Requirements do not provide an appropriate time for performing a missed surveillance before Shutdown Requirements apply, the TS should include a time limit that allows a delay of required actions to permit the performance of the missed surveillance based on consideration of plant conditions, adequate planning, availability of personnel, the time required to perform the surveillance, and, of course, the safety significance of the delay in completing the surveillance. The staff has concluded that 24 hours is an acceptable time limit for completing a missed surveillance when the allowable outage times of the Action Requirements are less than this limit, or when time is needed to obtain a temporary waiver of the Surveillance Requirement.

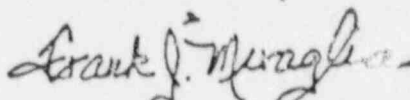
The third problem involves two possible conflicts between Specifications 4.0.3 and 4.0.4. The first conflict arises because Specification 4.0.4 prohibits entry into an operational mode or other specified condition when Surveillance Requirements have not been performed within the specified surveillance interval. A conflict with this requirement exists when a mode change is required as a consequence of Action Requirements and when the Surveillance Requirements that become applicable have not been performed within the specified surveillance interval. Specification 4.0.4 should not be used to prevent passage through or to operational modes as required to comply with Action Requirements because to do so: (a) would increase the potential for a plant

upset; and (b) would challenge safety systems. Also, certain surveillances should be allowed to be performed during a shutdown to comply with Action Requirements. Along with the modification of Specification 4.0.3 to permit a delay of up to 24 hours in the applicability of Action Requirements, Specification 4.0.4 has been clarified to allow passage through or to operational modes as required to comply with Action Requirements.

A second conflict could arise because, when Surveillance Requirements can only be completed after entry into a mode or specified condition for which the Surveillance Requirements apply, an exception to the requirements of Specification 4.0.4 is allowed. However, upon entry into this mode or condition, the requirements of Specification 4.0.3 may not be met because the Surveillance Requirements may not have been performed within the allowed surveillance interval. Therefore, to avoid any conflict between Specifications 4.0.3 and 4.0.4, the staff wants to make clear: (a) that it is not the intent of Specification 4.0.3 that the Action Requirements preclude the performance of surveillances allowed under any exception to Specification 4.0.4; and (b) that the delay of up to 24 hours in Specification 4.0.3 for the applicability of Action Requirements now provides an appropriate time limit for the completion of those Surveillance Requirements that become applicable as a consequence of allowance of any exception to Specification 4.0.4.

If you have any questions on this matter, please contact your project manager.

Sincerely,



Frank J. Miraglia, Associate Director
for Projects
Office of Nuclear Reactor Regulation

Enclosures:
As stated

ALTERNATIVES TO THE STS REQUIREMENTS TO RESOLVE
THREE SPECIFIC PROBLEMS WITH LIMITING CONDITIONS
FOR OPERATION AND SURVEILLANCE REQUIREMENTS

INTRODUCTION

Generic Letter 87-09 discusses three problems regarding the general requirements of Sections 3.0 and 4.0 of the STS on the applicability of Limiting Conditions for Operation (LCO) and Surveillance Requirements. The guidance provided in this enclosure addresses alternatives to the Standard Technical Specifications (STS) to resolve these problems.

Problem #1 -- UNNECESSARY RESTRICTIONS ON MODE CHANGES (Specification 4.0.3)

° BACKGROUND

The definition of an LCO is given in 10 CFR 50.36 as the lowest functional capability or performance level of equipment required for safe operation of the facility. Further, it is stated that when an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TS until the condition can be met.

Consistent with NRC's regulatory requirements for an LCO, the TS include two basic types of Action Requirements that are applicable when the LCO is not met. The first specifies the remedial actions that permit continued operation of the facility not restricted by the time limits of Action Requirements. In this case, conformance to the Action Requirements provides an acceptable level of safety for continued operation of the facility, and operation may proceed indefinitely as long as the remedial Action Requirements are met. The second type of Action Requirement specifies a time limit in which the LCO must be met. This time limit is the time allowed to restore an inoperable system or component to operable status or to restore parameters within specified limits. If these actions are not completed within the allowable outage time limits, action must be taken to shut down the facility by placing it in a mode or condition of operation in which the LCO does not apply.

Specification 3.0.4 of the STS states that entry into an operational mode¹ or other specified condition shall not be made unless the LCO is met without reliance on the provisions of the Action Requirements. Its intent is to ensure that a higher mode of operation is not entered when equipment is inoperable or when parameters exceed their specified limits. This precludes a plant startup when actions are being taken to satisfy an LCO, which -- if not completed within the time limits of the Action Requirements -- would result in a plant shutdown to comply with the Action Requirements.

¹The BWR STS use the term "operational condition" instead of the term "operational mode" that is used in PWR STS. As used here, "operational mode" means "operational condition" for BWRs.

Specification 3.0.4 also precludes entering a mode or specified condition if an LCO is not met, even if the Action Requirements would permit continued operation of the facility for an unlimited period of time. Generally, the individual specifications that have Action Requirements which allow continued operation note that Specification 3.0.4 does not apply. However, exceptions to Specification 3.0.4 have not been consistently applied and their bases are not well documented. For example, approximately two-thirds of the actions which permit continued operation in the Westinghouse STS are exempt from Specification 3.0.4. Although the staff encourages the maintenance of all plant systems and components in an operable condition as a good practice, the TS generally have not precluded entering a mode with inoperable equipment when the Action Requirements include remedial measures that provide an acceptable level of safety for continued operation.

° STATEMENT OF THE PROBLEM

Inconsistent application of exceptions to Specification 3.0.4 impacts the operation of the facility in two ways. First, it delays startup under conditions in which conformance to the Action Requirements establishes an acceptable level of safety for unlimited continued operation of the facility. Second, it delays a return to power operation when the facility is required to be in a lower mode of operation as a consequence of other Action Requirements. In this case, the LCO must be met without reliance on the Action Requirements before returning the facility to that operational mode or other specified condition for which unlimited continued operation was previously permitted in accordance with the Action Requirements.

° STAFF POSITION

Specification 3.0.4 unduly restricts facility operation when conformance to the Action Requirements provides an acceptable level of safety for continued operation. For an LCO that has Action Requirements permitting continued operation for an unlimited period of time, entry into an operational mode or other specified condition of operation should be permitted in accordance with those Action Requirements. This is consistent with NRC's regulatory requirements for an LCO. The restriction on a change in operational modes or other specified conditions should apply only where the Action Requirements establish a specified time interval in which the LCO must be met or a shutdown of the facility would be required. However, nothing in this staff position should be interpreted as endorsing or encouraging a plant startup with inoperable equipment. The staff believes that good practice should dictate that the plant startup should normally be initiated only when all required equipment is operable and that startup with inoperable equipment must be the exception rather than the rule.

° CHANGE TO SPECIFICATION 3.0.4

The practical solution to this problem is not the modification of TS to note that Specification 3.0.4 does not apply, but rather a change to Specification 3.0.4 to define the conditions under which its requirements do apply. Therefore, Specification 3.0.4 will be revised to state:

"Entry into an OPERATIONAL MODE or other specified condition shall not be made when the conditions for the Limiting Conditions for Operation are not met and the associated ACTION requires a shutdown if they are not met within a specified time interval. Entry into an OPERATIONAL MODE or specified condition may be made in accordance with ACTION requirements when conformance to them permits continued operation of the facility for an unlimited period of time."

° CHANGES TO INDIVIDUAL SPECIFICATIONS EXEMPT FROM SPECIFICATION 3.0.4

As a consequence of the modification described above to Specification 3.0.4, individual specifications with Action Requirements permitting continued operation no longer need to indicate that Specification 3.0.4 does not apply. They should be revised to delete the noted exception to avoid confusion about the applicability of Specification 3.0.4. However, exceptions to Specification 3.0.4 should not be deleted for individual specifications if a mode change would be precluded by Specification 3.0.4 as revised. For example, some specifications would not satisfy the provisions under which mode changes are permitted by the revision to Specification 3.0.4 and, therefore, the exception to Specification 3.0.4 need not be deleted. It is not the staff's intent that the revision of Specification 3.0.4 should result in more restrictive requirements for individual specifications.

Problem #2 -- UNNECESSARY SHUTDOWNS CAUSED BY INADVERTENT SURPASSING OF SURVEILLANCE INTERVALS (Specification 4.0.3)

° BACKGROUND

Surveillance Requirements are defined in 10 CFR 50.36 as those requirements relating to test, calibration, or inspection to ensure that the necessary quality of systems and components is maintained, that the facility will be within the safety limits, and that the LCO will be met.

Consistent with the NRC's regulatory framework for Surveillance Requirements, Specification 4.0.3 states that the failure to perform a surveillance within the specified time interval shall constitute a failure to meet the LCO's Operability Requirements. Therefore, if a Surveillance Requirement is not met as a result of the failure to schedule the performance of the surveillance, the LCO would not be met. Consequently, the LCO's Action Requirements must be met as when a surveillance verifies that a system or component is inoperable.

Generally, the Action Requirements include a specified time interval (i.e., allowable outage time limit) that permits corrective action to be taken to satisfy the LCO. When such a specified time interval is included in the Action Requirements, the completion of a missed surveillance within this time interval satisfies Specification 4.0.3.

