SYSTEM ENERGY RESOURCES, INC.
A Middle South Utilities Company

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Vice President
Nuclear Operations

March 3, 1989

U.S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C 20555

Attention: Document Control Desk

Gentlemen:

SUBJECT: Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-29
RF03 One-time Exceptions to
Specification 3.0.4 (Revision 2)
Proposed Amendment to the Operating
License (PCOL-89/01)
AECM-89/0051

System Energy Resources, Inc. (SERI) is submitting by this letter revisions to a proposed amendment to the Grand Gulf Nuclear Station Operating License which would allow one-time exceptions to Technical Specification (TS) 3.0.4 for certain TS requirements.

These proposed changes are required to support the upcoming third refueling outage at Grand Gulf Nuclear Station. The changes would have been granted through NRC review and acceptance of SERI's letter submitted in response to NRC Generic Letter 87-09 (the latest of which was SERI letter AECM-88/0128, dated December 14, 1988). However, SERI was advised by the NRC Staff on January 19, 1989, that delays in review would not permit a licensing amendment (associated with the Generic Letter 87-09) in time to support the upcoming outage activities. These one-time exceptions were proposed in lieu of the much broader scope changes associated with the Generic Letter.

In order to minimize the review effort, SERI considers these proposed changes to be those items from the Generic Letter scope that are critical to the outage plans. Without timely action on this limited subset of previously requested changes, SERI will be prevented from resuming power operations after the outage on the currently established schedule.

This proposed amendment was previously submitted on January 26, 1989 (AECM-89/0017). Following a meeting with the NRC Staff on February 14, 1989 SERI revised the initial application and resubmitted it on February 20, 1989 (AECM-89/0038). Through subsequent telephone conferences on February 24, 27 and 28, 1989, the Staff provided additional comments and concerns. These comments and concerns have been addressed in this revision (Revision 2) to the January 26, 1989 application. The revised portions are indicated by an "R" in the right hand margin.

A001
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Throughout the attached documents, there are specific references to dates, time durations and equipment availabilities that are provided at the request of the Staff. This data is based on the current RF03 outage schedule and some minor changes may be necessitated by virtue of further refinements to the schedule and in the management of maintenance issues which were unforeseen in the development of the schedule.

The justification in Attachment 2 has been revised to address the latest Staff concerns.

A chart showing the required and available safety systems during the various plant conditions is provided as Attachment 3 to this letter.

Attachment 4 provides a consolidated listing of those scheduled activities which result in the need for exceptions to TS 3.0.4. The duration of those activities are also provided based on the current RF03 schedule.

The original application was noticed in the Federal Register (Vol. 54, No. 25 at page 6199) on Wednesday, February 8, 1989. SERI has reviewed the revised and more restrictive amendment request against that notice and believes the two to be consistent. These proposed changes to TS represent a subset of and are more restrictive than those proposed in both the January 26, 1989 and the February 20, 1989 applications. Therefore based on our added review, the No Significant Hazards Determination required by 10CFR50.92 is not impacted.

In accordance with the provisions of 10 CFR 50.4, the signed original of the requested amendment is enclosed. Attachment 2 provides the technical justification and discussion to support the requested amendment. This application has been reviewed and accepted by the Plant Safety Review Committee. The Safety Review Committee reviewed and approved the application at the time of the original submittal. Based on the guidelines presented in 10 CFR 50.92, SERI has concluded that this proposed amendment involves no significant hazards considerations. In accordance with the requirements of 10 CFR 170.21, an application fee of $150 was attached to AECM-89/0017 which originally submitted this request.

SERI requests that NRC review and approval be completed by March 16, 1989 to support outage procedure and other software changes, as well as to conduct training as may be appropriate.

Yours truly,

W T Cottle

WTC:ckt

Attachments:
1. Affirmation per 10 CFR 50.30
2. GGNS PCOL-89/01
3. RF03 Outage Schedule
4. RF03 Scheduled Activities Which Result in Need for Specification 3.0.4 Exceptions

cc: (See next page)

cc: Mr. T. H. Cloninger (w/a)
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BEFORE THE

UNITED STATES NUCLEAR REGULATORY COMMISSION

LICENSE NO. NPF-29

DOCKET NO. 50-416

IN THE MATTER OF

MISSISSIPPI POWER & LIGHT COMPANY
and
SYSTEM ENERGY RESOURCES, INC.
and
SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION

AFFIRMATION

I, W. T. Cottle, being duly sworn, state that I am Vice President, Nuclear Operations of System Energy Resources, Inc.; that on behalf of System Energy Resources, Inc., and South Mississippi Electric Power Association I am authorized by System Energy Resources, Inc. to sign and file with the Nuclear Regulatory Commission, this application for amendment of the Operating License of the Grand Gulf Nuclear Station; that I signed this application as Vice President, Nuclear Operations of System Energy Resources, Inc.; and that the statements made and the matters set forth therein are true and correct to the best of my knowledge, information and belief.

W. T. Cottle

STATE OF MISSISSIPPI
COUNTY OF HINDS

SUBSCRIBED AND SWORN TO before me, a Notary Public, in and for the County and State above named, this 3rd day of March, 1989.

(SEAL)

Linda W. Miller
Notary Public

My commission expires:

My Commission Expires Aug. 5, 1991

A. SUBJECT

1. NL 89/03: One-time Exceptions to Specification 3.0.4 for RF03 (Revision 2) R

2. Affected Technical Specifications:

   a. Residual Heat Removal - Cold Shutdown, 3.4.9.2, ACTIONs a and c - page 3/4 4-27

   b. ECCS - Shutdown, 3.5.2, ACTION a - page 3/4 5-6

   c. Suppression Pool, 3.5.3, ACTION c - page 3/4 5-9

   d. Containment and Drywell Isolation Valves, 3.6.4, ACTIONs b and c - page 3/4 6-28

   e. Secondary Containment Automatic Isolation Dampers/Valves, 3.6.6.2, ACTIONs b and c - page 3/4 6-49

   f. Standby Service Water System, 3.7.1.1, ACTIONs b, c and d - pages 3/4 7-1 and 3/4 7-2

   g. Ultimate Heat Sink, 3.7.1.3, ACTION a - page 3/4 7-4

   h Control Room Emergency Filtration System, 3.7.2, ACTION b.1 - page 3/4 7-5

   i. Residual Heat Removal and Coolant Circulation - Low Water, 3.9.11.2, ACTIONs a and b - page 3/4 9-19

B. DISCUSSION

1. The proposed amendment provides one-time exceptions to Specification 3.0.4 in the Grand Gulf Nuclear Station (GGNS) Technical Specifications (TS) for use during the third refueling outage (RF03). The exceptions will allow entry into certain operational conditions or other specified conditions without meeting the Limiting Conditions for Operation (LCO), provided the requirements of associated action statements are met.

2. During refueling outages, various combinations of systems are required to be inoperable to perform required maintenance, surveillance tests, inspections and to allow design changes. TS 3.0.4 places unnecessary restrictions on operational and specified condition changes during these activities. Compliance with TS 3.0.4 sometimes results in additional outage activities, increased complication and duration of the outage.

3. System Energy Resources, Inc. (SERI) previously requested and received (AECM-87/0200, October 23, 1987 and MAEC-87/0305, December 4, 1987) one-time exceptions to Specification 3.0.4 for five specifications: 3.4.9.2 Residual Heat Removal - Cold Shutdown, 3.5.2 Emergency Core Cooling System - Shutdown, 3.7.1.1 Standby Service Water System, 3.9.11.1 Residual Heat Removal and Coolant Circulation - High Water Level, and 3.9.11.2 Residual Heat Removal and Coolant Circulation - Low Water Level. These exceptions allowed the plant to enter OPERATIONAL CONDITIONs 4 and 5 and allowed changing reactor cavity water level while complying with certain action statements of these specifications. The results of these one-time exceptions were to reduce additional and unnecessary activities, duration and complications of the outage which would have been required to comply with the TS 3.0.4 constraints. This flexibility was provided by these one-time exceptions while at the same time causing no significant change in the level of safety.

