Docket File

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 26, 1997

Mr. Leon R. Eliason
Chief Nuclear Officer & President-
Nuclear Business Unit
Public Service Electric & Gas
Company
Post Office Box 236
Hancocks Bridge, NJ 08038

SUBJECT: HOPE CREEK GENERATING STATION (TAC NO. M96993)

Dear Mr. Eliason:

The Commission has issued the enclosed Amendment No. 98 to Facility Operating License No. NPF-57 for the Hope Creek Generating Station. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated October 25, 1996 as supplemented by letters dated December 4, 1996 and January 24, 1997.

This amendment changes Hope Creek TS 3/4.1.3.5, "Control Rod Scram Accumulator," in order to: 1) permit a separate entry into a TS action statement for each inoperable control rod; 2) provide more specific applicability for required actions in Operational Condition 1 or 2 with one inoperable control rod scram accumulator (reactor pressure of $\geq$ 900 psig would be specified); 3) provide more specific actions (verify charging water pressure) for two or more inoperable control rod scram accumulators when reactor pressure is $\geq$ 900 psig; 4) provide more specific actions when reactor pressure is < 900 psig and one or more control rod scram accumulators are inoperable (verify insertion of control rods associated with inoperable accumulators and verify that charging water header pressure is $\geq$ 940 psig); 5) provide specific actions in Operational Condition 5 with one or more withdrawn control rods inoperable; and 6) eliminate the requirements to perform an 18-month channel functional test of the leak detectors and the 18-month channel calibration of the pressure detectors.

1/
NRC

A copy of our safety evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

/S/

David H. Jaffe, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-354

Enclosures: 1. Amendment No. 98 to License No. NPF-57
2. Safety Evaluation

cc w/encls: See next page

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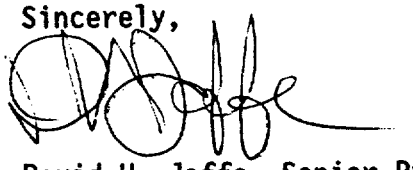
A copy of our safety evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,



David H. Jaffe, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-354

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2. Safety Evaluation

cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

PUBLIC SERVICE ELECTRIC & GAS COMPANY

ATLANTIC CITY ELECTRIC COMPANY

DOCKET NO. 50-354

HOPE CREEK GENERATING STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 98
License No. NPF-57

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:

   A. The application for amendment filed by the Public Service Electric & Gas Company (PSE&G) dated October 25, 1996, as supplemented by letters dated December 4, 1996, and January 24, 1997, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-57 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 98 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into the license. PSE&G shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

John F. Stolz, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: March 26, 1997

ATTACHMENT TO LICENSE AMENDMENT NO.98

FACILITY OPERATING LICENSE NO. NPF-57

DOCKET NO. 50-354

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

Remove	Insert
3/4 1-9	3/4 1-9
3/4 1-10	3/4 1-10
B 3/4 1-2	B 3/4 1-2
-	B 3/4 1-2a
-	B 3/4 1-2b
-	B 3/4 1-2c
B 3/4 1-3	B 3/4 1-3

REACTIVITY CONTROL SYSTEMS
CONTROL ROD SCRAM ACCUMULATORS
LIMITING CONDITION FOR OPERATION

3.1.3.5 Each control rod scram accumulator shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 5*.
ACTION:

----------NOTE----------
Separate condition entry is allowed for each control rod
---

a. In OPERATIONAL CONDITIONS 1 or 2:

1. With one control rod scram accumulator inoperable and reactor pressure ≥ 900 psig, within 8 hours,

a) Restore the inoperable accumulator to OPERABLE status, or

b) Insert the associated control rod, declare the associated control rod inoperable and disarm the associated control valves either electrically or hydraulically by closing the drive water and exhaust water isolation valves.

Otherwise, be in at least HOT SHUTDOWN with the next 12 hours.