° STATEMENT OF PROBLEM

Some Action Requirements have allowable outage time limits of only one or two hours and do not establish a practical time limit for the completion of a missed Surveillance Requirement. If surveillances cannot be completed within these

time limits, a plant shutdown would usually be required. Even if the Action Requirements include remedial measures that would permit continued operation, they may be stated in such a way that they could prevent the performance of the required surveillance. A plant shutdown would also be required if the missed surveillance applies to more than the minimum number of systems or components required to be operable for operation under the allowable outage time limits of the Action Requirements. In this case, the individual specification or Specification 3.0.3 would require a shutdown.

If a plant shutdown is required before a missed surveillance is completed, it is likely that it would be conducted when the plant is being shut down because completion of a missed surveillance would terminate the shutdown requirement. This is undesirable since it increases the risk to the plant and public safety for two reasons. First, the plant would be in a transient state involving changing plant conditions that offer the potential for an upset that could lead to a demand for the system or component being tested. This would occur when the system or component is either out of service to allow performance of the surveillance test or there is a lower level of confidence in its operability because the normal surveillance interval was exceeded. If the surveillance did demonstrate that the system or component was inoperable, it usually would be preferable to restore it to operable status before making a major change in plant operating conditions. Second, a shutdown would increase the pressure on the plant staff to expeditiously complete the required surveillance so that the plant could be returned to power operation. This would further increase the potential for a plant upset when both the shutdown and surveillance activities place a demand on the plant operators.

° STAFF POSITION

It is overly conservative to assume that systems or components are inoperable when a surveillance requirement has not been performed. The opposite is in fact the case; the vast majority of surveillances demonstrate that systems or components in fact are operable. When a surveillance is missed, it is primarily a question of operability that has not been verified by the performance of the required surveillance. Because the allowable outage time limits of some Action Requirements do not provide an appropriate time limit for performing a missed surveillance before shutdown requirements may apply, the TS should include a time limit that would allow a delay of the required actions to permit the performance of the missed surveillance.

This time limit should be based on considerations of plant conditions, adequate planning, availability of personnel, the time required to perform the surveillance, as well as the safety significance of the delay in completion of the surveillance. After reviewing possible limits, the staff has concluded that, based on these considerations, 24 hours would be an acceptable time limit for completing a missed surveillance when the allowable outage times of the Action Requirements are less than this time limit or when shutdown Action Requirements apply. The 24-hour time limit would balance the risks associated with an allowance for completing the surveillance within this period against the risks associated with the potential for a plant upset and challenge to safety systems when the alternative is a shutdown to comply with Action Requirements before the surveillance can be completed.

Although a missed surveillance would generally be completed in less time than this 24-hour limit allows, special circumstances may require additional time to ensure that the surveillance can be conducted in a safe manner. The time limits of Action Requirements for surveillances should start when it is identified that Surveillance Requirements have not been performed, except when the 24-hour delay is allowed in the implementation of the Action Requirements. Where the 24-hour time limit is allowed, the time limits of the Action Requirements are applicable either at the end of the 24-hour limit if the surveillance has not been completed or at the time the surveillance is performed if the system or component is found to be inoperable.

Several issues need to be clarified regarding the additional 24-hour time limit. First, this limit does not waive compliance with Specification 4.0.3. Under Specification 4.0.3, the failure to perform a Surveillance Requirement will continue to constitute noncompliance with the Operability Requirements of an LCO and to bring into play the applicable Action Requirements.

Second, Specifications 3.0.2 and 4.0.3 should not be misinterpreted. Specification 3.0.2 notes that a TS is being complied with when the Action Requirements are met within the specified time intervals. Although Specification 4.0.2 provides an allowance for extending the surveillance interval and allows for the completion of the surveillance within this time interval without violation of this Specification, under Specification 4.0.3 nonperformance of a Surveillance Requirement, within the allowed surveillance interval defined by Specification 4.0.2, constitutes a violation of the Operability Requirements of an LCO, as defined by Specification 4.0.3, and is subject to enforcement action.

To avoid any conflict among or misreading of Specifications 3.0.2, 4.0.3, and 4.0.2, the staff wishes to make clear (1) that Specification 3.0.2 shall not be construed to imply that the completion of a missed surveillance within the allowable outage time limits of the Action Requirements -- whether or not the additional 24-hour time limit is included -- negates the violation of Specification 4.0.3, and (2) that the failure to perform a surveillance within the allowable surveillance interval defined by Specification 4.0.2 constitutes a reportable event under 10 CFR 50.73(a)(2)(i)(R) because it is a condition prohibited by the plant's TS.

Third, even though an additional 24-hour time limit may apply for missed surveillances, another consideration is the possibility that plant conditions may preclude the performance of the specified requirements. The provision of a 24-hour delay in the application of the Action Requirements for the completion of a missed surveillance would provide time to obtain a temporary waiver of a Surveillance Requirement that could not otherwise be completed because of current plant conditions. If a surveillance can be performed only when the plant is shut down, there are only two options available to licensees when a missed surveillance is discovered during power operation and continued operation is not allowed under the Action Requirements. The first is to shut down the plant and perform the required surveillance. The other option is to seek relief from the Surveillance Requirement. Such relief would result in the processing of a TS amendment. As a matter of existing policy, a temporary waiver of compliance with a TS that would unnecessarily require a shutdown or

delay startup absence of some relief may be granted by NRC. A temporary waiver of compliance may be granted if the licensee has demonstrated in a written submittal, provided before the TS LCO expired, that the facility can safely continue to operate without compliance with the TS during the time it will take to process the TS amendment request.

° CHANGE TO SPECIFICATION 4.0.3

Specification 4.0.3 will be revised as follows to clarify when a missed surveillance constitutes a violation of the Operability Requirements of an LCO and to clarify the applicability of the Action Requirements and the time during which the limits apply:

"Failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by Specification 4.0.2, shall constitute noncompliance with the OPERABILITY requirements for a Limiting Condition for Operation. The time limits of the ACTION requirements are applicable at the time it is identified that a Surveillance Requirement has not been performed. The ACTION requirements may be delayed for up to 24 hours to permit the completion of the surveillance when the allowable outage time limits of the ACTION requirements are less than 24 hours."

Specification 4.0.3 previously included the statement that exceptions to it are stated in individual specifications. This statement is deleted because Specification 4.0.3 is always applicable, i.e., the implied exceptions for individual specifications do not exist.

Problem #3 -- CONFLICTS BETWEEN SPECIFICATIONS 4.0.3 AND 4.0.4
RELATED TO MODE CHANGES (Specification 4.0.4)

There are two parts of the general problem of conflicts between Specifications 4.0.3 and 4.0.4 related to mode changes. Each of these parts is discussed separately below.

Part 1 -- SURVEILLANCE REQUIREMENTS THAT BECOME APPLICABLE DUE TO ACTION REQUIREMENTS

° STATEMENT OF THE PROBLEM

Specification 4.0.4 prohibits entry into an operational mode or other specified condition when Surveillance Requirements have not been performed within the specified surveillance interval. First, a conflict with this TS exists when a mode change is required as a consequence of shutdown Action Requirements and when the Surveillance Requirements that become applicable have not been performed within the specified surveillance interval. For instance, the plant could previously have been in a mode for which the Surveillance Requirements were not applicable and, therefore, the surveillance may not have been performed within the specified time interval. Consequently, the Action Requirements of the LCO associated with these Surveillance Requirements apply and the unit may have to be placed in a lower mode of operation than that required by the original shutdown Action Requirements, or other remedial actions may have to be

taken, if the surveillance cannot be completed within the time limits for these actions. This is a second problem that may be encountered.

The first problem arises because conformance with Specification 4.0.4 would require the performance of these surveillances before entering a mode for which they apply. Source and intermediate range nuclear instrumentation and cold overpressure protection systems in PWRs are examples of systems for which Surveillance Requirements may become applicable as a consequence of mode changes to comply with shutdown Action Requirements. The second problem has been mitigated by the change in Specification 4.0.3 to permit a delay of up to 24 hours in the applicability of the Action Requirements, thereby placing an appropriate time limit on the completion of Surveillance Requirements that become applicable as a consequence of mode changes to comply with Action Requirements. However, the first problem can be further resolved by a change to Specification 4.0.4.

° STAFF POSITION

The potential for a plant upset and challenge to safety systems is heightened if surveillances are performed during a shutdown to comply with Action Requirements. It is not the intent of Specification 4.0.4 to prevent passage through or to operational modes to comply with Action Requirements and it should not apply when mode changes are imposed by Action Requirements. Accordingly, Specification, 4.0.4 should be modified to note that its provisions shall not prevent passage through or to operational modes as required to comply with Action Requirements. A similar provision is included in Specification 3.0.4.

° CHANGE TO SPECIFICATION 4.0.4

The following will clarify Specification 4.0.4 for mode changes as a consequence of Action Requirements:

"This provision shall not prevent passage through or to OPERATIONAL MODES as required to comply with ACTION Requirements."

Part 2 -- SURVEILLANCE REQUIREMENTS FOR EXCEPTIONS TO SPECIFICATION 4.0.4

° STATEMENT OF THE PROBLEM

An exception to Specification 4.0.4 is allowed when Surveillance Requirements can be completed only after entry into a mode or specified condition for which they apply. For example, the TS on power distribution limits are generally exempt from Specification 4.0.4. However, upon entry into the mode or specified condition, Specification 4.0.3 may not be met because the Surveillance Requirements may not have been performed within the allowed surveillance interval. Generally, these Surveillance Requirements apply to redundant systems, and Specification 3.0.3 would apply because they are treated as inoperable under Specification 4.0.3. Therefore, allowance of an exception to Specification 4.0.4 can create a conflict with Specification 4.0.3.

