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UniStar
NUCLEAR ENERGY

10 CFR 50.4
10 CFR 52.79

December 8, 2009

UN#09-504

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

Subject: UniStar Nuclear Energy, NRC Docket No. 52-016
              Response to Request for Additional Information for the
              Calvert Cliffs Nuclear Power Plant, Unit 3,
              RAI No. 190, Technical Specifications
              RAI No. 191, Technical Specifications

References: 1)   Surinder Arora (NRC) to Robert Poche (UniStar Nuclear Energy), "RAI No.
                    190 CTSB 3895" email dated November 9, 2009

             2)   Surinder Arora (NRC) to Robert Poche (UniStar Nuclear Energy), "FINAL
                    RAI No. 191 CTSB 3920" email dated November 10, 2009

The purpose of this letter is to respond to the requests for additional information (RAIs)
identified in the NRC e-mail correspondence to UniStar Nuclear Energy, dated November 9,
2009 (Reference 1) and November 10, 2009 (Reference 2). These RAIs address Technical
Specifications, as discussed in Chapter 16.0 of the Final Safety Analysis Report (FSAR), as
submitted in Part 2 of the Calvert Cliffs Nuclear Power Plant (CCNPP) Unit 3 Combined License
Application (COLA), Revision 6.

The enclosure provides our responses to RAI No. 190, Question 16-20, and RAI No. 191,
Question 16-21, and includes revised COLA content. A Licensing Basis Document Change
Request has been initiated to incorporate these changes into a future revision of the COLA.

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NRC

Our response does not include any new regulatory commitments. This letter does not contain any sensitive or proprietary information.

If there are any questions regarding this transmittal, please contact me at (410) 470-4205, or Mr. Michael J. Yox at (410) 495-2436.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on December 8, 2009

Greg Gibson

Enclosure: Response to NRC Request for Additional Information RAI No. 190, Question 16-20, and RAI No. 191, Question 16-21, Technical Specifications, Calvert Cliffs Nuclear Power Plant, Unit 3

cc: Surinder Arora, NRC Project Manager, U.S. EPR Projects Branch
Laura Quinn, NRC Environmental Project Manager, U.S. EPR COL Application
Getachew Tesfaye, NRC Project Manager, U.S. EPR DC Application (w/o enclosure)
Loren Plisco, Deputy Regional Administrator, NRC Region II (w/o enclosure)
Silas Kennedy, U.S. NRC Resident Inspector, CCNPP, Units 1 and 2
U.S. NRC Region I Office

GTG/RDS/mdf

Enclosure

Response to NRC Request for Additional Information
RAI No. 190, Question 16-20, and RAI No. 191, Question 16-21,
Technical Specifications,
Calvert Cliffs Nuclear Power Plant, Unit 3

RAI No. 190

Question 16-20, Follow-up to RAI 95, Question 16-1, Part A

a) The response states "U.S. EPR Revision 1, Tier 2 Chapter 16 has been revised to include Reviewer's Notes that permit a COL applicant to utilize a Setpoint Control Program (SCP). Subsequent to the issuance of Revision 1 to the U.S. EPR FSAR, the U.S. EPR Protection System Technical Specifications (LCO 3.3.1) and Bases were revised and submitted in response to RAI Set 103 (ML091820006). As part of that submittal, changes were made to the Technical Specifications to facilitate adoption and NRC approval of a Setpoint Control Program." The Reviewer's Note information provided in the EPR GTS and Bases (Rev. 1 and Interim Rev. 2) allowing the optional approach of specifying a yet to be defined Setpoint Control Program (SCP) Administrative Controls Technical Specification (TS), instead of placing brackets around a fully developed SCP Administrative Controls TS with Surveillance Requirement (SR) or table references to the SCP TS, does not satisfy 10 CFR 52.47(a)(11). In meetings on August 13-14, 2009, between Areva NP and the NRC staff, Areva acknowledged the staff's position and agreed to remove the Reviewer's Notes from the EPR GTS and Bases. Supplemental RAI-SRP16-CTSB-3742/14593 was issued to document and address the staff's findings regarding the Reviewer's Notes. The applicant is requested to update the response accordingly.

Response

U.S. EPR FSAR, Tier 2, Chapter 16.0, Technical Specifications, is incorporated by reference in Calvert Cliffs Nuclear Power Plant (CCNPP) Unit 3 Combined License Application (COLA) Part 2, Chapter 16.0.