2. With two or more control rod scram accumulators inoperable and reactor pressure ≥ 900 psig,

a) Within 20 minutes of discovery of this condition concurrent with charging water pressure < 940 psig, restore charging water header pressure to ≥ 940 psig otherwise place the mode switch in the shutdown position**, and

b) Within one hour insert the associated control rods, declare the associated control rods inoperable and disarm the associated control valves either electrically or hydraulically by closing the drive water and exhaust water isolation valves.

Otherwise, be in at least HOT SHUTDOWN within the next 12 hours.

---

* At least the accumulator associated with each withdrawn control rod. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.
** Not applicable if all inoperable control rod scram accumulators are associated with fully inserted control rods.

LIMITING CONDITION FOR OPERATION (Continued)
ACTION (Continued)

3. With one or more control rod scram accumulators inoperable and reactor pressure < 900 psig,

   a) Immediately upon discovery of charging water header pressure < 940 psig, verify all control rods associated with inoperable accumulators are fully inserted otherwise place the mode switch in the shutdown position**, and

   b) Within one hour insert the associated control rod(s), declare the associated control rod(s) inoperable and disarm the associated control valves either electrically or hydraulically by closing the drive water and exhaust water isolation valves.

   Otherwise, be in at least HOT SHUTDOWN within the next 12 hours.

b. In OPERATIONAL CONDITION 5*:

   1. With one or more withdrawn control rods inoperable, upon discovery immediately initiate action to fully insert inoperable withdrawn control rods.

c. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.1.3.5 Each control rod scram accumulator shall be determined OPERABLE:

   a. At least once per 7 days by verifying that the indicated pressure is greater than or equal to 940 psig unless the control rod is inserted and disarmed or scrammed.

* At least the accumulator associated with each withdrawn control rod. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.
** Not applicable if all inoperable control rod scram accumulators are associated with fully inserted control rods.

3/4.1.3 CONTROL RODS

The specifications of this section ensure that (1) the minimum SHUTDOWN MARGIN is maintained, (2) the control rod insertion times are consistent with those used in the accident analysis, and (3) limit the potential effects of the rod drop accident. The ACTION statements permit variations from the basic requirements but at the same time impose more restrictive criteria for continued operation. A limitation on inoperable rods is set such that the resultant effect on total rod worth and scram shape will be kept to a minimum. The requirements for the various scram time measurements ensure that any indication of systematic problems with rod drives will be investigated on a timely basis.

The operability of an individual control rod is based on a combination of factors, primarily, the scram insertion times, the control rod coupling integrity, and the ability to determine the control rod position. Accumulator operability is addressed by LCO 3.1.3.5. The associated scram accumulator status for a control rod only affects the scram insertion times; therefore, an inoperable accumulator does not immediately require declaring a control rod inoperable. Although not all control rods are required to be operable to satisfy the intended reactivity control requirements, control over the number of inoperable control rods is required.

Control rod insertion capability is demonstrated by surveillance 4.1.3.1.2 inserting each partially or fully withdrawn control rod at least one notch and observing that the control rod moves. The control rod may then be returned to its original position. This ensures the control rod is not stuck and is free to insert on a scram signal. At any time, a control rod is immovable for reasons not associated with the control rod drive mechanism, a determination of that control rod's trippability (Operability) must be made and appropriate actions taken. As an example, if the control rod can be scrammed, but can not be moved due to a RMCS failure, the rod(s) may continue to be considered OPERABLE provided all other related surveillances are current.

Damage within the control rod drive mechanism could be a generic problem, therefore with a withdrawn control rod immovable because of excessive friction or mechanical interference, operation of the reactor is limited to a time period which is reasonable to determine the cause of the inoperability and at the same time prevent operation with a large number of inoperable control rods.

Control rods that are inoperable for other reasons are permitted to be taken out of service provided that those in the nonfully-inserted position are consistent with the SHUTDOWN MARGIN requirements.

