From:	Coleman, Jamie Marquess
To:	Ennis, Rick; Boland, Anne
Cc:	Coleman, Jamie Marquess
Subject:	[External_Sender] Multi-licensee LAR example
Date:	Tuesday, March 21, 2017 3:55:51 PM
Attachments:	TSTF-17-XX xmit TSTF-535.pdf

Hello Rick and Anne. Here is the sample consolidated TSTF LAR for your review. Please let me know if how you'd like to proceed. Thank you for your time.

Jamie M. Coleman
Lead Engineer
Work: 205-992-6611
Cell: 334-718-1288

DRAFT

TSTF
TECHNICAL SPECIFICATIONS TASK FORCE
A JOINT OWNERS GROUP ACTIVITY

DATE

TSTF-17-XX
PROJ0753

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

SUBJECT: Application to Revise Technical Specifications to Adopt TSTF-535, "Revise Shutdown Margin Definition to Address Advanced Fuel Designs" for:

Brunswick Steam Electric Plant, Units 1 and 2
NRC Docket Nos. 50-325 and 50-324

Fermi Unit 2
NRC Docket Nos. 50-341

Hope Creek Unit 1
NRC Docket Nos. 50-354

Susquehanna Units 1 and 2
NRC Docket Nos. 50-387 and 50-388

Pursuant to 10 CFR 50.90, the Technical Specifications Task Force (TSTF) is submitting a request for an amendment to the Technical Specifications (TS) for Brunswick Units 1 and 2, Fermi Unit 2, Hope Creek Unit 1, and Susquehanna Units 1 and 2.

The proposed amendment modifies the TS definition of "Shutdown Margin " (SDM) to require calculation of the SDM at a reactor moderator temperature of 68°F or a higher temperature that represents the most reactive state throughout the operating cycle. This change is needed to address new Boiling Water Reactor (BWR) fuel designs which may be more reactive at shutdown temperatures above 68°F.

Attachment 1 provides a description and assessment of the proposed changes. Attachments 2, 3, 4, and 5 provide the plant-specific assessment, the authorized signature, the existing TS pages marked up to show the proposed changes, and the revised (clean) TS pages for each plant.

Approval of the proposed amendment is requested by [submittal date + 7 months]. Once approved, the amendment shall be implemented within 90 days.

In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated officials for North Carolina, Michigan, New Jersey, and Pennsylvania.

11921 Rockville Pike, Suite 100, Rockville, MD 20852
Phone: 301-984-4400, Fax: 301-984-7600
Administration by EXCEL Services Corporation

Review fees for this license amendment request should be billed to the Technical Specifications Task Force.

If you should have any questions regarding this submittal, please contact Brian Mann, 301-984-4400.

Sincerely,

James R. Morris (PWROG/W)

Lisa L. Williams (BWROG)

Otto W. Gustafson (PWROG/CE)

Jordon L. Vaughan (PWROG/B&W)

Jason P. Redd (APOG)

Attachments:

1. Description and Assessment
2. Brunswick Units 1 and 2 Assessment, Authorized Signature, TS Proposed Changes and TS Revised Pages
3. Fermi Unit 2 Assessment, Authorized Signature, TS Proposed Changes and TS Revised Pages
4. Hope Creek Unit 1 Assessment, Authorized Signature, and TS Proposed Changes
5. Susquehanna Units 1 and 2 Assessment, Authorized Signature, TS Proposed Changes and TS Revised Pages

cc: [NRC Project Managers for Brunswick, Fermi, Hope Creek, and Susquehanna]
NRC Region 1, 2, and 3 Offices
[NRC Resident Inspectors for Brunswick, Fermi, Hope Creek, and Susquehanna]
[State Contacts for North Carolina, Michigan, New Jersey, and Pennsylvania]

ATTACHMENT 1 - DESCRIPTION AND ASSESSMENT

1.0 DESCRIPTION

The proposed amendment modifies the Technical Specifications (TS) definition of "Shutdown Margin " (SDM) to require calculation of the SDM at a reactor moderator temperature of 68°F or a higher temperature that represents the most reactive state throughout the operating cycle. This change is needed to address new Boiling Water Reactor (BWR) fuel designs which may be more reactive at shutdown temperatures above 68°F.

