Calvert Cliffs Nuclear Power Plant Unit 3

Combined License Application

Part 4: Technical Specifications and Bases

Revision 7
December, 2010

This COLA Part includes RCOLA generic text. Site Specific Text is enclosed in braces: {Site Specific Information}

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PART 4 TECHNICAL SPECIFICATIONS AND BASES

Introduction

The U.S. EPR Generic Technical Specifications (TS) and Bases, provided in Chapter 16 of the U.S. EPR FSAR, are incorporated by reference with the following departures and supplements.

Section C.III.1 of Regulatory Guide 1.206 states for Chapter 16 that:

> 10 CFR Part 52 requires that an applicant for a COL that wishes to reference an approved certified design listed in an appendix to 10 CFR Part 52, e.g., Appendix A to Part 52, Section IV.A.2.c, include as part of its application plant-specific TS, consisting of the generic and site-specific TS, that are required by 10 CFR 50.36 and 10 CFR 50.36a.

The U.S. EPR FSAR is not yet a certified design. As such, the Technical Specifications and Bases are undergoing NRC Staff review and are evolving as that review progresses. In addition, the U.S. EPR COL applicants continue to work with AREVA NP to ensure that the U.S. EPR Generic Technical Specifications are complete and accurate and encompass minor plant specific differences.

To simplify review of this COL Application and reinforce the consistency of this facility with the U. S. EPR design, a complete set of Plant-Specific Technical Specifications will not be included in this COLA part until after the Advanced SER for the U.S. EPR is issued by the NRC Staff.

The differences from Revision 2 of the U.S. EPR Design Certification, either due to Reviewer's Notes and brackets 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:

GENERIC CHANGES

These changes are made for all UniStar fleet COLAs.

1 DEFINITIONS

Generic Technical Specifications:

a. The PROTECTION SYSTEM (PS) RESPONSE TIME definition includes brackets around the following:

"In lieu of measurement, response time may be verified for selected components provided that the components and methodology for the verification have been previously reviewed and approved by the NRC."

b. A Reviewer's Note in the PROTECTION SYSTEM (PS) RESPONSE TIME definition states:

"Applicable portions of the NRC approved Topical Reports may be utilized to modify the requirements for response time surveillance testing. These applicable portions of NRC approved Topical Reports should be referenced and discussed in the Bases description for the PS RESPONSE TIME surveillance requirement."

Plant-Specific Technical Specifications:

a. The brackets and associated text in the PROTECTION SYSTEM (PS) RESPONSE TIME definition are deleted.

b. The Reviewer's Note in the PROTECTION SYSTEM (PS) RESPONSE TIME definition are deleted.

Justification:

a. The brackets and associated text are no longer required because there are no NRC approved Topical Reports which may be utilized to modify the requirements for response time surveillance testing.

b. The Reviewer's Note is no longer required because there are no NRC approved Topical Reports which my be utilized to modify the requirements for the response time surveillance testing.

2 LCO 3.3.1 PROTECTION SYSTEM (PS)

Generic Technical Specifications:

a. Surveillance Requirement 3.3.1.4 states:

"Perform CALIBRATION."

b. Surveillance Requirement 3.3.1.6 states:

"Perform CALIBRATION."

c. Surveillance Requirement 3.3.1.9 states:

"Verify setpoints properly loaded in APUs."

d. A Reviewer's Note at the beginning of Table 3.3.1-2 states:

"[Reviewers Note: The values specified in brackets in the Limiting Trip Setpoint column are included for reviewer information only. A plant-specific setpoint study will be conducted. The values in Limiting Trip Setpoint column will then be replaced after the completion of this study.]"

e. Table 3.3.1-2 contains a "Limiting Trip Setpoint / Design Limit" column. Bracketed numerical values are provided for some reactor trips, Engineered Safety Features Actuation System signals, and Permissives.

f. Table 3.3.1-2, Footnote b, states:

"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."

g. Table 3.3.1-2, Footnote c, states:

"The setpoint shall be reset to a value that is within the as-left tolerance around the Nominal Trip Setpoint (NTSP) 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 a document controlled under 10 CFR 50.59."

