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RS-22-089

July 25, 2022

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

Clinton Power Station, Unit 1
Facility Operating License No. NPF-62
NRC Docket No. 50-461

Subject: Additional Information Supporting Request for License Amendment to Revise the Secondary Containment Design Basis to Credit the Fuel Building Railroad Airlock

References:
1. Letter from P. R. Simpson (Constellation Energy Generation, LLC) to U.S. NRC, "Request for License Amendment to Revise the Secondary Containment Design Basis to Credit the Fuel Building Railroad Airlock," dated April 7, 2022
2. Email from J. Wiebe (U.S. NRC) to K. M. Nicely (Constellation Energy Generation, LLC), "Request for Additional Information (RAI) Regarding Clinton License Amendment Request for Secondary Containment Design Basis (L-2022-LLA-0055)," dated June 21, 2022

In Reference 1, Constellation Energy Generation, LLC (CEG) requested an amendment to Facility Operating License No. NPF-62 for Clinton Power Station (CPS), Unit 1. Specifically, CEG requested approval for a change to the Updated Safety Analysis Report to support a revision of the Secondary Containment design basis to credit the Fuel Building Railroad Airlock.

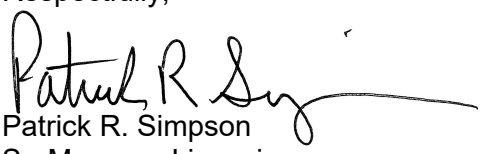
The NRC requested additional information that is needed to complete review of the proposed change in Reference 2. In response to this request, CEG is providing the attached information.

CEG has reviewed the information supporting a finding of no significant hazards consideration, and the environmental consideration, that were previously provided to the NRC in Attachment 1 of Reference 1. The additional information provided in this submittal does not affect the bases for concluding that the proposed license amendment does not involve a significant hazards consideration. In addition, the additional 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 amendment.

There are no regulatory commitments contained in this letter. Should you have any questions concerning this letter, please contact Mr. Kenneth M. Nicely at (630) 657-2803.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 25th day of July 2022.

Respectfully,



Patrick R. Simpson
Sr. Manager Licensing
Constellation Energy Generation, LLC

Attachment: Response to Request for Additional Information

cc: NRC Regional Administrator, Region III
NRC Senior Resident Inspector – Clinton Power Station
Illinois Emergency Management Agency – Division of Nuclear Safety

ATTACHMENT
Response to Request for Additional Information

NRC Request

By application dated April 7, 2022, (Agencywide Documents Access and Management System Accession No. ML22097A208), Constellation Energy Generation, LLC (CEG), the licensee, submitted a license amendment request (LAR) to change the Clinton Power Station (CPS), Unit 1, design basis. Specifically, CEG requested approval for a change to the Updated Safety Analysis Report to support a revision of the CPS secondary containment design basis to credit the Fuel Building Railroad Airlock (FBRA) and FBRA outer door. The LAR Attachment 1, "Evaluation of Proposed Change," discusses that no changes are needed to the CPS technical specifications (e.g., secondary containment technical specification) in order to credit the FBRA and the FBRA outer door as part of the secondary containment design basis.

Section 50.36, "Technical Specifications," of Title 10 of the Code of Federal Regulations (10 CFR) describes the requirements related to the content of the technical specifications (TS). Pursuant to 10 CFR 50.36(c), TS are required to include limiting conditions for operation (LCO). Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility.

CPS LCO Applicability requirement, LCO 3.0.9, addresses barriers which cannot perform their related support function for TS systems. For example, barriers are used to protect systems against missiles that are generated by external events. If a barrier cannot perform its related support function due to some type of failure or due to intentional removal to facilitate plant activities, the supported system(s) may be inoperable under the definition of OPERABILITY. Note that LCO 3.0.9 may be concurrently applied to more than one train or subsystem of a multiple train or subsystem supported system provided at least one train or subsystem of the supported system is OPERABLE and the barriers supporting each of these trains or subsystems provide their related support function(s) for different categories of initiating events.