2.0 ASSESSMENT

See Attachments 2, 3, 4, and 5 for the plant-specific assessments.

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration Determination

The licensees request adoption of TSTF-535, Revision 0, "Revise Shutdown Margin Definition to Address Advanced Fuel Designs," which is an approved change to the standard technical specifications (STS), into the Brunswick Units 1 and 2, Fermi Unit 2, Hope Creek Unit 1,and Susquehanna Units 1 and 2 Technical Specifications (TS). The proposed amendment modifies the TS definition of "Shutdown Margin " (SDM) to require calculation of the SDM at a reactor moderator temperature of 68°F or a higher temperature that represents the most reactive state throughout the operating cycle.

The licensees have evaluated whether or not a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

   Response: No.

   The proposed change revises the definition of SDM. SDM is not an initiator to any accident previously evaluated. Accordingly, the proposed change to the definition of SDM has no effect on the probability of any accident previously evaluated. SDM is an assumption in the analysis of some previously evaluated accidents and inadequate SDM could lead to an increase in consequences for those accidents. However, the proposed change revises the SDM definition to ensure that the correct SDM is determined for all fuel types at all times during the fuel cycle. As a result, the proposed change does not adversely affect the consequences of any accident previously evaluated.

   Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

   Response: No.

   The proposed change revises the definition of SDM. The change does not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed) or a change in the methods governing normal plant operations. The change does not alter assumptions made in the safety analysis regarding SDM.

   Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

   Response: No.

   The proposed change revises the definition of SDM. The proposed change does not alter the manner in which safety limits, limiting safety system settings or limiting conditions for operation are determined. The proposed change ensures that the SDM assumed in determining safety limits, limiting safety system settings or limiting conditions for operation is correct for all BWR fuel types at all times during the fuel cycle.

   Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, the licensees conclude that the proposed change presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

3.2 Conclusions

In conclusion, based on the considerations discussed above, (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.

4.0 ENVIRONMENTAL EVALUATION

The proposed change would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed change.

ATTACHMENT 2

BRUNSWICK STEAM ELECTRIC PLANT (BSEP), UNITS 1 AND 2

ASSESSMENT AND SIGNATURE

2.0 ASSESSMENT

2.1 Applicability of Published Safety Evaluation

Duke Energy Progress, LLC (Duke Energy) has reviewed the model safety evaluation dated February 13, 2013, as part of the Federal Register Notice of Availability. This review included a review of the NRC staff's evaluation, as well as the information provided in TSTF-535. Duke Energy has concluded that the justifications presented in the TSTF-535 proposal and the model safety evaluation prepared by the NRC staff are applicable to Brunswick Units 1 and 2 and justify this amendment for the incorporation of the changes to the Brunswick Units 1 and 2 Technical Specifications.

2.2 Variations

Duke Energy is proposing the following variations from the TS changes described in TSTF-535, Revision 0, or the applicable parts of the NRC staff's model safety evaluation dated February 19, 2013.

The traveler and model safety evaluation discuss the applicable regulatory requirements and guidance, including the 10 CFR 50, Appendix A, General Design Criteria (GDC). GDC 26 addresses reactivity control system redundancy and capability. GDC 27 addresses combined reactivity control systems capability. BSEP Unit 1 and Unit 2 were not licensed to the 10 CFR 50, Appendix A, GDC. The BSEP equivalents of GDCs 26 and 27 are described in the Updated Final Safety Analysis Report (UFSAR), sections 3.1.2.3.7 and 3.1.2.3.8, respectively.

