

AmerGen Energy Company, LLC
Oyster Creek
US Route 9 South
P.O. Box 388
Forked River, NJ 08731-0388

10 CFR 50.90

September 10, 2001
2130-01-20178

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

Subject: Oyster Creek Generating Station
Facility Operating License No. DPR-16
Docket No. 50-219
Technical Specification Change Request No. 292

In accordance with 10 CFR 50.4(b)(1), enclosed is Technical Specification Change Request (TSCR) No. 292 for the above facility.

In accordance with 10 CFR 50.90, AmerGen Energy Company, LLC (AmerGen) requests an amendment to the Technical Specifications (TS) contained in Appendix A to the Facility Operating License as described in Enclosure 1. The proposed change would revise the requirement for source range monitor operability during core alterations in Technical Specification 3.9.D. A mark-up of TS page 3.9-1 showing the requested change is contained in Enclosure 2. Corresponding changes to the Bases of Specification 3.9 are also included in Enclosure 2. Replacement TS pages reflecting the requested change will be provided to the NRC prior to the issuance of the license amendment.

AmerGen requests review and approval of the proposed change by September 10, 2002 in advance of the next (1R19) refueling outage currently scheduled to commence October 16, 2002.

Using the standards in 10 CFR 50.92, AmerGen has concluded that the proposed change does not constitute a significant hazard as described in the Enclosure 1 analysis performed in accordance with 10 CFR 50.91(a)(1).

AmerGen believes that an environmental review of this change is not required in accordance with the criteria of 10 CFR 51.22(c)(9) as discussed in Enclosure 1.

Pursuant to 10 CFR 50.91(b)(1), also enclosed is a Certificate of Service for this request certifying service to the designated official of the State of New Jersey Bureau of Nuclear Engineering and the Mayor of Lacey Township, Ocean County, New Jersey.

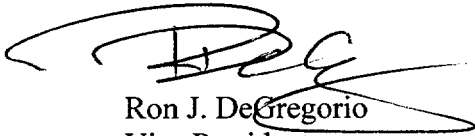
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Oyster Creek Generating Station
2130-01-20178
Page 2 of 2

This license amendment application has undergone a safety review in accordance with Section 6.5 of the Oyster Creek Technical Specifications. Aside from new requirements associated with the requested change to the Technical Specifications there are no new commitments contained in this correspondence.

Should you have any questions or require any additional information please contact Mr. Paul F. Czaya at 609-971-4139.

Very truly yours,



Ron J. DeGregorio
Vice President
Oyster Creek

Enclosures: 1) Technical Specification Change Request No. 292
2) Technical Specification Pages Mark-up


c: H. J. Miller, Administrator, USNRC Region I
L. A. Dudes, USNRC Senior Resident Inspector, Oyster Creek
H. N. Pastis, USNRC Senior Project Manager, Oyster Creek
File No. 01077

AmerGen Energy Company, LLC
Oyster Creek Generating Station

Facility Operating License No. DPR-16

Technical Specification Change Request No. 292
Docket No. 50-219

Applicant hereby submits a proposed change to Appendix A Technical Specification 3.9.D on page 3.9-1. All statements contained in this application have been reviewed, and all such statements made and matters set forth therein are true and correct to the best of my knowledge.

By: 
Ron J. DeGregorio
Vice President
Oyster Creek

Sworn and subscribed to before me this 10th day of September 2001.


A Notary Public of NJ

MARITA ZAREMBO
NOTARY PUBLIC OF NEW JERSEY
Commission Expires 5/31/2005

United States of America
Nuclear Regulatory Commission

In the Matter of)
AmerGen Energy Company, LLC)

Docket No. 50-219

Certificate of Service

This is to certify that a copy of Technical Specification Change Request No. 292 for the Oyster Creek Generating Station Facility Operating License, filed with the U.S. Nuclear Regulatory Commission on September 10, 2001 has this 10th day of September 2001, been served on the Mayor of Lacey Township, Ocean County, New Jersey, and the designated official of the State of New Jersey Bureau of Nuclear Engineering, by deposit in the United States mail, addressed as follows:

The Honorable Ronald Sterling
Mayor of Lacey Township
818 West Lacey Road
Forked River, NJ 08731

Mr. Kent Tosch, Director
Bureau of Nuclear Engineering
Department of Environmental Protection
CN 411
Trenton, NJ 08625

By: 

Ron J. DeGregorio
Vice President
Oyster Creek

Enclosure 1

Oyster Creek Generating Station
Technical Specification Change Request No. 292

Safety Evaluation
and
No Significant Hazards Determination

I. Technical Specification Change Request No. 292

The purpose of this Technical Specification Change Request (TSCR) is to revise Oyster Creek Generating Station (OCGS) Technical Specification (TS) 3.9.D to change the requirement for Source Range Monitor (SRM) operability during core alterations. This request proposes that this requirement be made consistent with TS 3.9.E.2 and 3.9.F.2 by requiring two SRM channels to be operable, one with its detector located in the core quadrant where core alterations are being performed, and another with its detector located in an adjacent quadrant.

AmerGen Energy Company, LLC (AmerGen) requests that the following change be made to the existing Appendix A Technical Specifications:

Revised Technical Specification Page: 3.9-1

The proposed change will replace the existing text of TS 3.9.D as indicated below:

Current text: "During core alterations the source range monitor nearest the alteration shall be operable."

Proposed text: "During CORE ALTERATIONS at least two (2) source range monitor (SRM) channels shall be OPERABLE and inserted to the normal operating level. One of the OPERABLE SRM channel detectors shall be located in the core quadrant where CORE ALTERATIONS are being performed, and another shall be located in an adjacent quadrant."

The proposed change is contained on TS page 3.9-1. A mark-up of TS page 3.9-1 is contained in Enclosure 2. In addition, revision of TS Section 3.9 Bases on pages 3.9-2 and 3.9-3 is also provided in Enclosure 2. As part of the Bases revision, the beginning of Section 3.9 Bases is being relocated from page 3.9-2 to page 3.9-3.

Words in specifications contained on affected pages that are defined by Section 1.0 of the Technical Specifications are capitalized consistent with the format of the Standard Technical Specifications. The capitalized definitions are indicated by a double underscore in the mark-up. In addition, the word REFUEL in TS 3.9.B is being changed to lower case since the word refuel alone is not defined in TS Section 1.0. These aspects constitute a purely administrative change.

II. Discussion of Proposed Changes

The change to source range monitor requirements in TS 3.9.D during core alterations will make this specification consistent with the requirements during control rod removal in TS 3.9.E.2 and 3.9.F.2. In both cases the reactivity potential of the core is being altered. The operability of at least two source range monitors ensures redundant monitoring capability is available to detect changes in the reactivity condition of the core. The change to TS 3.9.D provides improved clarity with respect to implementation of the operability requirements. The core has been divided into clearly defined quadrants for implementation of source range monitor requirements during control rod removal (Specifications 3.9.E.2 and 3.9.F.2). Based on the quadrant in which the control rod is being removed, it is simple to determine which source range monitors must be operable. This logic can also be applied to the quadrant in which core alterations are being performed.

The current specification only requires one source range monitor to be operable, but it must be the one located nearest to the core alteration. The source range monitor nearest to the core alteration is not clearly defined for all cases. Also, when fuel is shuffled in the core two locations are involved in the core alteration. This further complicates the process of ensuring that the current operability requirements are met. The quadrant in which the fuel move is performed is more clearly discernable and thus more easily verified.

III. Safety Assessment

The proposed change involves the operability requirements for source range monitors during core alterations in TS 3.9.D. The SRM detectors are located in four discreet radial core locations, each 18 inches above the core mid-plane. The SRM channels produce a signal that is proportional to the local neutron flux in the vicinity of the detectors. Reactivity changes will cause a change in neutron flux, producing a response in the SRM channel output. The distance from the core alteration to the SRM detector is not crucial for detecting an unexpected reactivity change that would produce an inadvertent criticality. Therefore, an operable SRM located in the quadrant where the core alteration is being performed, along with a redundant SRM in an adjacent quadrant, will provide adequate reactivity monitoring capability.

