STP Nuclear Operating Company
South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

March 26, 1998
NOC-AE-000118
File No. G20.02.01
10CFR50.90
10CFR50.92

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

South Texas Project
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Proposed Response to Request for Additional Information
and Proposed Agenda for Telephone Meeting

Reference: Request for Additional Information on Proposed Conversion to the Improved Standard Technical Specifications, South Texas Project Units 1 and 2 (STP) (TAC Nos. M95529 and M95530) dated March 5, 1998 (ST-AE-NOC-000104)

The STPNOC proposed response to the referenced Request for Additional Information (RAI) is attached (Attachments 1 through 4). We would like to use this proposed response as a basis for a teleconference call to be conducted the week of March 30, 1998. We would also like to establish an agenda for the teleconference call based on those items where the NRC still has an issue with the STPNOC proposed response.

A brief listing of the RAI item dispositions is included on pages 3 and 4. We believe only items in bold type should be on the teleconference call agenda. The items where we have incorporated the NRC comments are noted and we don't believe they require any additional discussion. The NRC is requested to review the remainder of the items to identify any revisions to the agenda. If the teleconference call is not effective in resolution of the items, a follow-up meeting should be held in the NRC's Rockville offices.

If you have any questions, please call me at 512-972-8686 or Wayne Harrison at 512-972-7298.

Lawrence E. Martin
Vice President
Nuclear Assurance and Licensing

310026

/AWH

Attachments
Attachment 1 ITS All LCOs/Sections
Attachment 2 ITS Section 3.5, ECCS Systems
Attachment 3 ITS Section 3.6, Containment Systems
Attachment 4 Containment Pressure/Temperature Analysis

A001/1

H:\WP\NL\NRC-WK\TSC-980118.DOC

STI: 30578211

Ellis W. Merschoff
Regional Administrator, Region IV
U. S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-8064

Thomas W. Alexion
Project Manager, Mail Code 13H3
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

David P. Loveless
Sr. Resident Inspector
c/o U. S. Nuclear Regulatory Commission
P. O. Box 910
Bay City, TX 77404-0910

J. R. Newman, Esquire
Morgan, Lewis & Bockius
1800 M. Street, N.W.
Washington, DC 20036-5869

M. T. Hardt/W. C. Gunst
City Public Service
P. O. Box 1771
San Antonio, TX 78296

A. Ramirez/C. M. Canady
City of Austin
Electric Utility Department
721 Barton Springs Road
Austin, TX 78704

Jon C. Wood
Matthews & Branscomb
One Alamo Center
106 S. St. Mary's Street, Suite 700
San Antonio, TX 78205-3692

Institute of Nuclear Power
Operations - Records Center
700 Galleria Parkway
Atlanta, GA 30339-5957

Richard A. Ratliff
Bureau of Radiation Control
Texas Department of Health
1100 West 49th Street
Austin, TX 78756-3189

D. G. Tees/R. L. Balcom
Houston Lighting & Power Co.
P. O. Box 1700
Houston, TX 77251

Central Power and Light Company
ATTN: G. E. Vaughn/C. A. Johnson
P. O. Box 289, Mail Code: N5012
Wadsworth, TX 77483

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

RAI No.	Brief Disposition
Generic # 1:	**STP has provided additional information, but is proposing no changes to the application.**
Generic #2:	**STP has provided additional information, but is proposing no changes to the application.**
Generic #3:	**STP has proposed a revision to the Bases, but prefers to retain a single specification for RHR and SI.**
Generic #4:	No discussion needed. STP has proposed to substantially incorporate the NRC comment with the exception that we believe that a Less Restrictive Discussion of Change (L DOC) is more appropriate than a Less Restrictive/Admin Change (LA DOC).
3.5.2-1:	A new Justification for Deviation (JFD) is proposed to explain deletion of the note.
3.5.2-2:	**Discuss as part of Generic Issues. Addressed by responses to Generic #1 and Generic #3.**
3.5.2-3:	STP has proposed revised NUREG/Bases markups and JFDs.
3.5.2-4:	**STP has proposed a clarification of the DOCs and provided additional information.**
3.5.2-5:	**STP has proposed some corrections to the NUREG markup and the affected Surveillance Requirements.**
3.5.2-6:	**STP has explained the station interpretation and does not believe a change is required.**
3.5.2-7:	No discussion needed. STP has proposed to revise the DOCs in accordance with the NRC comment.
3.5.2-8:	No discussion needed. Addressed by response to Generic #4.
3.5.2-9, 10:	Not used.
3.5.2-11:	STP explained the station interpretation and does not believe a change is required.
3.5.2-12:	**Discuss as part of Generic Issues. Addressed by response to Generic #3.**

RAI No.	Brief Disposition
3.5.2-13:	No discussion needed. STP has proposed to revise the DOCs in accordance with the NRC comment.
3.5.2-14:	Not used.
3.5.2-15:	STP has explained the station design/licensing basis and proposed to incorporate the information into the DOC and Bases.
3.5.2-16:	Addressed by response to Generic #2.
3.5.2-17:	STP verified NRC assumption.
3.5.2-18:	**Discuss as part of Generic Issues. Addressed by response to Generic #1.**
3.6.6-1:	**Discuss as part of Generic Issues. Addressed by response to Generic #1.**
3.6.6-2:	No discussion needed. STP has proposed to incorporate the NRC comment.
3.6.6-3:	STP has responded to the NRC question. No changes to the application are proposed.
3.6.6-4:	Not used.
3.6.6-5:	**STP has responded to the NRC question and attached analytical information submitted in support of a previous license amendment. No changes to the application are proposed.**
3.6.6-6:	STP has responded to the question. No changes to the application are proposed.
3.6.6-7:	STP has proposed to clarify the affected JFD with additional information regarding the current licensing basis.
3.6.6-8:	No discussion needed. STP has proposed to incorporate the NRC comment.
3.6.6-9, 10:	Not used.
3.6.6-11:	STP has proposed to clarify the DOC.
3.6.6-12:	No discussion needed. Addressed by the response to Generic #4.
3.6.6-13:	STP has provided the station interpretation. No changes to the application are proposed.

ATTACHMENT 1

ITS All LCOs/Sections

Generic #1 DOC M4 and JFD #5 & #6
ITS 3.5.2, Action A and B, Completion Times
DOC M7 and JFD #11
ITS 3.6.6, Action A and B, Completion Times

CTS 3.5.2 and CTS 3.5.6 have been combined into ITS 3.5.2. CTS 3.6.2.1 and CTS 3.6.2.3 have been combined into ITS 3.6.6. Now, ITS 3.5.2 and 3.6.6 have separate Actions A and B for two different non-related-systems inoperable. These situations do no appear to be covered under Section 1.3, Example 1.3-3 which attempts to limit the time spent in the respective actions.
Comment: STP is to explain in detail the operational "maneuvering" which occurs between Actions for ITS 3.5.2 as is discussed in DOC M4 and the limiting of "serial entries" as discussed in DOC M7 for ITS 3.6.6. Provide explicit examples. Provide this for each LCO where this example is applied. In addition, explain which Action of the LCO relates directly to the respective Actions A, B and C of the Example 1.3-3.

STP Response:

ITS 3.5.2

Although STP's RHR is not an ECCS, it is relied on for long-term cooling for several design basis accidents. As a result, the STP current licensing basis requires an operable RHR system in MODES 1, 2, and 3. This is unique to STP and therefore is not addressed in the Standard Technical Specifications (STS)(NUREG 1431). STP made a decision early in the conversion to the Standard Technical Specifications to combine the current ECCS specification and the RHR specification in the ECCS section into one specification (Improved Technical Specification 3.5.2) to adhere as closely to the standard as possible. The specification was developed under the guidance of the writers guide to ensure the content and format met the standard. Adding the additional completion time of "21 days from discovery of failure to meet the LCO" addressed the potential issue of continuous operation of the plant with a degraded emergency core cooling system. How continuous operation under an ECCS degraded condition could occur is best explained by the following example:

If a RHR subsystem is found inoperable (Condition A) the clock starts for the 14 day Completion Time. Assume that twelve days into the 14 day allowed outage time an SI subsystem becomes inoperable (Condition B) and the clock starts for the 7 day Completion Time. A few hours later Required Action A.1 is satisfied and Condition A is exited but the clock continues for Condition B. Six days into the Completion Time for Condition B a RHR subsystem is found inoperable again and the 14 day clock starts for Condition A. During that same day the SI subsystem is returned to operable status within the allowed outage time and Condition B is exited but the clock continues for Condition A.

This type of scenario, alternating between an inoperable RHR subsystem and an inoperable SI subsystem, could continue indefinitely which would mean that the ECCS could stay in a degraded condition continuously. The addition of the Completion Time, "AND 21 days from discovery of failure to meet the LCO," prevents this from happening since it is based on failure to meet the LCO and not on inoperable equipment.

