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10 CFR 50.90

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U.S. Nuclear Regulatory Commission
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Washington, DC 20555-0001

Dresden Nuclear Power Station, Units 2 and 3
Renewed Facility Operating License Nos. DPR-19 and DPR-25
NRC Docket Nos. 50-237 and 50-249

Subject: Supplement to the Request for Additional Information Related to License Amendment Requests to Adopt TSTF-505, TSTF-591, and 10 CFR 50.69

References:

1. Letter from Mark D. Humphrey (Constellation Energy Generation, LLC) to U.S Nuclear Regulatory Commission, "License Amendment Request to Revise Technical Specifications to Adopt Risk Informed Completion Times TSTF-505, Revision 2, 'Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b,' and TSTF-591,'Revise Risk Informed Completion Time (RICT) Program'," dated May 8, 2024 (ADAMS Accession No. ML24129A135)

2. Letter from Mark D. Humphrey (Constellation Energy Generation, LLC) to U.S Nuclear Regulatory Commission, "Application to Adopt 10 CFR 50.69, 'Risk-Informed Categorization and Treatment of Structures, Systems, and Components for Nuclear Power Reactors'," dated May 28, 2024 (ADAMS Accession No. ML24149A261)

3. Letter from Mark D. Humphrey (Constellation Energy Generation, LLC) to U.S Nuclear Regulatory Commission, "Response to the Request for Additional Information Related to License Amendment Request to Revise Technical Specifications to Adopt Risk Informed Completion Times TSTF-505, Revision 2, 'Provide Risk- Informed Extended Completion Times - RITSTF Initiative 4b,' and TSTF-591, 'Revise Risk Informed Completion Time (RICT) Program'," dated April 23, 2025 (ADAMS Accession No. ML25113A134)

In Reference 1, Constellation Energy Generation, LLC (CEG) submitted a license amendment request for Dresden Nuclear Power Station (DNPS), Units 2 and 3, to revise Technical Specifications to adopt TSTF 505, Revision 2, "Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b," and TSTF-591,"Revise Risk Informed Completion Time (RICT) Program." A separate license amendment request was submitted to the NRC in Reference 2 to allow adoption of 10 CFR 50.69, "Risk-informed categorization and treatment of structures, systems and components for nuclear power reactors." In Reference 3, CEG responded to a request for additional information (RAI) to support NRC review of References 1 and 2.

The NRC provided further topics, related to external flooding risk inputs and assumptions, for inclusion via email correspondence that were discussed with CEG during a teleconference on May 13, 2025. In response to this request, CEG is providing the attached information. In addition, CEG recently identified that the reference to procedure EP-AA-1004 that was included in Reference 3 was not correct. The attached information also updates the procedure reference to EP-AA-1004 that was cited in Reference 3.

CEG has reviewed the information supporting the findings of no significant hazards consideration, and the environmental considerations, that were previously provided to the NRC in References 1 and 2. The additional information provided in this submittal does not affect the bases for concluding that the proposed license amendments do not involve a significant hazards consideration. In addition, the information provided in this submittal does not affect the bases for concluding that neither an environmental impact statement nor an environmental assessment needs to be prepared in connection with the proposed amendments.

There are no regulatory commitments contained in this letter. Should you have any questions concerning this letter, please contact Ms. Erin Whitsell at (309) 738-9650.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 2nd day of June 2025.

Respectfully,

Humphrey, Mark D.
Digitally signed by Humphrey, Mark D.
Date: 2025.06.02 08:10:12 -05'00'

Mark Humphrey
Sr. Manager Licensing
Constellation Energy Generation, LLC

Attachments:

1. Supplement to Request for Additional Information
2. Revised Markup of Technical Specifications 5.5.16

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – DNPS
NRC Project Manager, NRR – DNPS
Illinois Emergency Management Agency and Office of Homeland Security – Division of Nuclear Safety

ATTACHMENT 1

Dresden Nuclear Power Station
Docket Nos. 50-237 and 50-249

Renewed Facility Operating License Nos. DPR-19 and DPR-25

Supplement to the Request for Additional Information Related to License Amendment Requests to Adopt TSTF-505, TSTF-591, and 10 CFR 50.69

