



June 2, 2023

U.S. Nuclear Regulatory Commission  
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Calvert Cliffs Nuclear Power Plant, Units 1 and 2  
Renewed Facility Operating License Nos. DPR-53 and DPR-69  
NRC Docket Nos. 50-317 and 50-318

SUBJECT: Emergency License Amendment Request - One-Time Extension of the Control Room Emergency Ventilation System (CREVS) Technical Specification

- REFERENCES
1. Letter from D. Skay (U.S. NRC) to C. H. Cruse (Constellation Nuclear), "Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2 – Amendment Re: One-Time Extension of the Unit 2 Control Room Emergency Ventilation System Technical Specification," dated February 13, 2002 (ADAMS Accession No. ML020090620)
  2. Letter from D. Skay (U.S. NRC) to C. H. Cruse (Constellation Nuclear), "Calvert Cliffs Nuclear Power Plant, Unit No. 2 – Amendment 227 Re: One-Time Extension of the Unit 2 Control Room Emergency Ventilation System Technical Specification," dated April 4, 2002 (ADAMS Accession No. ML020920286)

Pursuant to 10 CFR 50.90, Application for amendment of license, construction permit, or early site permit," Constellation Energy Generation, LLC (CEG), proposes a change to the Technical Specifications (TS), Appendix A of Renewed Facility Operating License Nos. DPR-53 and DPR-69 for Calvert Cliffs Nuclear Power Plant, Units 1 and 2 (CCNPP). This proposed change is being requested on an emergency basis pursuant to 10 CFR 50.91(a)(5).

This submittal requests a one-time extension to TS 3.7.8 Control Room Emergency Ventilation System (CREVS) Action C.1 Completion Time (CT), from seven (7) days to 16 days, for one train of the control room emergency ventilation system inoperable due to the emergency power supply for the train being inoperable. This one-time extension is necessary to support ongoing troubleshooting, repairs, and return to service testing of the 1A Diesel Generator (DG) (11 CREVS train emergency power supply) which could challenge the current CT of seven (7) days.

During the proposed one-time CT extension the site will be taking compensatory measures to provide additional assurance that the sources of risk from the extension will be minimized.

Emergency License Amendment Request  
One-Time Extension of the CREVS Technical Specification  
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This request is consistent with prior CCNPP one-time extensions to TS 3.7.8 Action C.1 CTs as approved by the U.S. NRC in References 1 and 2.

Attachment 1 provides an evaluation of the proposed changes, including a discussion of the emergency situation, the risk analysis, the proposed compensatory measures, and an analysis of the significant hazards consideration. Attachment 2 provides a markup of the affected TS page.

CEG requests approval of the proposed license amendment request as soon as possible based on emergency circumstances at CCNPP in accordance with the provisions of 10 CFR 50.91(a)(5) but no later than June 8, 2023 at 00:47 hours. The proposed license amendment request, if approved, will be implemented immediately upon issuance.

The proposed change has been reviewed by the CCNPP Plant Operations Review Committee in accordance with the requirements of the CEG Quality Assurance Program.

There are no regulatory commitments contained in this submittal.

In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (b), CEG is notifying the State of Maryland of this application for license amendment by transmitting a copy of this letter and its attachments to the designated State Official.

Should you have any questions concerning this submittal, please contact Ms. Wendi E. Para at (267) 533-5208.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 2<sup>nd</sup> day of June 2023

Respectfully,



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David P. Helker  
Sr. Manager - Licensing  
Constellation Energy Generation, LLC

Attachments:   1. Evaluation of Proposed Change  
                  2. Proposed Technical Specification Change (Markup)

cc:     USNRC Region I, Regional Administrator  
          USNRC Senior Resident Inspector, Calvert Cliffs Nuclear Power Plant  
          USNRC Project Manager, NRR – Calvert Cliffs Nuclear Power Plant  
          S. Seaman, State of Maryland

## **ATTACHMENT 1**

### **Emergency License Amendment Request**

**Calvert Cliffs Nuclear Power Plant, Units 1 and 2  
Renewed Facility Operating License Nos. DPR-53 and DPR-69  
NRC Docket Nos. 50-317 and 50-318**

### **EVALUATION OF PROPOSED CHANGE**

**Subject: Emergency License Amendment Request - One-Time Extension of the Control Room Emergency Ventilation System (CREVS) Technical Specification**

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## **1.0 SUMMARY DESCRIPTION**

Pursuant to 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit," Constellation Energy Generation, LLC (CEG), proposes a change to the Technical Specifications (TS), Appendix A of Renewed Facility Operating License Nos. DPR-53 and DPR-69 for Calvert Cliffs Nuclear Power Plant, Units 1 and 2 (CCNPP). The proposed change is being requested on an emergency basis pursuant to 10 CFR 50.91(a)(5).