COLA Part 4, states, "The differences from Revision 1 of the U.S. EPR Design Certification, either due to Reviewer's Notes called out within the body of the U.S. EPR Generic Technical Specifications and Bases, or as identified by this applicant, are described and justified in the discussion below:"

The Reviewer's Notes referenced in the NRC Question above were deleted in Revision 6 of the CCNPP Unit 3 COLA. Refer to the following Generic Changes in COLA Part 4:

- Generic Change 1, LCO 3.3.1, Protection System (PS), Plant Specific Technical Specification Change a.,
- Generic Change 14, TS 5.5.18, Setpoint Control Program, Plant Specific Technical Specification Change a., and
- Generic Change 17, Bases 3.3.1, Protection System (PS), Plant Specific Technical Specification Change a.

COLA Impact

The COLA will not be revised as a result of this response.

Question 16-20, Follow-up to RAI 95, Question 16-1, Part B

b) The response includes an evaluation of the Setpoint Control Program (SCP) departure as if it were Tier 2 information. Departure from the EPR GTS will require staff approval via an exemption from the future Design Change Rule (DCR). Therefore, the evaluation is unnecessary.

Response

COLA Part 2, Section 1.8.2, and Part 7, Section 1.1.6, will be revised to delete the currently proposed departure. A new exemption request will be added to Part 7, Section 1.2.8.

COLA Impact

Part 2, Section 1.8.2, will be updated as follows in a future COLA revision:

1.8.2   DEPARTURES

The U.S. EPR FSAR includes the following COL Item in Section 1.8.2:

A COL applicant that references the U. S. EPR design certification will provide a list of any departures from the FSAR in the COL FSAR.

This COL Item is addressed as follows:

{The list of departures from the U.S. EPR FSAR is as follows:

Maximum Differential Settlement	FSAR 2.5.4 and 3.8.5
Maximum Annual Average Atmospheric Dispersion Factor	FSAR 2.3.5
Accident Atmospheric Dispersion Factor from 0 - 2 Hours for the Low Population Zone	FSAR 2.3.4 and 15.0.3
Maximum Ground Water Elevation	FSAR 2.4.12, 3.4.2, and 3.8.5
Toxic Gas Detection and Isolation	FSAR 3.11, 6.4, 9.4.1 and 14.2.12
~~Technical Specifications Setpoint Control Program~~	~~FSAR 16.3.3, 16.5.5, and Bases 16.3.3~~

Justification for these departures is presented in Part 7 of the COL application.}

Part 7, Section 1.1, will be updated as follows in a future COLA revision:

1.1   DEPARTURES

~~1.1.6   GENERIC TECHNICAL SPECIFICATIONS AND BASES – SETPOINT CONTROL PROGRAM~~

~~Affected U.S. EPR FSAR Sections: Tier 2, Section 16 – Technical Specifications (TS) 3.3.1 and 5.5, and Bases 3.3.1~~

Summary of Departure:

A Setpoint Control Program (SCP) is adopted in the {CCN PP Unit 3} Technical Specifications (TS). TS 3.3.1 is revised to delete the associated Reviewer's Notes and bracketed information. Applicable Surveillance Requirements and footnotes are revised to reference the SCP. Numerical setpoints are removed and replaced with a reference to the SCP. TS 5.5 is revised to delete the associated Reviewer's Note. Also, a SCP description will be added to the Administrative Controls – Programs and Manuals section (5.5). The SCP description references the NRC approved setpoint methodology documents that shall be used for the development of required numerical setpoints. The TS Bases 3.3.1 are revised to delete the associated Reviewer's Note, incorporate additional background information, and clarify the applicability of the program to certain specific functions.

Scope/Extent of Departure:

This Departure is identified in Section A of Part 4 of the {CCNPP Unit 3} COL Application, {Generic Change Items 1, 15 and 16}.

Departure Justification:

Certain plant specific setpoints cannot be determined until after the selection of instrumentation and require as-built system design information, which may not occur until after the approval of the COL application is granted. SECY-08-0142, *Change in Staff Position Concerning Information in Plant-Specific Technical Specifications that Combined License Applicants Must Provide to Support Issuance of Combined Licenses,"* states that "the plant-specific Technical Specifications issued with a combined license must be complete, implementable, and provide a basis for the Commission to conclude that the plant will operate in accordance with the relevant requirements."* An option to satisfy this requirement is to relocate numerical values out of the TS and replace them with an administrative program that references NRC approved methodologies for determining these values. Writer Notes in the Generic Technical Specifications permit the COL applicant to relocate these numeric values through the use of a SCP. The methodologies to be cited in the SCP for determining these numerical values have been submitted to NRC. Referencing these NRC approved methodologies in the TS provide reasonable assurance that the facility will be operated in conformity with the license, the provisions of the Act, and the Commission's rules and regulations.

