William J. Cahill, Jr.

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June 9, 1978

Re Indian Point Nos. 1, 2, & 3
Docket Nos. 50-3, 50-247, &
50-286

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

Dear Mr. Grier

This report of an anomalous measurement at one of our environmental sampling locations in the vicinity of Indian Point is being made as a followup to the telephone report our Mr. Anthony Ferraro gave to your Dr. Robert Bores on May 9, 1978, and subsequent discussions they had on May 22, & 23, 1978, at our New York Office.

The Environmental Technical Specification Requirements (ETSR) for Indian Point Nos. 1, 2, & 3, Section 5.6.2.2, require, in part, that if a confirmed measured level of radioactivity in any environmental medium exceeds ten times the control station value, a written report be submitted within 30 days. In the event a control station does not exist for a particular medium, "historical" levels for the particular locations can be used in place of control station values. Our procedure, NEM-A-07, "Notification, Investigation, and Reporting of Abnormal Activitiy in Environmental Samples", defines such "historical" values for various media and also lists the action levels where NRC notification is required.

As reported by Teledyne Isotopes, our contracting laboratory, I-131 activity in a sample of water from Camp Field reservoir, located approximately 3.5 miles Northeast of Indian Point and collected on March 27, 1978, was 182 pCi/liter as determined by germanium-lithium, Ge(Li),

C003
E3
1/0

analysis. The reported activity of the sample was later verified by Teledyne Isotopes. A sample of reservoir water collected on the same day at New Croton reservoir, located 7 miles East Southeast of Indian Point had a reported I-131 activity by Ge(Li) analysis of less than 9 pCi/liter. The "historical" level for Camp Field reservoir as listed in NEM-A-07 is 0.5 pCi/liter for I-131.

Plant releases during this period were less than the previous month when I-131 concentrations in reservoir water samples were below detectable limits. In addition, precipitation samples collected on March 31, 1978, around Indian Point and as far away as Roseton, 20 miles to the North had positive I-131 concentrations. Since plant releases were lower than the previous month and since I-131 activities were detected in all precipiation samples, including Roseton which is far enough away to be unaffected by plant releases, the contribution of plant releases to the Camp Field reservoir sample is concluded to be negligible.

The activity measured in the precipitation samples is attributed to the Chinese weapons test of March 14, 1978. Fallout from that test reached the Indian Point vicinity just before the increased levels were measured. Measurements by other utilities and laboratories in the region confirmed that the I-131 levels in precipitation were from weapons test fallout.

The anomalous I-131 activity in Camp Field reservoir may have been caused by: (1) contamination of the sample before counting, or, (2) collection of a non-representative sample. To determine if contamination existed, an inspection was made of our contracting laboratory. Water samples from other utilities which were collected during the same period and analyzed the same day and in the same group as our samples had I-131 activities of 10 pCi/liter or less. It was concluded from this that contamination of our reservoir sample did not occur.

Conditions during sample collection were then investigated. The sample was collected just offshore with the sample container submerged just below the surface. The technicians who collected the sample indicated that it was raining heavily while they were obtaining the sample. A check of U.S. Weather Service data for New York City reveals that total rainfall for March 26-27,

1978, was about 1.5 inches. Since fallout from the Chinese weapons test was passing over the area at the time, a heavy washout could have occurred during sample collection. In addition, although not frozen, the ground near the shoreline was hard, thus it may have contributed to a higher-than-normal runoff into the reservoir. Because of the above circumstances, it was concluded that a non-representative sample was collected. We will be changing our sample collection technique to insure that a better, more representative sample is obtained.

Should you have any questions regarding the information presented herein, we will be glad to discuss them with you, at your convenience.

Very truly yours

William J. Ballard, Jr.

cc: Mr. Edson G. Case, Acting Director
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