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 STALL, J.A. Florida Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION
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SUBJECT: Application for amends to licenses DPR-67 & NPF-16,
 requesting to revise TS 3/4.9.9 re refueling requirements &
 TS 3/4.9.10 re refueling operations, water level-reactor
 vessel.

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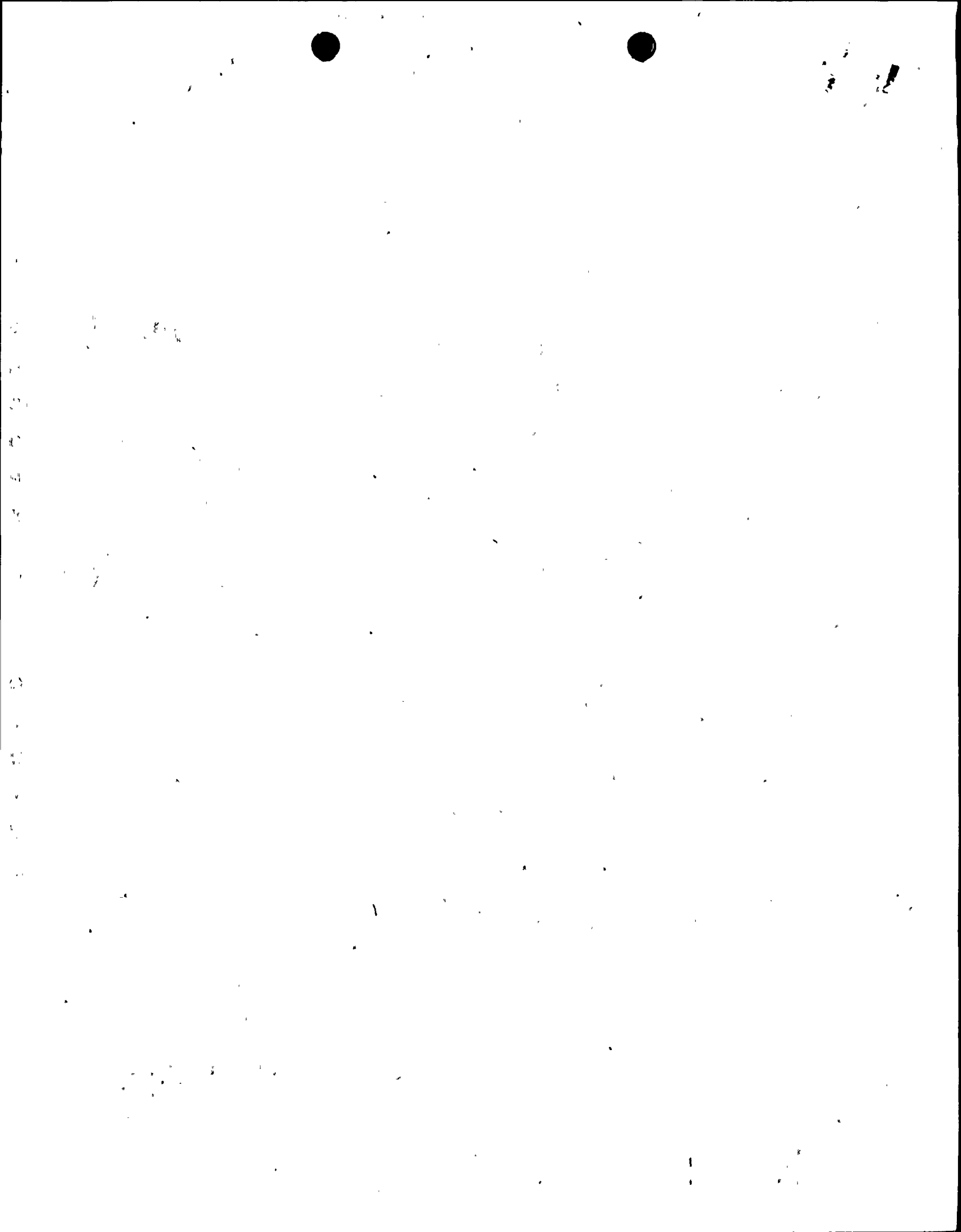
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FPL

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L-96-222
10 CFR 50.90

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

RE: St. Lucie Unit 1 and Unit 2
Docket Nos. 50-335 and 50-389
Proposed License Amendments
Refueling Technical Specifications