The proposed change will not adversely affect nuclear safety or safe plant operation. The change will clarify source range monitor operability requirements and make them consistent with other refueling specifications. The requirement to have an operable SRM

in the quadrant where the core alteration is performed will provide local monitoring of the reactivity change. The added requirement for an operable SRM in an adjacent quadrant will provide redundant monitoring capability that is not currently required.

IV. Information Supporting a Finding of No Significant Hazards

AmerGen has concluded that the proposed change to TS 3.9.D does not involve significant hazards. In support of this determination, an evaluation of each of the three standards set forth in 10 CFR 50.92 is provided below.

1. The proposed TS change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed change revises Technical Specification 3.9.D for source range monitor operability requirements during core alterations. The only accident described in the Final Safety Analysis Report (FSAR) while the plant is in Cold Shutdown or Refueling is a fuel handling (dropped bundle) accident. The proposed change involves equipment that is not involved in the mitigation or prevention of a fuel handling accident as described in the FSAR. Therefore, the change to SRM operability requirements does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. The proposed TS change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed change to TS 3.9.D does not involve any physical alteration of plant equipment or system configuration. Core reactivity and reactivity control functions are not affected, and adequate reactivity monitoring capability is maintained. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The proposed TS change does not involve a significant reduction in a margin of safety.

The proposed change to TS 3.9.D affects the operability requirements for source range monitors during core alterations. The SRMs do not perform any required functions for mitigating the consequences of an accident. The current specification only requires one operable SRM. The proposed specification will ensure redundant monitoring is available to detect changes in the reactivity

condition of the core by requiring the operability of at least two source range monitors. This will provide adequate capability for detecting an inadvertent criticality. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

V. Information Supporting an Environmental Assessment Determination

An environmental assessment is not required for the proposed change since it conforms to the criteria for "actions eligible for categorical exclusion" as specified in 10 CFR 51.22(c)(9). The proposed change will have no impact on the environment. The proposed change does not involve significant hazards as discussed in the preceding section. The proposed change does not involve a significant change in the types or significant increase in the amounts of any effluents that may be released off-site since the change pertains to the operability requirements of an in-core reactivity monitoring system whose function is unchanged. In addition, the proposed change does not involve a significant increase in individual or cumulative occupational radiation exposure since no additional or revised activities involving exposure to radiation are associated with the change to SRM operability requirements.

VI. Conclusion

The proposed change to TS 3.9.D regarding operability requirements for an in-core monitoring system (source range monitors), involves no significant hazards and does not require an environmental assessment.

VII. Implementation

AmerGen requests the proposed change in this license amendment request to become effective upon issuance with implementation within 30 days of issuance.

Enclosure 2

Oyster Creek Technical Specification Change Request No. 292

Mark-up Revision to Technical Specification Pages 3.9-1, 3.9-2 and 3.9-3

3.9 REFUELING

Applicability: Applies to fuel handling operations during refueling.

Objective: To assure that criticality does not occur during refueling.

Specification: A. Fuel shall not be loaded into a reactor core cell unless the control rod in that core cell is fully inserted.

B. During core alterations the reactor mode switch shall be locked in the REFUEL position.
lower case.

C. The refueling interlocks shall be operable with the fuel grapple hoist loaded switch set at <485 lb. during the fuel handling operations with the head off the reactor vessel. If the frame-mounted auxiliary hoist, the trolley-mounted auxiliary hoist or the service platform hoist is to be used for handling fuel with the head off the reactor vessel the load limit switch on the hoist to be used shall be set at <400 lb.

D. During core alterations ^{at least two (2)} the source range monitor ^{(SRM) channels} nearest ~~the alteration~~ shall be operable.

and inserted to the normal operating level. One of the OPERABLE SRM channel detectors shall be located in the core quadrant where CORE ALTERATIONS are being performed, and another shall be located in an adjacent quadrant.