Departure Evaluation:

This Departure, the inclusion of a Setpoint Control Program and the associated changes in the TS and Bases, provides adequate assurance the required Limiting Trip Setpoints and Nominal Trip Setpoints are developed and maintained such that safety functions will actuate at the point assumed in the applicable safety analysis. Accordingly, the Departure does not:

    1.   Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific FSAR;

~~2.~~ ~~Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety and previously evaluated in the plant-specific FSAR;~~

~~3.~~ ~~Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific FSAR;~~

~~4.~~ ~~Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific FSAR;~~

~~5.~~ ~~Create a possibility for an accident of a different type than any evaluated previously in the plant-specific FSAR;~~

~~6.~~ ~~Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific FSAR;~~

~~7.~~ ~~Result in a design basis limit for a fission product barrier as described in the plant-specific FSAR being exceeded or altered; or~~

~~8.~~ ~~Result in a departure from a method of evaluation described in the plant-specific FSAR used in establishing the design bases or in the safety analyses.~~

~~This Departure does not affect resolution of a severe accident issue identified in the plant-specific FSAR.~~

~~Therefore, this Departure has no safety significance.~~

Part 7, Section 1.2, will be updated as follows in a future COLA revision:

1.2 EXEMPTION REQUESTS

These exemption requests have been developed assuming approval and issuance of a design certification for the U.S. EPR and are based on the current version of the U.S. EPR FSAR.

Calvert Cliffs 3 Nuclear Project and UniStar Nuclear Operating Services request the following exemptions related to:

1. Maximum Ground Water Level,

2. Maximum Differential Settlement (across the basemat),

3. Maximum Annual Average Atmospheric Dispersion Factor (0.5 mile – limiting sector),

4. Accident Atmospheric Dispersion Factor (0-2 hour, Low Population Zone, 1.5 miles),

5. Fitness For Duty Program

6. Use of M5™ Advanced Zirconium Alloy Fuel Rod Cladding, and

7. Toxic Gas Detection and Isolation.

8. Generic Technical Specifications and Bases - Setpoint Control Program

The exemption request associated with Use of M5™ Advanced Zirconium Alloy Fuel Rod Cladding, is the same as that previously requested by AREVA in support of the U.S. EPR Design Certification Application.

Discussion and justification for each of the above exemption requests are provided in the following pages.

1.2.8   Generic Technical Specifications and Bases – Setpoint Control Program

Applicable Regulation: 10 CFR Part 52

The U.S. EPR FSAR Tier 2, Chapter 16.0, Technical Specifications and Bases specify and discuss Limiting Trip Setpoints and Design Limits for reactor trip, Engineered Safety Features functions, and Permissives.

Pursuant to 10 CFR 52.7 and 10 CFR 52.93, Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC, request an exemption from compliance with the U.S. EPR FSAR Technical Specification requirements associated with the Limiting Trip Setpoints and Design Limits for reactor trip, Engineered Safety Features functions, and Permissives.

Discussion:

Certain plant specific setpoints cannot be determined until after the selection of instrumentation and require as-built system design information, which may not occur until after the approval of the COL application is granted. SECY-08-0142, *Change in Staff Position Concerning Information in Plant-Specific Technical Specifications that Combined License Applicants Must Provide to Support Issuance of Combined Licenses,"* states that "the plant-specific Technical Specifications issued with a combined license must be complete, implementable, and provide a basis for the Commission to conclude that the plant will operate in accordance with the relevant requirements." An option to satisfy this requirement is to relocate numerical values out of the Technical Specifications and replace them with an administrative program that references NRC approved methodologies for determining these values.   Appropriate Technical Specifications will reference the Setpoint Control Program and a Setpoint Control Program description will be added to the Administrative Controls – Programs and Manuals Section 5.5. The Setpoint Control Program will either describe and justify the methodologies for determining these numerical values or reference the methodologies that have previously been submitted to NRC.   Bases descriptions will be revised, as necessary.

The exemption is not inconsistent with the Atomic Energy Act or any other statute. As such, the requested exemption is authorized by law.

This change does not result in a departure from the design and does not require a change in the design described in the U.S. EPR FSAR. In addition, the change has been evaluated and determined to not adversely affect the safety function of the associated structures, systems, components, reactor trip or Engineered Safety Features functions. Therefore, the requested exemption will not present an undue risk to the public health and safety.

The change does not relate to security and does not otherwise pertain to the common defense and security. Therefore, the requested exemption will not endanger the common defense and security.

The special circumstance necessitating the request for exemption is that the plant specific setpoints cannot be determined until after the selection of instrumentation and require as-built system design information, which may not occur until after the approval of the COL application is granted. The use of NRC approved methodologies, where applicable, will ensure the setpoints contained in, and controlled by, the Setpoint Control Program will not adversely affect the safety functions. As such, application of the regulation for this particular circumstance would not serve the underlying purpose of the rule and is not required to achieve the underlying purpose of the rule.