Pursuant to 10 CFR 50.90, Florida Power & Light Company (FPL) requests to amend Facility Operating License DPR-67 for St. Lucie Unit 1 and NPF-16 for St. Lucie Unit 2 by incorporating the attached Technical Specifications (TS) revisions. An editorial change is proposed for TS 3/4.9.9, "Refueling Operations, Containment Isolation System," and, for St. Lucie Unit 1, the LCO is modified to conform with other related refueling requirements. The Applicability, Actions, and Surveillance Requirements of TS 3/4.9.10, "Refueling Operations, Water Level-Reactor Vessel," are upgraded consistent with the Standard Technical Specifications for Combustion Engineering Plants, NUREG-1432, for both St. Lucie Units. This latter revision will also reduce the potential for personnel contaminations during refueling activities at Unit 2.

It is requested that the proposed amendments, if approved, be issued prior to the next St. Lucie Unit 2 refueling overhaul, which is currently scheduled to begin April 14, 1997.

Attachment 1 is an evaluation of the proposed changes. Attachment 2 is the "Determination of No Significant Hazards Consideration." Attachments 3 and 4 contain copies of the affected technical specifications pages marked up to show the proposed changes.

The proposed amendments have been reviewed by the St. Lucie Facility Review Group and the FPL Company Nuclear Review Board. In accordance with 10 CFR 50.91 (b) (1), copies of the proposed amendments are being forwarded to the State Designee for the State of Florida.

Please contact us if there are any questions about this submittal.

Very truly yours,

J.A. Stall
Vice President
St. Lucie Plant

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JAS/RLD

Attachments

cc: Stewart D. Ebnetter, Regional Administrator, Region II, USNRC.
Senior Resident Inspector, USNRC, St. Lucie Plant.
Mr. W.A. Passetti, Florida Department of Health and
Rehabilitative Services.

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STATE OF FLORIDA)
)
COUNTY OF ST. LUCIE) ss.

J. A. Stall being first duly sworn, deposes and says:

That he is Vice President, St. Lucie Plant, for the Nuclear Division of Florida Power & Light Company, the Licensee herein;

That he has executed the foregoing document; that the statements made in this document are true and correct to the best of his knowledge, information and belief, and that he is authorized to execute the document on behalf of said Licensee.



J. A. Stall

STATE OF FLORIDA
COUNTY OF ST. LUCIE

Sworn to and subscribed before me
this 30 day of October, 1996
by J. A. Stall, who is personally known to me.



Signature of Notary Public-State of Florida



KAREN WEST
MY COMMISSION # CC359928 EXPIRES
April 18, 1998
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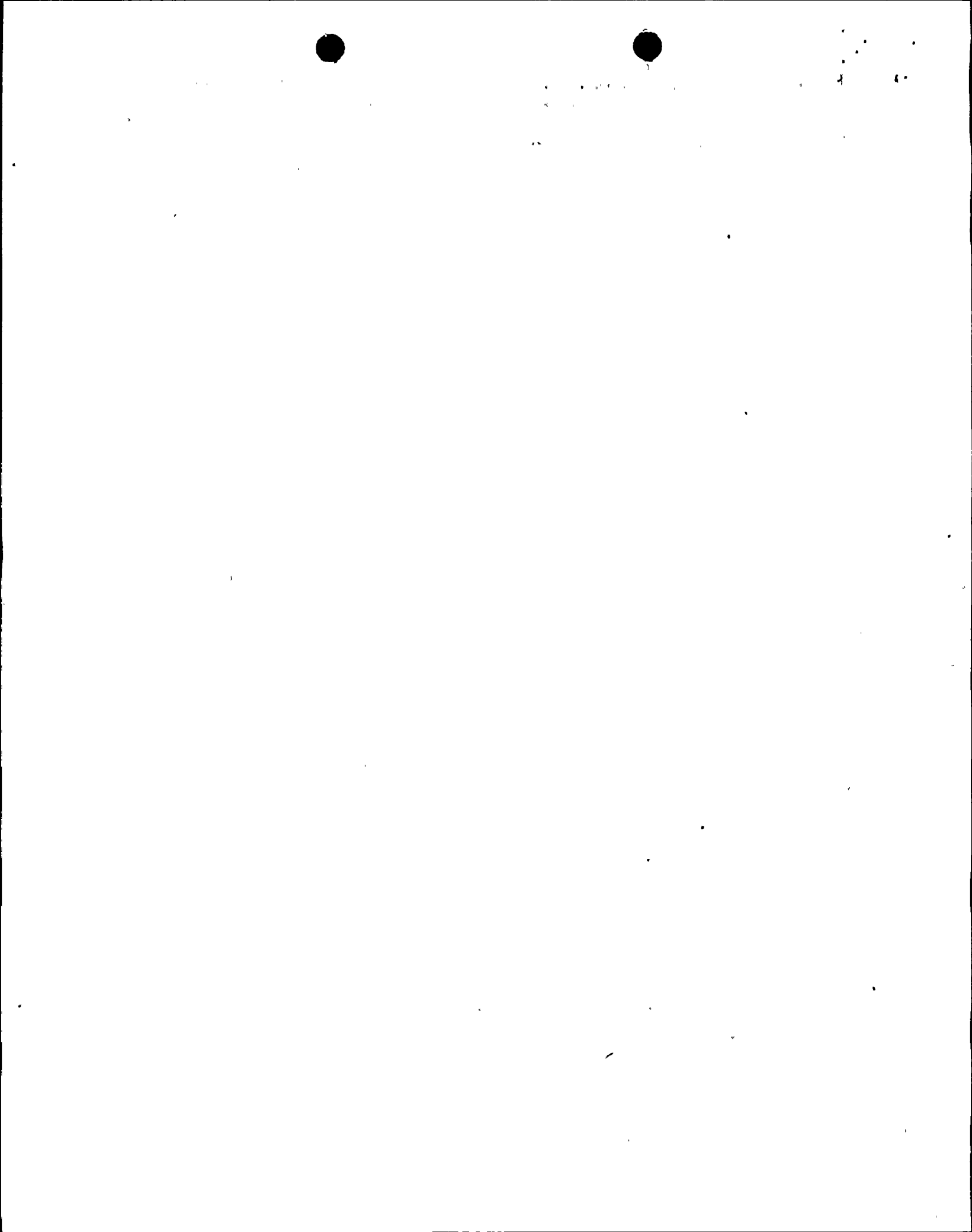
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St. Lucie Unit 1 and Unit 2
Docket Nos. 50-335 and 50-389
Proposed License Amendments
Refueling Technical Specifications