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

"As specified in the COLR."

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

"As specified in the Pressure Temperature Limits Report."

Plant Specific Technical Specifications:

a. Surveillance Requirement 3.3.1.4 is revised to state:

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

b. Surveillance Requirement 3.3.1.6 is revised to state:

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

c. Surveillance Requirement 3.3.1.9 is revised to state:

"Verify setpoints are properly loaded in APUs in accordance with TS 5.5.18, "Setpoint Control Program.""

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

e. Table 3.3.1-2 contains a setpoint column. This column is deleted.

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

Deleted.

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

Deleted.

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

Deleted.

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

Deleted.

Justification:

a. The CALIBRATION of the Boron concentration sensors must be performed in accordance with the requirements of the Setpoint Control Program. The reference to the location of the Setpoint Control Program in the ”Programs and Manuals” section of the Technical Specifications is provided to ensure compliance with the stated requirements.

b. The CALIBRATION of specified reactor trip and Engineered Safety Feature sensors must be performed in accordance with the requirements of the Setpoint Control Program. The reference to the location of the Setpoint Control Program in the ”Programs and Manuals” section of the Technical Specifications is provided to ensure compliance with the stated requirements.

c. A Setpoint Control Program is being incorporated into the Plant-Specific Technical Specifications.

d. A Setpoint Control Program is being incorporated into the Plant-Specific Technical Specifications. The Reviewer's Note is no longer necessary.

e. A Setpoint Control Program is being incorporated into the Plant-Specific Technical Specifications. Specific setpoints will no longer be included in Table 3.3.1-2.

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.

3 LCO 3.7.10 CONTROL ROOM EMERGENCY FILTRATION (CREF)

Generic Technical Specifications:

TS LCO 3.7.10, "Control Room Emergency Filtration (CREF)," Required Action B.2 and Required Action D.1, contain design information on toxic gas and hazardous chemicals.

Plant Specific Technical Specifications:

This section of the U. S. EPR Generic Technical Specifications is incorporated by reference with the following departures:

The design information regarding toxic gas and hazardous chemicals is deleted from the Plant-Specific Technical Specifications and Bases.

Justification:

Toxic gas and hazardous chemical automatic protection for the Control Room Envelope is not required based on the site-specific evaluation provided in Part 2 of this COL Application (FSAR Sections 2.2.3 and 6.4.4).

4 TS 5.1 RESPONSIBILITY

Generic Technical Specifications:

"TS 5.1, "Responsibility," includes two Reviewer's Notes:

1. "Titles for members of the unit staff shall be specified by use of an overall statement referencing an ANSI Standard acceptable to the NRC staff from which the titles were obtained, or an alternative title may be designated for this position. Generally, the first method is preferable; however, the second method is adoptable to those unit staffs requiring special titles because of unique organizational structures.

2. The ANSI Standard shall be the same ANSI Standard referenced in Section 5.3, Unit Staff Qualifications. If alternative titles are used, all requirements of these Technical Specifications apply to the position with the alternative title applied with the specified title. Unit staff titles shall be specified in the Final Safety Analysis Report or Quality Assurance Plan. Unit staff titles shall be maintained and revised using those procedures approved for modifying/revising the Final Safety Analysis Report or Quality Assurance Plan."

Plant Specific Technical Specifications:

TS 5.1 is revised to remove the Reviewer's Notes and replace them with a note requiring that the organizational positions listed in the Administrative Controls section have corresponding site-specific titles specified in the Final Safety Analysis Report (FSAR).

Justification:

The use of generic titles in the Technical Specifications, and the inclusion of site-specific, corresponding titles in the FSAR, is consistent with Improved Standard Technical Specifications, Revision 3.1 of NUREG-1430 through NUREG-1434.

