

POWER AUTHORITY OF THE STATE OF NEW YORK

INDIAN POINT NO. 3 NUCLEAR POWER PLANT

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July 6, 1979

IP-JJK-5213

George H. Smith, Chief
Fuel Facility & Materials Safety Branch
U. S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Mr. Smith:

This letter is provided in response to your letter of June 15, 1979, received at this office on June 20, 1979, concerning Inspection 50-286/79-06, conducted by Mr. K. Plumlee of your office on March 21-23, 1979, of the Indian Point 3 Facility with Operating License DPR-64. Although the inspection letter addresses our operating license correctly, that is, DPR-64, the Notice of Violation, Appendix A attached, identifies License No. DPR-69 erroneously.

Your Notice of Violation refers to Plant Emergency Procedure PEP-RM-1, Rev. 1., "High Activity-Radiation Monitoring System" and specifically Section B3.0 and 4.0 of that procedure identified as: 3.0 - Immediate Automatic Action and 4.0 - Immediate Operator Action. You note that an actuation of containment radiogas monitor R-12 will automatically cause a containment ventilation isolation signal and a containment evacuation alarm annunciation and that, in addition, under Section 4, the operator, if containment is open for access, to immediately announce the evacuation of containment and to repeat the announcement as well as to insure that containment ventilation isolation has occurred. You note that contrary to the above requirements, on March 21, 1979, following actuation of monitor R-12, the containment ventilation apparently did not isolate and the operator did not announce the evacuation of containment, nor, apparently, did he isolate the containment ventilation systems. You also noted that these failures increased the potential for uptake of airborne radioactive materials by personnel working in containment at that time.

I should point out at this time that the containment evacuation alarm, although it is controlled by the R-11 and R-12 monitors described in Section B3 of the subject procedure, has a completely separate alarm set point which annunciates a containment evacuation. A separate alarm set point is used for the bistables in the R-11 and/or R-12 monitors to control containment purge

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supply valves, containment purge exhaust valves, and containment pressure relief valves. At the time referenced in your inspection, the alarm set point for the containment evacuation alarm was set at a much lower level than the trip circuitry for the valve isolation signals. The evacuation alarm signal points were set at 5,000 counts per minute for the R-11 monitor and 200 counts per minute for the R-12 monitor; this corresponds to 25% of the MPC_a for Cobalt 60 for the R-11 particulate monitor and 4 times background for the R-12 monitor for radiogas. The trip point for the containment purge supply valve, containment purge exhaust valve, and containment pressure relief valves were set at 15,000 CPM for the R-11 particulate monitor and 1,000 CPM for the R-12 radiogas monitor. These settings were 3 and 5 times the settings for the containment evacuation alarm. Because of these conditions, the count rate on the R-12 monitor noted by the Inspector, that is, 200 CPM would not and should not have caused the containment ventilation isolation signal as noted in your inspection report. This count rate should have and did cause an annunciation, however, of the evacuation alarm inside the containment building.

The bistable trip points for the R-11 and R-12 monitors are established at the direction of the operating organization to avoid the release of radioactive materials from the containment building, in order to comply with site effluent requirements. The alarm set point for the evacuation alarm, that is, the containment evacuation alarm, is set at the direction of the Health Physics Supervisor and is primarily used to provide a very conservative protection of workers within the containment building. The alarm set points for these two separate indications are, therefore based on separate criteria and as such would not necessarily result in both evacuation and containment isolation simultaneously. The conditions noted by the Inspector in the details submitted with your letter of June 15, 1979, address the fact that no increase in particulate activity was noted. The only increase in activity shown by the containment monitors was in radiogas level indicated by the R-12 monitor. Since, at the Indian Point Facility, we restrict exposure to airborne noble gases based on whole body dose, the radiation exposure of any workers exposed to the containment atmosphere under the alarm conditions would be indicated by their self-reading dosimeters and by their film badge and TLD dosimetry. The conditions indicated would not have caused any inhalation of particulate matters since no indication of this substance was present.

The conditions during this alarm would not have increased the potential uptake of any airborne particulate radioactive material by personnel working in containment at that time. The increased potential for whole body radiation exposure from immersion in an atmosphere of radiogas was minimal at most.

The procedure PEP-RM-1, Rev. 1, as noted above, can result in some confusion as to what is required of an operator for an evacuation signal when a containment isolation evacuation signal does not occur along with the first. In order to eliminate this confusion, this procedure, along with Health Physics procedures which give directions for establishment of particulate and radiogas monitor alarm trip points are being revised and are expected to be issued by August 6, 1979.

If you have any questions concerning these matters, please do not hesitate to contact either myself or my health physics staff personnel.

Sincerely,


J. P. Bayne
Resident Manager

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