ATTACHMENT 1

EVALUATION OF PROPOSED TS CHANGES



EVALUATION OF PROPOSED TS CHANGES

Introduction

The proposed amendment to Facility Operating License DPR-67 for St. Lucie Unit 1 (PSL1) and NPF-16 for St. Lucie Unit 2 (PSL2) will revise Technical Specification (TS) 3/4.9.10, "Refueling Operations, Water Level-Reactor Vessel." The Limiting Condition for Operation (LCO) specified for the minimum allowed refueling water level is not altered, but the Applicability, Actions, and Surveillance Requirements are changed to remove inconsistencies between the LCO and the definition of Core Alterations, and to achieve consistency with the generic Standard Technical Specifications for Combustion Engineering Plants (NUREG-1432). In addition, the revision will reduce the potential for radiological contamination of personnel who must install and/or remove locking devices required for 4-fingered Control Element Assemblies (CEA) withdrawn into the upper guide structure (UGS) during reactor disassembly/re-assembly operations at PSL2.

The proposed amendments will also revise TS 3/4.9.9, "Refueling Operations, Containment Isolation System," to delete an unnecessary statement in the specified ACTION, and for PSL1, to make the Applicability statement conform with requirements of other related refueling Specifications at both St. Lucie units.

Background

During refueling operations, LCO 3.9.10 places a constraint on the minimum water level allowed above the reactor vessel, and the associated Applicability statement requires conformance to the LCO during movement of fuel assemblies or (any) CEAs within the reactor vessel. Refueling operations include reactor core alterations, as well as the underwater transfer of irradiated fuel assemblies between the reactor vessel and the spent fuel storage facility. The specified minimum water level provides assurance that sufficient water depth is available to retain iodine fission product activity within the water in the event of a fuel handling accident, and thereby minimizes the offsite radiation dose that could occur from the accident. The radioactive iodine would emanate from the gas gap activity released as a result of the rupture of an irradiated fuel assembly.

The PSL2 core design includes four (4-fingered) CEAs which are shared by fuel assemblies located at the outer periphery of the reactor core. During reactor disassembly, after the vessel head is removed and prior to UGS removal, these CEAs must be withdrawn into the UGS and secured in the withdrawn position by manually installing extension shaft locking devices (clamps and lock pins) at the top of their respective CEA shrouds. The 4-fingered CEAs remain within the UGS throughout the remainder of the disassembly and refueling sequence. During reactor re-assembly, these locking devices must be manually removed from the CEA extension shafts after the UGS is installed. Maintaining the refueling water level at 23 feet above the top of the reactor vessel flange, as currently required by LCO 3.9.10, results in the water surface being at a higher elevation than the deck of the UGS work platform. Consequently, operators must stand in approximately 2 feet of radioactive water and reach below the water surface to install/remove the extension shaft clamps and lock pins. This problem does not occur at PSL1 since the core design does not include 4-fingered CEAs.