5 TS 5.2.2 UNIT STAFF

Generic Technical Specifications:

TS 5.2.2, "Unit Staff," contains a Reviewer's Note specifying the number of non-licensed operators required for two units when both units are shutdown or defueled.

Plant Specific Technical Specifications:

TS 5.2.2, "Unit Staff," is revised to remove the Reviewer's Note.

Justification:

This is a single unit facility.

6 TS 5.3 UNIT STAFF QUALIFICATIONS

Generic Technical Specifications:

TS 5.3, "Unit Staff Qualifications," contains a Reviewer's Note on the specification of the minimum qualifications of the unit staff.

Plant Specific Technical Specifications:

TS 5.3, "Unit Staff Qualifications," is revised to remove the Reviewer's Note.

Justification:

The unit staff qualifications standards are provided consistent with the FSAR, including FSAR Section 13.2.

7 TS 5.5.11 GASEOUS WASTE PROCESSING SYSTEM RADIOACTIVITY MONITORING PROGRAM

Generic Technical Specifications:

TS 5.5.11, "Gaseous Waste Processing System Radioactivity Monitoring Program," contains a Reviewer's Note for COL applicants incorporating outdoor liquid radioactive waste storage tanks in their design.

Plant Specific Technical Specifications:

TS 5.5.11, "Gaseous Waste Processing System Radioactivity Monitoring Program," is revised to remove the Reviewer's Note.

Justification:

The site-specific design does not include outdoor liquid radioactive waste storage tanks.

8 TS 5.5.15 CONTAINMENT LEAKAGE RATE TESTING PROGRAM

Generic Technical Specifications:

TS 5.5.15, "Containment Leakage Rate Testing Program," contains a Reviewer's Note indicating that, as discussed in U. S. EPR FSAR Section 6.2.6, the U.S. EPR has no penetrations that are classified as bypass leakage paths.

Plant Specific Technical Specifications:

TS 5.5.15, "Containment Leakage Rate Testing Program," is revised to remove the Reviewer's Note.

Justification:

The site-specific design has no penetrations that are classified as bypass leakage paths.

9 TS 5.5.17 CONTROL ROOM ENVELOPE HABITABILITY PROGRAM

Generic Technical Specifications:

TS 5.5.17, "Control Room Envelope Habitability Program," contains design information regarding hazardous chemical release.

Plant Specific Technical Specifications:

This section of the U. S. EPR Generic Technical Specifications is incorporated by reference with the following departures:

The design information regarding hazardous chemical release is deleted from the Plant-Specific Technical Specifications.

Justification:

Toxic gas and hazardous chemical automatic protection for the Control Room Envelope is not required based on the site-specific evaluation provided in Part 2 of this COL Application (FSAR Sections 2.2.3 and 6.4.4.).

10 TS 5.5.18 SETPOINT CONTROL PROGRAM

Generic Technical Specifications:

The Generic Technical Specifications do not describe a Setpoint Control Program.

Plant Specific Technical Specifications:

The following program description represents an Exemption and Departure to the U.S. EPR FSAR. It is added to the Plant-Specific Technical Specifications.

5.5.18 Setpoint Control Program (SCP)

a. The Setpoint Control Program implements the regulatory requirement of 10 CFR 50.36(c)(1)(ii)(A) that technical specifications will include items in the category of limiting safety system settings (LSSS), which are settings for automatic protective devices related to those variables having significant safety functions. Both SL-LSSS and Non-SL LSSS automatic protective instrumentation functions are included in the scope of the Setpoint Control Program.

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 Technical Specification required automatic protection instrumentation function shall be calculated in conformance with the instrumentation setpoint methodology previously reviewed and approved by the NRC. The NRC approved methodologies used to determine the Analytical Limits shall be those described in:

1. Technical Specification 5.6.3, CORE OPERATING LIMITS REPORT (COLR).

2. Technical Specification 5.6.4, Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMIT REPORT (PTLR).

The NRC approved methodologies used to determine the channel uncertainty are as follows:

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)].