° STAFF POSITION

It is not the intent of Specification 4.0.3 that the Action Requirements should preclude the performance of surveillances when an exception to Specification 4.0.4 is allowed. However, since Specification 4.0.3 has been changed to permit a delay of up to 24 hours in the applicability of the Action Requirements, an appropriate time limit now exists for the completion of those Surveillance Requirements that become applicable when an exception to Specification 4.0.4 is allowed.

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

3/4.0 APPLICABILITY

[NOTE: Only Specifications 3.0.4, 4.0.3, and 4.0.4 are being modified, as shown in the underlined provisions. The other specifications are shown for information only.]

LIMITING CONDITIONS FOR OPERATION

3.0.1 Compliance with the Limiting Conditions for Operation contained in the succeeding specifications is required during the OPERATIONAL MODES or other conditions specified therein; except that upon failure to meet the Limiting Conditions for Operation, the associated ACTION requirements shall be met.

3.0.2 Noncompliance with a specification shall exist when the requirements of the Limiting Condition for Operation and associated ACTION requirements are not met within the specified time intervals. If the Limiting Condition for Operation is restored prior to expiration of the specified time intervals, completion of the ACTION requirements is not required.

3.0.3 When a Limiting Condition for Operation is not met, except as provided in the associated ACTION requirements, within 1 hour action shall be initiated to place it, as applicable, in:

- a. At least HOT STANDBY within the next 6 hours,
- b. At least HOT SHUTDOWN within the following 6 hours, and
- c. At least COLD SHUTDOWN within the subsequent 24 hours.

Where corrective measures are completed that permit operation under the ACTION requirements, the action may be taken in accordance with the specified time limits as measured from the time of failure to meet the Limiting Condition for Operation. Exceptions to these requirements are stated in the individual specifications.

This specification is not applicable in MODES 5 or 6.

3.0.4 Entry into an OPERATIONAL MODE or other specified condition shall not be made when the conditions for the Limiting Conditions for Operation are not met and the associated ACTION requires a shutdown if they are not met within a specified time interval. Entry into an OPERATIONAL MODE or specified condition may be made in accordance with ACTION requirements when conformance to them permits continued operation of the facility for an unlimited period of time. This provision shall not prevent passage through or to OPERATIONAL MODES as required to comply with ACTION requirements. Exceptions to these requirements are stated in the individual specifications.

APPLICABILITY

SURVEILLANCE REQUIREMENTS

4.0.1 Surveillance Requirements shall be met during the OPERATIONAL MODES or other conditions specified for individual Limiting Conditions for Operation unless otherwise stated in an individual Surveillance Requirement.

4.0.2 Each Surveillance Requirement shall be performed within the specified time interval with:

- a. A maximum allowable extension not to exceed 25% of the surveillance interval, but
- b. The combined time interval for any three consecutive surveillance intervals shall not exceed 3.25 times the specified surveillance interval.

4.0.3 Failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by Specification 4.0.2, shall constitute noncompliance with the OPERABILITY requirements for a Limiting Condition for Operation. The time limits of the ACTION requirements are applicable at the time it is identified that a Surveillance Requirement has not been performed. The ACTION requirements may be delayed for up to 24 hours to permit the completion of the surveillance when the allowable outage time limits of the ACTION requirements are less than 24 hours. Surveillance Requirements do not have to be performed on inoperable equipment.

4.0.4 Entry into an OPERATIONAL MODE or other specified condition shall not be made unless the Surveillance Requirement(s) associated with a Limiting Condition of Operation has been performed within the stated surveillance interval or as otherwise specified. This provision shall not prevent passage through or to OPERATIONAL MODES as required to comply with ACTION requirements.

4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2, and 3 components shall be applicable as follows:

- a. Inservice inspection of ASME Code Class 1, 2, and 3 components and inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).
- b. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice inspection and testing activities required by the ASME Boiler and

APPLICABILITY

SURVEILLANCE REQUIREMENTS

Pressure Vessel Code and applicable Addenda shall be applicable as follows in these Technical Specifications:

<u>ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice inspection and testing activities</u>	<u>Required frequencies for performing inservice inspection and testing activities</u>
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

3/4.0 APPLICABILITY

[NOTE: This enclosure provides revised Bases for all specifications in Sections 3.0 and 4.0.]

BASES

Specification 3.0.1 through 3.0.4 establish the general requirements applicable to Limiting Conditions for Operation. These requirements are based on the requirements for Limiting Conditions for Operation stated in the Code of Federal Regulations, 10 CFR 50.36(c)(2):

"Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specification until the condition can be met."

Specification 3.0.1 establishes the Applicability statement within each individual specification as the requirement for when (i.e., in which OPERATIONAL MODES or other specified conditions) conformance to the Limiting Conditions for Operation is required for safe operation of the facility. The ACTION requirements establish those remedial measures that must be taken within specified time limits when the requirements of a Limiting Condition for Operation are not met.

There are two basic types of ACTION requirements. The first specifies the remedial measures that permit continued operation of the facility which is not further restricted by the time limits of the ACTION requirements. In this case, conformance to the ACTION requirements provides an acceptable level of safety for unlimited continued operation as long as the ACTION requirements continue to be met. The second type of ACTION requirement specifies a time limit in which conformance to the conditions of the Limiting Condition for Operation must be met. This time limit is the allowable outage time to restore an inoperable system or component to OPERABLE status or for restoring parameters within specified limits. If these actions are not completed within the allowable outage time limits, a shutdown is required to place the facility in a MODE or condition in which the specification no longer applies. It is not intended that the shutdown ACTION requirements be used as an operational convenience which permits (routine) voluntary removal of a system(s) or component(s) from service in lieu of other alternatives that would not result in redundant systems or components being inoperable.

The specified time limits of the ACTION requirements are applicable from the point in time it is identified that a Limiting Condition for Operation is not met. The time limits of the ACTION requirements are also applicable when a system or component is removed from service for surveillance testing or investigation of operational problems. Individual specifications may include a specified time limit for the completion of a Surveillance Requirement when equipment is removed from service. In this case, the allowable outage time

3/4.0 APPLICABILITY

BASES (Con't)

Limits of the ACTION requirements are applicable when this limit expires if the surveillance has not been completed. When a shutdown is required to comply with ACTION requirements, the plant may have entered a MODE in which a new specification becomes applicable. In this case, the time limits of the ACTION requirements would apply from the point in time that the new specification becomes applicable if the requirements of the Limiting Condition for Operation are not met.

Specification 3.0.2 establishes that noncompliance with a specification exists when the requirements of the Limiting Condition for Operation are not met and the associated ACTION requirements have not been implemented within the specified time interval. The purpose of this specification is to clarify that (1) implementation of the ACTION requirements within the specified time interval constitutes compliance with a specification and (2) completion of the remedial measures of the ACTION requirements is not required when compliance with a Limiting Condition of Operation is restored within the time interval specified in the associated ACTION requirements.

Specification 3.0.3 establishes the shutdown ACTION requirements that must be implemented when a Limiting Condition for Operation is not met and the condition is not specifically addressed by the associated ACTION requirements. The purpose of this specification is to delineate the time limits for placing the unit in a safe shutdown MODE when plant operation cannot be maintained within the limits for safe operation defined by the Limiting Conditions for Operation and its ACTION requirements. It is not intended to be used as an operational convenience which permits (routine) voluntary removal of redundant systems or components from service in lieu of other alternatives that would not result in redundant systems or components being inoperable. One hour is allowed to prepare for an orderly shutdown before initiating a change in plant operation. This time permits the operator to coordinate the reduction in electrical generation with the load dispatcher to ensure the stability and availability of the electrical grid. The time limits specified to reach lower MODES of operation permit the shutdown to proceed in a controlled and orderly manner that is well within the specified maximum cooldown rate and within the cooldown capabilities of the facility assuming only the minimum required equipment is OPERABLE. This reduces thermal stresses on components of the primary coolant system and the potential for a plant upset that could challenge safety systems under conditions for which this specification applies.

If remedial measures permitting limited continued operation of the facility under the provisions of the ACTION requirements are completed, the shutdown may be terminated. The time limits of the ACTION requirements are applicable from the point in time there was a failure to meet a Limiting Condition for Operation. Therefore, the shutdown may be terminated if the ACTION requirements have been met or the time limits of the ACTION requirements have not expired, thus providing an allowance for the completion of the required actions.

3/4.0 APPLICABILITY

BASES (Con't)

The time limits of Specification 3.0.3 allow 37 hours for the plant to be in the COLD SHUTDOWN MODE when a shutdown is required during the POWER MODE of operation. If the plant is in a lower MODE of operation when a shutdown is required, the time limit for reaching the next lower MODE of operation applies. However, if a lower MODE of operation is reached in less time than allowed, the total allowable time to reach COLD SHUTDOWN, or other applicable MODE, is not reduced. For example, if HOT STANDBY is reached in 2 hours, the time allowed to reach HOT SHUTDOWN is the next 11 hours because the total time to reach HOT SHUTDOWN is not reduced from the allowable limit of 13 hours. Therefore, if remedial measures are completed that would permit a return to POWER operation, a penalty is not incurred by having to reach a lower MODE of operation in less than the total time allowed.