This submittal requests a one-time extension to TS 3.7.8 Control Room Emergency Ventilation System (CREVS) Action C.1 Completion Time (CT), from seven (7) days to 16 days, for one train of the control room emergency ventilation system inoperable due to the emergency power supply for the train being inoperable. This one-time extension is necessary to support ongoing troubleshooting, repairs and return to service testing of the 1A Diesel Generator (DG) (11 CREVS train emergency power supply) which could challenge the current CT of seven (7) days.

## **2.0 DETAILED DESCRIPTION**

### **2.1 CREVS Design and Operation**

The CREVS is a shared system providing protection to the common Control Room for both Unit 1 and Unit 2. The CREVS consists of two redundant subsystems (Trains 11 and 12), each capable of maintaining the habitability of the Control Room Envelope (CRE). Each CREVS train is considered operable when the individual components necessary to limit operator exposure are operable within the given train. A CREVS train is considered operable when the associated components listed below are operable and their associated power supplies are operable:

- Control Room Heating, Ventilation, and Air Conditioning Supply and Return;
- Post Loss-of-Coolant Incident (LOCI) fan;
- Post LOCI filter train;
- High Efficiency Particulate Air (HEPA) filters;
- Ductwork, valves, and dampers; and
- CRE boundary (the single boundary supports both subsystems).

The CCNPP CREVS has its inlet fresh air supplies, one for each train, and the common air exhaust isolated by leak tight hatches; therefore, the CCNPP CREVS is operated in full recirculation mode during normal and accident conditions. With the CREVS operating in the recirculation mode, if a chemical, radiological, or smoke event occurred, the ventilation system would not require damper actuation or system realignment to establish the boundary and protect the operators in the control room.

11 CREVS train is normally powered from the Unit 1 4.16 kV Engineered Safety Feature (ESF) Bus 11, which is connected to 13.8 kV Bus 11 offsite circuit and backed up by the 1A DG.

12 CREVS train is normally powered from the Unit 2 4.16 kV ESF Bus 24, which is connected to 13.8 kV Bus 21 offsite circuit and backed up by the 2B DG.

## **2.2 Current TS Requirements**

The TS allows one train of CREVS to be inoperable for seven (7) days for reasons other than an inoperable Toilet area exhaust isolation valve or an inoperable CRE boundary in MODE 1, 2, 3, or 4.

TS 3.8.1, AC Sources – Operating, Condition E, requires that, if a DG is inoperable and not returned to service within 14 days, the site would declare the affected CREVS train inoperable and enter TS 3.7.8, Condition C for one CREVS train inoperable for reasons other than Condition A or B in MODE 1, 2, 3, or 4 on both CCNPP units. The CT for TS 3.7.8 Action C.1 is seven (7) days. If the system is not made OPERABLE by return of the DG within the additional seven (7) days, TS 3.7.8 Condition G and Actions G.1 and then G.2 would be entered which requires both CCNPP units be in MODE 3 within 6 hours, and MODE 5 within 36 hours.

## **2.3 Emergency Condition**

On May 18, 2023 at approximately 00:47 EDT the CCNPP, Unit 1 1A DG tripped on low lube oil pressure during performance of a planned 12-hour run. Following the DG trip, CCNPP, Unit 1 entered Condition 3.8.1.B and CCNPP, Unit 2 entered Condition 3.8.1.E. On June 1, 2023 at 00:47, which is expiration of the 14 days provided by TS 3.8.1, Action E.5 for Unit 2, CCNPP declared the 11 CREVS train inoperable and entered TS 3.7.8, Condition C on both CCNPP units for one CREVS train inoperable.

CCNPP has begun the causal analysis process for the 1A DG trip as driven by the corrective action program. The causal analysis team is engaging fleet and industry subject matter experts to aid in determining cause and actions to address the trip and potential Extent of Condition.

The proximate cause of the May 18, 2023 1A2 engine trip appears to be high cyclic fatigue resulting in a failure of one of the two engine-driven lube oil pump's shaft.