This requested exemption does not require a change in the design described in the U.S. EPR FSAR. Therefore, this exemption will not result in any loss of standardization.

For these reasons, Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC, request approval of the requested exemption from compliance with the U.S. EPR FSAR Tier 2, Chapter 16.0, Technical Specifications and Bases, which specify Limiting Trip Setpoints and Design Limits for reactor trip, Engineered Safety Features functions, and Permissives.

Question 16-20, Follow-up to RAI 95, Question 16-1, Part C

c) Revised Footnote (c) on page 14 of the response (Plant Specific Technical Specifications, Item "g"), states "The setpoint shall be reset to a value that is within the as-left tolerance around the Limiting Trip Setpoint (LTSP) at the completion of the surveillance; otherwise the division shall be declared inoperable." Step 5.5.18.c.5 of the Setpoint Control Program (SCP) Specification proposed by the applicant states "The instrument division trip setting shall be set to a value within the specified ALT around the specified NTSP (a trip setting as or more conservative than the specified LTSP) at the completion of the surveillance; otherwise, the surveillance requirement is not met and the instrument division shall be immediately declared inoperable." Also, note that step 5.5.18.c.3 of the referenced SCP Specification compares the as-found value of the instrument trip setting to the previous as-left value or the specified NTSP, not the LTSP. The applicant is requested to resolve the inconsistencies.

Response

The proposed approach for incorporating a Setpoint Control Program will be revised as follows:

- Delete the Limiting Trip Setpoint / Design Limit column in Table 3.3.1-2,

- Delete the following footnotes in Table 3.3.1-2:

  o Footnote b, regarding the controls associated with the as-found setpoint,
  o Footnote c, regarding the controls associated with the as-left setpoint,
  o Footnote e, which references the Core Operating Limits Report (COLR), and
  o Footnote v, which references the Pressure Temperature Limits Report (PTLR).

- The new Footnote w in Table 3.3.1-2 will no longer be used.

- The description of the Setpoint Control Program will be revised to:

  o Reference the Technical Specifications for the COLR and PTLR, which contain instrumentation setpoint methodologies previously reviewed and approved by the NRC,
  o Include a statement that the LTSP, NTSP, AV, PTAC and ALT for other Technical Specification required automatic protection instrumentation functions shall be calculated in conformance with the instrumentation setpoint methodology documented and justified in the Setpoint Control Program, and
  o Clarify that uncertainties associated with the setting tolerance band is the specified ALT.

- Revise the information contained in the Technical Specification Bases to delete the statements that differentiate between those setpoints that are directly related to Safety Limits and those that are not.

COLA Impact

COLA Part 4 will be updated as follows in a future COLA revision:

PART 4 TECHNICAL SPECIFICATIONS AND BASES

GENERIC CHANGES

1   **LCO 3.3.1   PROTECTION SYSTEM (PS)**

Generic Technical Specifications:

h.   Table 3.3.1-2, Footnote e, states:

"As specified in the COLR."

i.   Table 3.3.1-2, Footnote v, states:

"As specified in the Pressure Temperature Limits Report."

Plant Specific Technical Specifications:

c.   Surveillance Requirement ~~3.3.1.4~~ 3.3.1.6 is revised to state:

"Perform CALIBRATION in accordance with Specification 5.5.18, "Setpoint Control Program (SCP).""

d.   The Reviewer's Note at the beginning of Table 3.3.1-2 is deleted.

e.   Table 3.3.1-2 contains a "Limiting Trip Setpoint / Design Limit" column. This column is deleted. ~~Where a numerical setpoint is provided in the Limiting Trip Setpoint / Nominal Value column in Table 3.3.1-2 (as opposed to a footnote), the numerical setpoint is being replaced with a new footnote "(w)". Any existing superscript footnotes associated with the existing numerical Limiting Trip Setpoints / Nominal Values shall remain (i.e., Footnotes (b) and (c)). The new footnote will be placed at the bottom of each page of the table and shall state:~~

~~"(w)   The Limiting Trip Setpoint / Nominal Value for this Trip / Actuation Function / Permissive is as specified in the Setpoint Control Program."~~

~~Table 3.3.1-2 contains a "Limiting Trip Setpoint / Design Limit" column. The brackets around the reactor trips, Engineered Safety Features Actuation System signals, and Permissives are deleted.~~

f.   Table 3.3.1-2, Footnote b, is revised to state:

~~"If the as-found setpoint is outside its predefined as-found tolerance, then the Trip/Actuation Function shall be evaluated to verify that it is functioning as required before returning the Trip/Actuation Function to service in accordance with the Setpoint Control Program."~~ Deleted.