The number of control rods permitted to be inoperable could be more than the eight allowed by the specification, but the occurrence of eight inoperable rods could be indicative of a generic problem and the reactor must be shutdown for investigation and resolution of the problem.

BASES

CONTROL RODS (Continued)

The control rod system is designed to bring the reactor subcritical at a rate fast enough to prevent the MCPR from becoming less than the fuel cladding Safety Limit during the limiting power transient analyzed in Section 15.4 of the FSAR. This analysis shows that the negative reactivity rates resulting from the scram with the average response of all the drives as given in the specifications, provide the required protection and MCPR remains greater than the fuel cladding Safety Limit. The occurrence of scram times longer then those specified should be viewed as an indication of a systematic problem with the rod drives and therefore the surveillance interval is reduced in order to prevent operation of the reactor for long periods of time with a potentially serious problem.

The scram discharge volume is required to be OPERABLE so that it will be available when needed to accept discharge water from the control rods during a reactor scram and will isolate the reactor coolant system from the containment when required.

Control rods with inoperable accumulators are declared inoperable and Specification 3.1.3.1 then applies. This prevents a pattern of inoperable accumulators that would result in less reactivity insertion on a scram than has been analyzed. The OPERABILITY of the control rod scram accumulators is required to ensure that adequate scram insertion capability exists when needed over the entire range of reactor pressures. The OPERABILITY of the scram accumulators is based on maintaining adequate accumulator pressure.

In OPCON 1 and 2, the scram function is required for mitigation of DBAs and transients, and therefore the scram accumulators must be OPERABLE to support the scram function. In OPCON 3 and 4, control rods are only allowed to be withdrawn under limits imposed by the reactor mode switch being in shutdown and by the control rod block being applied. This provides adequate requirements for control rod scram accumulator OPERABILITY during these conditions. In OPCON 5, withdrawn control rods are required to have OPERABLE accumulators.

The actions of Specification 3.1.3.5 are modified by a note indicating that a separate Condition entry is allowed for each control rod scram accumulator. This is acceptable since the required Actions for each Condition provide appropriate compensatory actions for each affected accumulator. Complying with the Required Actions may allow for continued operation and subsequent affected accumulators governed by subsequent Condition entry and application of associated Required Actions.

With two or more control rod scram accumulators inoperable and reactor pressure $\geq$ 900 psig, adequate pressure must be supplied to the charging water header. With inadequate charging water pressure, the accumulators could

CONTROL RODS (Continued)

become inoperable, resulting in a potential degradation of the scram performance. Therefore, within 20 minutes from discovery of charging water header pressure < 940 psig concurrent with conditions in Action 3.1.3.5.a.2, adequate charging water header pressure must be restored. The allowed Completion Time of 20 minutes is reasonable, to place a CRD pump into service to restore the charging header pressure, if required. This Completion Time is based on the ability of the reactor pressure alone to fully insert all control rods.

With one or more control rod scram accumulators inoperable and the reactor pressure < 900 psig, the pressure supplied to the charging water header must be adequate to ensure that accumulators remain charged. With the reactor pressure < 900 psig, the function of the accumulators in providing the scram force becomes much more important since the scram function could become degraded during a depressurization event or at low reactor pressures. Therefore, immediately upon discovery of charging water header pressure < 940 psig, concurrent with conditions in Action 3.1.3.5.a.3, all control rods associated with inoperable accumulators must be verified to be fully inserted. Withdrawn control rods with inoperable accumulators may fail to scram under these low pressure conditions. The associated control rods must also be inserted, declared inoperable, and disarmed within 1 hour. The allowed Completion Time of 1 hour is reasonable considering the low probability of DBA or transient occurring during the time that the accumulator is inoperable.