The CT for CREVS TS 3.7.8 Action C.1, is seven (7) days which will expire on June 8, 2023 at 00:47 EDT. Based on the current scope of ongoing troubleshooting, repairs, and return to service testing, CCNPP will be challenged to complete the work in the allowed CT. CCNPP estimates that it may take up to an additional nine (9) days to complete the ongoing troubleshooting, repairs, and return to service testing and requests that the CT be extended to 16 days. This estimate includes some contingency time to allow for the fact that this work is not regularly performed and to obtain additional parts if needed.

Therefore, this emergency license amendment requests a one-time extension to the TS 3.7.8 Action C.1 CT, from seven (7) days to 16 days. Neither a routine nor an exigent amendment can be processed prior to June 8, 2023 at 00:47 EDT.

On the basis of the discussion herein, CEG has determined that emergency circumstances exist and that CCNPP did not knowingly cause the emergent situation. Further, we affirm that we have made a best effort to make a timely license amendment application. Therefore, CEG requests an expedited review of the proposed emergency license amendment in accordance with the provisions of 10 CFR 50.91(a)(5) to avoid commencing a shutdown of both CCNPP units.

## 2.4 Proposed Change

The one-time extension to the TS 3.7.8 Action C.1 CT will be documented by a footnote:

Insert \* after "7 days" in the TS LCO 3.7.8, Action C.1 CT

Add the following footnote to the bottom of TS Page 3.7.8-2:

"\* This Action is extended from 7 days to 16 days (for loss of the emergency power supply only) during repair and restoration work on the 1A DG in June 2023. This one-time extension begins when the 1A DG allowed outage time as specified in Technical Specification 3.8.1 Condition E expires. The one-time extension ends when the 11 CREVS train is returned to OPERABLE status or, 16 days has expired, whichever is first."

The proposed change is shown in the TS Markup in Attachment 2.

Surveillance Requirements (SRs) associated with other in-service but protected equipment were reviewed and any impacts due to the requested change will be managed by the Surveillance Frequency Control Program.

## 3.0 TECHNICAL EVALUATION

The Technical Evaluation examined the impacts to the Plant Safety Analysis, and the Risk Analysis from a one-time extension of the CT for one CREVS train inoperable to 16 days.

### 3.1 Safety Analysis

CCNPP Updated Final Safety Analysis Report describes the two redundant emergency ventilation subsystems for the Control Room. The safety function of the CREVS is to maintain the Control Room habitable for operators and to maintain the environment needed for continued equipment operation. The CREVS utilizes fans, dampers, and filters to accomplish its safety functions. To allow for a single-failure to the system, the Control Room is served by two redundant 100 percent capacity CREVS trains. Each of the CREVS trains is powered from a different safety-related bus, which is powered from different DGs.

During the proposed one-time extended CT, the emergency power supply for 11 CREVS will be inoperable for up to 30 days in accordance with the Risk Informed Completion Time (RICT) while ongoing troubleshooting, repairs and return to service testing is performed on the 1A DG. Per the TS, CCNPP may remove one of the CREVS trains from service for up to seven (7) days, thereby eliminating the single-failure protection. This temporary relaxation of the single-failure criterion, consistent with overall system reliability considerations, provides a limited time to make modifications, repair equipment, or conduct testing.

The 11 CREVS train, which does not directly impact core damage frequency or large early release frequency but does support the control room envelope safe haven for operators to control the plant during postulated radiological, smoke, or other toxic gas events, will be functional during the period of the extended CT. The 11 CREVS train will have the primary offsite power supply available during this period. As pre-planned alternate onsite power, the 11

CREVS will have emergency power supplied by the 0C DG, a non-safety related alternate AC power source. Additionally, in the event of failure of the 0C diesel, the 11 CREVS can be powered by tying lower level busses in accordance with site operating procedures. Loss of all power to the CREVS would require loss of the four offsite power sources and failure of the 0C DG to start.

The only design basis event that could interrupt normal power to both CREVS trains is a loss-of-offsite power. The offsite power system consists of three 500 kV transmission lines that meet in a common switchyard, and a separate 69 kV transmission line that connects to the 13 kV busses. The three 500 kV lines are independent of each other and are mounted on weather-resistant towers along a single right-of-way. The 69 kV transmission line comes into a separate substation on the site along a different right-of-way and is buried for most of its length on CCNPP property. The design of the switchyard permits only two redundant networks from the switchyard to the 4 kV bus. Therefore, the design has four off-site power sources to feed the two redundant networks within the switchyard.