The same principle applies with regard to the allowable outage time limits of the ACTION requirements, if compliance with the ACTION requirements for one specification results in entry into a MODE or condition of operation for another specification in which the requirements of the Limiting Condition for Operation are not met. If the new specification becomes applicable in less time than specified, the difference may be added to the allowable outage time limits of the second specification. However, the allowable outage time limits of ACTION requirements for a higher MODE of operation may not be used to extend the allowable outage time that is applicable when a Limiting Condition for Operation is not met in a lower MODE of operation.

The shutdown requirements of Specification 3.0.3 do not apply in MODES 5 and 6, because the ACTION requirements of individual specifications define the remedial measures to be taken.

Specification 3.0.4 establishes limitations on MODE changes when a Limiting Condition for Operation is not met. It precludes placing the facility in a higher MODE of operation when the requirements for a Limiting Condition for Operation are not met and continued noncompliance to these conditions would result in a shutdown to comply with the ACTION requirements if a change in MODES were permitted. The purpose of this specification is to ensure that facility operation is not initiated or that higher MODES of operation are not entered when corrective action is being taken to obtain compliance with a specification by restoring equipment to OPERABLE status or parameters to specified limits. Compliance with ACTION requirements that permit continued operation of the facility for an unlimited period of time provides an acceptable level of safety for continued operation without regard to the status of the plant before or after a MODE change. Therefore, in this case, entry into an OPERATIONAL MODE or other specified condition may be made in accordance with the provisions of the ACTION requirements. The provisions of this specification should not, however, be interpreted as endorsing the failure to exercise good practice in restoring systems or components to OPERABLE status before plant startup.

3/4.0 APPLICABILITY

BASES (Con't)

When a shutdown is required to comply with ACTION requirements, the provisions of Specification 3.0.4 do not apply because they would delay placing the facility in a lower MODE of operation.

Specifications 4.0.1 through 4.0.5 establish the general requirements applicable to Surveillance Requirements. These requirements are based on the Surveillance Requirements stated in the Code of Federal Regulations, 10 CFR 50.36(c)(3):

"Surveillance requirements are requirements relating to test, calibration, or inspection to ensure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions of operation will be met."

Specification 4.0.1 establishes the requirement that surveillances must be performed during the OPERATIONAL MODES or other conditions for which the requirements of the Limiting Conditions for Operation apply unless otherwise stated in an individual Surveillance Requirement. The purpose of this specification is to ensure that surveillances are performed to verify the operational status of systems and components and that parameters are within specified limits to ensure safe operation of the facility when the plant is in a MODE or other specified condition for which the associated Limiting Conditions for Operation are applicable. Surveillance Requirements do not have to be performed when the facility is in an OPERATIONAL MODE for which the requirements of the associated Limiting Condition for Operation do not apply unless otherwise specified. The Surveillance Requirements associated with a Special Test Exception are only applicable when the Special Test Exception is used as an allowable exception to the requirements of a specification.

Specification 4.0.2 establishes the conditions under which the specified time interval for Surveillance Requirements may be extended. Item a. permits an allowable extension of the normal surveillance interval to facilitate surveillance scheduling and consideration of plant operating conditions that may not be suitable for conducting the surveillance; e.g., transient conditions or other ongoing surveillance or maintenance activities. Item b. limits the use of the provisions of item a. to ensure that it is not used repeatedly to extend the surveillance interval beyond that specified. The limits of Specification 4.0.2 are based on engineering judgment and the recognition that the most probable result of any particular surveillance being performed is the verification of conformance with the Surveillance Requirements. These provisions are sufficient to ensure that the reliability ensured through surveillance activities is not significantly degraded beyond that obtained from the specified surveillance interval.

Specification 4.0.3 establishes the failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by the provisions of Specification 4.0.2, as a condition that constitutes a failure to meet the OPERABILITY requirements for a Limiting Condition for Operation. Under the

3/4.0 APPLICABILITY

BASES (Con't)

provisions of this specification, systems and components are assumed to be OPERABLE when Surveillance Requirements have been satisfactorily performed within the specified time interval. However, nothing in this provision is to be construed as implying that systems or components are OPERABLE when they are found or known to be inoperable although still meeting the Surveillance Requirements. This specification also clarifies that the ACTION requirements are applicable when Surveillance Requirements have not been completed within the allowed surveillance interval and that the time limits of the ACTION requirements apply from the point in time it is identified that a surveillance has not been performed and not at the time that the allowed surveillance interval was exceeded. Completion of the Surveillance Requirement within the allowable outage time limits of the ACTION requirements restores compliance with the requirements of Specification 4.0.3. However, this does not negate the fact that the failure to have performed the surveillance within the allowed surveillance interval, defined by the provisions of Specification 4.0.2, was a violation of the OPERABILITY requirements of a Limiting Condition for Operation that is subject to enforcement action. Further, the failure to perform a surveillance within the provisions of Specification 4.0.2 is a violation of a Technical Specification requirement and is, therefore, a reportable event under the requirements of 10 CFR 50.73(a)(2)(i)(B) because it is a condition prohibited by the plant's Technical Specifications.

If the allowable outage time limits of the ACTION requirements are less than 24 hours or a shutdown is required to comply with ACTION requirements, e.g., Specification 3.0.3, a 24-hour allowance is provided to permit a delay in implementing the ACTION requirements. This provides an adequate time limit to complete Surveillance Requirements that have not been performed. The purpose of this allowance is to permit the completion of a surveillance before a shutdown is required to comply with ACTION requirements or before other remedial measures would be required that may preclude completion of a surveillance. The basis for this allowance includes consideration for plant conditions, adequate planning, availability of personnel, the time required to perform the surveillance, and the safety significance of the delay in completing the required surveillance. This provision also provides a time limit for the completion of Surveillance Requirements that become applicable as a consequence of MODE changes imposed by ACTION requirements and for completing Surveillance Requirements that are applicable when an exception to the requirements of Specification 4.0.4 is allowed. If a surveillance is not completed within the 24-hour allowance, the time limits of the ACTION requirements are applicable at that time. When a surveillance is performed within the 24-hour allowance and the Surveillance Requirements are not met, the time limits of the ACTION requirements are applicable at the time that the surveillance is terminated.

Surveillance Requirements do not have to be performed on inoperable equipment because the ACTION requirements define the remedial measures that apply. However, the Surveillance Requirements have to be met to demonstrate that inoperable equipment has been restored to OPERABLE status.

3/4.0 APPLICABILITY

BASES (Con't)

Specification 4.0.4 establishes the requirement that all applicable surveillances must be met before entry into an OPERATIONAL MODE or other condition of operation specified in the Applicability statement. The purpose of this specification is to ensure that system and component OPERABILITY requirements or parameter limits are met before entry into a MODE or condition for which these systems and components ensure safe operation of the facility. This provision applies to changes in OPERATIONAL MODES or other specified conditions associated with plant shutdown as well as startup.

Under the provisions of this specification, the applicable Surveillance Requirements must be performed within the specified surveillance interval to ensure that the Limiting Conditions for Operation are met during initial plant startup or following a plant outage.

When a shutdown is required to comply with ACTION requirements, the provisions of Specification 4.0.4 do not apply because this would delay placing the facility in a lower MODE of operation.

Specification 4.0.5 establishes the requirement that inservice inspection of ASME Code Class 1, 2, and 3 components and inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a. These requirements apply except when relief has been provided in writing by the Commission.

This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda. This clarification is provided to ensure consistency in surveillance intervals throughout the Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities.

Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME Boiler and Pressure Vessel Code and applicable Addenda. The requirements of Specification 4.0.4 to perform surveillance activities before entry into an OPERATIONAL MODE or other specified condition takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows pumps and valves to be tested up to one week after return to normal operation. The Technical Specification definition of OPERABLE does not allow a grace period before a component, that is not capable of performing its specified function, is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable.