The reactor mode switch must be immediately placed in the shutdown position if either Required Action and associated Completion Time associated with loss of the CRD charging pump (Required Actions 3.1.3.5.a.2.a or 3.1.3.5.a.3.a) cannot be met. This ensures that all insertable control rods are inserted and that the reactor is in condition that does not require the active function (i.e., scram) of the control rods. This Required Action is modified by a note stating that the action is not applicable if all control rods associated with the inoperable scram accumulators are fully inserted, since the function of the control rods has been performed.

Surveillance Requirement 4.1.3.5 requires that the accumulator pressure be checked every 7 days to ensure adequate accumulator pressure exists to provide sufficient scram force. The primary indicator of accumulator OPERABILITY is the accumulator pressure. A minimum accumulator pressure is specified, below which the capability of the accumulator to perform its intended function becomes degraded and the accumulator is considered inoperable. Declaring the accumulator inoperable when the minimum pressure is not maintained ensures that significant degradation in scram times does not occur. The 7 day frequency has been shown to be acceptable through operating experience and takes into account indications available in the control room.

Control rod coupling integrity is required to ensure compliance with the analysis of the rod drop accident in the FSAR. The overtravel position

CONTROL RODS (Continued)

feature provides the only positive means of determining that a rod is properly coupled and therefore this check must be performed prior to achieving criticality after completing CORE ALTERATIONS that could have affected the control rod coupling integrity. The subsequent check is performed as a backup to the initial demonstration.

In order to ensure that the control rod patterns can be followed and therefore that other parameters are within their limits, the control rod position indication system must be OPERABLE.

The control rod housing support restricts the outward movement of a control rod to less than 6 inches in the event of a housing failure. The amount of rod reactivity which could be added by this small amount of rod withdrawal is less than a normal withdrawal increment and will not contribute to any damage to the primary coolant system. The support is not required when there is no pressure to act as a driving force to rapidly eject a drive housing.

The required surveillance intervals are adequate to determine that the rods are OPERABLE and not so frequent as to cause wear on the system components.

3/4.1.4 CONTROL ROD PROGRAM CONTROLS

Control rod withdrawal and insertion sequences are established to assure that the maximum insequence individual control rod or control rod segments which are withdrawn at any time during the fuel cycle could not be worth enough to result in peak fuel enthalpy greater than 280 cal/gm in the event of a control rod drop accident. The specified sequences are characterized by homogeneous, scattered patterns of control rod withdrawal. When THERMAL POWER is greater than 20% of RATED THERMAL POWER, there is no possible rod worth which, if dropped at the design rate of the velocity limiter, could result in a peak enthalpy of 280 cal/gm. Thus requiring the RSCS and/or RWM to be OPERABLE when THERMAL POWER is less than or equal to 20% of RATED THERMAL POWER provides adequate control.

The RSCS and RWM provide automatic supervision to assure that out-of-sequence rods will not be withdrawn or inserted.

The analysis of the rod drop accident is presented in Section 15.4.9 of the FSAR and the techniques of the analysis are presented in a topical report, Reference 1, and two supplements, References 2 and 3.

The RBM is designed to automatically prevent fuel damage in the event of erroneous rod withdrawal from locations of high power density during high power operation. Two channels are provided. Tripping one of the channels will block erroneous rod withdrawal soon enough to prevent fuel damage. This system backs up the written sequence used by the operator for withdrawal of control rods.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 98 TO FACILITY OPERATING LICENSE NO. NPF-57