Two predominant ways that offsite power could be inadvertently lost are through maintenance activities and weather-related events. As detailed in Section 3.2, Risk Assessment Insights and Compensatory measures, to reduce the possibility that maintenance activities could contribute to a loss-of-offsite power, CCNPP will protect and restrict planned maintenance activities on the CCNPP portion of the three 500 kV offsite transmission lines until the 1A DG emergency power is restored to 4 kV Bus 11. This will provide additional margin beyond the two transmission lines required by TS.

The design and construction of the four transmission lines lessens their vulnerability to weather-related events. Tornadoes and hurricanes are weather-related threats to the transmission system. The probability of tornadoes and hurricanes striking CCNPP were previously evaluated for the Station Blackout rule response. The frequencies reported were  $3.75 \times 10^{-4}$  per year for tornadoes, and 0.1 per year for hurricanes. Although winter ice storms are another potential threat to the transmission system these are not likely during the early summer month of June. Therefore, based on the design of the transmission system and the time of year that the work is scheduled, the vulnerability of the transmission system to a weather-related event is minimized and acceptable.

In addition, as detailed in Section 3.2, Risk Assessment Insights and Compensatory measures, CCNPP will protect and restrict planned maintenance on the 0C DG to ensure it will be available to the 4 kV Bus 11 as an alternative power source during the period 1A DG is inoperable. This action further reduces risk since there will be a backup, non safety-related, power source available to the bus.

CCNPP has also evaluated the 0C DG for the same condition existing on the 1A DG, since they are both Societie' Alsacienne de Constructions Mechaniques De Mulhouse (SACM) DGs from the same manufacturer. CCNPP is confident that the 0C DG remains capable of performing its function following a loss-of-offsite power.

**NOTE:** The other three DGs at CCNPP are of a different design and fabricated by a different vendor (Fairbanks Morse).

Another factor that could have an impact on the ability of the CREVS to perform its safety function is the reliability of the unaffected CREVS train. The 12 CREVS train is reliable based on its past performance. Further, the primary and emergency power supplies for the 12 CREVS train, the 13.8 kV Bus 21 offsite circuit and the 2B DG, respectively, are reliable based on their past performance. In addition, as detailed in Section 3.2, Risk Assessment Insights and Compensatory measures, CCNPP will protect and restrict planned maintenance on the 12 CREVS train and the 2B DG and associated support systems to ensure the 12 CREVS train remains operable while the 11 CREVS train does not have emergency power.

If an unforeseen circumstance causes the loss-of-emergency power to 12 CREVS train while in this condition, the site will follow the appropriate Action Statement for the loss of both CREVS trains. This proposed one-time extension has no effect on the time limits for the Action Statement associated with the loss of both CREVS trains.

### **3.2 Risk Assessment Insights and Compensatory measures**

This proposed one-time license amendment is not a risk-informed request and, therefore, a risk evaluation is not required. However, to provide additional information, CEG is providing risk information related to the proposed change.

The impact on the CREVS is considered to be a negligible contribution to the risk associated with the 1A DG being inoperable. This is because operator performance to mitigate most Large Early Release Frequency (LERF) scenarios are not impacted by CREVS. Use of the Risk Informed Completion Time (RICT) program for the removal of the 1A DG, demonstrates with reasonable assurance that the proposed TS change is within the current risk acceptance guidelines in RG 1.177 for one-time changes.

Compensatory measures are proposed during the extended CT. These compensatory measures were derived from a review of the full-power internal events Probabilistic Risk Assessment (PRA) and the fire PRA models for main control room ventilation and failure of the 1A DG. Further, compensatory measures specifically associated with mitigating the impact of a loss of power to CREVS are identified. No credit for additional compensatory measures was given in the PRA model. The analysis was performed for each CCNPP unit individually.

The following compensatory measures will be taken by CCNPP for this one-time CT extension request based on the PRA results.