This approach is consistent with other specifications found in the STS (e.g. STS 3.7.5) and was felt to be an important more restrictive change to include. The specifications were not written to match the examples in section 1 but were written to the requirements of the writers guide and to make sure the current licensing basis is satisfied. However, example 1.3-3 does provide how to interpret the use of this separate completion time. There are no current required actions for conditions where a RHR subsystem and an SI subsystem are inoperable at the same time that would result in a shorter completion time. That is why the example in section 1.3 is not the same as the specification in question. The examples in section 1.3 are provided to help the user to understand how to interpret the new standard technical specifications, not to establish the only methods of development.

ITS 3.6.6

STP design is such that the Containment Spray System and the Reactor Containment Fan Cooler (RCFC) System provide the containment atmosphere cooling to limit post accident pressure and temperature in containment. These two systems were covered under separate specification in the current technical specifications and were combined during the conversion to the Standard Technical Specifications STS (NUREG 1431) in order to adhere to the standard as much as possible. The specification was developed under the guidance of the writers guide to ensure the content and format met the standard. Adding the additional completion time of "56 days from discovery of failure to meet the LCO" addressed the potential issue of continuous operation of the plant with a degraded containment cooling system. How continuous operation under a containment cooling system degraded condition could occur is best explained by the following example:

If a containment spray train is found inoperable (Condition A) the clock starts for the 28 day Completion Time. Twenty-seven days into the 28 day allowed outage time a RCFC train becomes inoperable (Condition B) and the clock starts for the 28 day Completion Time. A few hours later Required Action A.1 is satisfied and Condition A is exited but the clock continues for Condition B. Twenty-seven days into the Completion Time for Condition B a containment spray train is found inoperable again and the 28 day clock starts for Condition A. During that same day the RCFC train is returned to operable status within the allowed outage time and Condition B is exited but the clock continues for Condition A.

This type of scenario, alternating between an inoperable containment spray train and an inoperable RCFC train, could continue indefinitely which would mean that the containment cooling system could stay in a degraded condition continuously. The addition of the Completion Time, "AND 56 days from discovery of failure to meet the LCO," prevents this from happening since it is based on failure to meet the LCO and not on inoperable equipment.

This approach is consistent with the STS and was felt to be an important more restrictive change to include. The specifications were not written to match the examples in section 1 but were written to the requirements of the writers guide and to make sure the current licensing basis is satisfied. However, example 1.3-3 does provide how to interpret the use of this separate completion time. There are no current required actions for conditions where a containment spray train and a RCFC train are inoperable at the same time that would result in a shorter completion time. That is why the example in section 1.3 is not the same as the specification in question. The examples in section 1.3 are provided to help the user to understand how to interpret the new standard technical specifications not to establish the only methods of development.

Generic #2 DOC L17 - CTS 4.5.6.1
JFD #5 - ITS SR 3.5.2.3
DOC A27 - CTS 4.6.2.1.a
JFD #5 - ITS SR 3.6.6.4
DOC L25 - CTS 4.7.7.b and CTS 4.7.7.e.3
JFD #20 - ITS SR 3.7.11.1 & SR 3.7.11.4
DOC L20 - CTS 4.7.8.a and 4.7.8.d.3; CTS 4.9.12.a and 4.9.12.d.3
JFD #5 - ITS SR 3.7.12.1 & 4; and ITS SR 3.7.13.1 & 4

ITS 3.5.2, 3.6.6, 3.7.11, 3.7.12 and 3.7.13 contain STAGGERED TEST BASIS requirements which have changed as a result of the adaptation of the two train STS to the three-train STP design. The CTS 1.35, STAGGERED TEST BASIS is changed significantly by the STAGGERED TEST BASIS revised definition in the STS. These changes have resulted in the identification of new frequency intervals that can not be determined to match the revised STAGGERED TEST BASIS definition.
Comment: Each application of the new STAGGERED TEST BASIS definition must be evaluated to determine if it is more frequent, less frequent or the same. STP is requested to provide the following for each situation. 1) State the current test cycles per train as derived directly from the CTS requirements; 2) If the specific number of days interval is not stated, and it is in accordance with CTS 4.0.5, then state the interval from the ASME code and identify the applicable code section.; 3) State the test cycles per train as derived directly from the STS requirements; 4) State the test cycles per train as derived directly from the proposed ITS requirements. Using DOC L17 as an example, use the format shown on page 7 in the STPEGS February 11, 1997 letter, #ST-HL-AE-5571. DOC L17 describes the addition of a fourth Train D in order to make the testing fit a 12-week cycle. A 12-week cycle is equally divisible by three as it is by four, so please explain what is this fourth train? What are the specific ECCS pump train requirements the tests are verifying. Please provide the instrumentation schematics which are necessary to understand the addition of Train D.

STP Response:

STP is a four loop plant with three ESF Safety Trains. The four primary loop configuration with independent Auxiliary Feedwater to each Steam Generator effectively creates a fourth train for the D loop. Examples are four independent Auxiliary Feedwater trains, four trains of Main Steam and Feedwater, four trains of Steam Generator blowdown, as well as, Component Cooling Water and Seal Injection to the D Reactor Coolant Pump. Additionally, there are four channels of instrumentation for some Reactor Protection System (RPS) and Engineered Safety Features Actuation System functions. Examples of these are Pressurizer Pressure, Pressurizer Level, Steam Generator Level and Power Range Nuclear Instrumentation.

The twelve week, four train, schedule is one of the primary administrative controls that prevents unplanned cross-train events and organizes work into a logical, planned configuration. The D train week is necessary for the fourth Auxiliary Feedwater train and RPS instrumentation. In the two out of four logic for the Reactor Protection System, a reactor trip would be the result of having one channel out of service and then requiring another channel to be placed in trip for surveillance testing. The four train schedule is a means of limiting the trip risk in these instances. A typical twelve week schedule for staggering three ESF Safety trains is shown in the Figure 1 below, Testing of 3 Safety

Trains (A, B, C). The small change in the frequency of testing as a result of the STP design is a result of the effort to reduce the potential for reactor trips or multiple trains out of service and does not significantly impact the stagger testing benefit. The change in the frequency is requested only to allow compliance with the stated test frequency within the train schedule without the use of the grace allowance for testing. The frequency change does not impact the overall completion of the surveillance testing for all of the trains in that, the testing of all three safety trains will be completed within the 93 days allowed if the original frequency of 31 days was used, as shown on page 7 in the STPEGS February 11, 1997 letter, #ST-HL-AE-5571 for the three train plant.

FIGURE 1 - TESTING OF 3 SAFETY TRAINS (A, B, C)

STAGGERED TESTING FOR A TWO TRAIN PLANT													
WEEK	1	2	3	4	5	6	7	8	9	10	11	12	1
TRAIN	A	B	C	A	B	C	A	B	C	A	B	C	A
TEST	X				X				X				X
	|---------28 DAYS------|---------28 DAYS-------|---------28 DAYS-------|												
STAGGERED TESTING FOR A THREE TRAIN PLANT													
WEEK	1	2	3	4	5	6	7	8	9	10	11	12	1
TRAIN	A	B	C	D	A	B	C	D	A	B	C	D	A
TEST	X					X					X		X
	|------------35 DAYS--------|-----------35 DAYS-----------|--14 DAYS--|												

CTS 4.5.6.1 - ITS SR 3.5.2.3

The frequency for inservice testing, in accordance with the ASME Section XI Code requirements and the associated Relief Requests, is semiannual (184 days) for the Residual Heat Removal (RHR) and Containment Spray (CS) pumps. Each of these systems contains 3 Safety trains with a pump in each train. The frequency of testing for these pumps is effectively one pump every two months or 61 days. Relief Request approval was granted for the inservice testing of these pumps in letter #ST-AE-HL-93719 dated 2/17/94.

The Staggered Test Frequency Comparison is shown in Figure 2 and is described in the following paragraphs. The frequency of staggered testing for the Residual Heat Removal (RHR) Pumps was determined by the benefit derived in combining the slave relay testing and RHR Pumps inservice testing. The combining of these two tests cut in half the number of RHR pump starts required and the number of containment entries needed to support these pump starts. The slave relay tests are safety train related and the testing frequency is adjusted to fit the train schedule. Figure 3, Semiannual Frequency Testing Within the Twelve Week Schedule, shows how a 6 month frequency (24 weeks, only 168 days using the twelve week schedule) can be divided evenly (8 weeks, 8 weeks, and 8 weeks). However, alignment of the RHR inservice tests with the slave relay tests within the train schedule allows for staggered testing on intervals of 10 weeks, 7 weeks, 7 weeks. The ITS frequency requested is 70 days based on the longest span of 10 weeks, however testing will be performed with only 49 days between the other tests. As stated above, the small change in the frequency of testing as a result of the STP design reduces safety equipment actuation, reduces radiation exposure and reduces the potential for multiple trains out of service simultaneously and it does not significantly impact the staggered testing benefit. The change in the frequency is requested only to allow compliance with the stated test frequency within the train schedule without the use of the grace allowance for testing. The frequency change does not impact the overall completion of the surveillance testing for all of the trains in that, the testing of all three safety trains will be completed within the 184 days allowed if the original frequency (61 days times three trains) was used.