TS 1.9 defines a CORE ALTERATION as the movement or manipulation of any fuel, sources, reactivity control components, or other components affecting reactivity within the reactor vessel with the vessel head removed and fuel in the vessel. The definition provides exceptions which include "shared (4-fingered) control element assemblies (CEAs) withdrawn into the upper guide structure (UGS) or evolutions performed with the UGS in place such as CEA latching/unlatching which do not constitute a CORE ALTERATION." This definition is consistent with the generic Standard Technical Specifications (STS) for Combustion Engineering Plants.

Description and Evaluation of Proposed TS Changes for PSL1 and PSL2

Copies of the affected TS pages marked-up to show the changes are contained in Attachments 3 and 4 of this submittal.

- (1) The Applicability statements for TS 3/4.9.9 (PSL1 only) and 3/4.9.10 (both PSL units) are rewritten as follows:

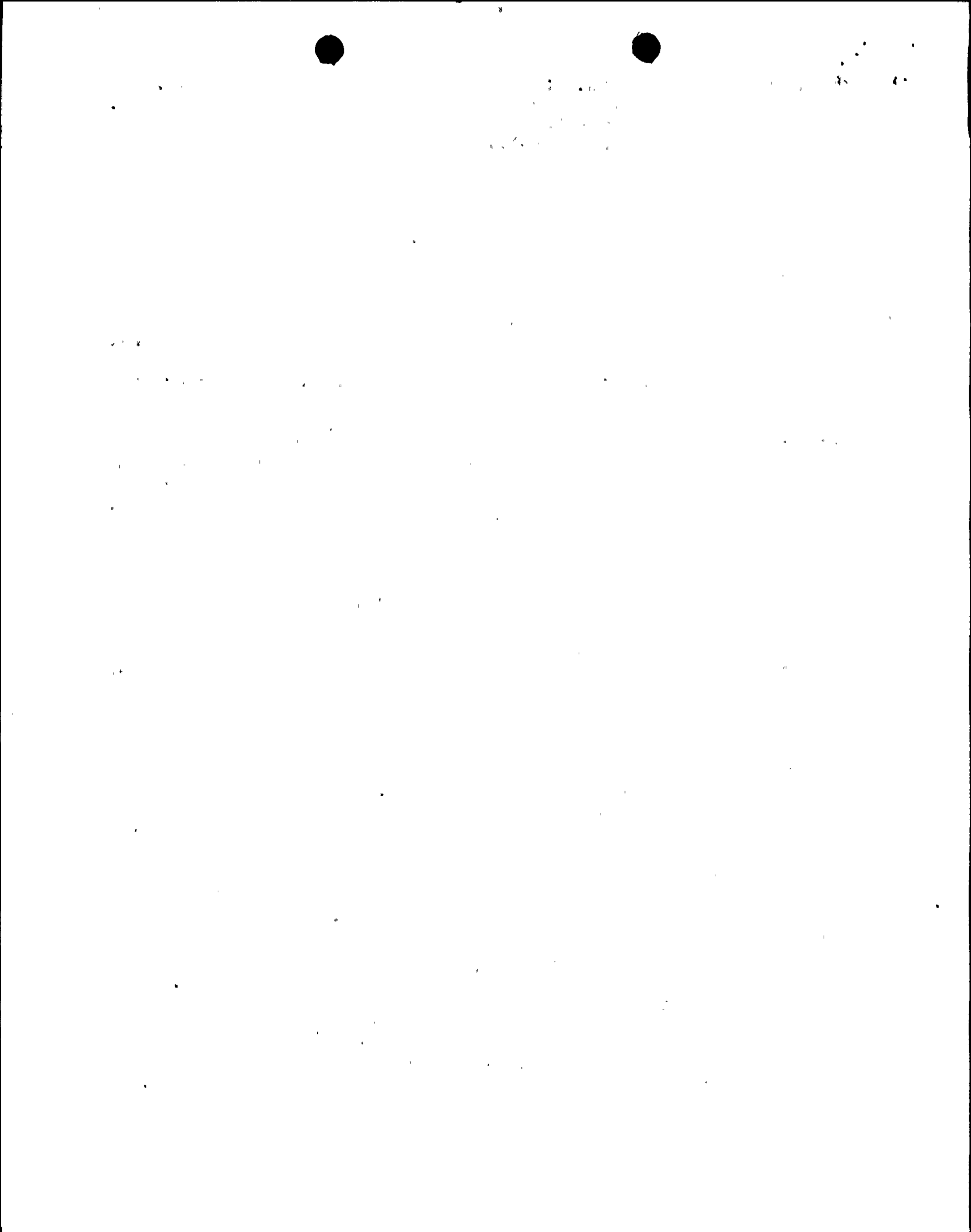
APPLICABILITY: *During CORE ALTERATIONS.*