<u>Supplement to Request for Additional Information</u>

1. SCOPE

The following Constellation Energy Generation, LLC (CEG) supplement response addresses an update to a procedure revision for evacuation times documented in the Dresden Nuclear Power Station (DNPS) RAI response letter dated April 23, 2025 (ML25113A134), submitted in support of the station's TSTF-505 (Risk-Informed Completion Time) and 10 CFR 50.69 License Amendment Requests (LARs). The Request for Additional Information (RAI) was issued on March 25, 2025 (ML25084A129) following the NRC's review of Constellation's supplemental submittal dated March 21, 2025 (ML25080A153).

In addition, the NRC provided further topics for inclusion via email correspondence. These additional items were discussed with the NRC during a teleconference held on May 13, 2025, and are addressed below.

The RAI consists of parts a, b, and c. The response options are to answer parts a and c or part b. CEG chooses to reply to part b.

2. NRC RAI

b. Alternatively – as allowed by section 2.3.1, item 7, of NEI 06-09 – perform a reasonable bounding analysis quantifying the risk for the combined effects flood external event. Also discuss how the quantified risk will be applied along with the internal events risk contribution in calculating the configuration risk and the associated RICT.

The justification should include consideration of and, as applicable, the basis for the following factors:

- The frequency of the combined effects flooding hazard at flooding elevations of significance.
- The impact the combined effects flooding hazard has (at flooding elevations of significance) on plant operation and structures including the ability to cope with the hazard.
- The reliability of flood protection measures (if applicable).
- The reliability of human actions (if applicable).
- Consideration of uncertainties and wind wave effects in the determination of demonstrably conservative mean values as discussed in section 6.2-3 of ASME/ANS RA-Sa-2009.

CEG Response

b.

CEG has chosen to quantify the risk of the combined effects external flood event at DNPS, to include this risk in the total plant Core Damage Frequency (CDF) and Large Early Release Frequency (LERF) for Units 2 and 3, and to account for this risk in RICT calculations for specific configurations.

The DNPS analysis for the external flood (XF) combined effects flood mechanism has been revised in DR-LAR-008, Revision 4 [1] to utilize a demonstrably conservative approach to estimating the risk from such floods at the station. The external flood hazard curve presented in Figure E4-1 of the original TSTF-505 LAR [2] provides the basis for the combined effects flood hazard frequencies. Two scenarios are analyzed; the first scenario includes floods where the water surface elevation (WSE) starts to impact the plant at 510.5' up to 517.5'. For floods less than 517.5', there are no postulated impacts to the station that are not already accounted for in the full power internal events model and risk from these combined effects flood mechanisms are considered negligible (i.e., CDF and LERF = 0). For Scenario 2 as water reaches 517.5', the Isolation Condenser (IC) is in service and shell-side inventory supply is provided via the diesel driven isolation condenser make up pumps (ICMUPs) due to the loss of offsite and emergency AC power. The scenarios are shown in Table 1, below.

Table 1: Combined Effects River Flooding Scenarios with CDF Impact

Scenario Name	WSEL Range	Frequency (per yr)	CCDP	CDF (per yr)
Scenario 1	510.5'-517.5'	1E-2	ε (negligible)	ε (negligible)
Scenario 2	517.5'-523'	2E-5	1	2E-5
			Total	2E-5

Core cooling for Scenario 2 relies on the IC and FLEX since all other installed mitigation capability is assumed to be lost for external floods with levels equal to or greater than a Water Surface Elevation (WSE) of 517.5'. After the WSE reaches 521', core cooling is transferred to the FLEX pumps. Although there is a viable mitigation strategy for floods greater than 517.5', it is conservatively assumed that the Conditional Core Damage Probability (CCDP) for Scenario 2 is equal to 1.0. This results in a total CDF of 2E-5/yr for external floods.

For LERF, an analysis of the progression of core damage events from Scenario 2 was conducted by developing and performing a Modular Accident Analysis Program (MAAP) thermal-hydraulic run simulating this scenario.