CTS 4.6.2.1.B - ITS SR 3.6.6.4

Containment Spray Pumps inservice testing is performed during the Train week associated with the train in which the pump is a component. The pump inservice test and a quarterly requirement to start the pump is required to prove continuity between the slave relay and the Containment Spray Pumps. The Technical Specification frequency described above is 61 days times three trains for a total of 184 days. However, Containment Spray Pump inservice tests are performed within the train schedule on staggered test intervals of 10 weeks, 7 weeks, 7 weeks. The ITS frequency requested is 70 days based on the longest span of 10 weeks, however testing will be performed with only 49 days between the other tests. The small change in the frequency of testing as a result of the STP design reduces the potential for multiple trains out of service simultaneously and it does not significantly impact the staggered testing benefit. The change in the frequency is requested only to allow compliance with the stated test frequency within the train schedule without the use of the grace allowance for testing. The frequency change does not impact the overall completion of the surveillance testing for all of the trains in that, the testing of all three safety trains will be completed within the 184 days allowed if the original frequency (61 days times three trains) was used. The Improved Technical specification definition for staggered testing does not affect the testing frequency of these pumps at STP.

CTS 4.7.7.B - ITS SR 3.7.11.1

Operability testing of the Control Room Envelope HVAC is performed in the current Technical Specifications on a staggered test basis. The frequency is established in the twelve week schedule as shown in the first figure, Testing of 3 Safety Trains (A, B, C) at a frequency of 35 days. The small change in the frequency of testing as a result of the STP design reduces the potential for reactor trips or multiple trains out of service and it does not significantly impact the stagger testing benefit. The change in the frequency is requested only to allow compliance with the stated test frequency within the train schedule without the use of the grace allowance for testing. The frequency change does not impact the overall completion of the surveillance testing for all of the trains in that, the testing of all three safety trains will be completed within the 93 days allowed if the original frequency of 31 days was used.

CTS 4.7.7.E.3 - ITS SR 3.7.11.4

The ITS frequency is the same as the STP current Specification which is 18 months. This frequency is more restrictive than NUREG 1431 which is 18 months on a staggered test basis. Using the NUREG frequency for 3 trains of Control Room Envelope HVAC would allow 54 months to complete all three trains. Removal of the staggered test basis requirement does not effect the technical requirements of the existing test.

CTS 4.7.8.A, 4.9.12.A - ITS SR.3.7.12.1, SR 3.7.13.1

The frequency for Fuel Handling Building HVAC testing is effectively unchanged. In both cases both trains of HVAC will be completed in 31 days. This is a less restrictive change due to the removal of the staggered test requirement, but the ITS frequency is the same as shown in the NUREG. This frequency is acceptable because the same amount of testing will be performed every month. This change is a result of an administrative change to the scheduling method of the tests and does not involve a technical change to the testing requirements.

CTS 4.7.8.D.3, 4.9.12.D.3 - ITS SR 3.7.12.4, SR 3.7.13.4

The ITS frequency is the same as the STP current Specification which is 18 months. This frequency is more restrictive than NUREG 1431 which is 18 months on a staggered test basis. Using the NUREG frequency for 2 trains of Fuel Handling Building HVAC would allow 36 months to complete both trains. Removal of the staggered test basis requirement does not effect the technical requirements of the existing test.

FIGURE 2 - STAGGERED TEST FREQUENCY COMPARISON

ITS Spec	CTS Freq	4.0.5 Freq	STS Freq	ITS Freq	Comments
SR 3.5.2.3	4.0.5	184 days / 3 trains = 61 days Relief Requests	IST Program	70 days	Less restrictive change from CTS to STS and ITS. However, all 3 Trains will be performed within 61 days X 3 trains = 184 days.
SR 3.6.6.4	4.0.5	184 days / 3 trains = 61 days Relief Requests	IST Program	61 days	No change.
SR 3.7.11.1	92 days / 3 trains = 31 days (staggered)	N/A	31 days (not staggered)	35 days (staggered)	Less restrictive change from CTS to STS and ITS. However, all 3 Trains will be performed within 31 days X 3 trains = 92 days.
SR 3.7.11.4	18 months	N/A	18 months X 3 trains = 54 months staggered	18 months	CTS is equal to ITS. STS is less restrictive.
SR 3.7.12.1	31 days / 2 trains = 15 days (staggered)	N/A	31 days (not staggered)	31 days (not staggered)	less restrictive change from CTS due to removal of staggered test requirement. Frequencies are effectively equal (both trains complete in 31 days)
SR 3.7.12.4	18 months	N/A	18 months X 2 trains = 36 months staggered	18 months	CTS is equal to ITS. STS is less restrictive.
SR 3.7.13.1	31 days / 2 trains = 15 days (staggered)	N/A	31 days (not staggered)	31 days (not staggered)	less restrictive change from CTS due to removal of staggered test requirement. Frequencies are effectively equal (both trains complete in 31 days)
SR 3.7.13.4	18 months	N/A	18 months X 2 trains = 36 months staggered	18 months	CTS is equal to ITS. STS is less restrictive.

CTS Freq. - current test cycles per train as derived directly from the CTS requirements
4.0.5 Freq. - specific number of days from the ASME code, as applicable.
STS Freq. - test cycles per train as derived directly from the STS requirements.
ITS Freq. - test cycles per train as derived directly from the proposed ITS requirements.

FIGURE 3 - Semiannual Frequency Testing Within the Twelve Week Schedule

STAGGERED TESTING FOR 6 MONTH FREQUENCY WITH THREE TRAINS PERFORMED ON TRAIN WEEKS																									
WEEK	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1
TRAIN	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A
TEST	X										X							X							X
	|--------------------70 DAYS--------------------|-------------49 DAYS-------------|------------49 DAYS---------------|																								

STAGGERED TESTING FOR 6 MONTH FREQUENCY WITH THREE TRAINS PERFORMED ON D TRAIN WEEK																									
WEEK	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1
TRAIN	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A
TEST								X								X								X	
	-----------56 DAYS----------------|---------------56 DAYS---------------|---------------56 DAYS----------------|------																								

Applicable Technical Specifications

CTS	ITS
4.5.6.1	SR 3.5.2.3
4.6.2.1.b	SR 3.6.6.4

Generic #3 DOC A1-1 for CTS 3.5.2, Action a
DOC A1-1 for CTS 3.5.6, Actions a, b, and c
DOC A1-3 for CTS 3.5.6, LCO Statement
JFD #5 and #6 for ITS 3.5.2, All Actions

CTS 3.5.2 and CTS 3.5.6 have been combined into one LCO - ITS 3.5.2. ITS 3.5.2 requires three ECCS trains to be Operable. All ITS Actions refer to the inoperability of SI or RHR "subsystems". The Bases Background discussion uses "trains" and "subsystems" interchangeably when an ECCS train appears to be composed of components from more than one subsystem.
Comment: The use of the term "subsystems" is not distinct as the use of the term "trains". The LCO/Bases terminology should be changed to "ECCS train(s)" or "RHR train(s)". This is because an inoperable RHR heat exchanger in one RHR subsystem also makes a "SI" subsystem flowpath inoperable. Likewise, the RHR "loop" terminology used in this LCO and elsewhere in the ITS should be clarified or RHR "trains" should be used consistently. Alternately, the two CTS LCOs could be retained as two separate ITS LCOs in this conversion.

STP Response:

ITS 3.5.2 specification and Bases have been reviewed and modifications made to ensure consistency regarding references to SI or RHR portions of the specification. The wording will be consistent with the description given in the Bases;

> "The ECCS consists of two subsystems: A Safety Injection (SI) subsystem and a RHR subsystem. Each subsystem consists of three redundant, 100% trains. The SI subsystem includes the High Head Safety Injection (HHSI) pumps, Low Head Safety Injection (LHSI) pumps, RHR heat exchangers, and the associated valves.
>
> The RHR subsystem flow paths consist of piping, valves, heat exchangers, and pumps such that suction can be taken from the RCS hot legs, cooled in the RHR heat exchangers,... The major components of each train are the RHR pump and the RHR heat exchanger."

Generic #4	DOC L21 -	CTS 4.6.2.1.c.2 and 4.6.2.3.b ITS SRs 3.6.6.5, 3.6.6.6 and 3.6.6.7
	DOC A9 -	CTS 4.5.2.e.1 and 2 ITS SRs 3.5.2.5 and 3.5.2.6
	DOC M3, L22, -	CTS 4.7.1.5; 4.7.1.2.1.b.1 & 2 ITS SR 3.7.2.1; SRs 3.7.5.3, 3.7.5.4
	DOC L27; L28 -	CTS 4.7.3.b.1 & 2; CTS 4.7.4.b.1, 2 & 3 ITS SRs 3.7.7.1, 3.7.7.2; ITS SRs 3.7.8.2, 3, & 4
	DOC L32; L40 -	CTS 4.7.14.b; 4.7.7.e.2 ITS SRs 3.7.10.1 & 2; SR 3.7.11.3
	DOC L41; -	CTS 4.7.8.d.2; 4.9.12.d.2 ITS SRs 3.7.12.3; 3.7.13.3

There are various CTS requirements, as identified above, which have verifications that pumps/chillers/trains or systems, actuate or start on the specified test actuation signal. ITS has changed these requirements to permit credit for either an "actual or simulated" test signal be given to satisfy this test for Operability.