During movement of irradiated fuel assemblies within containment.

a) TS 3/4.9.9 (PSL1 only): Operability of the containment isolation system in conjunction with the containment penetrations maintains the ability to restrict release of radioactive material to the environment from a fuel element rupture when in the refueling mode. The existing Applicability statement for TS 3/4.9.9 requires the Containment Isolation System to be OPERABLE at all times during MODE 6, which is not consistent with the operability requirements for those containment penetrations that the isolation system would operate. Pursuant to Specification 3/4.9.4, "Refueling Operations, Containment Penetrations," the ability to close containment penetrations is only required in MODE 6 when CORE ALTERATIONS or movement of irradiated fuel within containment is in progress. This is reasonable since CORE ALTERATIONS and transfer of fuel between the reactor vessel and the spent fuel facility are the types of refueling operations susceptible to a fuel handling accident and potential fuel element rupture in containment.

The proposed Applicability statement resolves the inconsistency between the two LCOs, and will require conformance to TS 3/4.9.9 during those operations susceptible to a fuel handling accident. This change will also make the PSL1 TS 3/4.9.9 the same as the corresponding Specification for the Containment Isolation System at St. Lucie Unit 2, and is consistent with the STS (NUREG-1432, Revision 1) LCO 3.9.3 for Containment Penetrations.

b) TS 3/4.9.10: The existing Applicability statement requires conformance to the LCO during movement of fuel assemblies or (any) CEAs within the reactor vessel. The proposed Applicability statement requires conformance to the LCO during the movement of fuel assemblies or other components affecting reactivity within the reactor vessel; except for movement of the shared (4-fingered) CEAs or other evolutions performed with the UGS in place such as CEA latching/unlatching, and verification thereof, which do not constitute a CORE ALTERATION. These exceptions were found acceptable (Amendment No.146/85 for PSL1/PSL2) because such operations have only a minor effect on core reactivity and, with the UGS in place, the fuel assemblies can not be moved and the CEAs can not be shuffled. Additionally, with the UGS in place, the fuel is protected from the possibility of mechanical damage from objects being dropped on it, and other components that would create a direct radiation hazard can not be removed from the reactor vessel.



The revision to LCO 3/4.9.10 will allow the PSL2 refueling cavity water level to be maintained below the deck elevation of the UGS work platform during refueling tasks involving the 4-fingered CEAs. Thus, the potential for radiological contamination of personnel will be reduced. The proposed changes also make clear that conformance to the conditions of the LCO is required when moving irradiated fuel assemblies within containment, e.g., such as transferring fuel between the reactor vessel and the spent fuel facility. Assurance is thereby provided that the proper cavity water level for all refueling operations in containment susceptible to fuel handling mishaps will be maintained.