1. Perform operator shift briefs on applicable Abnormal and Emergency Operating Procedures to reinforce potentially important operator actions including:
  - Trip the Reactor Coolant Pumps (RCPs) at both 1C06 and 1C19 with normal indications affected by fire with only the cross-powered flow indication annunciator installed under NFPA805 is unaffected by fire. The goal is to trust the NFPA 805 opposite-unit-backed flow gauge if the other indications may be reading erroneously. If that single gauge is showing no flow and the rest are reading unlikely values, trip the pump.
  - Open the Auxiliary Feed Water (AFW) Block Valves
  - Local control AFW Flow if the existing controllers fail including potentially using the auxiliary shutdown panel in the 45' SWGR Room
  - Alignment of FLEX in support of powering the CREVS.



2. Perform shift briefs and pre-job walkdowns to reduce the likelihood of a fire in the important areas identified below by controlling combustibles and limiting breaker switching activities:
  - 430 (U1 45' SWGR)
  - 318 (Unit 1 Containment Purge Air Supply Room)
  - 306 (Unit 1 Cable Spreading Room)
  - 27' Turbine Building
    - 2MCC201AT
    - 2MCC201BT
    - 2MCC206T
    - 2MCC216T
    - 2MCC217T
    - 2MCC218T
    - 2ABT83-S1 / 2ABT83-S2 (SGFP Speed Control),
    - 2PNL2T25 (U-2 GTMS Panel),
    - 2PNL2C1111 (SG 21 FEED REG VALVE 2CV1111 LOCAL CONTROL PANEL),
    - 2PNL2C1121 (SG 22 FEED REG VALVE 2CV1121 LOCAL CONTROL PANEL),
    - 2PNL2T22A (CNDS. & FWDTR MISC- Electrical Cabinet).
  - U-4000-11
3. Pre-stage FLEX equipment for re-powering CREVS to the extent possible without introducing combustibles to risk significant areas.

**NOTE:** The fueled 480 VAC FLEX generator must be at least 20' away from Risk Mitigation equipment (i.e., Generator staged and cables run to the SWGR door).

4. Implement all fire risk management actions (RMAs) for each configuration per the applicable station On-Line Risk Management procedural guidance.
5. Protect and restrict planned maintenance on the 12 CREVS train, the 2B DG, and the 2B DG associated support systems, which supplies the 12 CREVS train.
6. Protect and restrict planned maintenance on the 0C DG to ensure it will be available to the 4 kV Bus 11 as an alternative power source.
7. Protect and restrict planned maintenance on the three 500 kV offsite transmission lines and 69 kV transmission line.

The compensatory measures provide additional assurance that the sources of risk from the one-time CT extension will be minimized.

## 4.0 REGULATORY EVALUATION

### 4.1 Applicable Regulatory Requirements/Criteria

The proposed change has been evaluated to determine whether applicable regulations and requirements continue to be met. CEG has determined that the proposed change does not require any exemptions or relief from the following current applicable regulations and regulatory requirements, which were reviewed in making this determination:

#### 10 CFR 50.36, Technical Specifications

10 CFR 50.36(c) provides that TS will include Limiting Conditions for Operation (LCOs) which are "the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee will shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met." The proposed change involves a one-time extension of the affected TS CT. The LCOs themselves remain unchanged, as do the required remedial actions or shut down requirements in accordance with 10 CFR 50.36. In addition, 10 CFR 50.36 requires that a licensee's TS be derived from the analyses and evaluation included in the safety analysis report.

The proposed change does not affect CCNPP's compliance with the intent of 10 CFR 50.36.

#### 10 CFR 50.63, Loss of all alternating current

10 CFR 50.63 requires that light water-cooled nuclear power plants licensed to operate be able to withstand for a specified duration and recover from a station blackout (SBO).

The proposed change does not alter CCNPP's duration (coping time) or affect its compliance with the intent of 10 CFR 50.63.

#### 10 CFR 50.65, Requirements for monitoring the effectiveness of maintenance at nuclear power plants

10 CFR 50.65 requires that when performing maintenance activities (including but not limited to surveillance, post-maintenance testing, and corrective and preventive maintenance), the licensee shall assess and manage the increase in risk that may result from the proposed maintenance activities. The scope of the assessment may be limited to structures, systems, and components that a risk-informed evaluation process has shown to be significant to public health and safety. The maintenance activities associated with this change will be assessed and the increased risk will be managed in accordance with 10 CFR 50.65 (a)(4).

The proposed change does not affect CCNPP's compliance with the intent of 10 CFR 50.65.