Permissive values shall be as specified in U.S. EPR FSAR, Tier 2 Section 7.2.1.3.

c. Performance of CALIBRATION surveillances shall include the following:

   1. If the as-found calibration setting values are inside the two-sided limits of the PTAC, then the division is OPERABLE.

   2. If the as-found calibration setting value is outside the two-sided limits of the PTAC, then the division is inoperable, and corrective action is required, including those actions required by 10 CFR 50.36 when automatic protective devices do not function as required.

      As-found acceptance criteria will generally utilize no more than the square-root-sum-of-squares combination of the Reference Accuracy, M&TE, M&TE Readability, and Drift. The performance test verifies that the instruments are performing as expected. To prevent masking equipment degradation the acceptance criteria shall not include any margin. There are some applications in which a sensor or transmitter may be tested during abnormal conditions so that other uncertainty contributors such as temperature effects, radiation effects, vibration effects, apply. Site-specific procedures will establish trending requirements.

   3. The sensor(s) shall be calibrated such that the as-left sensor calibration setting value(s) are within the specified ALT around the specified NTSP (a trip setting as or more conservative than the specified LTSP) for each required automatic protection instrumentation function at the completion of the surveillance; otherwise, the surveillance requirement is not met and the sensor shall be immediately declared inoperable.

d. The difference between the as-found calibration setting values and the previously recorded as-left values for each sensor shall be trended and evaluated to verify that the sensor is functioning in accordance with its design basis.

e. The Setpoint Control Program shall establish a document containing the current value of the specified LTSP, NTSP, AV, PTAC, and ALT for each Technical Specification required automatic protection instrumentation

function, a record of changes to those values, and references to the calculation documentation. Permissive values shall be as specified in U.S. EPR FSAR, Tier 2 Section 7.2.1.3. Changes to this document shall be governed by the regulatory requirements of 10 CFR 50.59. In addition, changes to this document shall be governed by the approved setpoint methodology. This document, including any midcycle revisions or supplements, shall be provided to the NRC upon issuance for the initial cycle and each reload cycle.

Justification:

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 TS 5.5, "Programs and Manuals," coupled with the addition of supporting changes to LCO 3.3.1, "Protection System (PS)," and Bases 3.3.1, "Protection System (PS)," will satisfy this requirement.

11 TS 5.6.1 ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

Generic Technical Specifications:

TS 5.6.1, "Annual Radiological Environmental Operating Report," contains a Reviewer's Note to allow a single report submittal for all units at a multi-unit site.

Plant Specific Technical Specifications:

TS 5.6.1, "Annual Radiological Environmental Operating Report," is revised to remove the Reviewer's Note.

Justification:

The allowance for submittal of single reports for multiple units is not being pursued at this time.

12 TS 5.6.2 RADIOACTIVE EFFLUENT RELEASE REPORT

Generic Technical Specifications:

TS 5.6.2, "Radioactive Effluent Release Report" contains a Reviewer's Note to allow a single report submittal for all units at a multi-unit site.

Plant Specific Technical Specifications:

TS 5.6.2, "Radioactive Effluent Release Report" is revised to remove the Reviewer's Note.

Justification:

The allowance for submittal of single reports for multiple units is not being pursued at this time.

13 BASES 3.3.1 PROTECTION SYSTEM (PS)

Generic Technical Specifications:

a. TS Bases 3.3.1, "Protection System (PS)," includes a Reviewer's Note in the Background section that describes the term Limiting Trip Setpoint and plant specific requirements when LTSPs are not included in Table 3.3.1-2.

b. TS Bases 3.3.1, "Protection System (PS)," includes a Reviewer's Note in the Surveillance Requirements section that states "In order for a plant to take credit for topical reports as the basis for justifying Frequencies, topical reports must be supported by an NRC staff SER that establishes the acceptability of each topical report for that unit."