Based on LAR information described in Attachment 1, the FBRA inner door performs multiple safety functions including as a secondary containment boundary and as a barrier to tornado winds and missiles. While the proposed new boundary of the FBRA and outer door provides the secondary containment function, it does not provide the tornado barrier protection. If the FBRA inner door is unable to perform its barrier function, impacts to the equipment inside the Fuel Building due to lack of tornado protection would be assessed through the licensee's Barrier Impairment Program and Corrective Action Program. However, the licensee did not provide information that explains whether or not the FBRA inner door would be subject to the provisions of CPS LCO 3.0.9.

The NRC staff has reviewed the information and determined that additional information is required to complete its review. The specific request is addressed below.

Discuss in detail CPS LCO 3.0.9 applicability to the FBRA inner door, including:

1. Explain whether or not the licensee's "Barrier Impairment Program" cited in the LAR implements CPS LCO 3.0.9.

2. Explain whether or not the FBRA inner door is considered a barrier subject to the provisions of CPS LCO 3.0.9.

3. Explain whether or not CPS LCO 3.0.9 allowance is permitted with the FBRA inner door unable to function as a barrier.

4. If the FBRA inner door is unavailable to function as a barrier, identify the supported TS systems and equipment that would be impacted and identify the supported system LCOs, the applicable TS Conditions that would be entered for the supported systems and the associated Required Actions and Completion Times that would apply.

5. If the FBRA inner door is not considered a barrier subject to the provisions of CPS LCO 3.0.9, describe any programmatic controls or procedures that would limit the amount of time the inner door may remain open.

Response

LCO 3.0.9 provides an allowance, for up to 30 days, to not declare a supported system LCO not met solely due to a required barrier being unable to perform its support function. As stated in LCO 3.0.9, the allowance can only be used if at least one train or subsystem of the supported system remains operable.

During development of the license amendment request, the possibility of using the provisions of LCO 3.0.9 for the FBRA inner door was considered. Although the FBRA inner door is a barrier that falls within the scope of LCO 3.0.9, it was determined that the allowance provided by LCO 3.0.9 could not be used because the requirement to have at least one train or subsystem of a supported system operable would not be met for all TS supported systems that would be affected if the FBRA inner door was unable to perform its tornado protection support function. Therefore, use of LCO 3.0.9 was not discussed in the license amendment request because it provided no benefit.

Specifically, CEG determined that use of LCO 3.0.9 would be prohibited because both the Division 1 and Division 2 Diesel Generators (DGs) would be affected if a condition arose that prevented the FBRA inner door from being closed concurrent with the conditions specified in the license amendment request (i.e., with a tornado watch or warning, severe thunderstorm watch or warning, high winds warning, or indication of a LOCA in effect). In this potential scenario, TS 3.8.1 Condition E would be entered due to having two required DGs inoperable. The Required Action would be to restore one required DG to operable status within 2 hours. If one required DG could not be restored to operable status, a unit shutdown would be required within the following 12 hours. As a result, the LCO 3.0.9 allowance would provide no benefit for other TS supported systems that would be affected if the FBRA inner door were unable to perform its tornado protection support function because the Required Actions and associated Completion Times of TS 3.8.1 would be more restrictive.

As stated in Attachment 1 of the license amendment request, on page 11:

> *If it is determined that the inner door is unable to perform its tornado protection support function (i.e., with a tornado watch or warning, severe thunderstorm watch or warning, high winds warning, or indication of a LOCA in effect) for supported system limiting conditions for operation, the applicable TS Conditions would be entered for the*

supported systems and the associated Required Actions and Completion Times would apply.

Therefore, the applicable TS Conditions and the associated Required Actions and Completion Times would limit the amount of time the inner door may be open concurrent with the conditions specified in the license amendment request.

If the FBRA inner door could not be closed, concurrent with the conditions specified above, the impact on TS structures, systems, and components, and support systems, that are needed to address a design basis tornado would be assessed. This is consistent with Regulatory Guide 1.117, "Tornado Design Classification," which states that equipment used to provide long-term core cooling following a LOCA should be protected.