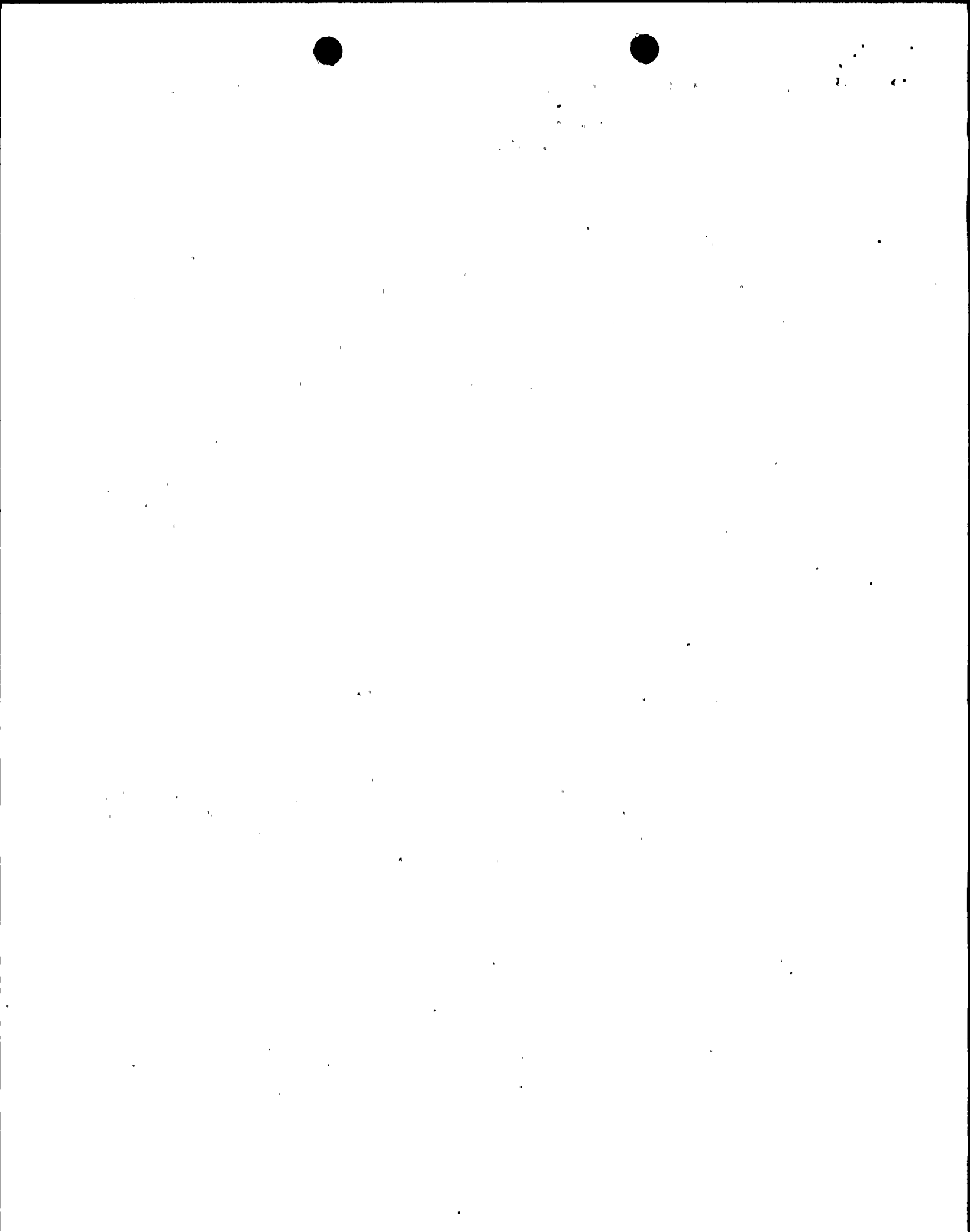
The proposed applicability of LCO 3/4.9.10 is consistent with the corresponding LCO 3.9.6 of the STS (NUREG-1432, Revision 1), and will minimize the possibility of a fuel handling accident in containment that is beyond the assumptions of the St. Lucie Unit 1 and Unit 2 safety analysis.

(2) The ACTION statements for LCO 3/4.9.9 and 3/4.9.10 are revised as follows:

a) T/S 3/4.9.9: Delete the last sentence which states, "The provisions of Specification 3.0.4 [3.0.3 for PSL1] are not applicable."

For PSL1, the reference to Specification 3.0.3 is unnecessary, e.g., TS 3.0.3 is not applicable in MODES 5 or 6 and an exception is therefore redundant. At the time that LCO 3/4.9.9 was constructed, the proper reference for the stated exception would have been Specification 3.0.4 in order to allow entry into an operational mode or specified condition in accordance with the ACTION requirements. This exception would have been necessary at that time because TS 3.0.4 prohibited such entry.