EVENT

- VIOLATED TECHNICAL SPECIFICATION 3.3.2 FOR EXCESSIVE COOLDOWN INSTRUMENTATION REQUIREMENTS
- PLANT STAFF DISCOVERED ON FEBRUARY 9, 1988 SEVEN OF TWELVE FEEDWATER FLOW TRANSMITTERS ISOLATED
- DISCOVERY WAS SELF INITIATED BY REQUIREMENTS LISTED IN PREREQUISITE SECTION OF LOW POWER PHYSICS TEST, 1PEP04-ZL-0064, PRE CRITICAL ALIGNMENT OF STEAM AND FEEDWATER FLOW INSTRUMENTATION
- IMMEDIATELY RESTORED ISOLATED TRANSMITTERS TO SERVICE
- IMMEDIATELY INITIATED A 100% DOUBLE VERIFICATION OF LINEUP OF ALL TECHNICAL SPECIFICATION INSTRUMENTATION.
NO OTHER INSTRUMENTS WERE FOUND MISALIGNED

ROOT CAUSE

- PROGRAM FOR SYSTEM ALIGNMENT WAS WEAK BECAUSE IT DID NOT INCLUDE ALL INSTRUMENT VALVES IN A SYSTEM ALIGNMENT PROCEDURE

CORRECTIVE ACTION

- SYSTEM ALIGNMENT PROCEDURES HAVE BEEN REVISED TO REQUIRE VERIFICATION OF ALL INSTRUMENTS WHEN A SYSTEM ALIGNMENT IS PERFORMED. ALIGNMENTS HAVE TWO INDEPENDENT VERIFICATIONS FOR TECHNICAL SPECIFICATION INSTRUMENTS
- PLANT STARTUP PROCEDURES HAVE BEEN REVISED TO REQUIRE VERIFICATION OF TECHNICAL SPECIFICATION INSTRUMENT ALIGNMENT PRIOR TO CHANGING MODES FOR WHICH THE INSTRUMENTS ARE REQUIRED. ALIGNMENTS HAVE TWO INDEPENDENT VERIFICATIONS FOR TECHNICAL SPECIFICATION INSTRUMENTS
- PLANT STARTUP PROCEDURES HAVE BEEN REVISED TO REQUIRE SYSTEM ALIGNMENTS, WHICH NOW INCLUDE INSTRUMENT ALIGNMENTS, PRIOR TO INITIAL CRITICALITY, POST REFUELING, OR AFTER OUTAGES OF 30 DAYS OR LONGER
- THE UNIT 2 SYSTEMS OPERATIONAL CONFIGURATION CONTROL PROGRAM WILL ADDRESS THE WEAKNESSES IDENTIFIED IN THE UNIT 1 PROGRAM PRIOR TO IMPLEMENTATION

EVENT CHRONOLOGY

APRIL 24, 1987 -
APRIL 28, 1987

7 OF 12 FEEDWATER FLOW
TRANSMITTERS CALIBRATED FOR
OPERATION

NOTE: CALIBRATION PROCEDURE
LEAVES INSTRUMENTS LINED
UP FOR OPERATION. A
DOUBLE VALVE LINEUP CHECK
IS PERFORMED AS PART OF
THE PROCEDURE.

APRIL 29, 1987

PLANT IMPLEMENTED A UNIT 1
SYSTEMS OPERATIONAL
CONFIGURATION CONTROL PROGRAM.

NOTE: PROGRAM WAS DEFICIENT IN
THAT IT DID NOT ADDRESS
START DATE OF
SURVEILLANCE TEST PROGRAM
AND IT RELIED ON SYSTEM
OPERATING PROCEDURES TO
ALIGN ENTIRE SYSTEM WHEN
IN FACT SYSTEM ALIGNMENTS
DID NOT INCLUDE
INSTRUMENT ALIGNMENTS.

APRIL 30, 1987

HYDROSTATIC TESTING OF THE
FEEDWATER FLOW TRANSMITTER
SENSING LINES PERFORMED. ALL 12
TRANSMITTERS VALVED OUT OF
SERVICE TO PROTECT THEM FROM
HYDRO PRESSURES.

NOTE: MAIN FEEDWATER SYSTEM WAS
STILL JURISDICTIONALLY
CONTROLLED BY STARTUP AT
THIS TIME. THE HYDRO
PROCEDURE WAS NOT
APPROVED BY NPOD AND DID
NOT CONTAIN RESTORATION
STEPS FOR THE
TRANSMITTERS.

MAY 1, 1987 -
JUNE 8, 1987

5 OF 12 FEEDWATER FLOW
TRANSMITTERS CALIBRATED FOR
OPERATION. THESE 5 REPRESENT
THE REMAINING 5 OF THE 12 NOT
CALIBRATED IN APRIL 24, TO
APRIL 28 TIME PERIOD.

NOTE: ON FEBRUARY 9, 1988 WHEN
THE TRANSMITTER ISOLATION
WAS DISCOVERED, THESE
FIVE WERE FOUND TO BE
VALVED IN SERVICE.

MAY 7, 1987 -
MAY 20, 1987

MAIN FEEDWATER SYSTEM VALVE
ALIGNMENT PERFORMED.

NOTE: THE PROCEDURE REVISION
USED TO COMPLETE THIS
ALIGNMENT ONLY REQUIRED
PLANT OPERATORS TO VERIFY
ROOT VALVES TO
INSTRUMENTS WERE OPEN.
THE PLANT PHILOSOPHY AT
THIS POINT WAS THAT THE
I&C GROUP WOULD COMPLETE
THESE INSTRUMENT
ALIGNMENTS THROUGH THEIR
PROCEDURES, WHICH FOR
TECHNICAL SPECIFICATION
INSTRUMENTS WAS THE
SURVEILLANCE TEST FOR
EACH INSTRUMENT.

JUNE 6, 1987

MAIN FEEDWATER SYSTEM
JURISDICTIONALLY TRANSFERRED TO
NPOD.

AUGUST, 1987

PLANT OPERATIONS DEPARTMENT
CHANGED PHILOSOPHY TO INCLUDE IN
PROCEDURES CHECKLIST TO VERIFY
INSTRUMENTS WERE PROPERLY
ALIGNED. COMMITMENT WAS TO
REVISE ALL SYSTEM OPERATING
PROCEDURES BY THE END OF THE
BIENNIAL REVIEW CYCLE.

NOVEMBER 4, 1987

MAIN FEEDWATER SYSTEM PROCEDURE WAS REVISED TO INCLUDE REQUIREMENTS FOR INSTRUMENT ALIGNMENT IN ACCORDANCE WITH AUGUST COMMITMENT.

NOTE: A DECISION NOT TO REPERFORM THE MAIN FEEDWATER SYSTEM VALVE ALIGNMENT, INCLUDING THE INSTRUMENT CHECKLIST, WAS MADE BASED ON THE FACT THAT THE SYSTEM HAD APPARENTLY BEEN OPERATING SUCCESSFULLY FOR A PERIOD OF TIME AND THAT THE INSTRUMENT ALIGNMENTS HAD BEEN PREVIOUSLY MADE USING THE SURVEILLANCE TESTING PROGRAM.

FEBRUARY 9, 1988

7 OF 12 FEEDWATER FLOW TRANSMITTERS WERE IDENTIFIED AS BEING ISOLATED.

NOTE: FEEDWATER FLOW INSTRUMENTS ARE REQUIRED TO BE OPERATIONAL IN MODES 1, 2, & 3. THE PLANT HAD ENTERED MODE 3 ON 3 OCCASIONS PRIOR TO FEBRUARY 9, 1988: NOVEMBER 22, 1987, JANUARY 30, 1988 AND FEBRUARY 7, 1988.

ANALYSIS

(PAGE 1 OF 2)

THE FEEDWATER FLOW TRANSMITTERS WHICH WERE ISOLATED AS A RESULT OF THIS EVENT PROVIDE INPUTS TO EXCESSIVE COOLDOWN PROTECTION, THE THREE ELEMENT FEEDWATER CONTROL SYSTEM AND FEEDWATER FLOW INDICATION.

- ONE OF THE PROTECTIVE ACTIONS PROVIDED BY THE EXCESSIVE COOLDOWN PROTECTION SCHEME IS FEEDWATER ISOLATION AND TURBINE TRIP ON HIGH FEEDWATER FLOW COINCIDENT WITH LOW RCS FLOW OR LOW TAVG TO PREVENT RETURN TO CRITICALITY DUE TO A STEAM LINE BREAK

- THE PROTECTION IS ONLY ACTIVE WHEN EITHER OR BOTH OF THE FOLLOWING ARE TRUE:
 - REACTOR TRIP BREAKERS OPEN
 - REACTOR POWER LESS THAN 10%

