Clinton Power Station
8401 Power Road
Clinton, IL 61727

U-604152
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10 CFR 50.36

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

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

Subject: Transmittal of Revision 15 to the Clinton Power Station Technical Specification Bases

In accordance with Clinton Power Station (CPS) Technical Specification 5.5.11, "Technical Specification (TS) Bases Control Program," Exelon Generation Company (EGC), LLC is transmitting the revised pages constituting Revision 15 to the CPS TS Bases. The changes associated with this revision were processed in accordance with CPS TS 5.5.11. Compliance with CPS TS 5.5.11 requires updates to the TS Bases to be submitted to the NRC at a frequency consistent with 10 CFR 50.71, "Maintenance of records, making of reports," paragraph (e).

There are no commitments in this letter.

Should you have any questions concerning this information, please contact Mr. Jeffrey Cunningham, Acting Regulatory Assurance Manager, at (217) 937-3160.

Respectfully,

B. Keith Taber
Site Vice President
Clinton Power Station

JLP/blf

Attachment 1 – Revision 15 Bases Page Listing
Attachment 2 – Revision 15 Bases Pages

cc: Regional Administrator, Region III
NRC Senior Resident Inspector, Clinton Power Station

A001
NRR

Attachment 1 to U-604152
Revision 15 Bases Page Listing

B 3.8-13a
B 3.8-32a
B 3.8-32b

Attachment 2 to U-604152
Revision 15 Bases Pages

BASES (continued)

SURVEILLANCE REQUIREMENTS

The AC sources are designed to permit inspection and testing of all important areas and features, especially those that have a standby function, in accordance with 10 CFR 50, GDC 18 (Ref. 9). Periodic component tests are supplemented by extensive functional tests during refueling outages under simulated accident conditions. The SRs for demonstrating the OPERABILITY of the DGs are in accordance with the recommendations of Regulatory Guide 1.9 (Refs. 3 and 16), Regulatory Guide 1.108 (Ref. 10), and Regulatory Guide 1.137 (Ref. 11).

Where the SRs discussed herein specify voltage and frequency tolerances, the minimum and maximum steady state output voltages of 4084 V and 4300 V respectively, are equal to - 2% and + 3.37% of the nominal 4160 V output voltage. The specified minimum and maximum frequencies of the DG is 58.8 Hz and 61.2 Hz, respectively, are equal to ± 2% of the 60 Hz nominal frequency. The specified steady state voltage and frequency ranges are derived from the recommendations given in Regulatory Guide 1.9 (Ref. 3). However, the minimum voltage was increased to ensure adequate voltage to operate all safety-related loads during a DBA (Ref. 15).

Analyses in References 26, 27, and 28 specify that the maximum acceptable voltage on the 4.16 kV safety-related buses is 4454 V for 30 minutes and 4300 V for continuous operation. These analyses evaluated the effects of the overvoltage condition on the connected loads in the 120 V distribution panels and determined that continuous operation above 4300 V on the 4.16 kV 1E buses would result in voltages above allowable for certain 120 V devices. The analyses allow for elevated voltages up to 4454 V for 30 minutes to account for overvoltage conditions that can occur if the Reserve Auxiliary Transformer Static VAR Compensator trips coincident with high 345 kV transmission system voltages. The 30-minute duration was considered sufficient time to restore 4.16 kV voltages to within specification without damaging downstream AC loads.

In general, surveillances performed for each of the required DGs are similar, with one notable difference due to the fact that the Division 3 DG utilizes a mechanical governor, while the Division 1 and 2 DGs utilize an electronic governor. As such, the Division 1 and 2 DGs are capable of operating in both an isochronous mode as well as a "droop" mode for when the DGs are paralleled to the offsite source during testing. The Division 3 DG, on the other hand, is capable of operating only in the droop mode (through a droop setting of zero can be utilized). This difference may affect the Division 3 DGs capability to achieve rated frequency following automatic switchover from the test mode to ready-to-load operation upon receipt of a LOCA initiation signal (as verified per SR 3.8.1.17).

(continued)

BASES (continued)

REFERENCES

1. 10 CFR 50, Appendix A, GDC 17.
2. USAR, Chapter 8.
3. Regulatory Guide 1.9, Revision 2.
4. USAR, Chapter 6.
5. USAR, Chapter 15.
6. Regulatory Guide 1.93.
7. Generic Letter 84-15, July 2, 1984.
8. NEDC-32988-A, Revision 2, Technical Justification to Support Risk-Informed Modification to Selected Required End States for BWR Plants, December 2002.
9. 10 CFR 50, Appendix A, GDC 18.
10. Regulatory Guide 1.108.
11. Regulatory Guide 1.137.
12. ANSI C84.1, 1982.
13. NUMARC 87-00, Revision 1, August 1991.
14. IEEE Standard 308.
15. IP Calculation 19-AN-19.
16. Regulatory Guide 1.9, Revision 3.
17. Calculation IP-C-0050.
18. Calculation IP-C-0051.
19. Calculation IP-C-0054.
20. Calculation IP-0-0114.
21. Calculation IP-C-0111.
22. Calculation IP-0-0106.
23. Calculation IP-0-0143.
24. Calculation IP-0-0110.
25. Calculation IP-0-0116.
26. Calculation 19-AJ-74.

(continued)

BASES

REFERENCES (continued)

27. Calculation 19-AK-06.

28. Calculation 19-AK-13.