Comment: It is acceptable to make this ITS change; however, there are consistency issues existing in the technical justification for these changes that needs a uniform resolution. These identical CTS changes have been justified, simultaneously, as more restrictive, less restrictive and as administrative. It is proposed that DOC L21 of CTS 3/4.6.2 be used as a standard which has the following features: it is justified as less restrictive change and the specified design actuation signal is relocated to the Bases of the SR description with an "LA" DOC justification. STP is requested to standardize each CTS change which use these features.

STP Response:

STP will replace ITS 3.5 DOCs A.9 and L.6, and ITS 3.7 DOCs M.3 and M.6 with "L" DOCs that are similar to ITS 3.6 DOC L.21. STP reviewed ITS 1.0 DOC L.3, ITS 3.7 DOCs L.22, L.27, L.28, L.32, L.40 and L.41, ITS 3.8 DOC L.24 and concluded they do not require revision. No other occurrences were found. STP believes that a L DOC is more appropriate than a LA DOC since the provision for an actual signal is new and less restrictive and does not merely involve an administrative relocation of an existing requirement or provision to another document.

ATTACHMENT 2

ITS Section 3.5, ECCS Systems

3.5.2, ECCS - Operating

3.5.2-1 JFD #3
STS 3.5.2, Applicability, Note #1

STS 3.5.2, Applicability, Note #1 permits both (SI) pump flow paths to be isolated by closing the isolation valves for up to 2 hours to perform pressure isolation valve testing. The ITS deletes this note without adequate technical explanation.
Comment: Specifically explain how does STP perform PIV testing without isolating the ECCS flowpaths, without entering Actions and without the need of this exception to the LCO Applicability?

STP Response:

A new JFD will be provided to better explain the deletion of this note. It will include the following information;

> For a two train plant, the testing of the PIVs on both trains must be done at the same time and would require both train's isolation valves to be closed at the same time. This condition would normally require the plant to enter LCO 3.0.3 during the test. This is a result of the two SI trains feeding to a common header just upstream of the pressure isolation valves. This note allows time for a two train plant to perform the required tests without having to shut down. STP does not require this exception to perform the testing since the ECCS trains do not feed into a header arrangement. Each train of HHSI and LHSI is independent and their are no cross connections between trains. PIV testing at STP is performed on one train at a time. Therefore, any testing only requires tracking the time each train is inoperable but no adverse trending is associated with the performance of these SRs. The testing is done in conjunction with the normal maintenance/outage schedule.

3.5.2-2 JFD #5 and #6
ITS 3.5.2 Actions A, B, C, D, F and G

Comment: This is the same as Generic Comments #1 and #3.

STP Response:

See response to generic comments #1 and #3
3.5.2-3 JFD #5
ITS 3.5.2 Action B, Completion Time and Action F

The JFD #5 justification in Action B for adding "21 days from discovery of failure to meet the LCO" implies this is part of the current licensing basis which is not the case. JFD #5 should only apply to the 7 day Completion Time. The JFD #5 justification in ITS Action F implies this new action is part of the current licensing basis which is not the case.

Comment: Please revise the submittal to clarify the difference between the proposed new requirements and the current licensing basis.

STP Response:

The following JFD needs to be added to justify the addition of the new completion time, "21 days from discovery of failure to meet the LCO."

The proposed change adds a second Completion Time than that provided in the CTS. The Completion Time of, "21 days from discovery of failure to meet the LCO" is based on the ITS format of TS which limits alternating between Actions such that the LCO may not be met indefinitely. The addition of this second Completion Time limits the time that the LCO is not met. This Completion Time was designed to limit serial entries into different Actions or Conditions of the same TS to one time. Since the Completion Times in this TS are 14 days for RHR and 7 days for SI, the total time the LCO may not be met is set to 21 days. This limits consecutive entry into the certain Conditions for Safety Injection and Residual Heat Removal to one time.

This requires changes to the NUREG specification and Bases markup and both JFD lists.

ITS 3.5.2 Conditions D and F address the situations where two or three SI trains are inoperable. The CTS does not address these conditions and therefore requires entry into LCO 3.0.3 under both conditions. ITS 3.5.2 Condition D allows 24 hours to restore 1 SI train to operable status when two SI trains are inoperable and this less restrictive change is covered under L.2. Condition F is considered an administrative change because it only addresses what should occur if two or three SI trains are inoperable and does not readdress the less restrictive change discussed in L.2. Action F merely states that if the required completion time is not met for restoring at least one of two inoperable SI trains or if all three SI trains are inoperable then LCO 3.0.3 must be entered. This is essentially the same as the CTS requirement under these conditions and is explained in DOC A.7 (which is to be relocated to DOC L.2 per response to 3.5.2-13). Therefore, no changes are required.

3.5.2-4 JFD #3
STS SR 3.5.2.1
DOC L4
CTS 4.5.2.a

CTS 4.5.2.a lists two valves in each ECCS train which needs to have position verified every 24 hours. ITS 3.5.2 deletes this CTS surveillance.
Comment: It is agreed that these valves are not those valves where a misalignment of a single valve will cause the defeat of multiple trains of equipment. A misaligned valve can re-direct ECCS flow, however, away from the intended cold-leg injection flowpath to the reactor core. STP has already been provided with a 24 hour Frequency which is a relaxation from the 12 hours required by the more common Westinghouse ECCS design and the STS. With the proposed deletion of this verification, STP should state specifically how these valves will be verified in their correct position and at what frequency. Will ITS SR 3.5.2.1, as written, apply to these type of valves? It appears both sets of these valves are not controlled in the same manner. It has been verified on the ECCS P&ID's that the three High Head Hot Leg Recirculation valves state "power lockout" but the three Low Head Hot Leg Recirculation Isolation valves are not equally indicated. STP should explain this difference.

STP Response:

Q. With the proposed deletion of this verification, STP should state specifically how these valves will be verified in their correct position and at what frequency.

A. High Head Hot Leg Recirculation valves XSI-0008A, XSI-0008B, and XSI-0008C and Low Head Hot Leg Recirculation Isolation valves XRH-0019A, XRH-0019B, and XRH-0019C will be verified in their correct position during system lineups and required surveillances that stroke the valves. The basis for the 24 hour frequency of the CTS was that in the more common Westinghouse ECCS design, mis-alignment of a single valve can cause the defeat of multiple trains of equipment. The STP design uses individual train specific Hot Leg recirculation lines without a common header. As such, the mis-positioning of a valve could, at worst, affect a single train. Therefore, this surveillance has been removed and the valves will be treated in a manner similar to others with the same potential for disabling a single train of equipment. DOC L.4 will be changed to provide more information as follows:

L.4 The CTS requirement of 4.5.2.a for a daily verification that power is removed from the Hot Leg recirculation isolation valve operators has been deleted. This change is made consistent with the design of the South Texas Project (STP) ECCS in which each valve can only affect the operation of a single train. The basis for the 24 hour frequency of the CTS was that in the more common Westinghouse ECCS design, mis-alignment of a single valve can cause the defeat of multiple trains of equipment. The STP design uses individual train specific Hot Leg recirculation lines without a common header. As such, the mis-positioning of a valve could, at worst, affect a single train. Therefore, this surveillance has been removed and the valves will be treated in a manner similar to others with the same potential for disabling a single train of equipment. That is, High Head Hot Leg Recirculation valves XSI-0008A, XSI-0008B, and XSI-0008C and Low Head Hot Leg Recirculation Isolation valves XRH-0019A, XRH-0019B, and XRH-0019C will be verified in their correct position during system lineups. This change represents a less restrictive change which recognizes and credits the STP design.

Q. Will ITS SR 3.5.2.1, as written, apply to these type of valves?

A. ITS SR 3.5.2.1 does apply but the valve's position will not be verified because ITS SR 3.5.2.1 contains the phrase "that is not locked, sealed, or otherwise secured in position". The power lockout features for the High Head Hot Leg Recirculation valves XSI-0008A, XSI-0008B, and XSI-0008C and Low Head Hot Leg Recirculation Isolation valves XRH-0019A, XRH-0019B, and XRH-0019C places them in the "otherwise secured" category.

Q. It appears both sets of these valves are not controlled in the same manner. It has been verified on the ECCS P&ID's that the three High Head Hot Leg Recirculation valves state "power lockout" but the three Low Head Hot Leg Recirculation Isolation valves are not equally indicated. STP should explain this difference.

A. Both the High Head Hot Leg Recirculation valves and the Low Head Hot Leg Recirculation Isolation valves are controlled in the same manner.
The power lockout features for the High Head Hot Leg Recirculation valves XSI-0008A, XSI-0008B, and XSI-0008C are shown on P&IDs, Safety Injection System, 5N129F05013, 5N129F05014, and 5N129F05015, respectively.
The power lockout features for the Low Head Hot Leg Recirculation Isolation valves XRH-0019A, XRH-0019B, and XRH-0019C are shown on P&ID, Residual Heat Removal System, SR169F20000.