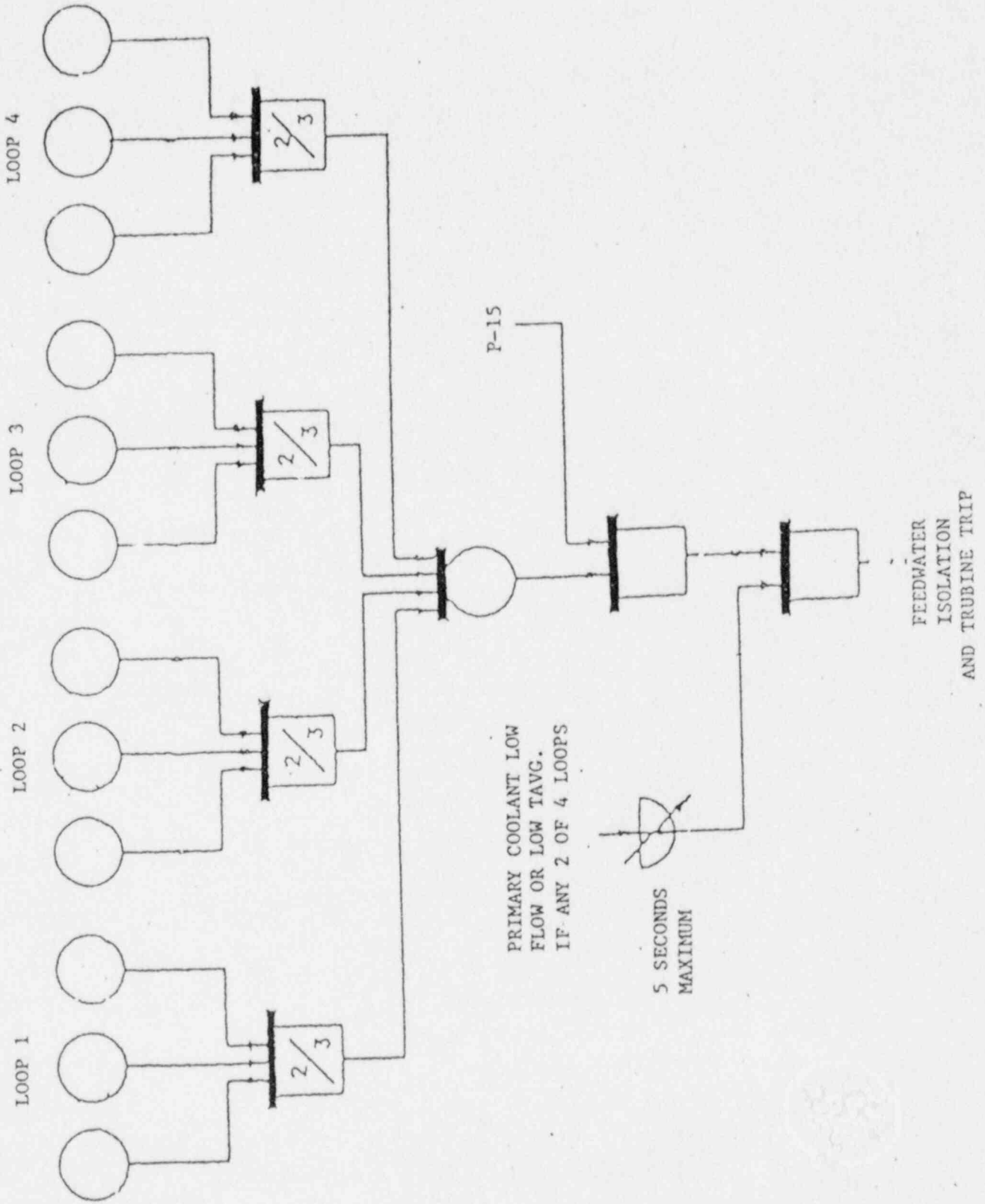
- NO CREDIT IS TAKEN FOR EXCESS COOLDOWN PROTECTION IN ANY FSAR CHAPTER 15 ACCIDENT ANALYSIS.

ANALYSIS

(PAGE 2 OF 2)

- A TECH SPEC CHANGE DELETING THIS FEATURE HAS BEEN APPROVED BY NRC.
- THE INOPERABLE STATUS OF THE FEEDWATER FLOW TRANSMITTERS WAS DETECTED DURING PRECRITICALITY TESTING. SINCE THE RCS WAS BORATED AT 2500 PPM (REFUELING CONDITIONS) AT THE TIME, THE ACCIDENT FOR WHICH THIS PROTECTIVE FEATURE WAS DESIGNED COULD NOT HAVE RESULTED IN REACTOR CRITICALITY.
- THE THREE ELEMENT FEEDWATER CONTROL SYSTEM WILL NOT OPERATE IN THE AUTOMATIC MODE WITHOUT A FEEDWATER FLOW SIGNAL.
- LACK OF FEEDWATER FLOW INDICATION WOULD BE OBVIOUS ONCE SIGNIFICANT FLOW RATES WERE ATTAINED.

EXCESS COOLDOWN PROTECTION SYSTEM
HIGH FEEDWATER FLOW



Houston Lighting & Power Company

Red

OFFICE MEMORANDUM

To DISTRIBUTION

April 29, 1987

From W. H. Kinsey *WJK*

ST-P2-HS-426

PFN: K5

Subject Unit 1 Systems Operational Configuration Control
SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION

Unit 1 completion status is now at a stage where NPOD must begin a concentrated effort toward obtaining operational configuration control of plant systems in order to ensure licensing and technical specification requirements for equipment operability are met to support receipt of an Operating License and subsequent fuel loading on June 1, 1987. To accomplish configuration control, NPOD must complete all associated valve, electrical and switch lineups on each system to baseline the system status. Following baselining, Operations must control all subsequent activities associated with changes to system configuration to ensure the configuration is known at all times and the system can be readily restored to operable status in accordance with approved plant procedures. In order to establish and maintain operational configuration control, the following measures will be implemented beginning May 1, 1987:

1. All work activities on Unit 1 systems shall be approved by the NPOD Shift/Unit Supervisor prior to implementation. This includes any work activity, including work performed under SWRs as well as CWRs and MWRs which has not actually commenced by this date. For SWRs this approval shall be denoted by Shift/Unit Supervisor's signature and date in Block 24 of the SWR form. The Shift/Unit Supervisor shall retain a copy of all SWRs approved for implementation. The NPOD Shift/Unit Supervisor shall be notified of work completion on Unit 1 systems. For SWRs this notification shall be documented by Shift/Unit Supervisor's signature and date in Block 28.
2. System operation and testing shall be performed in accordance with approved plant or start-up test procedures; OWORs and IOPs shall no longer be used for plant operations. Use of approved procedures to realign systems for operation and testing shall be controlled by the Shift/Unit Supervisor.
3. All work activities on Unit 1 systems shall be scheduled via the NPOD Daily Work Activity Schedule (DWAS). This should include 3 day prior notification of work start for all planned work activities. Exceptions may be handled on a case by case basis.
4. The schedule for placing systems under operational configuration control is provided in Attachment 1. This schedule shall be updated daily to reflect actual status. The organization responsible and reason for preventing placement of systems into configuration control shall be identified on the schedule.

Houston Lighting & Power Company

OFFICE MEMORANDUM

Page 2

April 29, 1987
 ST-P2-HS-426
 PFN: K5

To

W. H. Kinsey

From

Unit 1 Systems Operational Configuration Control
SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION

Subject

5. NPOD Operations shall be responsible for performing the necessary lineups to place each system under operational configuration control as scheduled, for documenting completion control alignment using Attachment 2, and for maintaining configuration control. Alignments shall be performed using approved plant procedures.
6. Individuals found working on systems under configuration control without proper authorization shall be subject to disciplinary action.
7. Technical Specification Limiting Conditions for Operation (LCO) and action times for Mode 6 requirements shall be initiated and enforced beginning May 15, 1987 for systems under configuration control. This will limit the number of trains that can be out of service and length of time equipment may be out of service. Exceptions may be handled on a case by case basis.
8. Temporary Alterations shall not be authorized to any system under configuration control. All temporary alterations shall be restored to approved design status or converted to Temporary Modifications as part of the establishment of configuration control.
9. All modifications (permanent or temporary) to systems under configuration control shall require evaluation by NPOD Operations to determine the need to revise operating procedures, if the system is to be returned to service with the modification in effect. Any such procedures shall be revised prior to returning the system to service.
10. Following establishment of operational configuration control, surveillance tests shall be performed on technical specification related systems, as necessary to ensure required operability to support receipt of an Operating License and Mode 6 Technical Specification requirements.



WHK/JWL/dms
 Attachments

SYSTEM	DESCRIPTION	TURNOVER DATE	F / A	SCH_DULED CONFIG COMT DATE	ACTUAL CONFIG COMT DATE	ORGANIZATION/ REASON
AC	CLOSED LOOP AUX COOLING WATER	16-Sep-86	A	01-May-87		
AF	AUX FEEDWATER SYSTEM	30-Apr-87	F	01-May-87		
CC	COMPONENT COOLING SYSTEM	08-May-87	F	01-May-87		
CD	CONDENSATE SYSTEM	27-Apr-87	F	01-May-87		
CH	CHILLED WATER HVAC	21-May-87	F	01-May-87		
DL	LIGHTING DIESEL GENERATOR	29-Apr-87	F	01-May-87		
ES	EXTRACTION STEAM SYTEM	30-Apr-87	F	01-May-87		
EW	ESSENTIAL COOLING WATER SYSTEM	12-Dec-86	A	01-May-87		
HF	FUEL HANDLING BLD HVAC	01-May-87	F	01-May-87		
IA	INSTRUMENT AIR SYSTEM	30-Jun-86	A	01-May-87		
OW	OILY WASTE SYSTEM	13-Mar-87	A	01-May-87		
RH	RESIDUAL HEAT REMOVAL SYSTEM	30-Apr-87	F	01-May-87		
SB	S6 BLOWDOWN SYSTEM	01-May-87	F	01-May-87		
SI	SAFETY INJECTION SYSTEM	01-May-87	F	01-May-87		
TM	MAIN TURBINE	29-Apr-87	F	01-May-87		
GM	MAIN GENERATOR	06-Apr-87	A	02-May-87		
SA	STATION AIR SYSTEM	30-Jun-86	A	02-May-87		
SM	ESF STATUS MONITOR	22-Oct-86	A	03-May-87		
VM	VIBRATION MONITORING SYSTEM	16-Jan-87	A	03-May-87		
BS	7300 PROCESSOR	23-Apr-87	A	04-May-87		
CS	CONTAINMENT SPRAY SYSTEM	30-Apr-87	F	04-May-87		
CM	CIRCULATING WATER SYSTEM	06-May-87	F	04-May-87		
DB	DIESEL GENERATOR (BOP)	30-Apr-87	F	04-May-87		
GS	TURBINE GLAND SEAL SYSTEM	11-Mar-87	A	04-May-87		
HG	DIESEL GENERATOR BLD HVAC	04-May-87	F	04-May-87		
RM	REACTOR MAKE-UP WATER SYSTEM	24-Oct-86	A	04-May-87		
FO	FUEL OIL STOR & TRANS SYSTEM	16-Sep-86	A	05-May-87		
LD	LUBE OIL PURIFICATION STOR & TRANS SYST	15-Sep-86	A	05-May-87		
OC	OPEN LOOP AUX COOLING SYSTEM	02-Mar-87	A	05-May-87		
SC	CIRC WATER SCREENS	18-Sep-86	A	05-May-87		
SS	SECONDARY SAMPLING SYSTEM	22-Apr-87	A	05-May-87		
DE	48V DC NON-CLASS 1E SYSTEM	16-Apr-86	A	06-May-87		
AM	ERFDAO & QUALIFIED DISPLAY PROC. SYSTEM	04-Jun-87	F	07-May-87		
MD	MAIN STEAM VENTS & DRAINS SYSTEMS	17-Apr-87	A	07-May-87		
NL	NITROGEN STORAGE SYSTEM	30-Jun-86	A	07-May-87		
PD	4KV AC NON 1E PWR	20-Oct-86	A	07-May-87		
SO	GEN H2 S.O. SYSTEM	17-Jan-87	A	07-May-87		
AS	AUX STEAM SYSTEM	13-Nov-86	A	08-May-87		
BR	BORON RECYCLE SYSTEM	14-May-87	F	08-May-87		
CP	CONDENSATE POLISHING SYSTEM	07-May-87	F	08-May-87		
HD	HEATER DRIP SYSTEM	07-May-87	F	08-May-87		
PL	480V AC LOAD CENTERS 1E	23-Oct-86	A	08-May-87		
RS	ROD CONTROL SYSTEM	27-Apr-87	F	08-May-87		
LT	MAIN TURBINE LUBE OIL SYSTEM	11-Apr-87	A	09-May-87		
VA	120V AC CLASS 1E	17-Oct-86	A	09-May-87		
AN	ANNUNCIATOR	13-Oct-86	A	10-May-87		
OR	NONRAD DRAINS & GUMPS	11-Apr-87	A	10-May-87		
GC	STATOR COOLING WATER SYSTEM	03-Feb-87	A	10-May-87		
PB	AUX TRANSFORMER	14-May-87	F	10-May-87		
PF	480V MCC'S	11-May-87	F	10-May-87		
PS	13.8KV EMERGENCY POWER	14-May-87	F	10-May-87		
PT	13.8KV EMERGENCY TRANS	14-May-87	F	10-May-87		