PUBLIC SERVICE ELECTRIC & GAS COMPANY

ATLANTIC CITY ELECTRIC COMPANY

HOPE CREEK GENERATING STATION

DOCKET NO. 50-354

1.0 INTRODUCTION

By letter dated October 25, 1996, as supplemented by letters dated December 4, 1996, and January 24, 1997, the Public Service Electric and Gas Company (PSE&G) requested an amendment to the Hope Creek Generating Station (HCGS) Facility Operating License. The proposed change to Hope Creek Technical Specification (TS) 3/4.1.3.5, "Control Rod Scram Accumulator," would: 1) permit a separate entry into a TS action statement for each inoperable control rod; 2) provide more specific applicability for required actions in Operational Condition 1 or 2 with one inoperable control rod scram accumulator (reactor pressure of $\geq$ 900 psig would be specified); 3) provide more specific actions (verify charging water pressure) for two or more inoperable control rod scram accumulators when reactor pressure is $\geq$ 900 psig; 4) provide more specific actions when reactor pressure is < 900 psig and one or more control rod scram accumulators are inoperable (verify insertion of control rods associated with inoperable accumulators and verify that charging water header pressure is $\geq$ 940 psig); 5) provide specific actions in Operational Condition 5 with one or more withdrawn control rods inoperable; and 6) eliminate the requirements to perform an 18-month channel functional test of the leak detectors and the 18-month channel calibration of the pressure detectors.

The December 4, 1996, and January 24, 1997, supplements did not change the initial proposed no significant hazards consideration determination.

2.0 DISCUSSION

The HCGS Reactor Pressure Vessel utilizes bottom-entry control rod drives to normally position, or scram, the control rods. Each control rod drive is equipped with a Hydraulic Control Unit (HCU) as described in Section 4.6.1.2.4.3 of the HCGS Updated Final Safety Analysis Report (UFSAR). Each HCU contains a scram accumulator, valves, a filter, instrumentation, electrical connections, and associated piping. Section 4.6.1.2.4.3 of the HCGS UFSAR provides the following information concerning the scram accumulators:

> The scram accumulator stores sufficient energy to fully insert a control rod at lower [reactor pressure] vessel pressures. At higher vessel pressures, the accumulator pressure is assisted or supplemented by reactor vessel pressure. The accumulator is a hydraulic cylinder with a free floating piston. The piston separates the water on top from the nitrogen below. A check valve in the accumulator charging line prevents loss of water pressure if the supply pressure is lost.
>
> During normal plant operation, the accumulator piston is seated at the bottom of the cylinder. Loss of nitrogen decreases the nitrogen pressure, actuating a pressure switch and sounding an alarm in the main control room.
>
> To ensure that the accumulator is always able to produce a scram, it is continuously monitored for water leakage. A float type level switch actuates an alarm if water leaks past the piston barrier and collects in the accumulator instrumentation block.

The scram accumulators are maintained in the "charged" condition by charging water flow from the control rod drive pumps, and are thus independent of reactor vessel pressure. The scram accumulators normally "float" at the discharge pressure of the control rod drive pumps, approximately 1500 psig.

The licensee's application dated October 25, 1996 as supplemented by letters dated December 4, 1996 and January 24, 1997, seeks to replace selected requirements of TS 3/4.1.3.5 with alternative requirements consistent with the NRC's Standard Technical Specifications, NUREG-1433, Revision 1, for the scram accumulators.

3.0 EVALUATION

3.1 Limiting Conditions for Operation

The first proposed change to TS 3.1.3.5 would change the requirement that, "All control rod scram accumulators shall be OPERABLE" to the requirement that, "Each control rod scram accumulator shall be OPERABLE." In addition, the following note would be inserted in the TS: "Separate condition entry is allowed for each control rod." The purpose of this change is to allow each scram accumulator to be treated, from an operability standpoint, as an independent piece of equipment. Since each control rod drive is equipped with an independent scram accumulator, and because the TSs establish action statements that provide for remedial action to establish an equivalent level of safety when one or more scram accumulator becomes inoperable, it is acceptable to treat each scram accumulator as an independent piece of equipment. These changes adopt the wording from NUREG-1433, Revision 1, TS 3.1.5 and are acceptable.