The MAAP run supports that adequate evacuation could be performed prior to reaching the high magnitude release threshold (i.e., 10% cesium iodide (CsI) release fraction). The time to complete adequate evacuation is based on the following Dresden reference documents:

- Radiological Emergency Plan [3]
- Evacuation Time Estimates [4]
- Emergency Action Levels (EALs) [5]

The LERF evaluation for the external flood scenario is documented in Appendix C of DR-LAR-008 Revision 4 [1] and summarized below.

At Dresden, the design basis external flooding scenario causes water levels to rise to Elevation 529', significantly exceeding the nominal plant grade elevation of 517.5'. Prior to water ingress into the Turbine Building, plant procedures mandate the shutdown of all electrical equipment located at Elevation 517.5', in accordance with DOA 0010-04, Rev. 59, "Floods" [6]. This procedural action effectively initiates a Station Blackout (SBO) condition. Specifically, Step D.14.c disables the automatic start signals for all Emergency Diesel Generators (EDGs), while Step D.14.d directs the de-energization of all transformers and motor control centers (MCCs) at Elevation 517', which triggers entry into the "Extended Loss of AC Power/Loss of Ultimate Heat Sink" flowchart—FSG-01.

For the purposes of the LERF analysis for Scenario 2, the IC is conservatively not credited from the time when flood water reaches 517.5' (e.g., assumes IC makeup pump flood barriers not successfully installed). Deploying Diverse and Flexible Coping Strategies (FLEX) equipment and the pump on the floating barge in the Turbine Building trackway are also conservatively not credited for mitigating this event.

Accordingly, for the purposes of the LERF analysis, it is conservatively assumed that no core cooling capability remains available during floods exceeding elevation 517.5 feet for the entire accident duration. The design basis external flooding scenario models a loss of both offsite AC power and onsite emergency power (i.e., an SBO condition) at approximately 18 hours, coinciding with floodwaters reaching plant grade at elevation 517.5 feet. At this time, Vital DC power (specifically the 125 VDC system) is also assumed to become unavailable due to potential flooding impacts on electrical equipment located within the Auxiliary Electrical Equipment Room at that elevation.

The Dresden PRA assumes that the determination that AC power is not likely to be restored within the 4-hour time frame (i.e., criteria MG1 "Prolonged loss of all offsite and onsite AC power to the emergency buses" in the EALs for declaring a General Emergency [5]) is made within the first 30 minutes following the initiation of the SBO event given that flood elevation is continuing to rise. As such, a General Emergency is assumed declared at t=18.5 hours for this external flooding scenario. The evacuation process would then be initiated after the declaration of a General Emergency and is estimated to be completed within 4.0 hours (i.e., t=18.5 hours + 4.0 hours, or approximately 22.5 hours) for 90% of the population within the 10 mile radius of the Emergency Planning Zone (EPZ) under worst assumed conditions based on site specific evacuation studies for weather and times of day variations [4]. Per MAAP case DR23-EXFL-C in DR-LAR-008, Revision 4 [1], an estimation of the time to reach the high magnitude release threshold (i.e., 10% CsI release fraction) is approximately 36.7 hours, which is approximately 14 hours longer than the time to complete evacuation including the 30 minutes to declare the General Emergency.

Note:

> The primary difference in evacuation timing between DR-LAR-008, Revision 3 and DR-LAR-008, Revision 4 is due to the estimated duration to complete public evacuation following a General Emergency declaration and the projected timing of a 10% cesium iodide (CsI) release. In Revision 3, the estimated evacuation time was 6.6 hours, beginning at t = 18.5 hours—30 minutes after the onset of the Station Blackout—resulting in evacuation completion at approximately 25 hours. The MAAP analysis associated with this revision projected a 10% CsI release at 35 hours, yielding a margin of about 10 hours between evacuation completion and significant radiological release.
>
> In contrast, Revision 4 incorporated updated evacuation studies that reduced the estimated evacuation time to 4.0 hours. With evacuation still assumed to begin at t = 18.5 hours, completion would occur by 22.5 hours. Concurrently, the MAAP modeling was revised with more conservative assumptions, specifically removing credit for electromatic relief valve (ERV) operation once floodwaters reach plant grade at elevation 517.5 feet. Additional sensitivity cases run with these assumptions delayed vessel failure and radionuclide release, shifting the projected 10% CsI release to 36.7 hours. This change increased the modeled time to core damage and release due to changes to the RPV depressurization capabilities and the associated impact on the thermal hydraulic accident progression. As a result, the evacuation margin in Revision 4 increased to approximately 14 hours.