3.5.2-5 DOC A1-2
CTS 4.5.2.b.2, 4.5.2.e.1 and 2, 4.5.2.f
JFD #4
ITS SRs 3.5.2.1, 3.5.2.4 and 3.5.2.5

CTS 4.5.2.b.2, 4.5.2.e.1 and 2, 4.5.2.f have been modified to change "ECCS" to the specific names and identity of the components to be tested in each ECCS train flowpaths. This similar change has been made inconsistently in the ITS to SRs 3.5.2.1, 3.5.2.4 and 3.5.2.5.
Comment: Because of the new ITS SR 3.5.2.3, the ITS SR 3.5.2.4 does not need to redundantly verify the RHR developed pump head. Also, the LCO applies to ECCS trains and the Bases define the components in each ECCS train. Therefore, reference to each valve in an ECCS train will apply equally to all the valves in the HHSI, LHSI and the RHR piping. It appears that only ITS SR's 3.5.2.3 and 3.5.2.4 need specific name clarification. STP is requested to revise the submittal or otherwise explain if there is another plant specific reason to identify each component differently than the STS. Please note resolution of Generic Comment #3 may affect this comment.

STP Response:

Comment: Because of the new ITS SR 3.5.2.3, the ITS 3.5.2.4 does not need to redundantly verify the RHR developed pump head.

Response: Rev. 0, Dated 7/18/97 (ITS Supplement) does not include RHR developed pump head in ITS SR 3.5.2.4. It was crossed out when SR 3.5.2.3 was added. However that specific change was not carried through to the NUREG markup and will be corrected.

Comment: The LCO applies to ECCS trains and the Bases define the components in each ECCS train. Therefore, reference to each valve in an ECCS train will apply equally to all the valves in the HHSI, LHSI and the RHR piping. It appears that only ITS SR's 3.5.2.3 and 3.5.2.4 need specific name clarification. STP is requested to revise the submittal or otherwise explain if there is another plant specific reason to identify each component differently than the STS. Please note resolution of Generic Comment #3 may affect this comment.

Response: To be consistent with the description of the systems in the ITS 3.5.2 Bases (see Generic #3) the surveillances are written to make it clear that the equipment identified in the CTS are tested in the same way. The following is a summary of how the equipment will be identified in each surveillance:

SR 3.5.2.1 will be changed to involve only the SI subsystem portion of the ECCS because it does not apply to the RHR subsystem (see CTS 4.5.2.b.2 and 3.5.6).

SR 3.5.2.2 will be changed to involve only the SI subsystem portion of the ECCS because it does not apply to the RHR subsystem (see CTS 4.5.2.b.1 and 3.5.6).

SR 3.5.2.3 only involves the RHR pump due to the Frequency (See CTS 4.5.6.1).

SR 3.5.2.4 only involves the HHSI and LHSI pumps due to the Frequency (see CTS 4.5.2.f).

SR 3.5.2.5 will be changed to involve only the SI subsystem portion of the ECCS because it does not apply to the RHR subsystem (see CTS 4.5.2.e.1 and 3.5.6).

SR 3.5.2.6 only involves the HHSI and LHSI pumps (see CTS 4.5.2.e.2).

SR 3.5.2.7 will be changed to involve only the SI subsystem portion of the ECCS because it does not apply to the RHR subsystem (see CTS 4.5.2.d and 3.5.6).

3.5.2-6 DOC A1-5
CTS 3.5.6 Action b
ITS 3.5.2, Action C

CTS 3.5.6 Action b states "With two RHR loops inoperable, restore at least two RHR loops to Operable status within 24 hours...". ITS 3.5.2 Action C requires one restored Operable.
Comment: This is a technical change which has been justified with an editorial DOC A1. At question, specifically, is whether two inoperable trains must both be made Operable within 24 hours or is only one inoperable train to be made Operable in 24 hours. STP is requested to explain how this is currently interpreted and procedurally implemented for the CTS and provide an appropriate L DOC or explain why this is not necessary.

STP Response:

The intent of CTS Action b and ITS Required Action C.1 is for at least two of the three RHR subsystems to be OPERABLE within the 24 hour required completion time. With two operable trains, the plant would then be in CTS Action a or ITS Condition A with a completion time of 7 days less the time elapsed since the first of the two subsystems became inoperable. This interpretation is consistent with ITS 1.3 regarding Completion Times. Since this is not a change in the requirements or interpretation of the CTS, the DOC administrative change A.1 designation is correct.

3.5.2-7 DOC A8
CTS 4.5.2.e.1
ITS SR 3.5.2.1

CTS 4.5.2.e.1 verifies that <u>each</u> valve actuates to the correct position on an Automatic Switchover to Containment Sump test signal. ITS SR 3.5.2.4 exempts from repeated verification any valve that is locked, sealed or otherwise secured in position.
Comment: This change is acceptable to make because it is a relaxation provided in the guidance of NUREG-1431. The categorization by STP is in error. This change is not an administrative change but it is a less restrictive technical change because there is a reduction in the number of valves positions to be checked. STP should revise the submittal and provide a revised "L" DOC.

STP Response:

DOC A.8 will be deleted and a new less restrictive "L" DOC will be added to Section 3.5 as follows:

CTS Surveillance Requirement 4.5.2.e.1, requires each automatic valve in the flow path to actuate to its correct position upon receipt of an Automatic switchover to Containment Sump test signal. The proposed change is incorporated into ITS SR 3.5.2.4 and modifies the wording of the Surveillance to exclude the valves that are locked, sealed or otherwise secured in position. This change is considered less restrictive since it reduces the number of valves that have to be actuated to their correct position. The valves that are exempt from testing are normally locked or sealed in position such that they are not required to actuate to perform their safety function. This is acceptable because the AFW system can still perform its safety function. This change is consistent with NUREG-1431.

3.5.2-8 DOC A9
CTS 4.5.2.e.1 and 2
ITS SRs 3.5.2.5 and 3.5.2.6

CTS 4.5.2.e.1 and 2 verifies that each valve actuates to the correct position on an Automatic Switchover to Containment Sump or a Safety Injection test signal. The ITS SR 3.5.2.5 and SR 3.5.2.6 uses these same test signals or an actual actuation signal.
Comment: This change is acceptable to make because it is a relaxation provided in the guidance of NUREG-1431. The categorization by STP is in error. This change is not an administrative change but it is a less restrictive technical change. STP should revise the submittal and provide a revised "L" DOC just like the L21 for LCO 3.6.6 for the same CTS change.

STP Response:

See response to Generic #4.

3.5.2-9 NOT USED

3.5.2-10 NOT USED

3.5.2-11 DOC A1-4
CTS 4.5.2.f
ITS SR 3.5.2.4

CTS 4.5.2.f has been revised to eliminate the specific reference to test the pumps on recirculation flow. ITS SR 3.5.2.4 provides that pump performance may be verified with more accuracy at the "test flow point" with higher flows.
Comment: This technical change in the pump test requirements is justified as a "DOC A.1" which is for reformatting or editorial CTS changes. STP should revise the submittal to provide a new technical DOC justification which specifically addresses this change in pump testing requirements.

STP Response:

This change is considered an administrative change because there is no change in requirements for the testing. The "test flow point" is at the "recirculation flow" established in CTS 4.5.2.f and relocated per LA.6. There is no reference to "higher flows" in any documentation. The testing will continue to be at the recirculation flow rate.

3.5.2-12 DOC LA4
CTS 3.5.2 and Action a
CTS 3.5.6
ITS 3.5.2

CTS 3.5.2 and 3.5.6 explicitly define the components which make each ECCS train and RHR loop Operable. ITS 3.5.2 has relocated these descriptions of the Operability requirements to the Bases.
Comment: This relocation is acceptable; however, the text descriptions are confusing due to the comments noted in Generic Comment #3. Resolution of this Comment is dependent upon the generic resolution.

STP Response:

See response to Generic #3.

3.5.2-13 DOC A7 and L2
CTS 4.5.2 Action a
ITS 3.5.2 Action D, E and F

CTS 4.5.2 Action a provides compensatory action when only one ECCS train is inoperable. When two ECCS trains are inoperable, LCO 3.0.3 is invoked. ITS 3.5.2 adds Action D with two ECCS trains inoperable which allows 24 hours to restore two trains Operable before going to Mode 3. ITS 3.5.2 also adds Action F with three ECCS trains inoperable which invokes LCO 3.0.3.

Comment: In the CTS, the invoking of LCO 3.0.3 begins when two ECCS trains become inoperable rather than after three trains are inoperable. DOC A7 is not an administrative change but a technical CTS change which is really part of DOC L2. It is contradictory as presented in the CTS markup to justify these CTS changes as both administrative and less restrictive technical, concurrently. STP is requested to delete DOC A7 and just expand DOC L2, accordingly.

STP Response:

DOC A.7 will be designated as "not used" and its text relocated to DOC L.2.