The second proposed change would add an additional restriction to the Action Statement of TS 3.1.3.5a.1. At the present time, this Action Statement applies at any time, in OPERATIONAL CONDITION 1 or 2 (power operation and

startup, respectively), "With one control rod scram accumulator inoperable." The proposed Action Statement would be further restricted by applying to a condition "With one control rod scram accumulator inoperable and reactor pressure greater than or equal to 900 psig." Since higher vessel pressures assist the scram function, the proposed change to TS 3.1.3.5a.1 provides additional assurance that a control rod scram will be accomplished with an inoperable scram accumulator. The licensee has also proposed an additional remedial action to be taken when one scram accumulator is inoperable. If the scram accumulator cannot be restored to operable status within 8 hours, the associated control rod must be declared inoperable, inserted, and disarmed. This remedial action completes the safety function of the inoperable scram accumulator. These two proposed changes to TS 3.1.3.5a.1 adopt the wording from NUREG-1433, Revision 1, TS 3.1.3, "Control Rod OPERABILITY," and TS 3.1.5, "Control Rod Scram Accumulators," and are acceptable.

In the third proposed change, the licensee is proposing to provide more specific actions (verify charging water pressure) for two or more inoperable control rod scram accumulators when reactor pressure is $\geq$ 900 psig. At the present time, TS 3.1.3.5a.2 addresses the inoperability of two or more scram accumulators at reactor pressures $\geq$ 900 psig and at < 900 psig. The proposed TS would divide the existing TS into two parts, TS 3.1.3.5a.2 (for reactor pressures $\geq$ 900 psig) and TS 3.1.3.5a.3 (for reactor pressures < 900 psig). With regard to proposed TS 3.1.3.5a.2 the licensee is proposing that:

> With two or more control rod scram accumulators inoperable and reactor pressure $\geq$ 900 psig,
>
> a) Within 20 minutes of discovery of this condition concurrent with charging water pressure < 940 psig, restore charging water header pressure to $\geq$ 940 psig, otherwise place the mode switch in the shutdown position**, and
>
> b) Within one hour insert the associated control rods, declare the associated control rod inoperable and disarm the associated control valves either electrically or hydraulically by closing the drive water and exhaust isolation valves.
>
> Otherwise, be in at least HOT SHUTDOWN within the next 12 hours.

The proposed, new footnote (**), states that the requirement, to place the mode switch in the shutdown position is, "Not applicable if all inoperable control rod scram accumulators are associated with fully inserted control rods." Under the currently applicable TS for reactor pressure $\geq$ 900 psig, the licensee is required to verify that at least one control rod drive pump is operating by inserting at least one control rod at least one notch. If no control rod drive pump is operating, the licensee is required to start at least one control rod drive pump. These existing TS are equivalent to the proposed TS in that the establishment of a charging water pressure of $\geq$ 940 psig requires the operation of at least one control rod drive pump. Part "b", which requires that control rods that are declared inoperable due to an

inoperable scram accumulator be fully inserted and electrically or hydraulically disarmed and the alternate remedial action, "Otherwise, be in at least HOT SHUTDOWN within the next 12 hours." are the same as the existing TSs. Finally, the proposed footnote (**) is acceptable in that it is the same as the wording in NUREG-1433, Revision 1, TS 3.1.5D.1. There is no need to place the mode switch in the shutdown position, for fully inserted control rods associated inoperable scram accumulators, since there is no additional safety function for the scram accumulators after the associated control rod is fully inserted. The NRC staff also concludes that proposed TS 3.1.3.5a.2 is consistent with the wording from NUREG-1433, Revision 1, TS 3.1.3 and TS 3.1.5. Accordingly, the proposed TS 3.1.3.5a.2 is acceptable.

For reactor pressures < 900 psig, the licensee has proposed the following TS 3.1.3.5a.3:

> With one or more control rod scram accumulators inoperable and reactor pressure < 900 psig,
>
> a) Immediately upon discovery of charging water header pressure < 940 psig, verify all control rods associated with inoperable accumulators are fully inserted otherwise place the mode switch in the shutdown position**, and
>
> b) Within one hour insert the associated control rods, declare the associated control rod inoperable and disarm the associated control valves either electrically or hydraulically by closing the drive water and exhaust isolation valves.
>
> Otherwise, be in at least HOT SHUTDOWN within the next 12 hours.