Therefore, the design basis external flood core damage accident is not an early release by a substantial margin and is not considered a LERF event. The additional approximate 14 hours between the estimated completion of evacuation and the time to reach a high magnitude CsI release provides margin to account for the uncertainty for the potential impact of an external flooding event on the evacuation times (e.g., flooding of evacuation routes).

While the evacuation time used in the Scenario 2 evaluation is based on a conservative limiting scenario (Winter, Midweek, Midday, Heavy Snow) [4], additional uncertainty exists regarding how an external flood may affect local infrastructure and evacuation routes. Although no detailed topographical analysis was performed to map flood inundation areas against evacuation routes, the MAAP run in Appendix C of DR-LAR-008, Revision 4 [1] supports that the available time to evacuate conservatively bounds potential delays.

In addition, Illinois state and local officials are expected to take timely and coordinated action during any external flood event at Dresden, rather than remaining passive until a General Emergency is declared. Below are two examples summarizing offsite involvement in site-related flooding events:

- According to the "Ready Illinois" website (https://ready.illinois.gov/plan/localofficials.html), local officials are mandated to ensure public safety during emergencies. Elected and appointed officials are responsible for providing strategic leadership and resources throughout preparedness, response, and recovery phases. They are expected to clearly understand and fulfill their roles, including providing direction and guidance to the public during emergencies. Although not explicitly stated, it is reasonable to expect that state and local authorities would initiate widespread public evacuation in response to a severe flooding event well before a General Emergency declaration at Dresden. This proactive posture supports the conclusion that sufficient margin exists to preclude a Large Early Release Frequency (LERF) scenario by reducing reliance on plant-initiated protective actions.

- The Will County All Hazard Mitigation Plan [7] in Chapter 4 identifies specific triggers that prompt state and local authorities to take action in response to flooding. These include rapidly rising river stages, particularly in the presence of ice jams, which can cause sudden upstream or downstream flooding and necessitate immediate local monitoring and coordinated response beyond standard National Weather Service (NWS) warnings. Actions are also initiated based on real-time data from USGS stream gauges and NWS flood alerts, as well as observable impacts such as intense rainfall, flash flooding, urban drainage overflow, or failure of dams and levees. When flooding threatens or damages public infrastructure—such as roads, power systems, or emergency communications—local emergency management agencies activate response measures, including public warnings and protective actions. Additionally, when the extent of damage meets established thresholds, local officials may coordinate with the state to request a disaster declaration, unlocking state and federal resources to support emergency response and long-term recovery efforts.

Impact on the TSTF-505/591 (RICT) Program

In order to account for the external flood hazard risk in the RICT program, an external flood penalty factor will be applied to RICT calculations for LCO 3.5.3 (IC System) only. It has already been established that there is a negligible risk increase for external floods impacting key SSCs below 517.5' As discussed in DR-LAR-008, Revision 4 [1], "…once WSE [Water Surface Elevation] reaches 517.5', it is assumed that the conditional core damage probability (CCDP) is 1.0. Below this WSE, there are no postulated impacts to the station that are not already accounted for in the full power internal events model and risk from these combined effects flood mechanisms are considered negligible."

Per the analysis documented in DR-LAR-008, Revision 4, for floods greater than 517.5', the IC system is the only mechanism for core cooling until FLEX is used. Therefore, configurations associated with all LCOs, except LCO 3.5.3, do not result in an increase in external flood risk, since IC is the only system that is critical for success of the external flood strategy for floods above 517.5’ until FLEX equipment is deployed. The only LCO configuration for floods above 517.5’ that would result in an increase in the flood risk is the unavailability of the IC or the ICMUPs (LCO 3.5.3 - IC System).