SYSTEM	DESCRIPTION	TURNOVER DATE	F / A	SCHEDULED CONFIG COMT DATE	ACTUAL CONFIG COMT DATE	ORGANIZATION/ REASON
CM	CONTAINMENT MONITORING SYSTEM	15-May-87	F	11-May-87		
EH	EHC SYSTEM	22-Apr-87	A	11-May-87		
FH	FUEL HANDLING SYSTEM	26-May-87	F	11-May-87		
FW	FEEDWATER SYSTEM	07-May-87	F	11-May-87		
II	INCORE INSTRUMENTATION	05-Jun-87	F	11-May-87		
LG	NORMAL AC LIGHTING	04-May-87	F	11-May-87		
MI	NUCLEAR INSTRUMENTATION	04-Jun-87	F	11-May-87		
PE	480V LOAD CENTERS	21-Jan-87	A	11-May-87		
BA	BREATHING AIR SYSTEM	30-Apr-87	F	12-May-87		
CV	CHEM & VOL CONTROL SYSTEM	14-May-87	F	12-May-87		
DC	250V DC NOM 1E BATTERIES	03-Feb-87	A	12-May-87		
FP	FIRE PROTECTION SYSTEM	11-May-87	F	12-May-87		
GE	MAIN TURBINE EXCITER	09-Apr-87	A	12-May-87		
PM	480V AC MCC'S 1E	23-Oct-86	A	12-May-87		
SH	SODIUM HYPOCHLORITE SYSTEM	17-Jun-86	A	12-May-87		
VC	120V AC NOM 1E VITAL	23-Oct-86	A	12-May-87		
DA	125V DC NOM 1E	30-Oct-86	A	13-May-87		
GG	6EM H2 & CO2	17-Jan-87	A	13-May-87		
IB	LOOSE PARTS MONITORING SYSTEM	27-Feb-87	A	13-May-87		
SF	ESF SYSTEMS	04-Jun-87	F	13-May-87		
TW	SERVICE WATER SUPPLY SYSTEM	14-Apr-86	A	13-May-87		
CF	80P CHEMICAL FEED SYSTEM	05-Nov-86	A	14-May-87		
FC	SPENT FUEL POOL COOLING SYSTEM	16-Jan-87	A	14-May-87		
PC	13.8KV AC AUXILIARY POWER SYSTEM	24-Oct-86	A	14-May-87		
SW	FRESH WATER SUPPLY SYSTEM	18-Mar-86	A	14-May-87		
CG	CONTAIN COMBUST GAS CNTRL SYSTEM	28-May-87	F	15-May-87		
CR	CONDENSER AIR REMOVAL SYSTEM	03-Feb-87	A	15-May-87		
DG	DIESEL GENERATORS	06-May-87	F	15-May-87		
DJ	125V DC CLASS 1E SYSTEM	06-Oct-86	A	15-May-87		
OW	DEMINERALIZER WATER SYSTEM	09-Jul-86	A	15-May-87		
ED	RADIOACTIVE VENTS & DRAINS	19-May-87	F	15-May-87		
EP	ESSENTIAL COOLING POND MAKE-UP SYSTEM	19-Mar-86	A	15-May-87		
HB	CONTROL ROOM HVAC	21-May-87	F	15-May-87		
HE	EAB PENETRATION SPACE HVAC	20-May-87	F	15-May-87		
LL	RIVER SERVICES TRANS. AND SWITCHGEAR	30-Nov-84	A	15-May-87		
LM	RESERVOIR MAKEUP PUMPING STATION	30-Nov-84	A	15-May-87		
MS	MAIN STEAM SYSTEM	01-May-87	F	15-May-87		
NC	NON-RADIOACTIVE CHEMICAL WASTE SYSTEM	04-Apr-86	A	15-May-87		
NK	FREEZE PROTECTION	01-Jun-87	F	15-May-87		
PA	STANDBY TRANSFORMER	02-Oct-86	A	15-May-87		
PS	PRIMARY SAMPLING SYSTEM	04-May-87	F	15-May-87		
RA	RADIATION MONITORING SYSTEM	05-Jun-87	F	15-May-87		
SP	SOLID STATE PROTECTION	05-Jun-87	F	15-May-87		
SY	SEISMIC MONITORING SYSTEM	05-Jun-87	F	15-May-87		
WW	WELL WATER SYSTEM	15-Aug-86	A	15-May-87		
HC	CONTAINMENT BUILDING HVAC	25-May-87	F	18-May-87		
NZ	ELECTRICAL MISC	01-Jun-87	F	18-May-87		
RC/RD	REACTOR COOL SYS/REACTOR HEAD DEGAS	06-May-87	F	18-May-87		
WL	LIQUID WASTE PROCESS SYSTEM	04-Jun-87	F	18-May-87		
HT	TURBINE BUILDING HVAC	06-May-87	F	19-May-87		
CN	COMMUNICATION SYSTEM	05-Jun-87	F	21-May-87		
CU	PLANT COMPUTER	04-Jun-87	F	25-May-87		
		11-May-87	F	26-May-87		

SYSTEM	DESCRIPTION	TURNOVER DATE	F / A	SCHEDULED CONFIG CONT DATE	ACTUAL CONFIG CONT DATE	ORGANIZATION/ REASON
HM	TENDON GAL. TUNNEL VENT S-SYST NOM CHILL	28-May-87	F	25-May-87		
LA	EMERGENCY & ESSENTIAL LIGHTING	01-Jun-87	F	25-May-87		
NM	CATHODIC PROTECTION	01-Jun-87	F	25-May-87		
VE	MAB PLANT VENT HDR	04-May-87	F	25-May-87		
WG	GASEOUS WASTE PROCESS SYSTEM	04-Jun-87	F	25-May-87		
RI	ROD POSITION INDICATOR SYSTEM	27-Apr-87	F	26-May-87		
WG	SOLID WASTE PROCESS SYSTEM	19-Jun-87	F	15-Jun-87		
PM	POTABLE WATER SYSTEM	07-Jul-87	F	01-Jul-87		
RC	RISER SPILLWAY GATE	16-Jul-87	F	10-Jul-87		

121 SYSTEMS

EVENT

- ON APRIL 13, 1988 NRC INSPECTOR DISCOVERED AN ERROR IN THE CALCULATION FOR ISOTHERMAL TEMPERATURE COEFFICIENT MEASURED AND CALCULATED BY LOW POWER PHYSICS TEST IPEP04-ZX-0004 PERFORMED ON MARCH 9, 1988
- UPON NOTIFICATION, HL&P IMMEDIATELY ASSESSED IMPACT OF ERROR AND DETERMINED THAT THE ACCEPTANCE CRITERIA OF THE SUBJECT TEST WERE STILL MET AND THAT NO OTHER TESTS UTILIZED THE ERRONEOUS INFORMATION OR WAS AFFECTED BY THE ERRONEOUS INFORMATION