The BSEP UFSAR section 3.1.2.3.7 addresses GDC 26 as follows:

> Each reactor unit contains two independent reactivity control systems of different design principles. Control of reactivity is provided by a combination of movable control rods, burnable poison, and reactor coolant recirculation system flow. These systems are able to accommodate fuel burn up, load changes, and long term reactivity changes. Reactor shutdown by the Control Rod Drive (CRD) System is designed to be sufficiently rapid to prevent fuel damage limits from being exceeded during either normal operation or any operational transients. A Standby Liquid Control (SLC) System provides independent backup to the above reactivity controls.
>
> The reactivity control system is designed to provide sufficient reactivity compensation under conditions of normal operation to make the reactor always subcritical from its most reactive condition. Means are provided for continuously regulating the reactor core excess reactivity and reactivity distribution.

The BSEP UFSAR section 3.1.2.3.a· addresses GDC 27 as follows:

> The BSEP boiling water reactors (BWR) will never require the combined capability of a poison addition system in addition to a control rod system. The reactivity control during postulated accidents is entirely by means of the Control Rod System with appropriate margin for a stuck rod; the pattern of rod usage is normally controlled through the rod worth minimizer program of the on-line computer. The reactivity control is aided by the inherent negative power coefficient of reactivity. A SLC System is provided as an independent backup shutdown system to cover emergencies in the operational reactivity control system. This system is designed to maintain the reactor in a safe shutdown condition.

A comparison of GDC 26 and 27 with the design features and controls used at BSEP Unit 1 and Unit 2 shows that the differences do not alter the conclusion that the proposed change as presented in TSTF-535, Revision 0, and the associated model safety evaluation is valid for BSEP Unit 1 and Unit 2.

A typographical error in the Shutdown Margin definition is corrected. Revision 0 of the BWR/4 Standard Technical Specifications, NUREG-1433, divided the first and second sentences of paragraph c into separate paragraphs. This typographical error is reflected in the BSEP Technical Specifications. This error was corrected in Revision 1 of NUREG-1433 and is corrected in the BSEP Technical Specifications. This has no effect on the meaning of the definition.

I declare under penalty of perjury that the foregoing is true and correct. Executed on (date).

William R. Gideon
Vice President
Brunswick Nuclear Plant

ATTACHMENT 2

BRUNSWICK UNITS 1 AND 2

PROPOSED TECHNICAL SPECIFICATIONS CHANGES (MARK UP)

1.1 Definitions (continued)

OPERABLE—OPERABILITY	A system, subsystem, division, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, division, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 2923 MWt.
REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.
SHUTDOWN MARGIN (SDM)	SDM shall be the amount of reactivity by which the reactor is subcritical or would be subcritical *throughout the operating cycle* assuming that: a. The reactor is xenon free; b. The moderator temperature is ≥ 68°F*, corresponding to the most reactive state*; and c. All control rods are fully inserted except for the single control rod of highest reactivity worth, which is assumed to be fully withdrawn. *With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.* ~~With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.~~

(continued)

1.1 Definitions (continued)

OPERABLE-OPERABILITY	A system, subsystem, division, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, division, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 2923 MWt.
REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.
SHUTDOWN MARGIN (SDM)	SDM shall be the amount of reactivity by which the reactor is subcritical or would be subcritical *throughout the operating cycle* assuming that: a. The reactor is xenon free; b. The moderator temperature is ≥68°F*, corresponding to the most reactive state*; and c. All control rods are fully inserted except for the single control rod of highest reactivity worth, which is assumed to be fully withdrawn. *With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.* ~~With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.~~

(continued)

ATTACHMENT 2

BRUNSWICK UNITS 1 AND 2

REVISED TECHNICAL SPECIFICATIONS CHANGES

1.1 Definitions (continued)

OPERABLE—OPERABILITY	A system, subsystem, division, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, division, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 2923 MWt.
REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.
SHUTDOWN MARGIN (SDM)	SDM shall be the amount of reactivity by which the reactor is subcritical or would be subcritical throughout the operating cycle assuming that: a. The reactor is xenon free; b. The moderator temperature is ≥ 68°F, corresponding to the most reactive state; and c. All control rods are fully inserted except for the single control rod of highest reactivity worth, which is assumed to be fully withdrawn. With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.