Rather than determining the increase in external flood risk when the IC or ICMUPs are unavailable, it is conservatively assumed that the entire flood CDF (2E-5/yr) will be used as the penalty factor (ΔCDF) for either unit:

ΔCDF_{XF}: 2E-5/yr for LCO 3.5.3

ΔCDF_{XF}: 0.0 for all other LCOs/SSCs

Since the LERF is 0.0 for all floods, there is no LERF penalty for any LCOs in the RICT program

$\Delta LERF_{XF}$: 0.0 for all LCOs/SSCs

Impact on the 10 CFR 50.69 Program

The combined effects flooding mechanism cannot be screened from the 50.69 program for floods that exceed plant grade (517.5’) as discussed in DR-LAR-008 Revision 4 [1]. Floods below this elevation do not have any impacts to key SSCs responsible for maintaining the plant in a safe stable condition during an event. Once water exceeds 517.5’, all mitigation capabilities, except for the IC and FLEX, are assumed to be lost and no core cooling capabilities are assumed available. This is conservative given the documented strategies in the UFSAR to provide alternate sources of core cooling during a flood.

As stated in References [8] and [9], an External Flood Safe Shutdown Equipment List (XFSSEL) will be developed prior to categorizing systems at DNPS. In Reference [9] as described in Section 4.3, Response to Question 3c of Attachment 2, 'Equipment Lists,' six criteria from Section 3.2.4.1 of the 50.69 LAR [8] will be used to screen out Scenario 2 SSCs – those associated with Combined Effects External Floods above plant grade – as Low Safety Significant (LSS). The response stated all of the six criteria have to be met (i.e., True) in order to categorize an SSC as LSS with respect to the external flooding hazard for 50.69.

A change to Criterion 3 is deemed necessary to specify as LSS those SSCs in systems that are assumed unavailable *during or* following an External *Flood Scenario 2* event.” The original Criterion 3 specified as LSS those “SSCs in systems that are assumed unavailable following an external flooding event.”

Baseline CDF/LERF

Tables 2 and 3 below list the CDF and LERF point estimate values that resulted from a quantification of the baseline internal events (including internal flooding) and fire Probabilistic Risk Assessment (PRA) models as described in Enclosure 5 from the original TSTF-505/591 LAR [2]. The tables have been updated to include the conservative 2.0E-5 external flood CDF described above and documented in Reference [1]. As described above, there is no significant contribution from external flood to total LERF.

Other external hazards remain below accepted screening criteria and therefore do not contribute significantly to the totals.

Table 2
Unit 2 Total Baseline CDF/LERF

DNPS Unit 2 Baseline CDF			**DNPS Unit 2 Baseline LERF**	
Source	**Contribution**		**Source**	**Contribution**
Internal Events PRA	3.1E-06		Internal Events PRA	2.2E-07
Fire PRA	3.3E-05		Fire PRA	3.6E-06
Seismic	8.0E-06		Seismic	2.6E-06
High Winds	1.5E-05		High Winds	9.0E-07
External Floods	*2.0E-05*		*External Floods*	No significant contribution
Other External Events	No significant contribution		Other External Events	No significant contribution
Total CDF	7.9E-05		**Total LERF**	7.3E-06

Table 3
Unit 3 Total Baseline CDF/LERF

DNPS Unit 3 Baseline CDF			**DNPS Unit 3 Baseline LERF**	
Source	**Contribution**		**Source**	**Contribution**
Internal Events PRA	3.1E-06		Internal Events PRA	2.3E-07
Fire PRA	3.2E-05		Fire PRA	4.7E-06
Seismic	8.0E-06		Seismic	2.6E-06
High Winds	1.6E-05		High Winds	8.8E-07
External Floods	*2.0E-05*		*External Floods*	No significant contribution
Other External Events	No significant contribution		Other External Events	No significant contribution
Total CDF	7.9E-05		**Total LERF**	8.4E-06

As demonstrated in Tables 2 and 3, the total CDF and total LERF are within the guidelines set forth in RG 1.174 [10] and support small changes in risk that may occur during RICT entries following TSTF-505/591 implementation. Therefore, DNPS TSTF-505/591 and 10 CFR 50.69 implementation is consistent with NEI 06-09 [11] and NEI 00-04 [12] guidance with the deviation allowing use of the XFSSEL.