c. TS Bases 3.3.1, "Protection System (PS)," includes a Reviewer's Note in the Surveillance Requirements section that describes exclusions that would preclude the notes from being applicable. This Reviewers Note concludes with the statement "Each licensee proposing to fully adopt this TSTF must review the potential SL-LSSS Functions to identify which of the identified functions are SL-LSSS according to the definition of SL-LSSS and their plant specific safety analysis. The Note is not required to be applied to any of the listed Functions which meet any of the exclusion criteria or are not SL-LSSS based on the plant specific design and analysis."

d. TS 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."

e. TS Bases, 3.3.1 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."

f. TS 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."

g. TS 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."

h. TS Bases 3.3.1, Surveillance Requirements, 3.3.1.9, states "SR 3.3.1.9 verifies that the Limiting Trip Setpoint, Design Limits, and Permissive values have been properly loaded into the applicable APU."

i. TS Bases 3.3.1 includes a Reviewer's Note in Surveillance Requirement 3.3.10 that states

"Applicable portions of NRC approved Topical Reports may be utilized to modify the requirements for response time surveillance testing. These applicable portions of NRC approved Topical Reports should be referenced and discussed."

Plant Specific Technical Specifications:

a. TS Bases 3.3.1, "Protection System (PS)" is revised to remove the Reviewer's Note from the Background section.

b. TS Bases 3.3.1, "Protection System (PS)," in the Surveillance Requirements section, is revised to remove the first Reviewer's Note regarding topical reports.

c. TS Bases 3.3.1, "Protection System (PS)," in the Surveillance Requirements section, is revised to remove the second Reviewer's Note regarding Notes (b) and (c) in Table 3.3.1-2.

d. TS Bases 3.3.1, Background, the paragraph that begins with "However, there is also some point beyond which" is revised to include the following sentence at the end of the paragraph:

> "In accordance with Specification 5.5.18, the Setpoint Control Program shall establish a document that contains the current value of the specified LTSP, Nominal Trip Setpoint (NTSP), Allowable Value (AV), Performance Test Acceptance Criteria (PTAC), and As-Left Tolerance (ALT) for each Technical Specification required automatic protection instrumentation function."

e. 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."

f. Bases 3.3.1, Surveillance Requirements, SR 3.3.1.4, is 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 that containing the current value of the specified LTSP, NTSP, AV, PTAC, and ALT for each Technical Specification required automatic protection instrumentation function. The Setpoint Control Program also establishes requirements for the performance of CALIBRATION surveillances. Permissive values shall be as specified in U.S. EPR FSAR, Tier 2 Section 7.2.1.3."

g. Bases 3.3.1, Surveillance Requirements, SR 3.3.1.6, is 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 that containing the current value of the specified LTSP, NTSP, AV, PTAC, and ALT for each Technical Specification required automatic protection instrumentation function. The Setpoint Control Program also establishes requirements for the performance of CALIBRATION surveillances. Permissive values shall be as specified in U.S. EPR FSAR, Tier 2 Section 7.2.1.3."

h. TS Bases 3.3.1, Surveillance Requirements, SR 3.3.1.9, is revised to state:

"SR 3.3.1.9 verifies that the setpoints are properly loaded into the applicable APUs. In accordance with Specification 5.5.18, the Setpoint Control Program shall establish a document containing the current value of the specified LTSP, NTSP, AV, PTAC, and ALT for each Technical Specification required automatic protection instrumentation function. Permissive values shall be as specified in U.S. EPR FSAR, Tier 2 Section 7.2.1.3."

i. TS Bases 3.3.1 Surveillance Requirements is revised to remove the Reviewer's Note and bracketed text regarding topical reports.