3.5.2-14 NOT USED

3.5.2-15 DOC LA4
CTS 3.5.6 Footnote (*)

CTS 3.5.6 Footnote (*) states that valves MOV-0060 and MOV-0061 may have power removed to support the Fire Hazards Analysis Report (FHAR) assumptions. This footnote is not retained in ITS 3.5.2.

Comment: DOC LA4 discusses the relocation of the Operability requirements for the ECCS trains and the RHR loops. There is no specific justification for not retaining this CTS 3.5.2 Footnote (). These valves are apparently the RHR Suction Isolation valves which protect the RHR from the higher RCS pressure. Why was this footnote placed in the CTS? Doesn't the RHR System interlock perform the same function? The Bases apparently do not contain any discussion to explain why these RHR valves are deactivated to support the FHAR assumptions. There is no discussion for how long these valves are deactivated and how often? STP is requested to provide a separate "LA" DOC for this CTS change.

STP Response:

The CTS footnote was placed in the final draft specifications after discussion with the NRC staff as noted in the certification letter dated June 5, 1987 (ST-HL-AE-2232). The NRC Safety Evaluation Report (NUREG-0781, Supplement 2, Sec. 9.5.1.7) also notes that power is removed from the RHR suction isolation valves, although it does not specifically discuss the wording in the technical specifications.

As noted in LA.4, specific details regarding the status of individual components is not required to be specified in the ITS to determine operability. MOV-0060A, B, &C and MOV-0061A, B, & C are the RHR suction isolation valves. The RHR system interlock for these valves is governed by ITS SR 3.4.15.2. Power is normally removed from the valves when the RCS pressure is higher than the RHR design pressure in accordance with the STP fire hazards analysis to preclude an overpressurization of the RHR from spurious operation of the valves in the event of a fire. Removal of power from the valves has no adverse effect on their operability since the RHR system has no automatic initiation function and is manually aligned and started by the operator when the RCS achieves proper pressure and temperature conditions. Consequently, relocation of the footnote information to the ITS Bases is appropriate.

STP will revise the ITS 3.5 LA DOCs with the information above and assure that the information is incorporated into the STP ITS Bases.

3.5.2-16 DOC L17
CTS 4.5.6.1
ITS SR 3.5.2.3

Comment: This is the same as Generic Comment #2.

STP Response:

See response to Generic #2.

3.5.2-17 JFD #3
STS SR 3.5.2.7

The ITS has not adopted SR 3.5.2.7 based on JFD #3.
Comment: It is assumed from JFD #3 that there are no ECCS throttle valves in the STP design. Verify if this assumption is correct.

STP Response:

The assumption is correct. STP's three trains of ECCS systems are independent, inject into separate RCS loops, are not headered, and have no throttle valves.

3.5.2-18 ITS 3.5.2 Actions

CTS 3.5.2 Actions
CTS 3.5.6 Actions

CTS 3.5.2 & 3.5.6 provide Actions for the Safety Injection and RHR Systems. ITS 3.5.2 Actions combine these requirements into one LCO.
Comment: ITS 3.5.2 does not contain Conditions for various combinations of Safety Injection and RHR Systems inoperable. As written, each applicable individual Condition would be entered for any combination. Was this the intention? If so, what was the purpose of combining these systems into one LCO?

STP Response:

See response to Generic #1.

ATTACHMENT 3

ITS Section 3.6, Containment Systems

3.6.6, Containment Spray and Cooling System

3.6.6-1 JFD #11
ITS 3.6.6, Action A and B, Completion Times
DOC M7
CTS 3.6.2.1 Action a and CTS 3.6.2.3 Action a

Comment: This is the same as Generic Comment #1.

STP Response:

See response to Generic #1.

3.6.6-2 JFD #5
ITS 3.6.6 Condition B, Note
DOC A23
CTS 3.6.2.3, LCO Statement

CTS 3.6.2.3 states "Three independent groups of RCFCs shall be Operable with a minimum of two units in two groups and one unit in the third group." The following note is added to ITS 3.6.6 Condition B: "One RCFC fan of one RCFC train may be removed from service without entering Condition B for that train. If more than one RCFC fan is removed from service, appropriate condition(s) must be entered."
Comment: The retention of this CTS requirement is acceptable. However, the following rewording is proposed to the Note: "One RCFC fan of one RCFC train may be removed from service without entering Condition B for that train. If more than one RCFC fan is removed from service, enter applicable ~~appropriate~~ Conditions and Required Actions." This is consistent with other Action table notes in the STS.

STP Response:

STP will supplement the STP application with the recommended wording change.

3.6.6-3 ITS 3.6.6 Actions
CTS 3.6.2.1 Actions
CTS 3.6.2.3 Actions

CTS 3.6.2.1 & 3.6.2.3 provide Actions for the Containment Spray System and the RCFCs. ITS 3.6.6 Actions combine these requirements into one LCO.
Comment: ITS 3.6.6 does not contain Conditions for various combinations of containment spray trains and RCFCs inoperable. As written, each applicable individual Condition would be entered for any combination. Was this the intention? If so, what was the purpose of combining these systems into one LCO?

STP Response:

The staff's interpretation of the proposed STP ITS 3.6.6 is correct and appropriate and is the same as the interpretation of CTS. The specifications for the RCFCs and the Containment Spray System were combined into a single LCO in conformance with the format of NUREG-1431. The response to Question 3.6.6-5 provides the basis for not considering combinations of inoperable RCFC and Containment Spray trains.

3.6.6-4 NOT USED

3.6.6-5 JFD #12
ITS 3.6.6 Action F
DOC A26

ITS 3.6.6 Action F has been modified to replace the "Any combination of three or more trains inoperable" with "Three RCFC trains inoperable."
Comment: DOC A26 is not a single administrative CTS change. It contains multiple of technical CTS changes which are inadequately justified. It appears that being in Condition C and Condition D simultaneously is equally or more degraded than the new ITS Action F Condition statement. Adopting the STS Action F Condition statement, as is, prevents four trains of the six total Containment Spray and Cooling trains being inoperable. STP is requested to explicitly state the percentage of cooling capacity remaining, as each train and combinations of trains are assumed unavailable, until loss of function exists as defined by the safety analysis of record.

STP Response:

The condition allowed by being in Condition C and Condition D simultaneously is limited to 24 hours. This condition is bounded by the analyses performed for the extension of the Standby Diesel Generator allowed outage time from 3 days to 14 days (Amendments 85/72). In the SDG specification, two SDGs are allowed to be inoperable for 24 hours. If a design basis accident were postulated to occur in that time, only one train of ESF equipment (including Containment Spray and RCFCs) would be available. Because additional ESF equipment is also affected by the unavailability of emergency power, the case of a single SDG is more severe than being in Conditions C and D simultaneously. STPs evaluations of these conditions were submitted in correspondence dated January 8, 1996 (ST-HL-AE-5272) and January 23, 1996 (ST-HL-AE-5280). The information from those submittals regarding Containment Spray and RCFC assumptions and the resulting MSLB and LOCA temperature and pressure profiles are attached. The results show the safety function is degraded below design basis values, but is not lost. This is consistent with the STP Three-train design philosophy and is discussed in DOCs L.13 and L.14.

Being in Conditions C and D simultaneously is the most limiting condition permitted by this LCO. Any combination involving an additional train of RCFCs or Containment Spray results in entry into Condition F and LCO 3.0.3. Other combinations (e.g., Conditions A and B or Conditions B and C or Conditions A and D) are less limiting and the 24 hour required completion time is conservative.

As noted, the justification for the new 24 hour required completion times is provided in DOCs L.13 and L.14, and the purpose of DOC A.26 is solely the administrative change of combining the two CTS LCOs into a single ITS LCO.

3.6.6-6 JFD #5
ITS SR 3.6.6.4
DOC A27
CTS 4.6.2.1.b

CTS 4.6.2.1.b requires verification on a Staggered Test Basis of the listed performance features of the CS pump. ITS SR 3.6.6.4 verifies these performance requirements in accordance with the IST Program.
Comment: This is the same as Generic Comment #2. Also, the testing of the CS pump at the "required developed head" is a technical CTS change and not administrative. STP is requested to provide a specific technical justification for this change.

STP Response:

CTS 4.6.2.1.b requires verification on a STAGGERED TEST BASIS of the listed performance features of the CS pump pursuant to Specification 4.0.5. ITS SR 3.6.6.4 has the same requirement on a STAGGERED TEST BASIS in accordance with the Inservice Testing Program. Since the CTS specification 4.0.5 is the Inservice Testing Program, these are equivalent expressions and are appropriately covered under an administrative change (A.27).

CTS 4.6.2.1.b requires verifying each pump develops a differential pressure of a certain value. ITS 3.6.6.4 requires verifying the pump's developed head is equal to the required developed head.

3.6.6-7 JFD #3
ITS SR 3.6.6.5

ITS SR 3.6.6.5 verifies if each automatic containment spray valve in the flowpath actuates to the correct position. The ITS has not adopted the phrase which exempts any valve "that is not locked, sealed, or otherwise secured in position".
Comment: The JFD #3 justification is not sufficiently explicit to explain why this phrase <u>is not</u> applicable for STP in ITS SR 3.6.6.5 while it <u>is</u> applicable for ITS SR 3.6.6.1. STP is requested to provide this additional detailed explanation.

