

ATTACHMENT I

Docket Nos. 50-3
50-247
50-286

Consolidated Edison Co. of N.Y., Inc.

LER-78-025/04L-0

Indian Point Unit No. 2

Section 2.1.3.1 of the ETSR prescribes the procedure that must be followed in calculating the heat rejection rate of the Indian Point site. The maximum heat rejection rate specified in this Section is 16.3×10^9 BTU/HR. This maximum is based on the total design heat rejection rate for all three nuclear plants operating at 100% of licensed power with an appropriate allowance for expected fluctuations in power output due to occasional high turbine back pressures. While the formula contained in Section 2.1.3.1 is the appropriate textbook equation for determining the heat rejection rate, the accuracy of the computation is a function of the accuracy of the parameters used in the equation. Section 2.1.3.1 specifies that the circulating water system (CWS) flow to be used in this computation is the rated capacity of the circulating water pumps, and that the temperature differential is the measured ΔT across the CWS. Since pump flow will deviate from rated capacity and measured water temperatures fluctuate with time, the utilization of these parameters as specified in Section 2.1.3.1 will not produce an accurate result.

As indicated above, use of the ETSR formula for calculating the heat rejection rate can result in an overly conservative determination of the heat rejection rate compared to the actual heat rejection rate which must be lower. For example, calculations performed on August 28, 1978, with Units No. 2 and No. 3 operating at power levels of 100% and 90%, respectively, and Unit No. 1 shut down, indicated a heat rejection rate of 17.2×10^9 BTU/HR. An alternative more accurate method for calculating the heat rejection rate which involved the subtraction of the net electrical generation from the total reactor heat output, indicated the heat rejected to the river was only 12.9×10^9 BTU/HR for the same day. This latter method is conservative in that it assumes no heat loss to the atmosphere.

Heat rejected to the river is a function of the plant designs and their power levels and as such is not operationally controlled and limited. Accordingly, the limitation on heat rejection in the ETSR is inherently met at all licensed power levels. The site heat rejection rate is not a function of the CWS ΔT , as the Section 2.1.3.1 formula seems to indicate, but rather the CWS ΔT is a function of the heat rejection rate as well as the actual CWS cooling water flow rate. Heat rejection rates calculated per the Section 2.1.3.1 equation provide no additional assurance of protection of the biological community since environmental compatibility is assured by adherence to the limits of the remainder of the ETSR. We are planning to submit a proposed change to the ETSR to eliminate the heat rejection limit to avoid this redundant and confusing requirement. In the interim, we plan to calculate the heat rejection rate using both the ETSR formula and the alternative method described above.

Consolidated Edison Company of New York, Inc
4 Irving Place, New York, N Y 10003
Telephone (212) 460 3819

September 22, 1978

Re: Indian Point Unit No. 2
Docket No. 50-247
LER-78-026/03L-0

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Mr. Boyce H. Grier, Director
Office of Inspection and Enforcement
Region I
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

Dear Mr. Grier:

The attached Licensee Event Report LER-78-026/03L-0 is hereby submitted in accordance with the requirements of Technical Specification 6.9.1.7. This event is of the type described in Technical Specification 6.9.1.7.2.d.

Three copies of this letter and the attachment are enclosed as required.

Very truly yours,

William J. Cahill, Jr.
Vice President

Attach.

cc: Mr. John G. Davis, Acting Director (30 copies)
Office of Inspection and Enforcement
c/o Distribution Services Branch, DDC, ADM
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. William G. McDonald, Director (3 copies)
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