

# Duquesne Light Company

Beaver Valley Power Station  
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L-98-075

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

**Subject: Beaver Valley Power Station, Unit No. 1 and No. 2  
BV-1 Docket No. 50-334, License No. DPR-66  
BV-2 Docket No. 50-412, License No. NPF-73  
Integrated Inspection Report 50-334/97-08 and 50-412/97-08  
Supplemental Reply to Notice of Violation**

By letter dated January 9, 1998, Duquesne Light Company (DLC) provided a response to the Notice of Violation (NOV) included with the subject inspection report dated November 26, 1997. In this letter, DLC provided a basis for why DLC did not concur with Violation B (50-334/97-08-05), and requested that the violation be withdrawn. By letter dated February 18, 1998, the NRC provided the conclusions of its review of the DLC response to the NOV. In this letter, the NRC disagreed with DLC's rationale for requesting the withdrawal of the violation, and requested that DLC provide an additional response to the violation by March 20, 1998.

On March 13, 1998, a telephone conference was held between members of the Region I staff and members of the DLC staff to discuss the violation. As a result of this discussion, it was agreed that an NRC site visit would be appropriate to further review the technical details of the radiation monitor system (RMS) calibration methods utilized at Beaver Valley Power Station (BVPS). Based on this telephone conference and the planned NRC site visit, DLC by letter dated March 19, 1998, requested an extension to the response to the February 18, 1998, NRC letter until April 20, 1998.

During the period of March 30, 1998 to April 1, 1998, an NRC Region I effluents specialist conducted an inspection to further review the technical details of the RMS calibration methods utilized at BVPS. This review determined that, while the method used at BVPS to perform the RMS calibrations is technically correct, the procedures used to perform the calibration are inadequate in that they lack sufficient detail about the current calibration techniques and processes.

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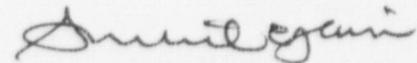
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DLC agrees with this finding, acknowledges that a misunderstanding of the issues associated with the violation occurred and appreciates the NRC's efforts to clarify these issues such that appropriate corrective actions can be taken.

Based on the above, DLC retracts its request to withdraw the violation, and in accordance with 10 CFR 2.201, provides the attached reply which addresses Violation B transmitted with the subject inspection report.

If there are any questions concerning this matter, please contact Mr. J. Arias at (412) 393-5203.

Sincerely,



Sushil C. Jain

c: Mr. D. S. Brinkman, Sr. Project Manager  
Mr. D. M. Kern, Sr. Resident Inspector  
Mr. H. J. Miller, NRC Region I Administrator  
Mr. N. S. Perry, Acting Chief, Reactor Projects Branch No. 7, Region I  
Mr. J. R. White, Chief, Radiation Safety Branch, Region I

DUQUESNE LIGHT COMPANY  
Nuclear Power Division  
Beaver Valley Power Station, Unit Nos. 1 and 2

Supplemental Reply to Notice of Violation

Integrated Inspection Report 50-334/97-08 and 50-412/97-08  
Letter Dated November 26, 1997

VIOLATION B (Severity Level IV, Supplement IV)

Description of Violation (50-334/97-08-05)

Unit 1 Technical Specification (TS) 6.8.1.a requires that, "Written procedures be established, implemented and maintained covering...the applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, Revision 2, February 1978," which includes procedures for radiation monitoring system (RMS) operation.

Contrary to the above, the licensee failed to establish adequate RMS calibration instructions in regard to determining RMS operating high voltage. Specifically, operating high voltage was not established on a plateau for RM-1RM-215A (Unit 1 Containment Particulate) and RM-1LW-104 (Unit 1 Liquid Waste Effluent). This was contrary to vendor manual "Victoreen Installation, Operation, and Maintenance, Instruction Manual Beta Scintillation Detectors Models 843-20, 843-20A, and 843-20B" and "Victoreen Instructional Manual Gamma Scintillation Detector Model 843-30" respectively; and was contrary to RMS calibration standards and industry guidance documents.

Reason for the Violation

The primary cause of this violation is that, while the method used to perform the radiation monitoring system (RMS) calibrations is technically correct, the procedures used to perform the calibration are inadequate in that they lack sufficient detail about the current calibration techniques and processes. The lack of detail resulted in, for some monitors, heavy reliance upon supervisory direction. An additional contributing factor was the use of a generic procedure for performance of plateau checks.

Corrective Actions Taken and the Results Achieved

The following are the corrective actions taken:

- A Condition Report was written and processed. As a result of Duquesne Light's initial interpretation of the violation, the report evaluation, which included technical discussions with the RMS vendor, focused primarily on calibration method and not on implementing procedures and/or administrative control.
- Bench testing of the effects of varying VAC line voltage on the RMS was performed to ascertain if high voltage (HV) variations or shifts occurred with varying line voltage. Additionally, historical records of calibration as-found HV operating points were evaluated for indications of HV drift between calibrations. Results of the testing and evaluation verified that the RMS voltage regulation circuits were very stable.
- Self-assessments, external and internal, were conducted that evaluated the calibration method and practices currently employed. These self-assessments concluded that the method used is technically correct; however, areas for improvement were identified.
- The two radiation monitors cited in the inspection report were removed from service and recalibrated to ensure the operating point for each was established within the vendor recommended operating range for detector HV. For RM-RM-215A, no changes to the existing operating point were necessary. For RM-LW-104, the suspect detector was replaced with a new detector yielding acceptable results, within the recommended HV operating range.
- Additional testing was performed, at the request of the NRC effluents specialist, of the suspect RM-LW-104 detector, in the installed system configuration. The results of this testing were provided to the NRC effluents specialist during an onsite discussion. Subsequent to this testing, the replacement detector from the previous action was reinstalled and calibrated and yielded an operating point within the recommended HV operating range.
- An onsite discussion was held between the NRC effluents specialist, Beaver Valley station personnel and RMS vendor representatives. The RMS tests results and assessments were made available and discussed. The result of the discussions was a determination that the method used to calibrate the RMS was technically correct but the procedures lacked sufficient detail regarding calibration techniques and processes.

Corrective Actions to Prevent Further Violations

The following additional corrective actions will be implemented:

- A detailed discussion of RMS calibration techniques and processes, including the maximum and minimum operating HV for each detector type, will be incorporated into appropriate implementing procedures.
- An RMS specific procedure for performing plateau checks and determining the HV operating point will be developed. The procedure will include selection of the calibration radionuclide(s), determination of the HV plateau and increment range, and performance of linear regression analyses of appropriate parameters.

Date When Full Compliance Will Be Achieved

The procedure actions discussed above will be implemented by July 31, 1998.