Justification:

a. A Setpoint Control Program is being incorporated into the Plant-Specific Technical Specifications. The Reviewer's Note is no longer necessary.

b. The specified Frequencies in the Plant-Specific TS 3.3.1 are based on the Frequencies specified in the Generic TS 3.3.1. Topical reports are not credited as the basis for justifying Surveillance Frequencies.

c. The application of the actions required by notes (b) and (c) are applied to all PS (SL-LSSS and Non-SL LSSS) required automatic protection instrumentation functions. The Reviewer's Note is no longer necessary.

d.-i. 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.

14 BASES 3.6.1 CONTAINMENT

Generic Technical Specifications:

TS Bases 3.6.1, "Containment," contains a Reviewer's Note, in the Bases for SR 3.6.1.1 indicating that Regulatory Guide 1.163 and NEI 94-01 contain acceptance criteria for containment leakage which may be reflected in the Bases.

Plant Specific Technical Specifications:

TS Bases 3.6.1, "Containment," is revised to remove the Reviewer's Note.

Justification:

The Containment Leakage Rate Testing Program is conducted as required by TS 5.5.15, "Containment Leakage Rate Testing Program," and U.S. EPR FSAR Section 6.2.6, "Containment Leakage Testing." U.S. EPR FSAR Section 6.2.6 is consistent with Regulatory Guide 1.163 and NEI 94-01. Therefore, the information reflected in the Reviewer's Note does not need to be included in the Bases.

15 BASES 3.7.10 CONTROL ROOM EMERGENCY FILTRATION (CREF)

Generic Technical Specifications:

TS Bases 3.7.10, "Control Room Emergency Filtration (CREF)," contains design information regarding hazardous chemicals, toxic gas detectors, and Control Room isolation for toxic gas.

Plant Specific Technical Specifications:

TS Bases 3.7.10 is incorporated by reference with the following departures:

"The detection of toxic gases and subsequent automatic isolation of the Control Room Envelope (CRE) is not required and is not a part of the design basis. The results of the toxic chemicals evaluaton in Section 2.2.3 did not identify any credible toxic chemical accidents that

exceed the limits established in Regulatory Guide 1.78. As a result, toxic gas detectors and CRE isolation are not required. Therefore all the associated design information is deleted."

In addition, there are several statements within TS Bases 3.7.10 that relate to the toxic gas and hazardous chemicals design information. These are described below:

The first sentence in the sixth paragraph of the Background:

> "Actuation of the CREF places the system in either of two separate states (emergency radiation state or toxic gas isolation state) of the emergency mode of operation, depending on the initiation signal. "

is deleted. The last sentence in the seventh paragraph:

> "The actions taken in the toxic gas isolation state are the same, except that the signal switches the CREF to an isolation alignment to minimize any outside air from entering the CRE through the CRE boundary."

is deleted. The last sentence in the eighth paragraph:

> "The actions of the toxic gas isolation state are more restrictive, and will override the actions of the emergency radiation state."

is also deleted.

Within the TS Bases 3.7.10 Actions section of the Bases, the last (third) paragraph in the discussion of Actions D.1 and D.2:

> "Required Action D.1 is modified by a Note indicating to place the system in the toxic gas isolation state with outside air isolated."

is deleted.

Justification:

Toxic gas and hazardous chemical automatic protection for the Control Room System is not required based on the site-specific evaluation provided in Part 2 of this COL Application (FSAR Sections 2.2.3 and 6.4.4.).

16 BASES 3.7.12 SAFEGUARD BUILDING CONTROLLED AREA VENTILATION SYSTEM (SBVS)

Generic Technical Specifications:

TS Bases 3.7.12, ”Safeguard Building Controlled Area Ventilation System (SBVS),” contains a Reviewer’s Note in the Actions section for Required Action B.1, that indicates that the adoption of Condition B is dependent on a commitment from the licensee to have guidance available describing compensatory measures to be taken in the event of intentional or unintentional entry into Condition B. The discussion also includes design information regarding toxic gas and hazardous chemicals.