STP Response:

JFD #3 states that the deviation from the NUREG is because the wording in the NUREG is not applicable to STP. Additional words will be added to indicate that the markups to the NUREG dealing with "locked, sealed, or otherwise secured" valves is consistent with the CTS. The CTS includes the wording, "not locked, sealed, or otherwise secured in position," in CTS 4.6.2.1.a (ITS SR 3.6.6.1) (31 day valve position verification) because it involves "manual, power-operated, or automatic" valves. In the STP Containment Spray System there are some manual valves that are locked in position. The CTS does not include the wording, "not locked, sealed, or otherwise secured in position, " in CTS 4.6.2.1.c.1 (ITS SR 3.6.6.5) (18 month automatic valve position verification) because it only involves automatic valves and there are no automatic valves at STP in the Containment Spray System that are locked, sealed, or otherwise secured in position.

3.6.6-8 DOC A1-1
CTS 3.6.2.1 and CTS 3.6.2.3
ITS 3.6.6 and Bases

CTS 3.6.2.1 and CTS 3.6.2.3 require the "independence" of the Containment Spray System (CS) and the RCFC groups in the LCO Statements. ITS 3.6.6 does not retain the "independence" requirements in the LCO statement but relocates this to the Bases where the LCO Operability requirements are established for the respective CS and RCFC trains.
Comment: It is acceptable to make these changes; however, the DOC A1-1 justification is inadequate when this should be an "LA" DOC. (For reference, see Section 3.7, DOC LA.8 for similar situation.) STP is requested to revise the submittal to provide a new justification.

STP Response:

STP will provide a LA DOC similar to LA.8 for ITS 3.7.

3.6.6-9 NOT USED

3.6.6-10 NOT USED

3.6.6-11 DOC LA11
CTS 4.6.2.1.b, c.1, c.2, and d
CTS 4.6.2.3.a

CTS 4.6.2.1.b, c.1, c.2, d, and CTS 4.6.2.3.a contain details for how the CTS surveillance requirements are to be performed which are better relocated to the Bases. In most cases, these requirements have been relocated to the ITS 3.6.6 Bases.
Comment: It is acceptable to relocate the details for how to perform the CTS surveillance requirements to the ITS 3.6.6 Bases. DOC LA11 only justifies the relocation of the definition of the components and features for Operability of the Containment Spray and Cooling System. STP is requested to revise the submittal and provide a new "LA" DOC for relocating these CTS surveillance requirement details to the Bases. In addition, CTS 4.6.2.1.c.2 does not relocate the portion of the CTS requirement stating "coincident with a sequencer start signal" to the Bases for ITS SR 3.6.6.6. Also, CTS 4.6.2.3 does not relocate the entire portion indicated as moved to the Bases of ITS SR 3.6.6.2. Please modify the Bases to account for these discrepancies or justify their deletion from the TS.

STP Response:

DOC LA.11 of Section 3.6 wording will be changed to more clearly define what is being moved to the Bases of ITS 3.6.6. Each item relocated to the ITS 3.6.6 Bases are:
CTS LCO wording regarding flow path is located to the Bases for ITS 3.6.6 LCO
CTS 4.6.2.1.b regarding flow path and the actual differential pressure (283 psid) to the Bases for ITS SR 3.6.6.4.
CTS 4.6.2.1.c.1 and 2 regarding the exact actuation signal will be added to the Bases for ITS SR 3.6.6.5 and SR 3.6.6.6
CTS 4.6.2.1.d regarding the type of flow test to the Bases for SR 3.6.6.8
CTS 4.6.2.3.a.1 regarding where to start equipment from will be added to the Bases for SR 3.6.6.2.

3.6.6-12 DOC L21
CTS 4.6.2.1.c.2 and 4.6.2.3.b
ITS SRs 3.6.6.5 and 3.6.6.6

Comment: This pertains to the "actual or simulated test signal" issue of Generic Comment #4.

STP Response:

See response to Generic #4.

3.6.6-13 DOC LA15
CTS 4.6.2.1.c
ITS SRs 3.6.6.5 and 3.6.6.6

CTS 4.6.2.1.c requires various verifications performed "during shutdown" which ITS 3.6.6 has not retained as a specific requirement.
Comment: It is acceptable to not state this specific requirement in the ITS 3.6.6; however, DOC LA15 states the CTS requirement is relocated to the Bases. A cursory review of the Bases does not show this requirement has been relocated. Please revise the submittal in accordance with DOC LA15 or direct the staff to the appropriate Bases location.

STP Response:

The term "during shutdown" is considered to be in the Bases for ITS SR 3.6.6.5 and SR 3.6.6.6 by including the words, "The 18 month Frequency is based on the need to perform these Surveillances under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillances were performed with the reactor at power."

ATTACHMENT 4

CONTAINMENT PRESSURE/ TEMPERATURE ANALYSIS

CONTAINMENT PRESSURE/TEMPERATURE ANALYSIS

LIST OF ASSUMPTIONS

	LOCA		MSLB	
	Single ESF-Train	**Multiple ESF-Trains**	**Single ESF-Train**	**Multiple ESF-Trains**
	Double Ended Pump Suction Guillotine with Minimum Safety Injection and Minimum Containment Heat Removal Systems in Operation	Double Ended Pump Suction Guillotine with Maximum Safety Injection and Minimum Containment Heat Removal Systems in Operation	102% Power, MSIV Failure with Minimum Containment Heat Removal Systems in Operation	102% Power, MSIV Failure with Minimum Containment Heat Removal Systems in Operation
Number of Spray trains operating	1	2	1	3
Spray flowrate	1885 gpm	3800 gpm	1885 gpm	4700 gpm
Spray initiation time	140 sec	82.6 sec	140 sec	90.6 sec
Number of RCFC trains operating	1	2	1	3
Number of RCFCs	1	3	1	5
RCFC initiation time	66.1 sec	38 sec	67.7 sec	67.7 sec
CCW temperature	125°F	110°F	125°F	110°F
CCW flow to each RCFC	1600 gpm	1800 gpm	1600 gpm	1800 gpm
Total CCW flow to all RCFCs used in the analysis	1600 gpm	5400 gpm	1600 gpm	9000 gpm