4. The proposed amendment will reinstate some of these one-time exceptions to Specification 3.0.4 and will apply these exceptions to certain other specifications to support RF03 activities. Eliminating the unnecessary restrictions on operational and specified condition changes caused by Specification 3.0.4 will in turn reduce unnecessary delays, additional activities, and added complications during RF03.

5. Specification 3.0.4 prohibits entry into an operational or specified condition unless the conditions for the LCO are met without reliance on provisions contained in the action requirements. Exceptions to these requirements are made and are specified in the individual TS. The proposed amendment is intended to provide operational flexibility during the third refueling outage while maintaining an acceptable level of safety.

6. The following one-time exceptions to TS 3.0.4 are proposed:

   a. The proposed change will add a sentence to ACTION a and revise the "**" footnote to TS 3.4.9.2 (RHR - Cold Shutdown) to state that the provisions of Specification 3.0.4 are not applicable for entry into OPERATIONAL CONDITION 4 from 5 and that the change is applicable until startup from the third refueling outage. Also, ACTION c is deleted because it was only applicable until startup from the second refueling outage.

   b. The proposed change will add a statement to ACTION a of TS 3.5.2 (ECCS - Shutdown) to state that the provisions of Specification 3.0.4 are not applicable for entry into OPERATIONAL CONDITION 5 from 5* and revise the "#" footnote to state that the change is applicable until startup from the third refueling outage.

   c. The proposed change will add a statement to ACTION c of TS 3.5.3 (Suppression Pool) to state that the provisions of Specification 3.0.4 are not applicable for entry into OPERATIONAL CONDITION 5 from 4 or 5* and a "##" footnote to state that the change is applicable until startup from the third refueling outage.

d. The proposed change will add a statement to ACTIONs b and c of TS 3.6.4 (Containment and Drywell Isolation Valves) to state that the provisions of Specification 3.0.4 are not applicable for entry into condition # for a maximum of 10 inoperable containment and drywell isolation valves and a "**" footnote to state that the change is applicable until startup from the third refueling outage. In addition, a statement is added to the "*" footnote to state that operational condition changes are not allowed while isolation valves are open under administrative controls of the "*" footnote.

e. The proposed change will add a statement to ACTIONs b and c of TS 3.6.6.2 (Secondary Containment Automatic Isolation Dampers/Valves) to state that the provisions of Specification 3.0.4 are not applicable for entry into condition * for a maximum of 10 inoperable dampers/valves and a "#" footnote to state that the change is applicable until startup from the third refueling outage.

f. Specification 3.7.1.1 (Standby Service Water System) ACTIONs b, c and d are proposed to be changed by adding the statement that the provisions of Specification 3.0.4 are not applicable. The change to ACTION b will only be applicable for entry into OPERATIONAL CONDITION 4 from 5. The change to ACTION c will only be applicable for lowering reactor cavity water level. The change to ACTION d will only be applicable for lowering reactor cavity water level in OPERATIONAL CONDITION 5. Also the "#" footnote is revised to state that the changes are applicable until startup from the third refueling outage.

g. The proposed change will add a statement to ACTION a of TS 3.7.1.3 (Ultimate Heat Sink) to state that the provisions of Specification 3.0.4 are not applicable for entry into OPERATIONAL CONDITIONs 4 and 5 and a "**" footnote to state that the change is applicable until startup from the third refueling outage.

h. The proposed change will add a statement to ACTION b.1 of TS 3.7.2 (Control Room Emergency Filtration System) to state that the provisions of Specification 3.0.4 are not applicable for entry into OPERATIONAL CONDITION 4 from 5 and a "#" footnote to state that the change is applicable until startup from the third refueling outage.

i. The proposed change will add a new ACTION c to TS 3.9.11.2 (RHR and Coolant Circulation - Low Water) to state that the provisions of Specification 3.0.4 are not applicable for entry into OPERATIONAL CONDITION 5 from 4 or lowering reactor cavity water level and revise the "#" footnote to state that the change is applicable until startup from the third refueling outage.

7. Attached to this proposed amendment are the revised marked up TS pages.

C. JUSTIFICATION

1. During the third refueling outage, presently scheduled to extend from March 17, 1989 through May 2, 1989, various combinations of ECCS systems, RHR trains and other plant equipment will be made inoperable to perform required maintenance, surveillance testing, inspections and modifications. These activities will require the plant to enter TS action statements at various times during the outage. The proposed amendment will provide one-time exceptions to TS 3.0.4 for certain TS for the third refueling outage only. The proposed amendment allows the plant to move between OPERATIONAL CONDITIONs 4 and 5. The proposed amendment will also allow changes between the following specified conditions while in TS action statements: lowering reactor cavity water level, core alterations, handling irradiated fuel, and operations with the potential to drain the vessel.

2. With the present TS, maintenance, testing and modification activities would have to be interrupted or delayed to make affected components operable as required by the TS LCO prior to changing operational or specified conditions. After completing the change in operational or specified condition, the components restored to operable status would again be made inoperable and the TS action statements entered to complete maintenance, testing and modification activities. The TS changes proposed are intended to provide operational flexibility during RFO3 while ensuring an acceptable level of safety is maintained.

3. SERI has developed and implemented a management philosophy in order to ensure adequate makeup capabilities exist to mitigate inadvertent reactor vessel draining and to ensure maximum decay heat removal capabilities during OPERATIONAL CONDITIONs 4 and 5. This philosophy has been implemented by policy as a Technical Specification Position Statement (TSPS) (currently TSPS 121). TSPSs are controlled and implemented in accordance with plant administrative procedure 01-S-15-2, "Plant Staff Handling of Plant Licensing Activities". The requirements of the TSPS are not used to satisfy any TS LCO requirements so as to avoid entry into an action statement. The requirements of TSPS 121 are only imposed when TS LCOs or action statements would not require at least one operable ECCS, RHR shutdown cooling loop, Fuel Pool Cooling and Cleanup (FPCCU) system, or associated diesel generator. In those cases, the TSPS does impose requirements which are more restrictive than the requirements of the TS. R R R R R R R R

4. The TSPS states at least one ECCS system and one FPCCU system are to be functional at all times. At least one shutdown cooling mode of RHR is to be functional throughout the outage unless required maintenance or testing activities preclude this. Any alternate shutdown cooling subsystem must be demonstrated to be able to remove the reactor decay heat load existing at the time the system is required. Also, the diesel generator associated with the above ECCS and RHR systems is required to be functional. R

5. The intent of TSPS 121 is not to use functional equipment to satisfy TS requirements for operable equipment. The term "functional" recognizes that a system may not be operable by TS definition but can still be readily available. "Functional" involves the assurance that a system can be restored to perform a specific function (i.e., ECCS can inject to the core at rated flow, shutdown cooling can maintain average reactor coolant temperature below the TS limits) while still allowing for minor manual manipulations such as closing breaker(s) or realigning valve(s). This does not preclude performing maintenance or surveillance activities on the system or associated attendant systems as long as such activities do not require a red tag or disassembly of any portion of the system that would prohibit timely system restoration for its specified function. The restoration of a functional system to a condition where the system can be operated would not require any red tag removal or system reassembly and therefore could be performed in a short time period (e.g., approximately 30 minutes). The "functional" system as used in TSPS 121 does not meet nor was it intended to meet regulatory or licensing bases for the mitigation of any design basis events. R