Plant Specific Technical Specifications:

TS Bases 3.7.12 is incorporated by reference with the following departures:

TS Bases 3.7.12, "Safeguard Building Controlled Area Ventilation System (SBVS)," is revised to remove the Reviewer's Note and modify the discussion for Required Action B.1 to include the required commitment. The revision also deletes the design information regarding toxic gas and hazardous chemicals. The revised text is:

B.1

If the safeguard buildings or fuel building boundary is inoperable in MODE 1, 2, 3, or 4, the SBVS trains may not be able to perform their intended functions. Actions must be taken to restore an OPERABLE safeguard buildings and fuel building boundaries within 24 hours. During the period that the safeguard buildings or fuel building boundary is inoperable, appropriate compensatory measures consistent with the intent, as applicable, of GDC 19 and 10 CFR Part 100 shall be utilized to protect plant personnel from potential hazards such as radioactive contamination,smoke, temperature and relative humidity, and physical security. Preplanned measures shall be available and implemented upon entry into the condition to address these concerns regardless of whether the entry is intentional or unintentional entry. The 24 hour Completion Time is reasonable based on the low probability of a postulated accident occurring during this time period, and the use of compensatory measures. The 24 hour Completion Time is a typically reasonable time to diagnose, plan and possibly repair, and test most problems with the safeguard buildings or fuel building boundary.

Justification:

The site-specific commitment provided is consistent with the requirements in the Reviewer's Note for adoption of the allowance provided in Condition B of TS 3.7.12, "Safeguard Building Controlled Area Ventilation System (SBVS)."

Toxic gas and hazardous chemical protection for the CREF is not required based on the site-specific evaluation provided in Part 2 of this COL application (FSAR Section 2.2.3 and 6.4.4).

SITE SPECIFIC CHANGES

{These changes are unique to Calvert Cliffs Nuclear Power Plant (CCNPP) Unit 3.

1 LCO 3.3.2 POST ACCIDENT MONITORING (PAM) INSTRUMENTATION

Generic Technical Specifications:

TS Table 3.3.2-1, "Post Accident Monitoring Instrumentation," provides the post accident monitoring (PAM) variables identified by the unit specific Regulatory Guide 1.97 analyses that meet the definition of Type A, B, and C variables.

Plant Specific Technical Specifications:

The CCNPP Unit 3 TS Table 3.3.2-1, "Post Accident Monitoring Instrumentation," is revised to provide plant specific information. The following text is inserted:

FUNCTION		REQUIRED DIVISIONS	CONDITION REFERENCED FROM REQUIRED ACTION D.1
19.	Essential Service Water System Cooling Tower Basin Level	2	E

Justification:

Adding the PAM variable, "Essential Service Water System Cooling Tower Basin Level," to TS Table 3.3.2-1, "Post Accident Monitoring Instrumentation," ensures proper instrument calibration frequency.

2 TS 4.1 SITE LOCATION

Generic Technical Specifications:

TS 4.1, ”Site Location,” contains a bracketed requirement for the COL application to provide site specific information for Section 4.1, ”Site Location.”

Plant Specific Technical Specifications:

The bracketed information is replaced with the following site specific information:

> "The site for the Calvert Cliffs Nuclear Power Plant (CCNPP) Unit 3 is located on the western shore of the Chesapeake Bay in Calvert County, Maryland, about 10.5 miles southeast of Prince Frederick, Maryland. The site is approximately 45 miles southeast of Washington, DC, and 60 miles south of Baltimore, Maryland. The exclusion area boundary for CCNPP Unit 3 is a circle with a radius of 3324 feet. The exclusion area boundary establishes a radius of at least 2640 feet from potential CCNPP Unit 3 release points."

Justification:

The site location information provided is consistent with the CCNPP Unit 3 FSAR description of site location.