(continued)

1.1 Definitions (continued)

OPERABLE-OPERABILITY	A system, subsystem, division, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, division, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 2923 MWt.
REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.
SHUTDOWN MARGIN (SDM)	SDM shall be the amount of reactivity by which the reactor is subcritical or would be subcritical throughout the operating cycle assuming that: a. The reactor is xenon free; b. The moderator temperature is ≥68°F, corresponding to the most reactive state; and c. All control rods are fully inserted except for the single control rod of highest reactivity worth, which is assumed to be fully withdrawn. With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.

(continued)

ATTACHMENT 3

FERMI UNIT 2

ASSESSMENT AND SIGNATURE

2.0 ASSESSMENT

2.1 Applicability of Published Safety Evaluation

DTE Electric Company (DTE) has reviewed the model safety evaluation dated February 13, 2013, as part of the Federal Register Notice of Availability. This review included a review of the NRC staff's evaluation, as well as the information provided in TSTF-535. DTE has concluded that the justifications presented in the TSTF-535 proposal and the model safety evaluation prepared by the NRC staff are applicable to Fermi Unit 2 and justify this amendment for the incorporation of the changes to the Fermi 2 Technical Specifications.

2.2 Variations

DTE is not proposing any variations or deviations from the TS changes described in the TSTF-535, Revision 0, or the applicable parts of the NRC staff's model safety evaluation dated February 13, 2013.

I declare under penalty of perjury that the foregoing is true and correct. Executed on (date).

Keith J. Polson
Site Vice President
Nuclear Generation

ATTACHMENT 3

FERMI UNIT 2

PROPOSED TECHNICAL SPECIFICATIONS CHANGES (MARK UP)

1.1 Definitions (continued)

RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3486 MWt.
REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.
SHUTDOWN MARGIN (SDM)	SDM shall be the amount of reactivity by which the reactor is subcritical or would be subcritical *throughout the operating cycle* assuming that: a. The reactor is xenon free; b. The moderator temperature is ≥68°F, *corresponding to the most reactive state*; and c. All control rods are fully inserted except for the single control rod of highest reactivity worth, which is assumed to be fully withdrawn. With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.
STAGGERED TEST BASIS	A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during *n* Surveillance Frequency intervals, where *n* is the total number of systems, subsystems, channels, or other designated components in the associated function.

(continued)

ATTACHMENT 3

FERMI UNIT 2

REVISED TECHNICAL SPECIFICATIONS CHANGES

1.1 Definitions (continued)

RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3486 MWt.
REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.
SHUTDOWN MARGIN (SDM)	SDM shall be the amount of reactivity by which the reactor is subcritical or would be subcritical throughout the operating cycle assuming that: a. The reactor is xenon free; b. The moderator temperature is ≥68°F, corresponding to the most reactive state; and c. All control rods are fully inserted except for the single control rod of highest reactivity worth, which is assumed to be fully withdrawn. With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.
STAGGERED TEST BASIS	A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during *n* Surveillance Frequency intervals, where *n* is the total number of systems, subsystems, channels, or other designated components in the associated function.

(continued)

ATTACHMENT 4

HOPE CREEK

ASSESSMENT AND SIGNATURE

2.0 ASSESSMENT

2.1 Applicability of Published Safety Evaluation

PSEG Nuclear, LLC (PSEG), has reviewed the model safety evaluation dated February 13, 2013, as part of the Federal Register Notice of Availability. This review included a review of the NRC staff's evaluation, as well as the information provided in TSTF-535. PSEG has concluded that the justifications presented in the TSTF-535 proposal and the model safety evaluation prepared by the NRC staff are applicable to Hope Creek and justify this amendment for the incorporation of the changes to the Hope Creek Technical Specifications.

2.2 Variations

PSEG is proposing the following variations from the TS changes described in the TSTF-535, Revision 0, or the applicable parts of the NRC staff's model safety evaluation dated February 13, 2013.