g. Table 3.3.1-2, Footnote c, is revised to state:

~~"The setpoint shall be reset to a value that is within the as-left tolerance around the Limiting Trip Setpoint (LTSP) at the completion of the surveillance; otherwise, the division shall be declared inoperable. Setpoints more conservative than the LTSP are acceptable provided that the as-found and as-left tolerances apply to the actual setpoint implemented in the Surveillance procedures to confirm Trip/Actuation Function performance. The methodologies used to determine the as-found and the as-left tolerances are specified in the Setpoint Control Program."~~ Deleted.

h. Table 3.3.1-2, Footnote e, is revised to state:

Deleted.

i. Table 3.3.1-2, Footnote v, is revised to state:

Deleted

Justification:

e. A Setpoint Control Program is being incorporated into the plant-specific Technical Specifications. Specific setpoints will no longer be included in Technical Specification Table 3.3.1-2. ~~The brackets in the column are no longer required and the other changes are necessary to specify the location of the setpoints.~~

f. ~~The wording of the footnote is revised to reflect the use of a Setpoint Control Program.~~

g. ~~The wording of the footnote is revised to reflect the use of a Setpoint Control Program.~~

f. The footnote is no longer required due to the use of a Setpoint Control Program.

g. The footnote is no longer required due to the use of a Setpoint Control Program.

h. The footnote is no longer required due to the use of a Setpoint Control Program.

i. The footnote is no longer required due to the use of a Setpoint Control Program.

14   TS 5.5.18   SETPOINT CONTROL PROGRAM

Plant Specific Technical Specifications:

b. The Limiting Trip Setpoint (LTSP), Nominal Trip Setpoint (NTSP), Allowable Value (AV), Performance Testing Acceptance Criteria (PTAC), and As-Left Tolerance (ALT) for each applicable Technical Specification required automatic protection instrumentation function shall be calculated in conformance with the instrumentation setpoint methodology previously reviewed and approved by the NRC as listed in Specifications 5.6.3, CORE OPERATING LIMITS REPORT (COLR), 5.6.4,

PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR), or in the following documents:

1. ANP-10275P-A, "U.S EPR Instrument Setpoint Methodology Topical Report," Revision 0, dated February 26, 2008 (ML080590482), and the conditions stated in the associated NRC safety evaluation.

2. [ANP-10287P-A, "Incore Trip Setpoint and Transient Setpoint Methodology For U.S. EPR," Revision #, dated Month dd, yyyy, (MLxxxxxxxxx)], and the conditions stated in the associated NRC safety evaluation, [Letter to AREVA NP from NRC, Title, dated Month, dd, yyyy, (MLxxxxxxxxx)].

The LTSP, NTSP, AV, PTAC, and ALT for other Technical Specification required automatic protection instrumentation functions shall be calculated in conformance with the instrumentation setpoint methodology documented and justified in the Setpoint Control Program.

c. For each required Technical Specification automatic protection instrumentation function, performance of CALIBRATION surveillances shall include the following:

2. The as-found value of the instrument division trip setting shall be compared with the previous as-left value or the specified NTSP. If the as-found value is compared with the specified NTSP to meet this requirement, the following conditions apply:

iii. the pre-defined test acceptance criteria band (the specified PTAC) for the as-found value must include either the setting tolerance band (the specified ALT) or the uncertainties associated with the setting tolerance band (the specified ALT) ~~(the square-root-sum-of-squares of reference accuracy, measurement and test equipment, and readability uncertainties)~~, but not both of these.

17 BASES 3.3.1 PROTECTION SYSTEM (PS)

Generic Technical Specifications:

e. Bases 3.3.1, Background, contains a paragraph that begins with "However, there is also some point beyond which the device would have not been able to perform its function due, for example, to greater than expected drift."

f. The first paragraph in the Bases, Actions, begins with "The most common causes of division inoperability are outright failure or drift of the sensor sufficient to exceed the tolerance allowed by the plant specific setpoint analysis."

g. Bases 3.3.1, Surveillance Requirements, 3.3.1.4, begins with "The online boron meters are a half shell design and are not in contact with the reactor coolant."

h. Bases 3.3.1, Surveillance Requirements, 3.3.1.4, begins with "A CALIBRATION of each PS sensor (except neutron detectors) every 24 months ensures that each instrument division is reading accurately and within tolerance."