Updated Example RICT Calculation for Isolation Condenser TS 3.5.3.A

The example RICT calculation result for TS Condition 3.5.3.A (IC System Inoperable) as shown in Attachment 6 of Reference [9] is updated below using the equation provided in Section 3 of Enclosure 1 [2] which is replicated below:

$$RICT(days) = \frac{ICCDP\ Threshold}{Total\ \Delta CDF\ \left(\frac{1}{yr}\right)} \times 365\left(\frac{days}{yr}\right)$$

The Incremental Conditional Core Damage Probability (ICCDP) threshold is 1.00E-05, while the ICLERP threshold limit is 1.00E-06. The same equation is used to calculate the Large Early Release Frequency (LERF) RICT (days) by simply using the RICT Incremental Conditional Large Early Release Probability (ICLERP) threshold Limit and Total ΔLERF instead. The RICT (days) is based on the Unit 2 internal events and internal fire PRA model calculations with seismic, high winds, and external flood penalties.

While $RICT_{CDF}$ decreased from 13.5 to 12.5 days by applying the XF CDF penalty factor, $RICT_{LERF}$ remains the more limiting value of 11.0 days (which did not change since there is no XF LERF penalty). Hence the revised RICT estimate for TS Condition 3.5.3.A remains 11.0 days.

Following TSTF-505 implementation, the actual RICT value will be calculated using the actual plant configuration and the current revision of the PRA models representing the as-built, as-operated condition of the plant, as required by NEI 06-09, Revision 0-A and the NRC safety evaluation.

Conclusions

- Given that the combined effects flooding mechanism in rivers and streams cannot be screened for external flood scenarios, a CDF penalty factor of 2E-5 will be used only for RICT configurations involving LCO 3.5.3 (the IC system). The Enclosure 1 sample RICT calculation shown in [9] remains unchanged at 11-days as it is limited by LERF.

- The following paragraph has been edited pertaining to Technical Specification 5.5.16, documented in Attachment 2, from the March 21, 2025 supplement [9] to include the external flood penalty factor:

  > "A RICT calculation must include the following hazard groups: internal flood and internal events PRA model, internal fire PRA model, seismic penalty factor, and external flood penalty factor. Changes to these means of assessing the hazard groups require prior NRC approval."

- An XFSSEL will be developed prior to categorizing systems at DNPS under 50.69 that include a revised Criterion 3 to specify as LSS those "SSCs in systems that are assumed unavailable during or following an External Flood Scenario 2 event."

- The total CDF for both units have been updated to reflect the 2E-5/yr contribution from the XF hazard as shown in Tables 2 and 3. The DNPS total CDF and total LERF remain below the guidelines established in RG 1.174, Revision 3 [10] (i.e., no more than about 1E-4/year for CDF and 1E-5/year for LERF).

3. REFERENCES

[1] Risk Management Notebook DR-LAR-008, "External Hazards Assessment for Dresden Nuclear Power Station," Revision 4, May 2025.

[2] Constellation Letter to NRC, "License Amendment Request to Revise Technical Specifications to Adopt Risk Informed Completion Times TSTF-505, Revision 2, 'Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b,' and TSTF-591, 'Revise Risk Informed Completion Time (RICT) Program'," May 8, 2024 (ADAMS Accession No. ML24129A135).

[3] Constellation Nuclear, EP-AA-1004, "Radiological Emergency Plan Annex for Dresden Station," Revision 40, October 2024.

[4] Constellation Nuclear, EP-AA-1004 Addendum 2, "Dresden Evacuation Time Estimates," Revision 2, May 28, 2024.

[5] Constellation Nuclear, EP-AA-1004 Addendum 3, "Emergency Action Levels for Dresden Station," Revision 13, December 2021.

[6] Constellation Generation, Dresden Procedure DOA 0010-04, FLOODS, Revision 59, dated December 7, 2021.

[7] Will County Emergency Management Agency, "Will County County-Wide All Hazard Mitigation Plan, 2020 Update," https://www.willcountyema.org/, Joliet, IL: Will County EMA, 2021.

[8] Constellation Letter to NRC, "Application to Adopt 10 CFR 50.69, "Risk-Informed Categorization and Treatment of Structures, Systems, and Components for Nuclear Power Reactors," dated May 28, 2024 (ADAMS Accession No. ML24149A261).