The footnote (**) is as already described above. Under the current TS associated with the operability of scram accumulators at reactor pressure < 900 psig, the licensee is required to place the mode switch in the shutdown position. As noted previously, insertion of control rods associated with inoperable scram accumulators is an acceptable alternative to placing the mode switch in the shutdown position. There is no need to place the mode switch in the shutdown position, for fully inserted control rods associated inoperable scram accumulators, since there is no additional safety function for the scram accumulators after the associated control rod is fully inserted. Part "b", which requires that control rods that are declared inoperable due to an inoperable scram accumulator be fully inserted and electrically or hydraulically disarmed and the alternate remedial action, "Otherwise, be in at least HOT SHUTDOWN within the next 12 hours." are the same as the existing TSs. The NRC staff also concludes that proposed TS 3.1.3.5a.3 is consistent with the wording from NUREG-1433, Revision 1, TS 3.1.3 and TS 3.1.5. Accordingly, the proposed TS 3.1.3.5a.2 is acceptable.

The licensee has also proposed changes to TS 3.1.3.5b which applies to scram accumulators in OPERATION CONDITION 5 (refueling). At the present time, TS 3.1.3.5b requires:

1. With one withdrawn control rod with its associated scram accumulator inoperable, insert the affected control rod and disarm the associated directional control valves within one hour either:

   a) Electrically, or

   b) Hydraulically by closing the drive water and exhaust water isolation valves.

2. With more than one withdrawn control rod with the associated scram accumulator inoperable and no control rod drive pump operating, immediately place the reactor mode switch in the shutdown position.

The licensee has proposed replacing the above requirements with the following:

1. With one or more withdrawn control rods inoperable, upon discovery immediately initiate action to fully insert inoperable withdrawn control rods.

For the purpose of the above requirement, a footnote indicates that the requirement applies, at least, to the scram accumulator associated with a withdrawn control rod. The licensee's proposed change to TS 3.1.3.5b adopts the wording of NUREG-1433, Revision 1, TS 3.9.5, "Control Rod OPERABILITY - Refueling." The proposed requirement assures that withdrawn control rods with inoperable accumulators are immediately inserted, thus immediately obviating the need for the scram accumulator to perform its safety function; the NRC Staff considers this action, alone, to be adequate under the applicable conditions. Accordingly, the proposed changes to TS 3.1.3.5b are acceptable.

3.2 Surveillance Requirements

The requirements of TS 4.1.3.5 provide surveillance requirements for the scram accumulators. These surveillance requirements include: (1) verification of scram accumulator pressure every 7 days per TS 4.1.3.5a and (2) Channel Function Test of leak detectors and Channel Calibration of the pressure detector instrumentation, every 18 months per TS 4.1.3.5b. The licensee has requested that the 18-month Channel Functional Test and Channel Calibrations, of TS 4.1.3.5b, be deleted; these surveillances are not required by the TS in NUREG-1433, Revision 1.

The 7-day verification of scram accumulator pressure involves a local pressure gauge, PI-131, and would be retained in the proposed TS 4.1.3.5. The licensee proposes to delete the surveillance requirements for the leak and pressure detection instrumentation (LSM-129 and PSL-130), from TS 4.1.3.5. These instruments are control room indications which provide a common "trouble" alarm when the instruments exceed their alarm setpoints. The instruments would still undergo required surveillance testing under plant procedures.

The NRC staff concludes that the 7-day verification of scram accumulator pressure provides an adequate indication of the readiness of the scram accumulators to provide their safety function. The licensee will continue to provide the necessary testing of the scram accumulator control room indications. Any change in this commitment would require an analysis under the requirements of 10 CFR 50.59, "Changes, tests, and experiments." Accordingly, the proposed deletion of TS 4.1.3.5b is acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New Jersey State Official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluent that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (61 FR 64394). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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