Plant Specific Technical Specifications:

f. ~~Bases 3.3.1, Applicable Safety Analyses, LCO and Applicability, Section B.9.c - Containment Isolation - Isolation (Stage 2) on High-High Containment Pressure, is revised to add the following at the end of the section:~~

> ~~"The setpoint for this function does not provide an automatic trip setpoint that protects against violating the Reactor Core Safety Limits or Reactor Coolant System Pressure Safety Limit during AOOs. This LSSS is not a SL-LSSS."~~

g. ~~Bases 3.3.1, Applicable Safety Analyses, LCO and Applicability, Section B.9.d - Containment Isolation - Isolation (Stage 1) on High Containment Radiation, is revised to add the following at the end of the section:~~

> ~~"The setpoint for this function does not provide an automatic trip setpoint that protects against violating the Reactor Core Safety Limits or Reactor Coolant System Pressure Safety Limit during AOOs. This LSSS is not a SL-LSSS."~~

h. ~~Bases 3.3.1, Applicable Safety Analyses, LCO and Applicability, Section B.10.a - Emergency Diesel Generator - Start on Degraded Grid Voltage, is revised to add the following at the end of the section:~~

> ~~"The setpoint for this function does not provide an automatic trip setpoint that protects against violating the Reactor Core Safety Limits or Reactor Coolant System Pressure Safety Limit during AOOs. This LSSS is not a SL-LSSS."~~

i. ~~Bases 3.3.1, Applicable Safety Analyses, LCO and Applicability, Section B.10.b - Emergency Diesel Generator - Start on LOOP, is revised to add the following at the end of the section:~~

> ~~"The setpoint for this function does not provide an automatic trip setpoint that protects against violating the Reactor Core Safety Limits or Reactor Coolant System Pressure Safety Limit during AOOs. This LSSS is not a SL-LSSS."~~

j. ~~Bases 3.3.1, Applicable Safety Analyses, LCO and Applicability, Section B.12.a and 12.b - PSRV Actuation - First and Second Valve, is revised to add the following at the end of the section:~~

> ~~"The setpoint for this function does not provide an automatic trip setpoint that protects against violating the Reactor Core Safety Limits or Reactor Coolant System Pressure Safety Limit during AOOs. This LSSS is not a SL-LSSS."~~

k. ~~Bases 3.3.1, Applicable Safety Analyses, LCO and Applicability, Section B.13 - Control Room HVAC Reconfiguration to Recirculation Mode on High Intake Activity, is revised to add the following at the end of the section:~~

~~"The setpoint for this function does not provide an automatic trip setpoint that protects against violating the Reactor Core Safety Limits or Reactor Coolant System Pressure Safety Limit during AOOs. This LSSS is not a SL-LSSS."~~

l̶f. Bases 3.3.1, Actions, the following sentence is added to the end of the first paragraph:

> "The Setpoint Control Program ensures that divisions are performing as expected by confirming that the drift and other related errors are consistent with the supporting setpoint methodologies and calculations."

m̶g. Bases 3.3.1, Surveillance Requirements, SR 3.3.1.4, will be revised to add the following paragraph at the end of the SR:

> "In accordance with Specification 5.5.18, the Setpoint Control Program shall establish a document t̶h̶a̶t̶ containing the current value of the specified LTSP, NTSP, AV, PTAC, and ALT for each required Technical Specification automatic protection instrumentation function. The Setpoint Control Program also establishes requirements for the performance of CALIBRATION surveillances."

n̶h. Bases 3.3.1, Surveillance Requirements, SR 3.3.1.6, will be revised to add the following paragraph at the end of the SR:

> "In accordance with Specification 5.5.18, the Setpoint Control Program shall establish a document t̶h̶a̶t̶ containing the current value of the specified LTSP, NTSP, AV, PTAC, and ALT for each required Technical Specification automatic protection instrumentation function. The Setpoint Control Program also establishes requirements for the performance of CALIBRATION surveillances."

Justification:

e.-n̶h. In accordance with Interim Staff Guidance COL/DC-ISG-8, Necessary Content of Plant-Specific Technical Specifications, present and future COL applicants shall propose plant-specific Technical Specifications containing all site-specific information necessary to ensure plant operation within its design basis. A COL applicant may propose to resolve this requirement by establishing an administrative control program. The changes to Bases 3.3.1, coupled with the addition of a Setpoint Control Program to TS 5.5, "Programs and Manuals," and supporting changes to LCO 3.3.1, "Protection System (PS)," will satisfy this requirement.