6. In addition, it is SERI outage philosophy to minimize the time in TS action statements associated with the above systems such that these action statements are only entered for required maintenance, testing, inspections, and modifications. Any exceptions to the TSPS must receive prior Plant Safety Review Committee review and approval. Application of this outage philosophy to RF03 is shown on the RF03 schedule included as Attachment 3. R

7. The following provides justification for each one-time exception and when each exception is currently planned on being used during RF03: R

   a. TS 3.4.9.2 Residual Heat Removal - Cold Shutdown
   ACTION a
   Deletion of ACTION c

      1) Specification 3.4.9.2 requires that two loops of RHR shutdown cooling be operable in OPERATIONAL CONDITION 4. A single RHR shutdown cooling loop provides sufficient heat removal capability for removing decay heat and sufficient mixing to assure accurate temperature indication. However, as discussed in the Bases for this specification, potential failure of the operating loop requires that two loops of RHR shutdown cooling be operable or that an alternate method of decay heat removal be demonstrated. ACTION a addresses provisions to be taken with less than the required number of RHR shutdown cooling loops operable. While relying upon the provisions of Action a, TS 3.0.4 would prohibit entry into OPERATIONAL CONDITION 4 from OPERATIONAL CONDITION 5. OPERATIONAL CONDITION 4 is entered from OPERATIONAL CONDITION 5 by tensioning the reactor vessel head. Specification 3.9.11.2 provides essentially the same action requirements in OPERATIONAL CONDITION 5 as Specification 3.4.9.2 in OPERATIONAL CONDITION 4. These similar action requirements are transferred from Specification 3.9.11.2 to 3.4.9.2 by the tensioning of the reactor vessel head bolts.

2) A Specification 3.0.4 exception is needed to change from OPERATIONAL CONDITION 5 (reactor in cold shutdown with vessel head removed) to OPERATIONAL CONDITION 4 (reactor in cold shutdown with vessel head installed) currently scheduled for April 20, 1989. On April 20, 1989 as currently planned, RHR shutdown cooling loop "A" will be operable and running. RHR shutdown cooling loop "B" will be inoperable since one of its support systems (SSW loop "B") will be inoperable due to the cleaning of the SSW loop "B" basin and piping. SSW loop "B" water level will be below the TS 3.7.1.3 minimum required water level but above the level required to provide adequate net positive suction head to the SSW loop "B" pump and flow to components cooled by SSW loop "B". With SSW loop "B" available, RHR shutdown cooling loop "B" will be capable of performing its shutdown cooling function if called upon to do so. Therefore, with the plant in the above condition, the requirements of TS 3.4.9.2 ACTION a will apply and a Specification 3.0.4 exception is necessary to tension the reactor vessel head bolts.

3) TS 3.4.9.2 requires two operable loops of RHR shutdown cooling in OPERATIONAL CONDITION 4. With less than two loops operable, one operable RHR shutdown cooling loop and an alternate decay heat removal method are acceptable per TS 3.4.9.2 ACTION a. The event of concern is the loss of the operating RHR shutdown cooling loop. On April 20, 1989 as currently planned, SERI will have RHR loop "A" operable and RHR loop "B" as an alternate. The alternate is
inoperable because the SSW basin water level is below the R
TS required level which provides a 30 day supply of water. R

When RHR "B" will be used as an alternate, the SSW basin R
water level will be maintained above the level required to R
provide adequate SSW pump "B" net positive suction head. R
The basin water level required to provide adequate SSW R
pump "B" net positive suction head is 82 feet 6 inches R
(mean sea level). Thereby when RHR "B" is an alternate, R
SSW pump "B" net positive suction head requirements will be R
met. The required water level in the ultimate heat sink to R
maintain net positive suction head for the associated SSW R
pump is identified and controlled in the instructions that R
control the SSW basin draindown. These instructions R
contain limits, cautions, and actions required for monitoring R
level and securing the pumps. These instructions are R
reviewed and approved by the Performance and Systems R
Engineering group and the Plant Safety Review Committee R
prior to use. The SSW system operating instruction, R
04-1-01-P41-1, currently describes how to provide makeup R
water to the SSW basins if normal makeup water sources are R
unavailable including during a loss of power. Such methods R
include using portable pumps and the onsite fire truck. R

With the SSW "B" basin in the above described condition, RHR loop "B" is available and capable of decay heat removal if called upon to do so. On April 20, 1989 the reactor will have a shutdown since March 17, 1989; therefore, a lower level decay heat will exist. R R R R

Tensioning of the reactor vessel head bolts has no effect on decay heat generation or removal. If RHR loop "A" fails, loop "B" is available and since bolt tension has no effect on decay heat generation or removal, there is no safety impact changing from OPERATIONAL CONDITION 5 to 4. Therefore the one-time exception provided by the proposed amendment provides an acceptable level of safety.

4) ACTION c is being deleted since it was applicable only until startup from RF02 and no longer applies. The proposed deletion is an administrative change and has no safety impact.

b. TS 3.5.2 Emergency Core Cooling Systems - Shutdown ACTION a

1) At least two water injection ECCS subsystems/systems are required operable by TS 3.5.2 during OPERATIONAL CONDITIONs 4 and 5*. (The * condition allows all the specified ECCS systems to be inoperable under certain conditions). ACTION a of this specification provides requirements that must be met if only one ECCS is operable and ensures that water inventory requirements can be met. The LPCS, LPCI, and HPCS systems are required to be available to provide reactor vessel inventory makeup following an event which causes inadvertent draining of the reactor vessel when irradiated fuel is in the vessel.

2) A Specification 3.0.4 exception is needed to lower the reactor cavity water level as planned on April 4, 1989. On April 4, 1989 as currently planned, LPCS (capable of automatic initiation/injection) and LPCI "A" will be the operable ECCS when the reactor cavity water level lowering evolution is started. However, LPCI "A" will become inoperable due to a keep fill alarm caused by a pressure change from lowering the reactor cavity water level while the ADHRS is operating. Even though LPCI "A" is not operable when the reactor cavity is drained, it is operable at the start of the evolution to lower the reactor cavity R R R

water level. For these plant conditions, the requirements of TS 3.5.2 ACTION a will apply. Therefore, a Specification 3.0.4 exception is needed to change from the specified condition of reactor cavity high water level to reactor cavity low water level.

3) The proposed change will allow exiting condition * while complying with the provisions of ACTION a. The event of concern is inadvertent draining of the reactor vessel while irradiated fuel is in the vessel. Lowering the reactor cavity water level is not an operation with the potential to drain the reactor vessel. Grand Gulf Nuclear Station Integrated Operating Instruction (IOI) 03-1-01-5, "Refueling", controls the lowering of the reactor cavity water level. The procedure for lowering the reactor cavity water level is contained in System Operating Instruction (SOI) 04-1-01-P11-2, "Refueling Water Storage and Transfer System." No refueling operations within the reactor cavity are permitted during the process in accordance with TS 3.9.8. A flow path from drains in the upper containment pool liner plate (approximately 373 inches above the top of active fuel) is established and valves are opened to initiate the process. The drained water can be discharged to a variety of locations dependent upon plant needs (i.e. suppression pool, storage tanks, radwaste, etc.). An operator is stationed at the upper containment pool (a portion of which contains the reactor cavity) to monitor pool level. The rate of level decrease can be controlled by the throttling of valves. The process is terminated when the desired level is reached by closing the associated upper containment pool drain valves.