#### Regulatory Guide 1.174, An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis

Regulatory Guide (RG) 1.174 describes a risk-informed approach, acceptable to the NRC, for assessing the nature and impact of proposed permanent licensing-basis changes by considering engineering issues and applying risk insights. This regulatory

guide also provides risk acceptance guidelines for evaluating the results of such evaluations. Although the proposed change is being technically justified via a deterministic approach and this is not a risk informed submittal, the proposed change has been evaluated in accordance with RG 1.174 and found to be acceptable.

Regulatory Guide 1.177, An Approach for Plant-Specific, Risk-Informed Decision-making: Technical Specifications

RG 1.177 describes an acceptable risk-informed approach specifically for assessing proposed permanent TS changes in CTs. This regulatory guide also provides risk acceptance guidelines for evaluating the results of such evaluations.

One acceptable approach to making risk-informed decisions about proposed TS changes is to show that the proposed changes meet the five key safety principles stated in RG 1.174 and RG 1.177 shown below.

1. The proposed change meets the current regulations unless it is explicitly related to a requested exemption or rule change.
2. The proposed change is consistent with the defense-in-depth philosophy.
3. The proposed change maintains sufficient safety margins.
4. When proposed changes result in an increase in core-damage frequency (CDF) or risk, the increases should be small and consistent with the intent of the Commission's Safety Goal Policy Statement.
5. The impact of the proposed change should be monitored using performance measurement strategies.

Although the proposed change is being technically justified via a deterministic approach and this is not a risk Informed submittal, the proposed change has been evaluated in accordance with RG 1.177 and has been found to be acceptable.

General Design Criterion 17. Electric Power Systems

GDC 17 requires an onsite electric power system and an offsite electric power system shall be provided to permit the functioning of structures, systems, and components important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

The proposed change does not affect CCNPP's compliance with the intent of GDC 17.

General Design Criterion 18, Inspection and testing of electrical power systems

GDC-18 requires that electric power systems that are important to safety must be designed to permit appropriate periodic inspection and testing of important areas and features, such as insulation and connections to assess the continuity of the systems and the condition of their components.

The proposed change does not affect CCNPP's compliance with the intent of GDC 18.

## 4.2 Precedent

The following precedents are directly applicable to this submittal in that on two occasions the U.S. NRC granted CCNPP a one-time extension to TS 3.7.8 Action C.1 Completion Time (CT) for one train of the CREVS to be inoperable due to the 1A DG emergency power supply being inoperable.

1. Letter from D. Skay (U.S. NRC) to C. H. Cruse, Constellation Nuclear, "Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2 – Amendment Re: One-Time Extension of the Unit 2 Control Room Emergency Ventilation System Technical Specification," dated February 13, 2002 (ADAMS Accession No. ML020090620)
2. Letter from D. Skay (U.S. NRC) to C. H. Cruse, Constellation Nuclear, "Calvert Cliffs Nuclear Power Plant, Unit No. 2 – Amendment 227 Re: One-Time Extension of the Unit 2 Control Room Emergency Ventilation System Technical Specification," dated April 4, 2002 (ADAMS Accession No. ML020920286)

**NOTE:** In 2002 when the above precedents were approved by the U.S. NRC the CCNPP TS change was associated with TS 3.7.8. Action D.1 which corresponds to the current TS 3.7.8 Action C.1.

## 4.3 No Significant Hazards Consideration

This submittal requests a one-time extension to TS 3.7.8 Control Room Emergency Ventilation System (CREVS) Action C.1 Completion Time (CT), from seven (7) days to 16 days, for one train of the control room emergency ventilation system inoperable due to the emergency power supply for the train being inoperable. This one-time extension is necessary to support ongoing troubleshooting, repairs, and return to service testing of the 1A Diesel Generator (DG).

Constellation Energy Generation, LLC (CEG) has evaluated whether or not a significant hazards consideration is involved with the proposed amendment 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 Control Room Emergency Ventilation System (CREVS) is used to mitigate the consequences of an accident. It is designed so that the Control Room remains habitable for operators and to maintain the environment needed for continued equipment operation. The CREVS is not an accident initiator for any previously evaluated accident.

The CREVS is designed to mitigate the consequences of design basis accidents. For that purpose, redundant trains are provided to protect against a single-failure. During the current Technical Specification seven (7) day allowed CT, an operating unit is allowed by the Technical Specifications to remove one of the CREVS trains from service, thereby eliminating this single-failure protection. The consequences of a design basis accident

coincident with a failure of the redundant CREVS train during the additional nine (9) day period are the same as those during the original seven (7) day CT.