E. Removal of one control rod or rod drive mechanism may be performed provided that all the following specifications are satisfied:

1. The reactor mode switch is locked in the refuel position.
2. At least two (2) source range monitor (SRM) channels shall be operable and inserted to the normal operation level. One of the operable SRM channel detectors shall be located in the core quadrant where the control rod is being removed and one shall be located in an adjacent quadrant.

F. Removal of any number of control rods or rod drive mechanisms may be performed provided all the following specifications are satisfied:

1. The reactor mode switch is locked in the refuel position and all refueling interlocks are operable as required in Specification 3.9.C. The refueling interlocks associated with the control rods being withdrawn may be bypassed as required after the fuel assemblies have been removed from the core cell surrounding the control rods as specified in 4, below.
2. At least two (2) source range monitor (SRM) channels shall be operable and inserted to the normal operation level. One of the operable SRM channel detectors shall be located in the core quadrant where a control rod is

being removed and one shall be located in an adjacent quadrant.

3. All other control rods are fully inserted with the exception of one rod which may be partially withdrawn not more than two notches to perform refueling interlock surveillance.
4. The four fuel assemblies are removed from the core cell surrounding each control rod or rod drive mechanism to be removed.
5. The SHUTDOWN MARGIN requirements of Specification 3.2.A are met.
6. An evaluation will be conducted for each refuel/reload to ensure that actual core criticality of the proposed order of defueling and refueling is bounded by previous analysis performed to support such defueling and refueling activities, otherwise a new analysis shall be performed.

The new analysis must show that sufficient conservatism exists for the proposed order of defueling and refueling before such operation shall be allowed to proceed.

- G. With any of the above requirements not met, cease core alterations or control rod removal as appropriate, and initiate action to satisfy the above requirements.

Basis:

Move to next
page.

During refueling operations, the reactivity potential of the core is being altered. It is necessary to require certain interlocks and restrict certain refueling procedures such that there is assurance that inadvertent criticality does not occur.

Addition of large amounts of reactivity to the core is prevented by operating procedures, which are in turn backed up by refueling interlocks (1) on rod withdrawal and movement of the refueling platform. When the mode switch is in the "Refuel" position, interlocks prevent the refueling platform from being moved over the core if a control rod is withdrawn and fuel is on a hoist. Likewise, if the refueling platform is over the core with fuel on a hoist control rod motion is blocked by the interlocks. With the mode switch in the refuel position only one control rod can be withdrawn (1,2).

The one rod withdrawal interlock may be bypassed in order to allow multiple control rod removal for repair, modifications, or core unloading. The requirements for simultaneous removal of more than one ^{or} control rod are more stringent than the requirements for removal of a single control rod, since in the latter

case Specification 3.2.A assures that the core will remain subcritical.

Fuel handling is normally conducted with the fuel grapple hoist. The total load on this hoist when the interlock is required consists of the weight of the fuel grapple and the fuel assembly. This total is approximately 773 lbs. in the extended position in comparison to the load limit of 485 lbs. Provisions have also been made to allow fuel handling with either of the three auxiliary hoists and still maintain the refueling interlocks. The 400 lb load trip setting on these hoists is adequate to trip the interlock when one of the more than 600 lb. fuel bundles is being handled.

The source range monitors provide neutron flux monitoring capabilities with the reactor ~~is~~ in the refueling and shutdown modes (3). ~~Specification 3.9.D assures that the neutron flux is monitored as close as possible to the location where fuel or controls are being moved.~~ Specifications 3.9.E and F require the operability of at least two source range monitors when control rods are to be removed.

3.9.D,

3.9,

during CORE
ALTERATIONS
and

REFERENCES:

- (1) FDSAR, Volume I, Section VII-7.2.5
- (2) FDSAR, Volume I, Section XIII-2.2
- (3) FDSAR, Volume I, Section VII-4.2.2 and VII-4.3.1

This requirement ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core.