4) As reactor cavity water level drops below 22 feet 8 inches above the reactor vessel flange TS 3.5.2 requires at least two ECCS to be operable. If less than two ECCS are operable, TS 3.5.2 action statements prohibit performing operations that have a potential for draining the reactor vessel. These actions do not apply to lowering reactor cavity water level since this process cannot by itself result in reactor vessel level being lowered below the reactor vessel flange (185 feet 1 inch elevation) since the reactor cavity drains are external to the vessel at approximately 184 feet 6 inches elevation in the reactor cavity.

5) On April 4, 1989, LPCS and LPCI "A" will be operable when the evolution to lower reactor cavity water level is started and LPCI "A" will be available when the keep fill alarm is received. In addition on April 4, 1989 there will be no operations with the potential to drain the vessel in progress. Sufficient ECCS capacity and redundancy are provided to allow lowering reactor cavity water level.

6) Therefore, flexibility provided by the proposed one-time exception to Specification 3.0.4 provides an acceptable level of safety because reactor water inventory requirements can still be met.

7) To reduce the need for future Specification 3.0.4 exceptions for TS 3.5.2 Action a, SERI will evaluate and determine the appropriate actions necessary to prevent inoperability of LPCI "A" or LPCI "B" due to the keepfill alarm from ADHRS operation. The evaluation is scheduled to be completed and the results provided to the NRC by October 7, 1989. R R R R R R

c. TS 3.5.3 Suppression Pool
ACTION c

1) TS 3.5.3 requires a suppression pool water level of at least 12 feet 8 inches in OPERATIONAL CONDITIONs 4 and 5. The suppression pool provides a primary source of water for the ECCS in the event of an accident to provide cooling water for irradiated fuel. The required pool level is sufficient to provide the required heat sink capability and water supply to the ECCS. The suppression pool water level instrumentation provides control room visual confirmation of pool level. ACTION c requires the suppression pool level to be verified by an alternate indicator at least once per 12 hours in the event a suppression pool water level instrumentation division is declared inoperable.

2) A Specification 3.0.4 exception is needed to change from OPERATIONAL CONDITION 4 (reactor in cold shutdown with vessel head installed) to OPERATIONAL CONDITION 5 (reactor in cold shutdown with vessel head removed) as currently scheduled for March 21, 1989. As currently scheduled, starting March 18 until March 29, 1989, RHR "C" jockey pump will be out of service for RHR loop "C" surveillances and to complete alternate decay heat removal system (ADHRS) modifications and testing. RHR "C" jockey pump keeps the reference leg filled for one division of suppression pool water level instrumentation. With the RHR "C" jockey pump out of service, one division of suppression pool water level instrumentation will be declared inoperable. The requirements of TS 3.5.3 ACTION c will therefore apply. One division of suppression pool water level instrumentation will still be operable and visual inspection as an alternate indicator of the suppression pool water level will be performed once per 12 hours. While relying upon the provisions of ACTION c, a Specification 3.0.4 exception is necessary to enter OPERATIONAL CONDITION 5 from 4.

3) The event of concern is loss of suppression pool inventory. Removal of the reactor vessel head has no effect on

suppression pool inventory. One division of suppression pool water level instrumentation will still be operable. Visual inspections of the pool level will be performed every 12 hours. Therefore, the intent of the TS basis is met even with one division of suppression pool water level instrumentation inoperable.

4) A Specification 3.0.4 exception is also needed to lower the reactor cavity water level as planned on April 4, 1989. On April 4, 1989 as currently planned when the reactor cavity water level is lowered, one division of suppression pool water level instrumentation will be inoperable due to ADHRS operating which necessitates the RHR "C" jockey pump to be out of service. TS 3.5.3 ACTION c will apply. One division of suppression pool water level instrumentation will still be operable and visual inspection of the suppression pool water level will be performed once per 12 hours.

5) The event of concern is a loss of suppression pool inventory. Lowering of the reactor cavity water level has no negative effect on suppression pool inventory. The process for lowering reactor cavity water level is described in Section C.7.b of this submittal. One division of suppression pool water level instrumentation will be operable. Visual inspections of the pool level will be performed every 12 hours. Therefore, the intent of the TS basis is met even with one division of suppression pool water level instrumentation inoperable. R

6) Therefore, the proposed one-time exception to Specification 3.0.4 as planned for usage during RF03 provides an acceptable level of safety.

7) To reduce the need for future Specification 3.0.4 exceptions for TS 3.5.3 Action c, SERI will further evaluate the system interaction between suppression pool level instrumentation and ADHRS and determine the appropriate actions necessary to prevent the inoperability of the one division of suppression pool level instrumentation affected by ADHRS operation. The evaluation is scheduled to be completed and the results provided to the NRC by October 7, 1989. R R R R R R R R

d. TS 3.6.4 Containment and Drywell Isolation Valves
ACTION b
ACTION c

1) Specification 3.6.4 identifies operability requirements imposed upon containment and drywell isolation valves during OPERATIONAL CONDITIONs 1, 2, and 3 and during periods when associated actuation instrumentation operability is required. Containment and drywell isolation valves are

provided to ensure drywell/containment integrity is maintained. Drywell integrity assures the suppression pool will not be bypassed during a reactor blowdown event. Containment integrity assures that an offsite release of radioactive material is controlled within the design leakage rate of the containment systems, thereby preventing offsite doses from exceeding those determined by the plant safety analyses.

2) The following specified condition changes currently scheduled for RF03 which will require Specification 3.0.4 exceptions are (plant will be in OPERATIONAL CONDITION 5):

i) start core alterations (March 24, 1989)
ii) start handling irradiated fuel (March 24, 1989)
iii) start bottom head drain work (March 25,1989)

Starting on the first day in RF03 various containment and drywell isolation valves will be inspected, tested and reworked. This work is scheduled to be performed within an outage window from March 18, 1989 through April 14, 1989. Various valves may be inoperable when the specified conditions listed above are entered; however, it is difficult to predict exactly which valves will be inoperable since the valve work is scheduled based upon maintenance personnel availability. Schedule progress is dependent upon the availability of resources to perform the work and problems encountered with each particular valve. Because of the uncertainty of which valves will be inoperable, the proposed amendment will limit the number of valves allowed to be inoperable to 10 when specified conditions are changed. Because of the situation described above, a one-time Specification 3.0.4 exception is necessary for ACTIONs b and c.

3) The one-time exception will only be used in OPERATIONAL CONDITION 5; therefore, the only isolation valves required to be operable are those in isolation valve groups 5, 6A, 6B, 7, 8 and 10. This is in accordance with the requirements of TS Table 3.3.2-1 which requires the isolation valves and their associated isolation actuation instrumentation to be operable only during particular specified conditions when not in OPERATIONAL CONDITIONs 1, 2 and 3.

4) The event of concern is an isolation valve failing to close. The valves scheduled for maintenance (inoperable) on March 24 and 25, 1989 have no safety related function in OPERATIONAL CONDITION 5 other than to isolate upon receipt of an isolation signal from TS required operable isolation actuation instrumentation. The penetrations with inoperable valves will be isolated on March 24 and 25, 1989

when the specified conditions are entered. Each containment and dry wall penetration will be effectively isolated by manual means as described by the TS action requirements in the event of inoperability of an associated isolation valve. A limit is placed on the number of valves inoperable during specified condition changes to a maximum of 10. Placing the penetrations in an isolated condition therefore fulfills the intent of the TS, prevents the event of concern and fulfills the isolation function of the valves.

