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John P. McElwain  
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U-603213  
4F.190

May 28, 1999

Docket No. 50-461

Document Control Desk  
Nuclear Regulatory Commission  
Washington, D.C. 20555

Subject: Response to Notice of Violation Contained  
in Inspection Report 50-461/99011(DRP)

Dear Madam or Sir:

The attachment to this letter contains the Clinton Power Station (CPS) response to the Notice of Violation of Nuclear Regulatory Commission (NRC) requirements documented in NRC Inspection Report 50-461/98011 (DRP). CPS admits that the violation occurred.

CPS believes that the actions described in the attached response addresses the concerns identified in the Notice of Violation.

Sincerely yours,

*George A. Hunger Jr.*

for John P. McElwain  
Chief Nuclear Officer

MRS/krk

Attachment

cc: NRC Clinton Project Manager  
NRC Resident Office, V-690  
Regional Administrator, Region III, USNRC  
Illinois Department of Nuclear Safety

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## **Response to Notice of Violation 50-461/99011-02**

The violation states in part:

"10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," states, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.

10 CFR Part 50, Appendix B, Criterion III, "Design Control," states, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis as specified in the license application, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions.

Contrary to the above, as of April 9, 1999, the licensee, despite having considered the issue closed in its corrective action program, had failed to correct a condition adverse to quality. This resulted in an erroneous design value being maintained in a design basis calculation and correspondingly, a continuing violation of Criterion III. Specifically, on July 2, 1997, the NRC informed the licensee that they had not established measures to translate the horsepower rating of the hydrogen mixing compressors into design basis load calculation 19-AK-05, Revision 5, "Calculation for Diesel Generator Load Monitoring." The licensee documented this issue in their corrective action system and closed the issue when they believed corrective actions were implemented. Subsequent NRC inspections concluded, despite the closure in licensee's corrective action system, that the licensee had not correctly translated, as of April 9, 1999, the horsepower rating of the hydrogen mixing compressors into the design calculations for loading of the emergency diesel generator."

### Background and Reason for Violation

Condition report 1-97-07-105 identified that the horsepower requirements for the hydrogen mixing compressors were greater than the horsepower used in the calculation performed to determine the maximum room temperature of equipment in the hydrogen mixing compressor room. This calculation is used to support the environmental qualification of equipment in the hydrogen mixing compressor room. The use of the incorrect horsepower for the hydrogen mixing compressor in the calculation was discovered during resolution of the concerns with degraded offsite electrical power supply voltage. The corrective actions for condition report 1-97-07-105 identified several items that may need to be changed to correct the error in the horsepower requirements of the hydrogen mixing compressors. The potential items impacted included, surveillance procedures, Updated Safety Analysis Report, and some calculations. The change to the diesel generator loading calculation was evaluated as part of one of the corrective actions for the condition report. However, the resolution to the condition report did not identify that calculation 19-AK-05 "Calculation for Diesel Generator Load Monitoring" needed to be revised to correct the horsepower requirement error for the hydrogen mixing compressors.

Calculation 19-AK-05 was revised as part of the resolution of the degraded offsite voltage project; however, the new revision did not include changes to the horsepower requirements for the hydrogen mixing compressors. Investigation revealed that individuals revising and reviewing the revision to calculation 19-AK-05 were aware of the need to change the horsepower requirements for the hydrogen mixing compressors because of previous verbal communication, but apparently forgot to revise the calculation to reflect the horsepower change. The need to revise calculation 19-AK-05 was not formally documented, and the calculation revision was being performed as part of a larger scope of work for the degraded offsite voltage project. The reason for the violation is that during the resolution of condition report 1-97-07-105, the individual that identified the calculations affected by the change in horsepower requirements for the hydrogen mixing compressors failed to identify calculation 19-AK-05 as requiring revision. Since calculation 19-AK-05 was not identified as requiring revision, it was not included as a calculation requiring revision in the resolution to condition report 1-97-07-105.

#### Corrective Steps Taken and Results Achieved

Calculation 19-AK-05 "Calculation for Diesel Generator Load Monitoring" was revised using the correct horsepower for the hydrogen mixing compressors. A review was performed to identify if there were any other calculations impacted by the change to the horsepower requirements for the hydrogen mixing compressors that were not identified during the resolution of condition report 1-97-07-105. This review identified several other electrical calculations that require revision that were not listed as impacted in condition report 1-97-07-105. These revisions will be completed as part of the corrective action to condition report 1-99-07-105.

#### Corrective Steps to Avoid Further Violations

Since 1997, when the problem with the incorrect horsepower for the hydrogen mixing compressors was identified, the impact review process for calculations has been improved. A revision to Nuclear Station Engineering procedure E.1 Calculation has been completed which revised the process for conducting Calculation Impact Assessments. Review of this new process concluded that the new process is adequate and most likely would have identified that calculation 19-AK-05 required revision to change the horsepower requirements for the hydrogen mixing compressors.

#### Date when Full Compliance Will Be Achieved

Clinton Power Station is in full compliance with 10 CFR 50, Appendix B, Criterion XVI and Criterion III, with regards to the failure to revise diesel loading calculation 19-AK-05 for a change to the hydrogen mixing compressor horsepower.