Question 16-20, Follow-up to RAI 95, Question 16-1, Part D

d) Discussion Item 8 on page 11 of the response states "not all functions provide an automatic trip setpoint that protects against violating the Reactor Core Safety Limits or Reactor Coolant System Pressure Safety Limit during AOOs (e.g., Control Room HVAC Reconfiguration to Recirculation Mode on High Intake Activity). The required Technical Specification automatic protection instrumentation functions are identified by the use of Footnotes (b) and (c) in the Limiting Trip Setpoint / Design Limit column in Table 3.3.1-2 of the U.S. EPR Technical Specifications." 10 CFR 50.36(c)(1)(ii)(A) requires that the TSs include Limiting Safety System Settings (LSSSs) for variables that have significant safety functions. For variables on which a Safety Limit (SL) has been placed, the LSSS must be chosen to initiate automatic protective action to correct abnormal situations before the SL is exceeded. 10 CFR 50.36(c)(1)(ii)(A) also contains requirements for a general class of LSSSs; LSSSs related to variables having significant safety functions but which do not protect SLs (referred to as the Design Limit by the applicant). All plant operating licenses have TSs for LSSSs that are not related to SLs. For these LSSSs, 10 CFR 50.36(c)(1)(ii)(A) also requires that a license take appropriate action if it is determined that the automatic safety system does not function as required. The use of footnotes and Bases statements to distinguish between SL-LSSS and non-SL LSSS functions is unnecessary. The distinctions add little value and the classification of EPR Protection System (PS) instrumentation functions (SL-LSSS versus non-SL LSSS) is not clearly understood in all cases. Setpoints for SL-LSSS and non-SL LSSS functions alike should be included in the Setpoint Control Program (SCP). In addition, Footnote (b) and (c) information is redundant to the information provided in the SCP Specification, making inclusion of the footnotes in Table 3.3.1-2 of the Plant Specific Technical Specifications (PTS) unnecessary. Note that removal of the footnotes would resolve the issue identified in Item c above.

Response

As discussed in the response to Part C of this Question, the proposed approach for incorporating a Setpoint Control Program will be revised to delete the Limiting Trip Setpoint / Design Limit column, delete Footnotes (b) and (c), and delete the statements in the Bases that differentiate between those setpoints that are directly related to Safety Limits and those that are not. As a result of the changes made in response to Part C, the setpoints for U.S. EPR reactor trip and engineered safety features functions will be located in, and subject to the requirements of, the proposed Setpoint Control Program.

COLA Impact

The COLA will be revised as discussed in the response to Part C of this Question.

Question 16-20, Follow-up to RAI 95, Question 16-1, Part E

e) Item "e" on pages 13 and 14 of the response states "Table 3.3.1-2 contains a "Limiting Trip Setpoint / Design Limit" column. Where a numerical setpoint is provided in the Limiting Trip Setpoint / Nominal Value column in Table 3.3.1-2 (as opposed to a footnote), the numerical setpoint is being replaced with a new footnote (w)". It will also be necessary to include Footnote (w) in the referenced column of Table 3.3.1-2 for Reactor Trip Functions (A.1.a, A.1.b, A.1.c, A.1.d, A.1.d, A.1.e, A.2) and ESFAS Functions (B.11.c, B.11.d, 12.a, 12.b), along with the already existing footnotes specifying the Core Operating Limits Report (COLR) and the Pressure And Temperature Limits Report (PTLR). The additional footnote referencing the Setpoint Control Program (SCP) is necessary to ensure that the requirements of the SCP are applied to the setpoint values of the referenced functions as well.

Response

As discussed in the response to Part C of this Question, the proposed approach for incorporating a Setpoint Control Program will be revised to ensure the setpoints for reactor trip and engineered safety features functions will be located in, and subject to the requirements of, the proposed Setpoint Control Program.

COLA Impact

The COLA will be revised as discussed in the response to Part C of this Question.

Question 16-20, Follow-up to RAI 95, Question 16-1, Part F

f) Step 5.5.18.c.2.iii of the applicant proposed Setpoint Control Program (SCP) Specification, revises the second parenthetical reference to "the specified ALT" in the NRC suggested model SCP. The applicant's basis for the change is stated in Discussion Item 7 which reads "The phrase "the specified ALT" is used in parentheses twice in this paragraph. The second use was intended to clarify the uncertainties associated with the setting tolerance band." The revision actually describes the setting tolerance band rather than providing the intended clarification regarding its uncertainties.

Response

The necessary changes to use the term "the specified ALT" have been made in the response to Part C of this Question.

COLA Impact

The COLA will be revised as discussed in the response to Part C of this Question.

Question 16-20, Follow-up to RAI 95, Question 16-1, Part G

g)   The reference to Surveillance Requirement (SR) 3.3.1.4 in Item "c" on page 13 of the response is incorrect. The actual reference should be to SR 3.3.1.6.

Response

The necessary changes to correct the reference to SR 3.3.1.6 have been made in the response to Part C of this Question.

COLA Impact

The COLA will be revised as discussed in the response to Part C of this Question.

Question 16-20, Follow-up to RAI 95, Question 16-1, Part H

h) Items "m" and "n" on page 20 of the response contain the same editorial error. The word "that" should be removed from the second line of the quoted text for both items.