5) In order to assure that the action requirements do not reduce the level of safety, the "*" footnote of Specification 3.6.4 is revised. Operational condition changes, as provided by the one-time exception to Specification 3.0.4, will not be made while maintaining valves open under administrative controls due to isolation valve inoperability. The following is added to the "*" footnote:

> "(OPERATIONAL CONDITION changes are not allowed while isolation valves are open under these administrative controls.**)"

This will assure penetrations are effectively isolated prior to changing specified conditions.

6) Therefore, specified condition changes allowed by application of the proposed one-time exception to Specification 3.0.4 provides an acceptable level of safety.

e. TS 3.6.6.2 Secondary Containment Automatic Isolation Dampers/Valves
ACTION b
ACTION c

1) Specification 3.6.6.2 identifies operability requirements imposed upon secondary containment automatic isolation dampers and valves during OPERATIONAL CONDITIONs 1, 2, and 3 and during certain specified conditions. The auxiliary building penetration isolation valves and dampers required operable are identified by TS Table 3.6.6.2-1. The LCO requires operability of auxiliary building automatic isolation valves/dampers such that secondary containment isolation may be established if required. Operability of the isolation dampers and valves ensures the secondary containment will be isolated to limit the release of radioactive material to the environment. ACTION b and ACTION c of the subject specification provide alternate means of complying with the LCO requirements in the event of inoperability of a damper or valve. Each action requires isolation of the flow path which is controlled by the associated damper/valve. The action statements result in a comparable condition to the LCO.

2) The following specified condition changes currently scheduled for RF03 which will require Specification 3.0.4 exceptions are (plant will be in OPERATIONAL CONDITION 5):

i) start core alterations (March 24, 1989)
ii) start handling irradiated fuel (March 24, 1989)
iii) start bottom head drain work (March 25, 1989).

Starting on the first day in RF03 various dampers and valves will be inspected, tested and reworked. This work is scheduled to be performed within an outage window from March 18, 1989 through April 24, 1989. Various dampers and valves may be inoperable when the specified conditions listed above are entered; however, it is difficult to predict exactly which dampers/valves will be inoperable since the work is scheduled based upon maintenance personnel availability. Schedule progress is dependent upon the availability of resources to perform the work and problems encountered with each particular damper/valve. Because of the uncertainty of which dampers/valves will be inoperable, the proposed amendment will limit the number of dampers/valves allowed to be inoperable to 10 when specified conditions are changed. Because of the situation described above, a one-time Specification 3.0.4 exception is necessary for ACTIONs b and c.

3) In all operational conditions the requirement for the auxiliary building isolation capability is based upon the need to contain any airborne radioactivity released from the containment following an accident. Similarly, during fuel handling evolutions, secondary containment integrity is necessary to mitigate a fuel handling accident. The event of concern is an isolation damper/valve failing to close, resulting in the loss of secondary containment integrity. The dampers/valves scheduled for maintenance on March 24 and 25, 1989 have no safety related function in OPERATIONAL CONDITION 5 other than to isolate upon receipt of an isolation signal. The penetrations with inoperable dampers/valves will be isolated on March 24 and 25, 1989 when the specified conditions are entered. The proposed change limits the number of inoperable dampers/valves to a maximum of 10 at any one time. Placing the penetrations in an isolated condition therefore fulfills the intent of the TS, prevents the event of concern and fulfills the isolation function of the dampers/valves.

4) The actions required by TS 3.6.6.2 result in a secondary containment isolation condition which is functionally equivalent to the LCO requirement. Those actions will be implemented for the affected penetrations on March 24 and 25, 1989. Therefore, the proposed one-time exception to Specification 3.0.4 provides an acceptable level of safety.

f. TS 3.7.1.1 Standby Service Water System
ACTION b
ACTION c
ACTION d

1) Specification 3.7.1.1 requires each of the Standby Service Water (SSW) system subsystems to be operable in OPERATIONAL CONDITIONs 1, 2, 3, 4, 5 and * where "*" involves handling irradiated fuel in the primary or secondary containment. Operability of the SSW subsystems ensures sufficient cooling is available for safety related equipment.

2) A Specification 3.0.4 exception is needed for ACTION b when changing from OPERATIONAL CONDITION 5 (reactor in cold shutdown with vessel head removed) to OPERATIONAL CONDITION 4 (reactor in cold shutdown with vessel head installed) currently scheduled for April 20, 1989. ACTION b addresses OPERATIONAL CONDITIONs 3 or 4 when the SSW system associated with an RHR loop required operable by Specification 3.4.9.1 or 3.4.9.2 is inoperable. SSW loop "B" will be below the TS 3.7.1.3 minimum required water level due to planned cleaning of the SSW "B" basin and piping and therefore inoperable when RHR shutdown cooling loop "B" is required by TS 3.9.11.2 and 3.4.9.2. The proposed Specification 3.0.4 exception to Action b supports the proposed change to Specification 3.4.9.2 described above and will only apply to entry of OPERATIONAL CONDITION 4 from 5. When an SSW subsystem is inoperable the associated RHR shutdown cooling loop is inoperable. Action b transfers the action requirements to TS 3.4.9.2. The event of concern is loss of cooling to safety related equipment. In this case, loss of cooling to the RHR heat exchangers for shutdown cooling which is evaluated and addressed in Section C.7.a of this submittal. Therefore, operational condition changes with provisions as proposed in TS 3.4.9.2 should be considered acceptable. R

3) A Specification 3.0.4 exception is needed for ACTION c and d to allow a change in specified condition (lowering reactor cavity water level) to occur as currently scheduled on April 4 and 17, 1989. On those dates, SSW loop "B" will be inoperable due to maintenance and basin cleaning. Since SSW loop "B" is required for RHR shutdown cooling loop "B" (TS 3.9.11.2) and for any Division 2 ECCS which could satisfy TS 3.5.2, ACTIONs c and d will apply on April 4 and 17, 1989.

4) ACTION c to Specification 3.7.1.1 addresses OPERATIONAL CONDITIONs 4 or 5 when the SSW subsystem associated with an ECCS pump required operable by Specification 3.5.2 is inoperable. The proposed Specification 3.0.4 exception to ACTION c supports the proposed change to Specification

3.5.2 and will only be used when lowering reactor cavity water level. When an SSW subsystem is inoperable, the associated ECCS is inoperable. ACTION c transfers action requirements to TS 3.5.2. The event of concern is loss of cooling to safety related equipment in the Division 2 ECCS. As evaluated in Section C.7.b of this submittal, no Division 2 ECCS are taken credit for on April 4 and 17, 1989. ECCS requirements of TS 3.5.2 on April 4, 1989 are met using Division 1 ECCS (LPCS, capable of automatic initiation/injection, and LPCI "A") and on April 17, 1989 using Division 1 and 3 ECCS (LPCS and HPCS both capable of automatic initiation/injection). Specified condition changes with similar provisions as proposed in Specification 3.5.2 should be considered acceptable. R R R R R R

5) ACTION d to Specification 3.7.1.1. addresses OPERATIONAL CONDITION 5 when the SSW subsystem associated with an RHR system required operable by Specifications 3.9.11.1 or 3.9.11.2 is inoperable. The proposed Specification 3.0.4 exception to ACTION d supports the proposed change to Specification 3.9.11.2 and will only be used with respect to RHR shutdown cooling requirements when lowering reactor cavity water level. When an SSW subsystem is inoperable, the associated RHR shutdown cooling loop is inoperable. ACTION d transfers action requirements to TS 3.9.11.2. The event of concern is loss of cooling to safety related equipment. This event is evaluated in Section C.7.i of this submittal. Specified condition changes with provisions as proposed in Specification 3.9.11.2 should be considered acceptable. R

6) As described above, TS 3.7.1.1 does not in itself contain any action requirements not addressed elsewhere in the TS. The affected TS are evaluated separately in this submittal. Therefore, the proposed one-time Specification 3.0.4 exception as used in TS 3.7.1.1 provides an accpetable level of plant safety.

g. TS 3.7.1.3 Ultimate Heat Sink
ACTION a

1) TS 3.7.1.3 governs the operability of the ultimate heat sink (UHS). In OPERATIONAL CONDITIONs 4, 5 and *, the basin associated with the systems and components required OPERABLE by TS 3.7.1.1 and TS 3.7.1.2 are required OPERABLE per TS 3.7.1.3. The SSW system removes heat from plant auxiliaries which require cooling water during an emergency shutdown of the plant and is the UHS for removal of the decay heat generated by the reactor core. The SSW system consists of two water basins, A and B, with their associated forced draft cooling towers, two SSW pumps and one HPCS service water pump. Each basin houses SSW pumps, and basin A also houses a HPCS service water pump. SSW pumps "A" and

"B" supply cooling water to plant components through loops "A" and "B" respectively while loop "C" is supplied by the HPCS service water pump. Operability of the UHS ensures sufficient cooling is available for safety related equipment.