For both PSL units, the need for an exception to Specification 3.0.4 in the LCO 3.9.9 ACTION statement has been superseded by subsequent amendments to the reference specification (Amendments 98/33 for PSL1/PSL2). TS 3.0.4 presently states, in part, "Entry into an OPERATIONAL MODE or specified condition may be made in accordance with ACTION requirements when conformance to them permits continued operation of the facility for an unlimited period of time." Therefore, the exclusion statement is redundant and its deletion is an editorial change.



b) TS 3/4.9.10: The ACTION is rewritten as follows:

With the requirements of the above specification not satisfied, *immediately suspend CORE ALTERATIONS and movement of irradiated fuel assemblies within containment, and immediately initiate action to restore refueling cavity water level to within limits.*

The existing Action statement only addresses operations involving movement of fuel assemblies or CEAs within the reactor vessel. The proposed action is increased in scope to also include suspension of movement of irradiated fuel assemblies in containment and to initiate action to restore the refueling cavity water level to within limits. The proposed Action statement emphasizes the urgency with which actions shall be taken to assure that operations necessary for a fuel handling accident to occur are promptly curtailed. By definition and pursuant to Specification 1.9, immediate suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position.

The revised Action statement is consistent with the corresponding LCO 3.9.6 of the STS (NUREG-1432, Revision 1), and will minimize the possibility of a fuel handling accident in containment that is beyond the assumptions of the St. Lucie Unit 1 and Unit 2 safety analyses.

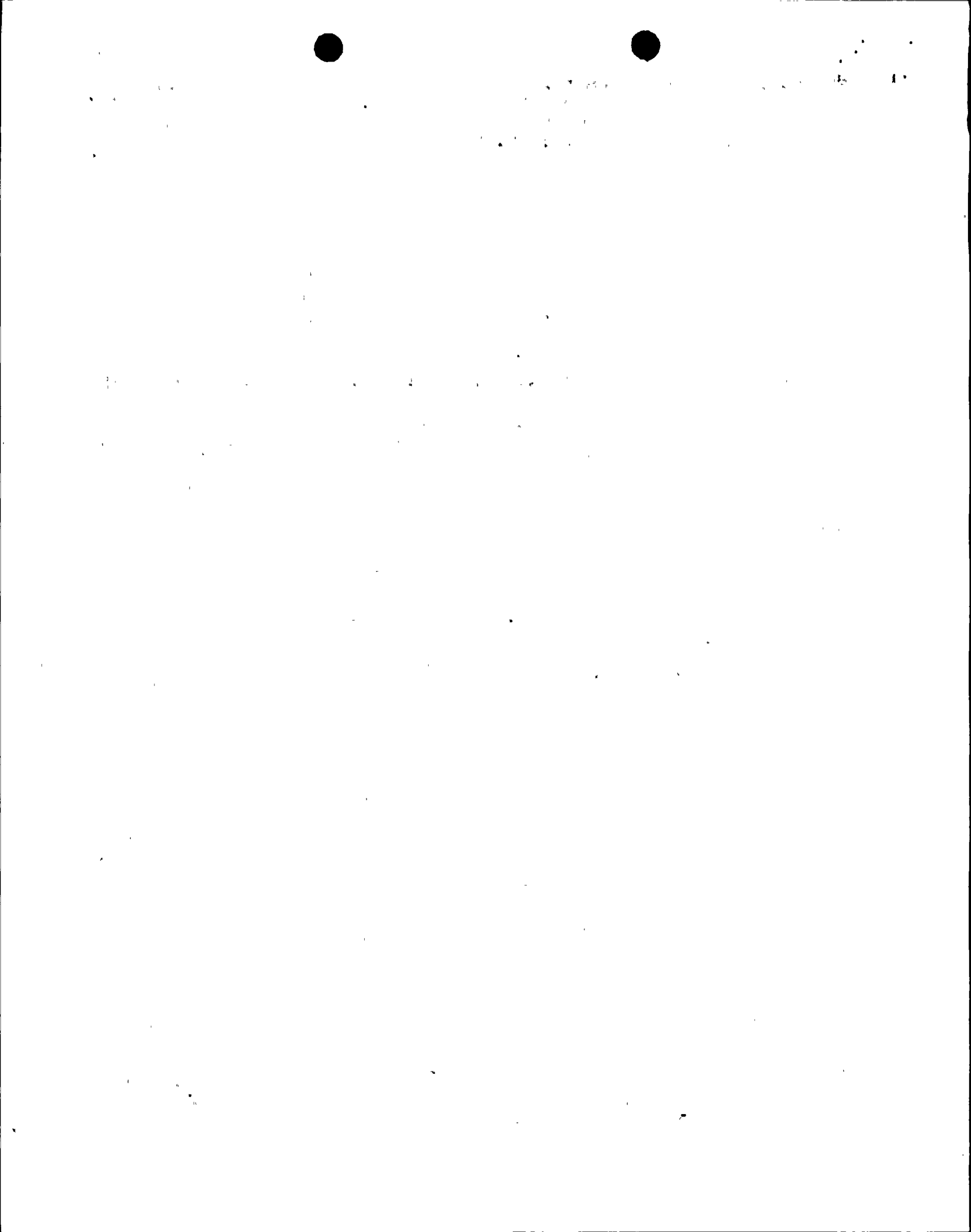
(3) SURVEILLANCE REQUIREMENT (SR) 4.9.10 is revised to incorporate the plant conditions reflected in the proposed Applicability statement, e.g., the surveillance is required during

"CORE ALTERATIONS and during movement of irradiated fuel assemblies within containment."