Figure 1A
LOCA Containment Temperature Profile

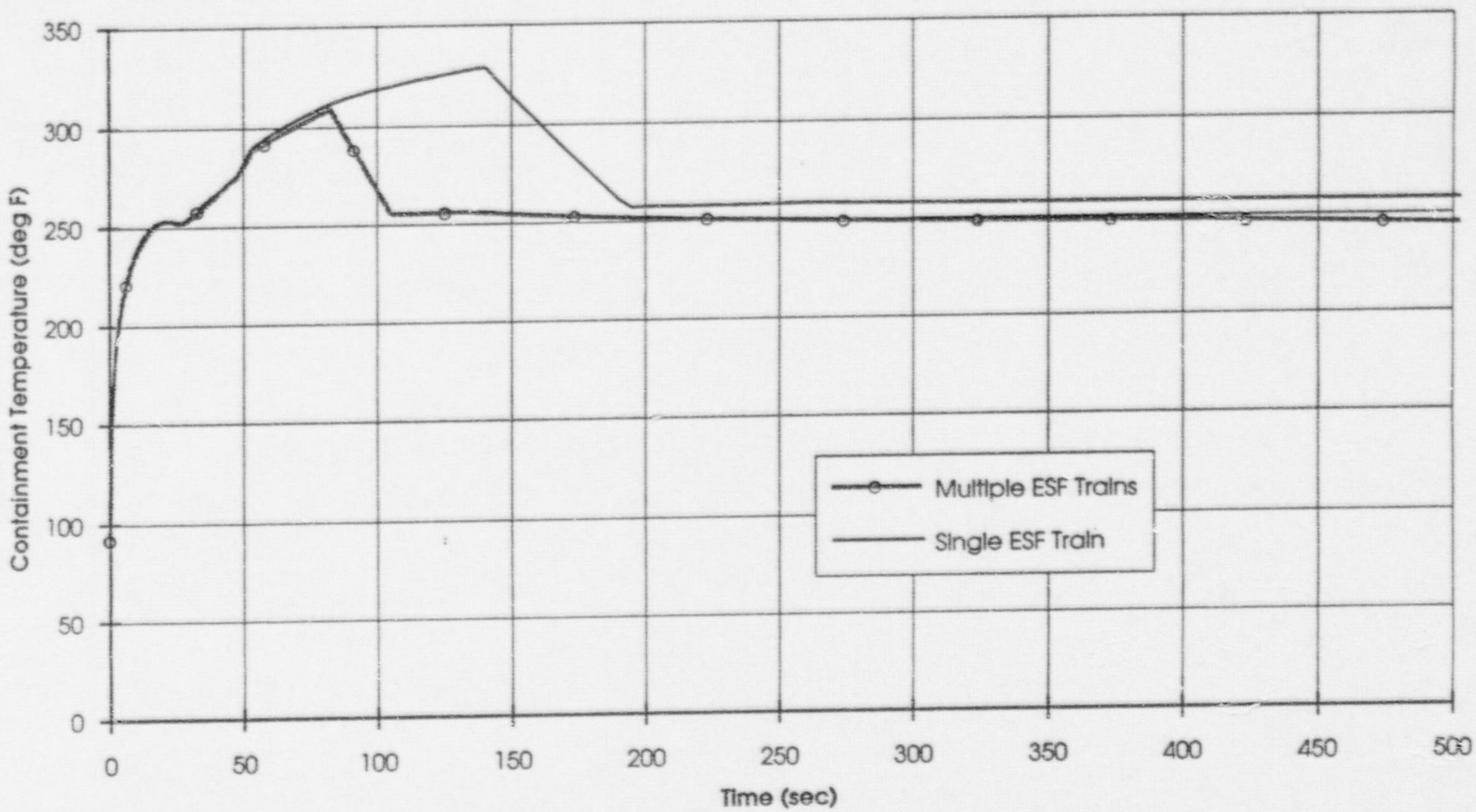

Figure 1B
LOCA Containment Pressure Profile

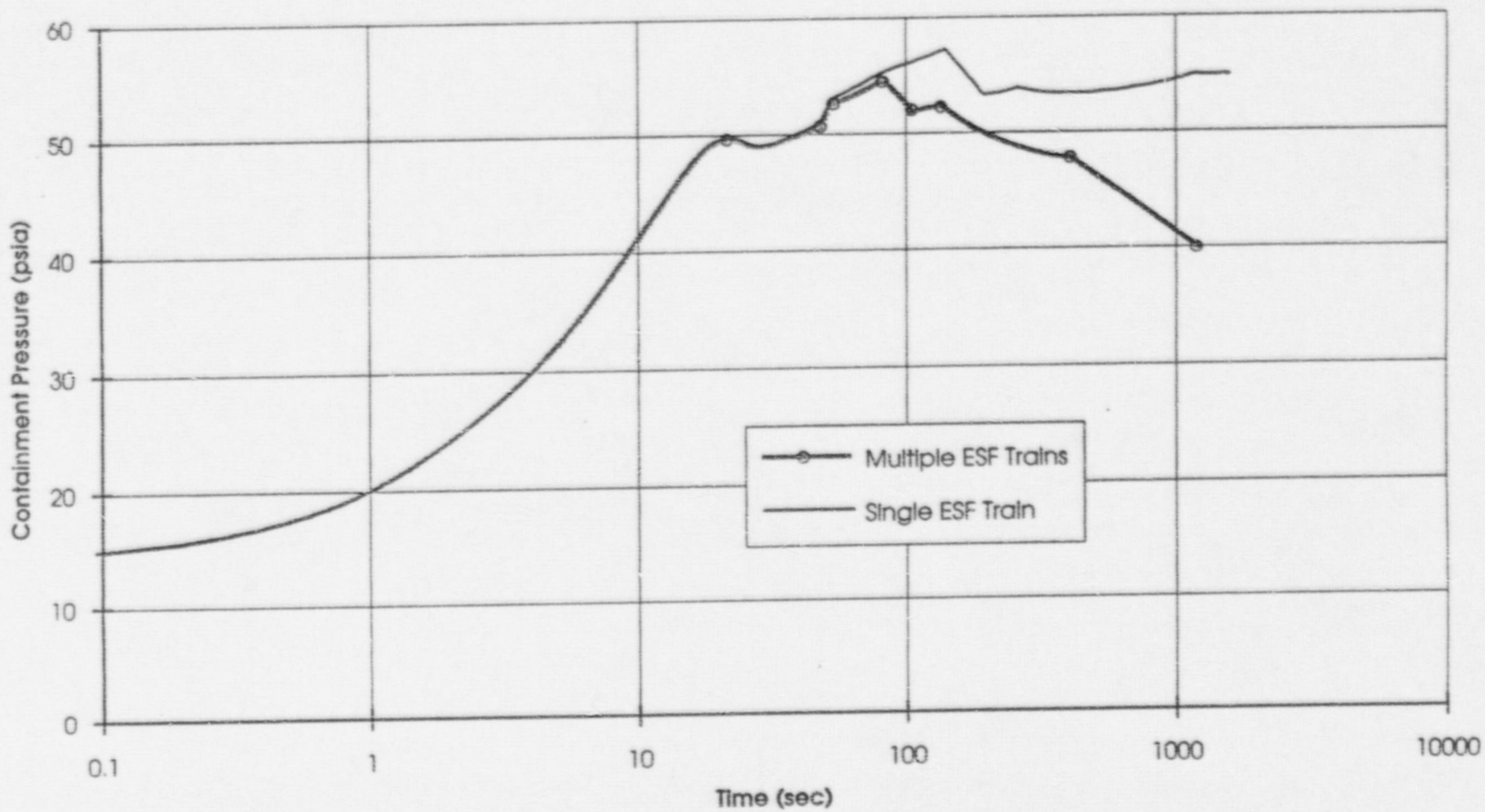

Figure 2B
MSLB Containment Pressure Profile

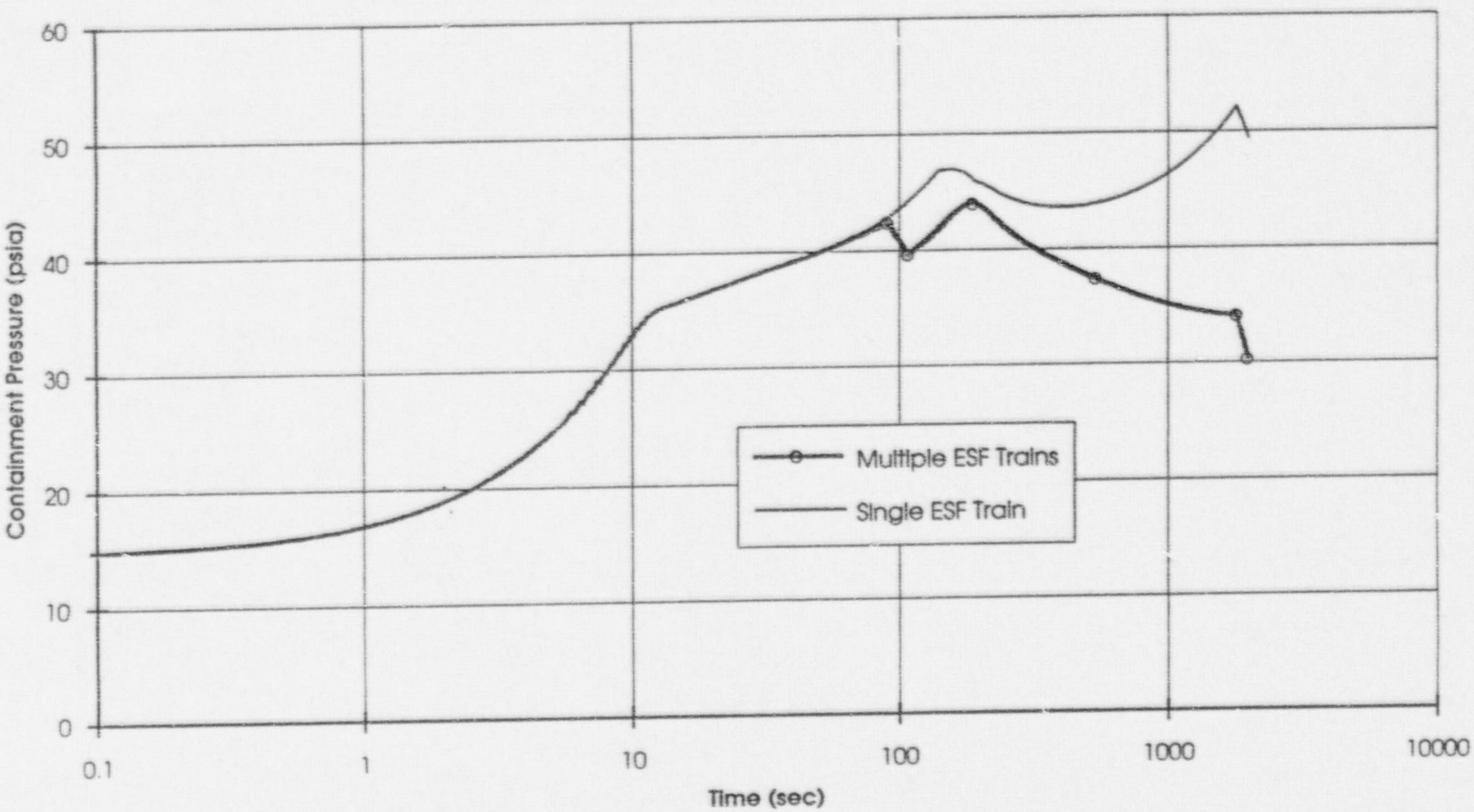

Figure 2A
MSLB Containment Temperature Profile