Response

The necessary changes to correct the reference to delete the extra word "that" in the two places discussed in the Question have been made in the response to Part C.

COLA Impact

The COLA will be revised as discussed in the response to Part C of this Question.

Question 16-20, Follow-up to RAI 95, Question 16-2, Part A

a) The response states "As stated on TSTF-493, Rev. 3, Page 1: "In all cases, the term Limiting Trip Setpoint" may be replaced in the Technical Specifications and in the Bases by a term (e.g., NTSP) consistent with the plant-specific setpoint methodology."" The applicant is requested to provide the version of TSTF-493, Rev. 3 (e.g., WOG, BWOG, BWR4, etc) that is referenced in the response.

Response

The referenced statement in TSTF-493, Revision 3 (ADAMS accession #ML080180441) is contained on the first page of the traveler, under Section 2.0, Proposed Change, at the bottom of Page 18 of 414. It is part of the generic discussion and is not associated with any specific reactor type.

COLA Impact

The COLA will not be revised as a result of this response.

RAI No. 191

Question 16-21, Follow-up to RAI 95, Question 16-6

Part 4, Technical Specifications and Bases (Item 17 - Protection System Bases 3.3.1), of the Calvert Cliffs Nuclear Power Plant reference COL application, Rev. 6, identifies Bases sections where the discussions have been revised to denote those functions for which Limiting Safety System Settings (LSSSs) are not associated with safety limits (non-SL LSSSs). 10 CFR 50.36(c)(1)(ii)(A) requires that the TSs include Limiting Safety System Settings for variables that have significant safety functions. For variables on which a Safety Limit (SL) has been placed, the LSSS must be chosen to initiate automatic protective action to correct abnormal situations before the SL is exceeded. 10 CFR 50.36(c)(1)(ii)(A) also contains requirements for a general class of LSSSs; LSSSs related to variables having significant safety functions but which do not protect SLs. All plant operating licenses have TSs for LSSSs that are not related to SLs. For these LSSSs, 10 CFR 50.36(c)(1)(ii)(A) also requires that a licensee take appropriate action if it is determined that the automatic safety system does not function as required. The subset of LSSSs that directly protect against violating the reactor core and RCS pressure boundary safety limits during anticipated operational occurrences (AOOs) are referred to as SL-LSSSs. The inclusion of Bases statements to distinguish between SL-LSSS and non-SL LSSS functions is unnecessary. The distinctions add little value and the classification of EPR Protection System (PS) instrumentation setpoints as either SL-LSSS or non-SL LSSS is not well understood for all functions. It is unclear how a number of the Table 3.3.1-2 reactor trip and Engineered Safety Feature function setpoints designated as SL-LSSS, "directly" protect against violating reactor core and RCS pressure boundary safety limits. In addition, setpoints for SL-LSSS and non-SL LSSS functions alike should be included in the Setpoint Control Program (SCP). SCP requirements should apply to all significant safety function LSSSs. In RAI 95, Question 16-6, the staff requested additional information regarding the applicant's use of "Setting Basis" values (Analytical and Design Limits) in Table 3.3.1-2 of the Plant Specific Technical Specifications (PTS), and that clarifying information be included in the Bases discussions to specify the limit type associated with each function. The clarifying information was requested on the basis that the "Setting Basis" approach (Analytical versus Design Limit) deviated from both NUREG-1431, "Standard Technical Specifications Westinghouse Plants," and the U.S. EPR GTS. The response to Question 16-6 and the resultant Bases changes identify significant safety functions for which the associated LSSSs are not directly related to the protection of a safety limit (otherwise referred to as "Design Limit" by the applicant), apparently for the purpose of identifying LSSS setpoints that are to be excluded from the requirements of the Setpoint Control Program. The applicant is requested to validate and confirm that the LSSS setpoints for all "significant safety functions" (SL LSSS and non-SL LSSS) specified in the PTS will be subject to the requirements of the proposed SCP. This issue has been identified as an open item in the SER w/OI for Part 4 of the Calvert Cliffs Nuclear Power Plant reference COL application.

Response

As discussed in the response to RAI 190, Question 16-20, Part C, the proposed approach for incorporating a Setpoint Control Program will be revised to delete the Limiting Trip Setpoint / Design Limit column and delete the statements in the Bases that differentiate between those setpoints that are directly related to Safety Limits and those that are not. As a result of the changes made in response to RAI 190, Question 16-20, Part C, the setpoints for U.S. EPR reactor trip and engineered safety features functions will be located in, and subject to the requirements of, the proposed Setpoint Control Program.

COLA Impact

The COLA will be revised as discussed in the response to RAI 190, Question16-20, Part C.