The Hope Creek TS utilize different numbering than the Standard Technical Specifications on which TSTF-535 was based. Specifically, definitions in the Hope Creek TS are in Section 1 vice Section 1.1 and the definitions are numbered. The Hope Creek SDM definition is stated as a paragraph. The Standard Technical Specifications format and definition, as modified by TSTF 535, are proposed to be adopted into the Hope Creek TS. The Standard Technical Specifications definition of SDM includes the sentence, "With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM." This is not explicitly stated in the current SDM definition, but is consistent with the current Hope Creek Surveillance Requirement 4.1.1.c which states:

> Within 12 hours after detection of a withdrawn control rod that is immovable, as a result of excessive friction or mechanical interference, or is untrippable, except that the above required SHUTDOWN MARGIN shall be verified acceptable with an increased allowance for the withdrawn worth of the immovable or untrippable control rod.

PSEG will provide retyped TS pages when requested by the NRC Project Manager.

I declare under penalty of perjury that the foregoing is true and correct. Executed on (date).

Eric Carr
Site Vice President
Hope Creek Generating Station

ATTACHMENT 4

HOPE CREEK

PROPOSED TECHNICAL SPECIFICATIONS CHANGES (MARK UP)

DEFINITIONS

SECONDARY CONTAINMENT INTEGRITY

1.39 SECONDARY CONTAINMENT INTEGRITY shall exist when:

a. All secondary containment penetrations required to be closed during accident conditions are either:

1. Capable of being closed by an OPERABLE secondary containment automatic isolation system, or

2. Closed by at least one manual valve, blind flange, or deactivated automatic valve or damper, as applicable secured in its closed position, except as provided in Table 3.6.5.2-1 of Specification 3.6.5.2.

b. All secondary containment hatches and blowout panels are closed and sealed.

c. The filtration, recirculation and ventilation system is in compliance with the requirements of Specification 3.6.5.3.

d. For double door arrangements, at least one door in each access to the secondary containment is closed.

e. For single door arrangements, the door in each access to the secondary containment is closed, except for normal entry and exit.

f. The sealing mechanism associated with each secondary containment penetration, e.g., welds, bellows or O-rings, is OPERABLE.

g. The pressure within the secondary containment is less than or equal to the value required by Specification 4.6.5.1.a.

SHUTDOWN MARGIN

1.40 ~~SHUTDOWN MARGIN shall be the amount of reactivity by which the reactor is subcritical or would be subcritical assuming all control rods are fully inserted except for the single control rod of highest reactivity worth which is assumed to be fully withdrawn and the reactor is in the shutdown condition; cold, i.e. 68°F; and xenon free.~~

INSERT

SITE BOUNDARY

1.41 The SITE BOUNDARY shall be that line beyond which the land is neither owned, nor leased, nor otherwise controlled, by the licensee.

INSERT

SDM shall be the amount of reactivity by which the reactor is subcritical or would be subcritical throughout the operating cycle assuming that:

a. The reactor is xenon free;

b. The moderator temperature is ≥ 68°F, corresponding to the most reactive state; and

c. All control rods are fully inserted except for the single control rod of highest reactivity worth, which is assumed to be fully withdrawn. With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.

ATTACHMENT 5

SUSQUEHANNA STEAM ELECTRIC STATION (SSES) UNITS 1 AND 2

ASSESSMENT AND SIGNATURE

2.0 ASSESSMENT

2.1 Applicability of Published Safety Evaluation

Susquehanna Nuclear, LLC (Susquehanna) has reviewed the model safety evaluation dated February 13, 2013, as part of the Federal Register Notice of Availability. This review included a review of the NRC staff's evaluation, as well as the information provided in TSTF-535. Susquehanna has concluded that the justifications presented in the TSTF-535 proposal and the model safety evaluation prepared by the NRC staff are applicable to Susquehanna Units 1 and 2 and justify this amendment for the incorporation of the changes to the Susquehanna Units 1 and 2 Technical Specifications.

2.2 Variations

Susquehanna is proposing the following variations from the TS changes described in the TSTF-535, Revision 0, or the applicable parts of the NRC staff's model safety evaluation dated February 13, 2013.