The periodic surveillance interval is unchanged from the existing Specification, and the proposed wording is consistent with the corresponding SR 3.9.6.1 of the STS (NUREG-1432, Revision 1).

Conclusion

The proposed change to LCO 3/4.9.9 resolves an inconsistency between the operability requirements for containment penetrations and the system which initiates automatic isolation of those



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penetrations at St. Lucie Unit 1. The plant conditions for which conformance to this LCO is required will be the same for both St. Lucie units.

Allowing for the St. Lucie TS narrative format, the proposed changes to LCO 3/4.9.10 are consistent with the corresponding requirements in LCO 3.9.6 of the Standard Technical Specifications for Combustion Engineering Plants, NUREG-1432, Revision 1. The revised LCO is considered to be a line item improvement to the existing Specification which will minimize the potential for personnel contamination at PSL2, and will continue to minimize the possibility of a fuel handling accident in containment that is beyond the assumptions of the safety analysis for each PSL unit.

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ATTACHMENT 2

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

Description of amendment request: The proposed amendment to Facility Operating License DPR-67 for St. Lucie Unit 1 (PSL1) and NPF-16 for St. Lucie Unit 2 (PSL2) will revise Technical Specification (TS) 3/4.9.10, "Refueling Operations, Water Level-Reactor Vessel." The Limiting Condition for Operation (LCO) specified for the minimum allowed refueling water level is not altered, but the Applicability, Action, and Surveillance Requirements are changed to remove inconsistencies with the definition of Core Alterations, and to achieve consistency with the generic Standard Technical Specifications for Combustion Engineering Plants (NUREG-1432). An editorial change is proposed for TS 3/4.9.9, "Refueling Operations, Containment Isolation System," and, for St. Lucie Unit 1, the LCO is modified to conform with other related refueling specifications.

Pursuant to 10 CFR 50.92, a determination may be made that a proposed license amendment involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. Each standard is discussed as follows:

(1) Operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability or consequences of an accident previously evaluated.

Certain evolutions performed with the UGS in place are not Core Alterations, and the revised LCO 3/4.9.10 will allow these activities to be performed at water levels other than prescribed by the existing LCO. Since these activities are performed with the UGS in place, the probability that a fuel handling accident would occur is not impacted by the proposed changes. The minimum water level required for Core Alterations and movement of irradiated fuel in containment is not altered by the proposed changes, nor are any assumptions or conditions changed that were used as inputs to the evaluation of fuel handling accident consequences. The changes to Specification 3/4.9.9 are administrative in nature and resolve an inconsistency between the operability requirements for the

containment isolation system and the containment penetrations that the system would isolate at PSL1. Therefore, operation of either facility in accordance with its proposed amendment would not involve a significant increase in the probability or consequences of an accident previously evaluated.

(2) Operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed changes are administrative in nature, in that the changes do not involve the addition or modification of equipment nor do they alter the design of plant systems. New failure modes are not introduced, and the physical plant or the modes of plant operation defined in the Facility License are not altered. Therefore, operation of either facility in accordance with its proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated.

(3) Operation of the facility in accordance with the proposed amendment would not involve a significant reduction in a margin of safety.

The safety margin associated with a fuel handling accident is determined, in part, by the minimum refueling water level allowed for conducting Core Alterations and movement of irradiated fuel in containment. The minimum water level required by LCO 3/4.9.10, or other factors considered as inputs to the safety analysis, is not changed by the proposed amendments. The revised applicability requirements for LCO 3/4.9.9 at PSL1 will allow the containment isolation system to be inoperable only during those Mode 6 conditions where Core Alterations or irradiated fuel movements within containment are not in progress, or each required containment penetration is otherwise closed. Therefore, operation of either facility in accordance with its proposed amendment would not involve a significant reduction in a margin of safety.

Based on the above discussion and the supporting Evaluation of Technical Specification changes, FPL has determined that the proposed license amendments involve no significant hazards consideration.