[9] Constellation Letter to NRC, "Supplement to License Amendment Request to Adopt Risk Informed Completion Times TSTF-505, Revision 2, 'Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b, 'TSTF-591, 'Revise Risk Informed Completion Time (RICT) Program,' and 10 CFR 50.69, 'Risk-Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors'," dated March 21, 2025 (ADAMS Accession No. ML25080A153).

[10] NRC Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," Revision 3, dated January 2018 (ADAMS Accession No. ML17317A256).

[11] NEI Topical Report (TR) NEI 06-09-A, "Risk-Informed Technical Specifications Initiative 4b, Risk-Managed Technical Specifications (RMTS) Guidelines," Revision 0-A, dated October 12, 2012 (ADAMS Accession No. ML 12286A322).

[12] Nuclear Energy Institute (NEI) 00-04, "10 CFR 50.69 SSC Categorization Guideline," Revision 0, July 2005.

ATTACHMENT 2

Dresden Nuclear Power Station
Docket Nos. 50-237 and 50-249

Renewed Facility Operating License Nos. DPR-19 and DPR-25

Supplement to the Request for Additional Information Related to License Amendment Requests to Adopt TSTF-505, TSTF-591, and 10 CFR 50.69

Revised Markup of Technical Specifications 5.5.16

5.5 Programs and Manuals

5.5.14 Control Room Envelope Habitability Program (continued)

inleakage, and measuring CRE pressure and assessing the CRE boundary as required by paragraphs c and d, respectively.

5.5.15 Surveillance Frequency Control Program

This program provides controls for Surveillance Frequencies. The program shall ensure that Surveillance Requirements specified in the Technical Specifications are performed at intervals sufficient to assure the associated Limiting Conditions for Operation are met.

a. The Surveillance Frequency Control Program shall contain a list of Frequencies of those Surveillance Requirements for which the Frequency is controlled by the program.

b. Changes to the Frequencies listed in the Surveillance Frequency Control Program shall be made in accordance with NEI 04-10, "Risk-informed Method for Control of Surveillance Frequencies," Revision 1.

c. The provisions of Surveillance Requirements 3.0.2 and 3.0.3 are applicable to the Frequencies established in the Surveillance Frequency Control Program.

Insert E

Insert E

5.5.16 <u>Risk Informed Completion Time Program</u>

This program provides controls to calculate a Risk Informed Completion Time (RICT) and must be implemented in accordance with NEI 06-09-A, Revision 0, "Risk-Managed Technical Specifications (RMTS) Guidelines." The program shall include the following:

a. The RICT may not exceed 30 days;

b. A RICT may only be utilized in MODE 1 and 2;

c. When a RICT is being used, any change to the plant configuration, as defined in NEI 06-09-A, Appendix A, must be considered for the effect on the RICT.

   1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.

   2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.

   3. Revising the RICT is not required if the plant configuration change would lower plant risk and would result in a longer RICT.

d. For emergent conditions, if the extent of condition evaluation for inoperable structures, systems, or components (SSCs) is not complete prior to exceeding the Completion Time, the RICT shall account for the increased possibility of common cause failure (CCF) by either:

   1. Numerically accounting for the increased possibility of CCF in the RICT calculation; or

   2. Risk Management Actions (RMAs) not already credited in the RICT calculation shall be implemented that support redundant or diverse SSCs that perform the function(s) of the inoperable SSCs, and, if practicable, reduce the frequency of initiating events that challenge the function(s) performed by the inoperable SSCs.

e. A RICT calculation must include the following hazard groups: internal flood and internal events PRA model, internal fire PRA model, seismic penalty factor, and external flood penalty factor. Changes to these means of assessing the hazard groups require prior NRC approval.

f. The PRA models used to calculate a RICT shall be maintained and upgraded in accordance with the processes endorsed in the regulatory positions of Regulatory Guide 1.200, Revision 3, "Acceptability of Probabilistic Risk Assessment Results for Risk-Informed Activities."

g. A report shall be submitted in accordance with Specification 5.6.7 before a newly developed method is used to calculate a RICT.