2) A Specification 3.0.4 exception is needed for changing from OPERATIONAL CONDITION 5 to OPERATIONAL CONDITION 4 currently scheduled for April 20, 1989. An exception is also needed to lower reactor cavity water level currently scheduled for April 4 and 17, 1989. The proposed Specification 3.0.4 exception to ACTION a supports the proposed change to TS 3.7.1.1. As currently planned, UHS basin B will be inoperable on April 4, 17 and 20, 1989 due to SSW/UHS loop/basin B cleaning and maintenance. The only function of UHS basin B is to support operability of SSW loop "B". If one UHS basin is declared inoperable, ACTION a requires the associated SSW subsystem (in this case SSW loop "B") to be declared inoperable and the actions of 3.7.1.1 to be taken. The event of concern is loss of cooling to safety related equipment. TS 3.7.1.1 has been evaluated in Section C.7.f of this submittal for the event of concern. Therefore, the applicability of the one-time exception to Specification 3.0.4 is transferred to TS 3.7.1.1 which transfers action to TS 3.5.2 and 3.9.11.2 (evaluated in Sections C.7.b and C.7.i, respectively, of this submittal). R R

3) The subject action requirements of Specification 3.7.1.3 cover OPERATIONAL CONDITIONs 1 through 5 and *. The Specification to which action is transferred from 3.7.1.3 provides alternative means of meeting LCO safety requirements, also covering OPERATIONAL CONDITIONs 1 through 5 and *. However, this increased flexibility of the Specification 3.0.4 exception is limited by the proposed change to TS 3.7.1.3 ACTION a to only entry into OPERATIONAL CONDITIONS 4, 5 and *.

4) TS 3.7.1.3 does not ir itself contain any action requirements not addressed elsewhere in TS. The other affected TS are evaluated separately in this submittal. Therefore, the proposed one-time exception to Specification 3.0.4 provides an acceptable level of plant safety.

h. TS 3.7.2 Control Room Emergency Filtration System ACTION b.1

1) TS 3.7.2 requires two independent control room emergency filtration system subsystems to be operable in all operational conditions. ACTION b.1 provides measures to perform in OPERATIONAL CONDITIONs 4, 5 or * (where * is when handling irradiated fuel) if only one subsystem is operable. The measures include restoring the inoperable

subsystem to operable status within 7 days or initiating and maintaining operation of the operable subsystem in the isolation mode of operation. The control room emergency filtration system is a subsystem of the control room ventilation system consisting of HEPA filters, charcoal beds, heaters and fans. The operability of the control room emergency filtration system helps limit control room personnel exposure during and following design basis accidents by air filtration.

2) When an isolation signal is present, resulting from a high radiation condition in the control room intake outside air duct, or a sensed loss of coolant accident (as indicated by high drywell pressure or low reactor vessel water level), the control room ventilation system isolates and enters into a recirculation mode of operation. In the recirculation mode, outside air is no longer supplied to the control room as the control room outside air intake dampers close, thus preventing additional airborne radiation from entering through the fresh air intake. The emergency filtration system circulates control room air through the charcoal beds and HEPA filters to remove any radioactive airborne particulate that may have already been in the control room and also removes any additional airborne radiation that may enter. With this system in operation (control room isolated), control room habitability is maintained since no additional outside air is taken into the system and the control room air is recirculated and continuously filtered to remove airborne particulate.

3) A Specification 3.0.4 exception is needed to change from OPERATIONAL CONDITION 5 to 4 as scheduled on April 30, 1989 since control room emergency filtration system loop "B" fresh air inlet and purge isolation valve maintenance is planned which will cause loop "B" to be declared inoperable. With the system in the above condition, TS 3.7.2 ACTION b.1 will apply.

4) The event of concern is loss of air filtration capability. Fresh air inlet and purge isolation valve inoperability does not prevent the control room emergency filtration subsystem "B" from fulfilling its TS function of limiting radiation doses to control room personnel by air filtration. With the fresh air inlet valve inoperable, both control room emergency filtration subsystems "A" and "B" will be placed in the isolation mode of operation. With one train of the control room emergency filtration system declared inoperable, ACTION b.1 requires restoring the train to operability or initiating and maintaining operation of the other train. Only one subsystem will be operating at a time even though both subsystems will be R

isolated. TS 4.7.2 requires that following painting, a R
fire, or chemical use in the ventilated area or after 720 R
hours of operation, the charcoal adsorbers be tested to R
ensure the appropriate criteria of Regulatory Guide 1.52, R
Revision 2 are satisfied. TS 4.7.2 requirements are
implemented by various plant surveillance procedures. In R
addition, the control room HVAC system operating instruction, R
04-S-01-Z51-1, requires the operator to check the painting R
log to ensure no painting has occurred within the control R
room boundary in the past 1.5 hours prior to system operation; R
thereby, preventing possible charcoal adsorber degradation. R
Since both of the control room emergency filtration R
subsystems will operate properly in the isolated mode R
following an accident, the control room will be ensured of R
habitability in the event of an accident. Therefore, both subsystems of control room emergency filtration system will be available to filter control room air meeting the intent of the TS.

5) Entering OPERATIONAL CONDITION 4 from 5 with the control room habitability ensured by ACTION b.1, while complying with Specification 3.0.4 provides an acceptable level of safety.

i. TS 3.9.11.2 — Residual Heat Removal and Coolant Circulation - Low Water Level
ACTION a
ACTION b
Addition of ACTION c

1) Specification 3.9.11.2 requires two RHR shutdown cooling loops to be OPERABLE in OPERATIONAL CONDITION 5, when irradiated fuel is the reactor vessel and with the reactor cavity water level less than 22 feet 8 inches above the top of the reactor vessel flange. This requirement to have two shutdown cooling loops operable ensures that a failure of the operating loop will not result in the complete loss of heat removal capability. This heat removal capability is not assumed in any DBA analysis. If the cavity water level is lowered, Specification 3.9.11.2 provides additional shutdown cooling requirements, since less water is available for decay heat removal. ACTIONs a and b of 3.9.11.2 require alternate methods of heat removal and/or circulation if the LCO is not met. This ensures that adequate protection is provided by the action statement to allow cavity level to drop below 22 feet 8 inches in OPERATIONAL CONDITION 5.

2) A Specification 3.0.4 exception is necessary to change from OPERATIONAL CONDITION 4 to OPERATIONAL CONDITION 5 as currently scheduled on March 21, 1989. On March 21, 1989 as currently planned, RHR shutdown cooling loop "A" will be operable and running. RHR shutdown cooling loop "B" will be inoperable due to feedwater "B" local leak rate testing which prevents RHR loop "B" from using its normal coolant return path of the feedwater line to the reactor vessel. (The reverse could be true with "A" inoperable and "B" operable if the feedwater "B" testing is finished early.) In the above conditions, TS 3.9.11.2 ACTION a requirements will apply during the operational condition change.