A typographical error in the Shutdown Margin definition is corrected. Revision 0 of the BWR/4 Standard Technical Specifications, NUREG-1433, divided the first and second sentences of paragraph c into separate paragraphs. This typographical error is reflected in the Susquehanna Technical Specifications. This error was corrected in Revision 1 of NUREG-1433 and is corrected in the Susquehanna Technical Specifications. This has no effect on the meaning of the definition.

I declare under penalty of perjury that the foregoing is true and correct. Executed on (date).

Robert J. Franssen
Site Vice President

ATTACHMENT 5

SUSQUEHANNA UNITS 1 AND 2

PROPOSED TECHNICAL SPECIFICATIONS CHANGES (MARK UP)

RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3952 MWt.
REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.
SHUTDOWN MARGIN (SDM)	SDM shall be the amount of reactivity by which the reactor is subcritical or would be subcritical *throughout the operating cycle* assuming that: a. The reactor is xenon free; b. The moderator temperature is ≥ 68°F*, corresponding to the most reactive state*; and c. All control rods are fully inserted except for the single control rod of highest reactivity worth, which is assumed to be fully withdrawn. *With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.* ~~With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.~~
STAGGERED TEST BASIS	A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during η Surveillance Frequency intervals, where η is the total number of systems, subsystems, channels, or other designated components in the associated function.
THERMAL POWER	THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.
TURBINE BYPASS SYSTEM RESPONSE TIME	The TURBINE BYPASS SYSTEM RESPONSE TIME consists of the time from when the turbine bypass

(continued)

1.1 Definitions (continued)

RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3952 MWt.
REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.
SHUTDOWN MARGIN (SDM)	SDM shall be the amount of reactivity by which the reactor is subcritical or would be subcritical *throughout the operating cycle* assuming that: a. The reactor is xenon free; b. The moderator temperature is ≥ 68°F*, corresponding to the most reactive state*; and c. All control rods are fully inserted except for the single control rod of highest reactivity worth, which is assumed to be fully withdrawn. *With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.* ~~With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.~~
STAGGERED TEST BASIS	A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during *n* Surveillance Frequency intervals, where *n* is the total number of systems, subsystems, channels, or other designated components in the associated function.
THERMAL POWER	THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.

(continued)

ATTACHMENT 5

SUSQUEHANNA UNITS 1 AND 2

REVISED TECHNICAL SPECIFICATIONS CHANGES

1.1 Definitions (continued)

RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3952 MWt.
REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.
SHUTDOWN MARGIN (SDM)	SDM shall be the amount of reactivity by which the reactor is subcritical or would be subcritical throughout the operating cycle assuming that: a. The reactor is xenon free; b. The moderator temperature is ≥ 68°F, corresponding to the most reactive state; and c. All control rods are fully inserted except for the single control rod of highest reactivity worth, which is assumed to be fully withdrawn. With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.
STAGGERED TEST BASIS	A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during η Surveillance Frequency intervals, where η is the total number of systems, subsystems, channels, or other designated components in the associated function.
THERMAL POWER	THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.
TURBINE BYPASS SYSTEM RESPONSE TIME	The TURBINE BYPASS SYSTEM RESPONSE TIME consists of the time from when the turbine bypass control unit generates a turbine bypass valve flow signal

(continued)

1.1 Definitions (continued)

RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3952 MWt.
REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.
SHUTDOWN MARGIN (SDM)	SDM shall be the amount of reactivity by which the reactor is subcritical or would be subcritical throughout the operating cycle assuming that: a. The reactor is xenon free; b. The moderator temperature is ≥ 68°F, corresponding to the most reactive state; and c. All control rods are fully inserted except for the single control rod of highest reactivity worth, which is assumed to be fully withdrawn. With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.
STAGGERED TEST BASIS	A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during *n* Surveillance Frequency intervals, where *n* is the total number of systems, subsystems, channels, or other designated components in the associated function.
THERMAL POWER	THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.
TURBINE BYPASS SYSTEM RESPONSE TIME	The TURBINE BYPASS SYSTEM RESPONSE TIME consists of the time from when the turbine bypass control unit generates a turbine bypass valve flow signal

(continued)