3 BASES 3.3.2 POST ACCIDENT MONITORING (PAM) INSTRUMENTATION

Generic Technical Specifications:

a. TS Bases 3.3.2, "Post Accident Monitoring Instrumentation," provides the post accident monitoring (PAM) variables identified by the unit specific Regulatory Guide 1.97 analyses that meet the definition of Type A, B, and C variables.

b. TS Bases 3.3.2, "Post Accident Monitoring Instrumentation," includes a Reviewer's Note in the Background section that states, "Table 3.3.2-1 provides a list of variables identified by the unit specific Regulatory Guide 1.97 analyses. Table 3.3.2-1 in unit specific Technical Specifications (TS) shall list all Type A, B and C variables identified by the unit specific Regulatory Guide 1.97 analyses, as amended by the NRC's Safety Evaluation Report (SER).

Plant Specific Technical Specifications:

a. The CCNPP Unit 3 Bases 3.3.2, "Post Accident Monitoring Instrumentation," is revised, in the LCO section, to provide plant specific information. The following text is inserted:

"19. Essential Service Water System (ESWS) Cooling Tower Basin Level

The ESW System is vital for all phases of plant operation and is designed to provide cooling water during normal operation and under accident conditions to ensure safe operation and maintain orderly shutdown of the plant. ESWS Cooling Tower Basin Level is a key parameter used to indicate proper level of cooling water during operation of the Ultimate Heat Sink Makeup System after a DBA event.

There are four ESWS Cooling Tower Basin Levels (1 per UHS train during operation of the UHS Makeup Water System) provided with a range that envelopes 9' to 26'}."

b. TS Bases 3.3.2, "Post Accident Monitoring Instrumentation," is revised to remove the Reviewer's Note from the Background section.

Justification:

ESWS Cooling Tower Basin Level is a key parameter used to indicate proper level of cooling water during operation of the Ultimate Heat Sink Makeup Water System after a DBA event. Adding this PAM variable ensures proper instrument calibration frequency.

4 BASES 3.7.19 ULTIMATE HEAT SINK (UHS)

Generic Technical Specifications:

TS-Bases 3.7.19, ”Ultimate Heat Sink (UHS),” contains a bracketed requirement in the Background section:

"[The Seismic Category 1 makeup necessary to support 30 days of post accident mitigation is site specific and details are to be provided by the COL applicant]"

A related requirement is contained in the LCO section :

"[COL applicant to provide definition of OPERABLE makeup source.]"

Plant Specific Technical Specifications:

The CCNPP Unit 3 Bases 3.7.19, "Ultimate Heat Sink (UHS)," is revised, in the Background section, to remove the bracketed requirement and provide site-specific information. The following text is inserted:

"The seismic Category 1 emergency makeup water supply, to the ESWS cooling tower basins, necessary to support 30 days of post accident mitigation is provided by the safety related Ultimate Heat Sink (UHS) Makeup Water System that draws water from the Chesapeake Bay. Chesapeake Bay water enters the UHS Makeup Water Intake Structure through an intake channel shared with the Circulating Water System Makeup Intake Structure. The UHS Makeup Water Intake Structure houses four independent UHS Makeup Water System trains, one for each ESWS division. Each train has one pump, a discharge check valve, and a pump discharge isolation motor operated valve, all housed in the UHS Makeup Water Intake Structure, plus the buried piping running up to and into the ESWS pumphouse at the ESWS cooling tower basin. Each UHS Makeup Water System pump is rated at 750 gpm."

To address the bracketed text in the LCO section, the bracketed text and the end of the preceeding sentence "...with capability from makeup from an OPERABLE source." is replaced with the following:

"...with capability for makeup from an OPERABLE source. An OPERABLE emergency makeup water source consists of one OPERABLE train of the UHS Makeup Water System capable of providing makeup water to its associated ESWS cooling tower basin. Each UHS Makeup Water System train includes a pump, valves, piping, instruments and controls to ensure the transfer of the required supply of water from the Chesapeake Bay to its associated ESWS cooling tower basin."

Justification:

The site specific information provided is consistent with the CCNPP Unit 3 FSAR Section 9.2 description of seismic Category 1 UHS Makeup Water System.}