3) The event of concern is the loss of the operating shutdown cooling loop. RHR shutdown cooling loop "A" will be operable and running. RHR shutdown cooling loop "B" will be available to perform its shutdown cooling function if called to do so by returning coolant to the reactor vessel through the LPCI "B" discharge line instead of the feedwater "B" line. The routing of the return flow to the reactor vessel through the LPCI "B" discharge line has been evaluated and shown to have no detrimental effect upon the ability of the RHR "B" loop to fulfill its shutdown cooling function. Reactor head closure bolt tension has no effect on decay heat generation or removal. Therefore, if RHR Loop "A" fails, loop "B" is available and since bolt tension has no effect on decay heat generation or removal, there is no safety reduction in changing from OPERATIONAL CONDITION 4 to 5. R R R R R

4) A Specification 3.0.4 exception is also necessary on April 4 and 17, 1989, as currently planned, to allow lowering the reactor cavity water level. The reactor cavity water level lowering method is as described in Section C.7.b of this submittal. On these dates, RHR shutdown cooling loop "A" will be operable. ADHRS will be running on April 4, 1989 and RHR loop "A" will be running on April 17, 1989. On April 4, 1989 RHR loop "B" will be inoperable due to maintenance on RHR loop "B" and on April 17, 1989, RHR loop "B" will be inoperable due to SSW loop "B" maintenance as described in Section C.7.f of this submittal. With the plant in these conditions, TS 3.9.11.2 ACTIONs a and/or b will apply. Therefore, to lower reactor cavity water level a Specification 3.0.4 exception is needed for both actions. R R

5) On April 4, 1989, ADHRS will be operating to provide decay heat removal with the operable RHR loop "A" in standby. The event of concern is the loss of the operating shutdown cooling loop. If ADHRS were to fail, a fully operable RHR shutdown cooling loop will immediately be available to remove decay heat. TS 3.9.11.2 establishes the RHR shutdown cooling requirements while in OPERATIONAL CONDITION 5 with low reactor cavity water level. In accordance with these requirements SERI must maintain operable two loops of RHR shutdown cooling. With less than two operable loops, appropriate action in accordance with the TS action statements must be taken. TS 3.9.11.2 recognizes the use of any alternate decay heat removal method as an acceptable approach in complying with TS action statements. ADHRS is not intended to be a replacement for an operable RHR shutdown cooling loop. SERI considers the use of TS action statements to provide appropriate compensatory measures when not meeting LCO requirements. This does not mean that the TS consider ADHRS or any other alternate method equivalent to an operable RHR shutdown cooling loop. The current RF03 schedule shows that on April 4, 1989 when ADHRS is in service, an operable RHR loop "A" is in standby. The standby loop provides backup protection in case of the loss of ADHRS as it would upon loss of an operable RHR shutdown cooling loop. While ADHRS in itself is not single failure proof, major components within the system are redundant with sufficient capacity to remove the existing decay heat load. If RHR loop "A" were also to fail, LPCS (capable of automatic initiation/injection) will be operable and able to flood the reactor and reactor cavity with suppression pool water. Once reactor cavity water level is raised, FPCCU can be used to remove reactor vessel decay heat. In addition, LPCS can be used in conjunction with drain lines to the suppression pool to continually inject and to recirculate suppression pool water to the vessel; thereby, utilizing the suppression pool as a large heat sink. R

6) GGNS Off-Normal Event Procedure (ONEP) 05-1-01-III-1, "Inadequate Decay Heat Removal", addresses loss of decay heat removal capability in OPERATIONAL CONDITIONs 4 and 5. This procedure provides the operator with specific directions for maintaining or re-establishing adequate core cooling, including references to the appropriate system operating instructions for placing RHR shutdown cooling into service. The ONEP will be revised to reflect the addition of the new ADHRS prior to the ADHRS first use. Using the curves contained in the ONEP, on April 4, 1989 the time to boil will be approximately 5.5 hours; therefore, allowing time for operator activity to restore ADHRS, RHR loop "A" or some other decay heat removal method. R

7) Therefore, there is sufficient decay heat removal capability available on April 4, 1989 to lower reactor cavity water without a reduction in safety.

8) On April 17, 1989, operable RHR loop "A" will be operating to remove reactor decay heat. The event of concern is the loss of the operating shutdown cooling loop. In addition to the above operable RHR loop "A", on April 17, 1989, RHR loop "B" will be available as an alternate to remove decay heat. The alternate is inoperable because the SSW basin water level is below the TS required level which provides a 30 day supply of water.

   When RHR "B" will be used as an alternate, the SSW basin water level will be maintained above the level required to provide adequate SSW pump "B" net positive suction head. The basin water level required to provide adequate SSW pump "B" net positive suction head is 82 feet 6 inches (mean sea level). Thereby when RHR "B" is an alternate, SSW pump "B" net positive suction head requirements are met. The required water level in the ultimate heat sink to maintain net positive suction head for the associated SSW pump is identified and controlled in the instructions that control the SSW basin draindown. These instructions contain limits, cautions, and actions required for monitoring level and securing the pumps. These instructions are reviewed and approved by the Performance and Systems Engineering group and the Plant Safety Review Committee prior to use. The SSW system operating instruction, 04-1-01-P41-1, currently describes how to provide makeup water to the SSW basins if normal makeup water sources are unavailable including during a loss of power. Such methods include using portable pumps and the onsite fire truck.

   With the SSW "B" basin in the above described condition, RHR loop "B" is available and capable of decay heat removal if called upon to do so. The reactor will have been shutdown since March 17, 1989; therefore a lower level of decay heat will exist on April 17, 1989. If RHR loop "A" fails, loop "B" is available. Therefore, there is sufficient decay heat removal capability available on April 17, 1989 to lower reactor cavity water level without a reduction in safety.

9) The new TS 3.9.11.2 ACTION c will allow entry into OPERATIONAL CONDITION 5 from 4 or lowering reactor cavity level when using the one time Specification 3.0.4

exception. Usage of the Specification 3.0.4 exception will thereby be restricted to only the scheduled events. Therefore, the one-time exception to Specification 3.0.4 provides an acceptable level of safety.

8. In summary, the proposed changes are justified based on:

   a. SERI policy endorses a conservative approach during OPERATIONAL CONDITIONs 4 and 5 concerning availability of ECCS and decay heat removal systems.

   b. SERI policy to minimize time in the action statement such that action provisions are only entered to perform required system maintenance, testing and modifications.

   c. Maintaining at least one shutdown cooling mode of RHR functional throughout the outage unless maintenance or testing activities preclude this.

   d. Decreasing the length of the outage while maintaining safe plant conditions.

   e. Meeting the action requirements provides an acceptable level of safety.

D. NO SIGNIFICANT HAZARDS CONSIDERATIONS

The following analysis about the issue of no significant hazards consideration, using the standards of 10 CFR50.92, is provided in accordance with 10 CFR 50.91(a).

