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May 15, 1991
BECO Ltr. 91- 69

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Docket No. 50-293
License No. DPR-35

Subject: Reactor Building Vent Air Sampling System Leak

Dear Sir:

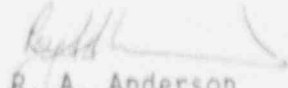
In February 1991, a minor leak was identified in the Reactor Building Vent (RBV) air sampling system. The leakage resulted from a degraded O-ring seal located immediately upstream from the sampling filter holder. Approximately 30-40 percent of the total flow through the sampling system was ambient room air rather than the air sampled from the RBV exhaust duct. Any airborne radioactivity identified in RBV exhaust was effectively "diluted" by the ambient air flow. The calculated correction factor of 1.65 was essentially constant for typical sampling system flow rates that ranged from 1.0 to 1.8 cubic feet per minute depending on the total process flow through the RBV exhaust duct. Maintenance was last performed on this portion of the system when O-rings were replaced in April 1988. Therefore, the correction factor will be applied to RBV effluent data recorded since that time. The vent leak did not affect activity measurements from the Main Stack offgas system.

The leak was identified just prior to issuance of the semiannual Effluent and Waste Disposal Report for the period July through December 1990. Data reported for the ground-level release pathway (RBV) for 1988, 1989, and the first half of 1990 will need to be corrected by a factor of 1.65. The previously reported combined ground-level release of radioactive particulates and iodines totaled $3.1E-3$ Ci. Therefore, a corrected activity of about $5.1E-3$ Ci will be reported in the updated tables. Releases of noble gases and tritium from the RBV during these periods will also show an increase by a factor of 1.65. Pilgrim Nuclear Power Station (PNPS) personnel are correcting the gaseous effluent tables for the ground-level release pathway for these five semiannual periods. The updated tables will be re-issued in conjunction with the next semiannual Effluent and Waste Disposal Report to be completed in late August 1991.

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Since the reported effluent data was also used to calculate resulting dose impacts that are proportional to the release activity, doses resulting from RBV releases will also increase by a factor of 1.65. During 1988 and 1989, the reported dose to a maximally exposed individual from all gaseous effluents was about 0.1 mrem whole body and 0.2 mrem maximum organ dose during each of the two years. When corrected for the updated ground-level activity values, the resulting maximum individual doses will be less than 0.2 mrem whole body, 0.4 mrem organ dose for each year. Such doses are only a fraction of a percent of natural background radiation levels or any applicable dose limits. PNPS personnel are also correcting dose tables for re-issue with the next semiannual Effluent and Waste Disposal Report.


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WJM/bal

cc: Mr. Thomas T. Martin
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