ROOT CAUSE

- THE PERSON RESPONSIBLE FOR FIRST PERFORMING THE CALCULATIONS MADE A MISTAKE IN READING THE STRIP CHART RECORDER FOR RAW DATA REQUIRED IN THE CALCULATIONS
- THE PERSON RESPONSIBLE FOR REVIEWING THE CALCULATIONS DID NOT START WITH THE SOURCE OF THE DATA, i.e. THE STRIP CHART RECORDER, BUT ONLY VERIFIED THE NUMERICAL MANIPULATIONS

CORRECTIVE ACTION

- REVIEWED ALL OTHER LOW POWER PHYSICS TESTS AND PRECRITICAL TESTS AND HAVE FOUND ONLY 3 OTHER MINOR, NON-SIGNIFICANT, NON-IMPACTING CALCULATIONAL ERRORS. THIS REVIEW INCLUDED 63 TESTS AND MORE THAN 4000 INDIVIDUAL NUMERICAL MANIPULATIONS
- PROCEDURE 1PEP04-ZA-0003, DOCUMENTATION OF INITIAL STARTUP TEST RESULTS, HAS BEEN REVISED TO EMPHASIZE RESPONSIBILITIES OF THE REVIEWER, AND AN ADDITIONAL REVIEW ON A SAMPLE BASIS HAS BEEN ADDED TO THE PROGRAM. ADDITIONALLY, A REVIEW ATTRIBUTE SHEET HAS BEEN DEVELOPED FOR THE PROGRAM
- TEST DIRECTORS AND SHIFT TEST DIRECTORS HAVE BEEN RETRAINED ON THE RESPONSIBILITIES FOR TEST PACKAGE REVIEW, IN PARTICULAR ON THE IMPORTANCE OF PERFORMING TOTALLY INDEPENDENT REVIEWS, FROM THE ORIGINAL RAW DATA TO THE FINAL CALCULATIONS

Initial Startup Test Procedure Package Review Checklist

The following is a list of the minimum requirements for test packages:

	Yes	No
1. Are all blanks completed as required by the test procedure?	_____	_____
2. Are all procedure entries regarding procedure numbers, revisions, and titles, within the procedure being reviewed, correct?	_____	_____
3. Is all documentation required by Section 8.0 of the procedure, in the procedure package?	_____	_____
4. Have all calculations required by the procedure been verified, starting from the original sources of information (strip charts, graphs, x-y plots, etc.)?	_____	_____
5. Is there sufficient data in the test package to demonstrate that all acceptance criteria were met?	_____	_____
6. Have all required log entries been made:		
6.1 Pretest briefing conducted	_____	_____
6.2 Date and time of start of test and completion of test	_____	_____
6.3 Name of personnel participating in test	_____	_____
6.4 Limits or precautions exceeded during test	_____	_____
6.5 Reverification of test prerequisites or initial conditions following significant delays in testing	_____	_____
6.6 Amounts of boric acid or demin water added during physics tests	_____	_____
6.7 QA/QC notified of test	_____	_____
7. All data recorded in ink	_____	_____
8. All test data not part of the original test (e.g. chart recorder traces, computer printouts, etc.) initialed and dated?	_____	_____
9. All corrections single line strike out, initialed and dated?	_____	_____

Any items answered "No" shall be documented and evaluated by attaching a Supplementary Evaluation Form.

Reviewed by: _____ - Date _____

EVENT

- DURING THE PERIOD OF FEBRUARY 11, 1988 THROUGH MARCH 31, 1988 NRC INSPECTORS NOTED A WEAKNESS IN THE PROGRAM FOR CONTROLLING LIFTED LEADS, JUMPERS, AND FUSES

ROOT CAUSE/DISCUSSION

- THE CONTROL OF LIFTED LEADS, JUMPERS, AND FUSES DURING MAINTENANCE TROUBLE—SHOOTING ONLY IS NOT EXPLICITLY ADDRESSED IN STATION PROCEDURES. THE STATION MAINTENANCE WORK REQUEST PROGRAM DOES, HOWEVER, REQUIRE MAINTENANCE PERSONNEL TO RECORD ALL ACTIONS TAKEN, WHICH INCLUDES THE ACTIONS OF CONCERN. THIS PRACTICE HAS BEEN CONSISTENTLY FOLLOWED BY STP PERSONNEL
- STP ELECTRICAL DEPARTMENT PERSONNEL HAVE A PROCEDURE THAT EXPLICITLY ADDRESSES THIS ISSUE AND AT THE TIME OF THE FINDING STP I&C PERSONNEL HAD A DRAFT OF A PROCEDURE IN PROGRESS. I&C PERSONNEL IN LIEU OF A PROCEDURE PRACTICED THE PHILOSOPHY NOTED ABOVE
- TO DATE, STP HAS NOT HAD ANY INCIDENTS OR ANY INDICATION OF PROBLEMS AS A RESULT OF THE CURRENT APPLIED PRACTICE OF NOTING ACTIONS TAKEN ON THE MAINTENANCE WORK REQUEST FORM

CORRECTIVE ACTION

- AT THE DIRECTION OF THE PLANT MANAGER, RESULTING FROM THE NRC'S CONCERNS, THE MAINTENANCE MANAGER PERFORMED AN IN-DEPTH REVIEW OF THE ENTIRE PROCESS FOR CONTROLLING LIFTED LEADS, JUMPERS, AND FUSES. AS A RESULT, 9 PROCEDURES THAT IN SOME FORM ADDRESS THE SUBJECT ACTIONS WILL BE REVISED BY JUNE 15,1988 TO ENSURE PROGRAM COHESIVENESS. A SINGLE NEW PROCEDURE WILL BE DEVELOPED FOR CRAFT PERSONNEL USE DURING TROUBLE-SHOOTING. THIS PROCEDURE WILL BE DEVELOPED BY JUNE 15,1988

EVENT

- ON FEBRUARY 13, 1988, AT 4:17 A.M. THE PLANT OPERATORS VIOLATED TECHNICAL SPECIFICATION 3.5.2 FOR ADEQUATE NUMBER OF OPERABLE ECCS TRAINS. THE PLANT WAS IN COMPLIANCE WITH TECHNICAL SPECIFICATION 3.0.3 PRIOR TO THIS TIME WITH A COOLDOWN IN PROGRESS
- ON FEBRUARY 13, 1988, AT 12:07 P.M., THE PLANT OPERATORS RECOGNIZED THAT THEY WERE NOT IN COMPLIANCE WITH TECHNICAL SPECIFICATION 3.5.2 AND RE-ENTERED TECHNICAL SPECIFICATION 3.0.3, PROCEEDED WITH THE PLANT COOLDOWN AND REACHED MODE 4 AT 1:17 A.M. ON FEBRUARY 14, 1988

ROOT CAUSE

- PERSONNEL ERROR IN THAT THE OPERABILITY TRACKING LOG WAS INCORRECTLY UPDATED AND MAINTAINED WITH REGARD TO AFFECTED ESF EQUIPMENT

CORRECTIVE ACTION

- PLANT OPERATIONS PROCEDURE OPOP01-ZQ-0030 HAS BEEN REVISED TO PROVIDE A MORE STRUCTURED TECHNICAL SPECIFICATION REVIEW FOR IMPACT OF INOPERABLE EQUIPMENT BOTH FOR THE EQUIPMENT DIRECTLY AFFECTED AND EQUIPMENT INDIRECTLY AFFECTED. THE REVISED PROCEDURE REQUIRES A THREE PARTY REVIEW FOR EACH TRACKING LOG ENTRY, SHIFT SUPERVISOR, UNIT SUPERVISOR AND STA
- SPECIAL TRAINING HAS BEEN CONDUCTED FOR LICENSED PERSONNEL, EMPHASIZING THE IMPORTANCE OF ACCURATELY DETERMINING THE SUB-SYSTEMS AFFECTED BY INOPERABLE COMPONENTS USING THIS INCIDENT AS AN EXAMPLE
- COMPUTERIZED MODEL OF THE TECHNICAL SPECIFICATIONS FOR ANALYZING OPERABILITY ISSUES IS NOW BEING USED TO ENHANCE OPERABILITY DETERMINATION

Maintenance of Plant Operations Logbooks
OPERABILITY TRACKING FORM
 OPOP01-ZQ-0030-2
 (Page 1 of 1)

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INOPERABILITY INITIATION

OTL# _____ TS LCO# _____ Modes Applicable _____ System _____ Component _____

INOP DATE/TIME _____
 Cause of INOP Condition _____

RESTORATION REQUIRED: DATE _____ TIME _____
 REQUIRED ACTION IF RESTORATION TIME EXCEEDED: _____

Control Room Log Reviewed? (Initial) _____
 OTL# Entered in Control Room Log?(Initial) _____
 T.S. Tracking Computer Checked? (Initial) _____
 Other Equipment/LCO Affected _____

Comments _____

Prepared By: _____ Unit Sup. _____ S.T.A. _____ Shift Sup. _____

ACTION TRACKING

Action Required While INOP _____

Initial Actions Performed _____ By _____ (enter time next due below)
 Unit Supervisor's Initials indicate required actions completed. Enter time next action due in next block

ACT#																			
DATE																			
TIME																			
INIT																			

ACT#																			
DATE																			
TIME																			
INIT																			

CLOSE OUT

Action Restoring Item to Service _____
 Declared Operable DATE _____ TIME _____ By _____

This form shall be retained a minimum of one year.