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 CREVS is not being modified by this proposed change nor will any unusual operator actions be required. The system will continue to operate in the same manner. The CREVS is not an initiator of any accident but is designed to respond should an accident occur.

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 operability of the CREVS during MODES 1 through 4, and during movement of irradiated fuel, ensures that the Control Room will remain habitable for operators and maintain the environment needed for continued equipment operation under all plant conditions. The proposed change does not affect the function of the CREVS. During the period of the Technical Specification CT when one CREVS train is inoperable, the margin of safety is reduced. This time period is a temporary relaxation of the single-failure criteria, which, consistent with overall system reliability considerations, provides a limited time to maintain or repair the equipment and conduct testing. The proposed change will allow one train of the CREVS to be without an emergency power supply for up to an additional nine (9) days beyond the current seven (7) day CT. This train of CREVS will be functional and will have an offsite power supply available for this period. The other train of the CREVS will have both its normal and emergency power supplies during this period.

Compensatory measures that will be taken to help prevent and mitigate the effects of the loss-of-offsite power to the CREVS include: protecting and minimizing maintenance activities on the three 500 kV offsite transmission lines, the 12 CREVs train, the 2B DG which supports the 12 CREVS train, and the emergency 0C DG; performing shift briefs to reinforce important operator actions; performing shift briefs and pre-job walkdowns to reduce the likelihood of a fire in the risk important areas, pre-staging FLEX equipment for re-powering CREVS, and taking all applicable risk management actions for each configuration per the station On-Line Risk Management procedural guidance during the period the licensee is in the CT for CREVS.

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

Based on the above, CEG concludes that the proposed amendment 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.

#### **4.4 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.

#### **5.0 ENVIRONMENTAL CONSIDERATION**

CEG has determined that the proposed amendment 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, "Standards for Protection Against Radiation." However, the proposed amendment does not involve: (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22, "Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review," paragraph (c)(9). Therefore, pursuant to 10 CFR 51.22, paragraph (b), no environmental impact statement or environmental assessment needs to be prepared in connection with the proposed amendment.

#### **6.0 REFERENCES**

- 6.1 Letter from D. Skay (U.S. NRC) to C. H. Cruse, Constellation Nuclear, "Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2 – Amendment Re: One-Time Extension of the Unit 2 Control Room Emergency Ventilation System Technical Specification," dated February 13, 2002 (ADAMS Accession No. ML020090620)
- 6.2 Letter from D. Skay (U.S. NRC) to C. H. Cruse, Constellation Nuclear, "Calvert Cliffs Nuclear Power Plant, Unit No. 2 – Amendment 227 Re: One-Time Extension of the Unit 2 Control Room Emergency Ventilation System Technical Specification," dated April 4, 2002 (ADAMS Accession No. ML020920286)

**ATTACHMENT 2**

**Emergency License Amendment Request**

**Calvert Cliffs Nuclear Power Plant, Units 1 and 2  
Renewed Facility Operating License Nos. DPR-53 and DPR-69  
NRC Docket Nos. 50-317 and 50-318**

**Proposed Technical Specification Change (Markup)**

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3.7.8-2

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. One or more CREVS trains inoperable due to inoperable CRE boundary in MODE 1, 2, 3, or 4.</p>	<p>B.1 Initiate action to implement mitigating actions.</p>	<p>Immediately</p>
	<p><u>AND</u></p> <p>B.2 Verify mitigating actions ensure CRE occupant exposures to radiological, chemical, and smoke hazards will not exceed limits.</p>	<p>24 hours</p>
	<p><u>AND</u></p> <p>B.3 Restore CRE boundary to OPERABLE status.</p>	<p>90 days</p>
<p>C. One CREVS train inoperable for reasons other than Condition A or B in MODE 1, 2, 3, or 4.</p>	<p>C.1 Restore CREVS train to OPERABLE status.</p>	<p>7 days*</p>

\* This Action is extended from 7 days to 16 days (for loss of the emergency power supply only) during repair and restoration work on the 1A DG in June 2023. This one-time extension begins when the 1A DG allowed outage time as specified in Technical Specification 3.8.1 Condition E expires. The one-time extension ends when the 11 CREVS train is returned to OPERABLE status or, 16 days has expired, whichever is first.