1. The proposed changes are intended to provide operational flexibility during the upcoming refueling outage while ensuring core decay heat removal capability, ECCS water injection requirements and primary and secondary containment capability. SERI has developed and implemented a management philosophy to ensure adequate makeup capabilities exist to mitigate inadvertent reactor vessel draining and to ensure maximum decay heat removal capabilities during plant outages. This philosophy has been implemented by policy as a Technical Specification Position Statement which requires:

   a) At least one ECCS and one Fuel Pool Cooling subsystem functional at all time.

   b) At least one shutdown cooling subsystem of RHR remain functional except for periods of required maintenance or testing.

   c) The emergency diesel/generator associated with the one required ECCS, Fuel Pool Cooling, and Shutdown Cooling subsystem be functional (and operable when possible).

d) Any alternate shutdown cooling subsystem must be demonstrated to be able to remove reactor decay heat load existing at the time the system is required.

In addition, it is SERI's outage philosophy to minimize the time in TS action statements associated with the above systems such that these action statements are only entered for required maintenance, testing, inspections, and modifications. Any exceptions to the above must receive prior Plant Safety Review Committee review and approval.

2. This policy has been successfully executed and demonstrated effective in previous refueling outages.

3. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated. SERI has evaluated UFSAR Chapter 15 events which are considered to be applicable during OPERATIONAL CONDITIONs 4 and 5. These events include a dropped fuel bundle and inadvertent criticality. The proposed Specification 3.0.4 exceptions cannot affect the probability of occurrence of any of these events. The proposed 3.0.4 exceptions would have no effect on fuel handling operations in the containment or in the spent fuel pool because fuel handling procedures and methods remain unchanged. The proposed changes have no effect on control rod interlocks or fuel loading errors and thus do not affect the probability of occurrence of an inadvertent criticality. The proposed changes will allow the following evolutions to occur during the third refueling outage while in the action statements of the affected TS:

   a. Tensioning and detensioning the reactor vessel head.

   b. Lowering the reactor cavity water level to less than 22 feet 8 inches above the reactor pressure vessel flange.

   c. Performing core alterations, handling irradiated fuel and performing an operation with the potential to drain the vessel while relying on the provisions of ACTION b and c of TS 3.6.4 and 3.6.6.2.

4. The above listed evolutions will be performed while in the action statements associated with ECCS operating and shutdown requirements, provisions concerning the number of RHR shutdown cooling loops required operable, provisions concerning primary containment, drywell and secondary containment capability and control room emergency filtration system. Without the requested TS 3.0.4 exceptions, the required systems would have to be made operable just to perform the above evolutions and then they may be made inoperable again for maintenance and testing purposes. The evolution of making systems operable just to change operational

conditions or other specified conditions represents significant impact on the refueling outage. With the proposed changes the outage length can be significantly decreased with no significant impact to overall plant safety.

5. The proposed changes do not affect the consequences of an accident previously evaluated. SERI policy looks at the overall outage plan and attempts to optimize testing and maintenance periods on ECCS and decay heat removal systems in order to ensure optimum availability while at the same time accomplishing required maintenance and testing activities.

6. The proposed changes involving RHR shutdown cooling affect Specifications 3.4.9.2 ACTION a, 3.7.1.1 ACTIONs b and d, 3.7.1.3 ACTION a, and 3.9.11.2. The action statements of Specifications 3.4.9.2 and 3.9.11.2 contain provisions to establish alternate methods of decay heat removal, when necessary, with RHR shutdown cooling loops inoperable. These alternate methods of decay heat removal are procedurally prescribed prior to entering an outage based on available equipment and planned outage activities. Since decay heat removal is provided for in the action statements of the affected specifications, entry into the operational conditions with less than the required number of RHR shutdown cooling loops available does not involve a significant increase in the probability or consequences of an accident previously evaluated.

7. The proposed change to Specification 3.7.1.1 ACTIONs b and d and 3.7.1.3 ACTION a affect the SSW subsystems and ultimate heat sink that support the RHR shutdown cooling loops. With an SSW subsystem inoperable, its associated RHR shutdown cooling loop is also required by the Technical Specifications to be declared inoperable. Changing operational conditions or other specified conditions with this SSW subsystem and associated RHR shutdown cooling loop inoperable represents no significant increase in the probability or consequences of an accident previously evaluated.

8. The proposed changes to Specification 3.5.2 and 3.7.1.1 ACTION c will allow operational condition changes with one ECCS subsystem/system OPERABLE. Since only OPERATIONAL CONDITIONs 4 and 5* are affected, present TS indicate that one ECCS subsystem/system is sufficient for water makeup requirements for the four hour time allowance of ACTION a of Specification 3.5.2 or indefinitely if all operations with the potential to drain the vessel are suspended. The proposed change to ACTION c of Specification 3.7.1.1 is similar to that for ACTIONs b and d such that when equipment is out of service, a support system such as SSW is not required to be operable for that ECCS function. Since ECCS makeup capability is provided while in ACTION a of Specification 3.5.2, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

9. The proposed change to 3.5.3 ACTION c will allow operation of the Alternate Decay Heat Removal System (ADHRS) which requires declaring inoperable a division of suppression pool water level instrumentation. TS 3.0.4 presently restricts changing operational conditions while relying on the provisions of that action. ADHRS operation causes the inoperability of one division of suppression pool level instrumentation which causes entry into ACTION c of TS 3.5.3. This action requires that suppression pool level be verified once per 12 hours by an alternate indicator. Operational condition or specified condition changes cannot be made while relying on the provisions of the action even though suppression pool level can be verified by an alternate indicator. Since an alternate means of verifying suppression pool level is provided by ACTION c of Specification 3.5.3, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

10. The proposed changes involving drywell, primary containment and secondary containment isolation valves affect Specification 3.6.4 ACTIONs b and c and Specification 3.6.6.2 ACTIONs b and c. The action statements of those specifications provide provisions for isolating affected penetrations when one or more of the associated isolation valves or dampers are inoperable. The action involves isolating the affected penetration by use of at least one deactivated automatic valve secured in the isolated position or by use of at least one closed manual valve or blind flange such that the safety function of the valve or damper is accomplished. Because the affected penetrations are isolated in accordance with the specified actions, changing operational or other specified conditions while relying on the provisions of the action does not involve a significant increase in the probability or consequences of an accident previously evaluated.

11. The proposed change involving the control room emergency filtration system affects Specification 3.7.2 ACTION b.1. The action statement of that specification provides provisions for OPERATIONAL CONDITIONs 4, 5 and "*" when one of the two required control room emergency filtration system subsystems are inoperable. The action requires restoration of the inoperable subsystem within seven days or initiate and maintain operation of the operable subsystem in the isolation mode of operation. Since emergency filtration capability is provided by the operable subsystem, changing operational conditions or other specified conditions with less than the required number of control room emergency filtration subsystems does not involve a significant increase in the probability or consequences of an accident.

12. The proposed change does not increase the possibility of a new or different kind of accident from any previously analyzed. The proposed changes do not increase the amount of time ECCS, RHR shutdown cooling loops or control room emergency filtration

subsystems are unavailable nor do the changes reduce the drywell, containment or secondary containment isolation capability. The proposed changes do not increase the potential for draining the reactor vessel. Since the above safety systems are maintained, there is no possibility of a new or different kind of accident from any previously analyzed. The proposed changes are intended to increase outage flexibility while maintaining necessary levels of plant safety.

13. The proposed change does not involve a significant reduction in a margin of safety. The proposed Specification 3.0.4 exceptions will still ensure that core decay heat removal, ECCS makeup capabilities, control room emergency filtration capability, and drywell, containment and secondary containment capability are available when required during the refueling outage. In addition to Technical Specification action requirements, SERI is to maintain at least one ECCS system and one Fuel Pool Cooling and Cleanup system functional at all times during the outage. RHR shutdown cooling loops will be functional unless maintenance or testing removes them from service. SERI's outage policy will minimize time in the action statements. Since essential safety systems are available as necessary during the outage, the change does not involve a significant reduction in a margin of safety.