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Duquesne Light

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October 24, 1979

United States Nuclear Regulatory Commission
Attention: Boyce H. Grier, Director
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Reference: Beaver Valley Power Station, Unit No. 1
Docket No. 50-334
License No. DPR-66
Response To IE Bulletin 79-23

Dear Mr. Grier:

We have reviewed IE Bulletin No. 79-23 concerning the potential failure of emergency diesel generator field exciter transformers. It is our conclusion the problem is not applicable at Beaver Valley Power Station.

At Beaver Valley, the neutral of the emergency diesel generator is ungrounded in the normal and emergency modes of operation. The neutral of the generator is not connected to the neutral of the primary winding of the excitation power transformer (EPT) and the primary winding of the EPT is not grounded. As such, the flow of high circulating current described in the Bulletin cannot exist. In the exercise mode of operation, the neutral of the diesel generator is connected to ground through a ten (10) ohm resistor to limit the flow of ground fault currents. The connection of the generator's neutral to the ten ohm resistor to ground is made through a motor operated switch. The switch is administratively controlled to be open except in the exercise mode of operation. The position of the motor operated switch is indicated in the control room. However, as noted above, the neutral of the generator is not connected to the EPT and the neutral of the primary winding of the EPT is not grounded. As such, the connection of the neutral to ground through the ten ohm resistor will not result in the flow of high circulating currents between the neutral of the generators and the EPT.

The neutral of the primary winding of the EPT is connected to the primary winding of the diesel generator potential transformers. This connection is not grounded. This connection was reviewed by Duquesne Light Engineering and by the manufacturer of the Beaver Valley emergency diesel generator units, Electro-Motive Division of General Motors Corporation. The Electro-Motive Division stated that the configuration in use at Beaver Valley is recommended to stabilize the voltage difference. Electro-Motive Division stated that this connection would not result in unacceptable circulating currents.

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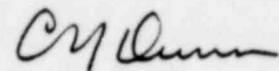
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Based on the above, we conclude that the present connections of the emergency diesel generators at Beaver Valley Power Station are proper and will not result in a flow of high circulating currents during operation with the neutral of the diesel generator grounded through the ten ohm resistor.

We plan to perform a 24-hour full load diesel generator test during the month of January, 1980. The unit will be in cold shutdown for refueling at this time.

Very truly yours,



C. N. Dunn
Vice President, Operations

cc: United States Nuclear Regulatory Commission
Office of Inspection and Enforcement
Division of Reactor Operations Inspection
Washington, D. C. 20555

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