POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT NO. 3 NUCLEAR POWER PLANT
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IP-JJK-10818

Boyce H. Grier, Director
Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PENN 19406

Gentlemen:

This letter is being provided for information concerning the Indian Point 3 facility with license number DPR-64. Appendix B to facility operating license for Indian Point Generating Units 1,2, and 3 lists the environmental technical specifications requirements for once through cooling. Section 2.3.1.4 of this specification states in part, "Chlorination treatment of the Sewage Treatment facility shall be controlled such that the maximum concentrations of total residual chlorine in effluent being discharged from the Sewage Treatment facility shall not exceed 2 ppm."

The discharge line of the Sewage Treatment Plant (STP) operates with a flow which varies between 10 gpm and 15 gpm and discharges into the discharge canal with from 100,000 to 1.5 million gpm of flow then ultimately discharges from the site to the environment.

The Sewage Treatment Plant as designed provides for the feeding of sodium hypochlorite solution of constant strength, at a constant rate into the discharge of the STP. The NPDES permit for the site requires that STP effluent be kept greater than 0.5 ppm total residual chlorine to sanitize the STP effluent. Since the chlorine demand of sewage is highly variable it is virtually impossible to maintain chlorine levels in the STP effluent greater than 0.5 and less than 2.0 at all times. We have attempted to keep chlorine residual in the effluent always above .5 ppm to assure sanitization of STP effluent. However, when daily samples have been taken of the effluent, on some occasions over the past 16 months it has been found that the effluent has been less than .5 ppm and (on a few occasions) greater than 2.0 ppm. At these times the chlorine feed rate has been adjusted in order to bring the chlorine residual within limits.

It has been brought to my attention by my staff that section 2.3.1.4 of the Environmental Technical Specifications could be interpreted to mean the chlorine concentration must be kept less than 2 ppm in the effluent pipe from the STP to the discharge canal. However, this would be inconsistent with section 2.3.1.4 the same section of the Technical Specification which requires that total residual chlorine in the site effluent be kept below 0.5 ppm during condenser chlorination.

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In order to exceed this limit as a result of Sewage Treatment Plant effluent, the chlorine concentration in the STP effluent would have to be in excess of 13,000 parts per million. Even if the entire volume of the concentrated sodium hypochlorite available in the STP were discharged into the effluent of the STP over a period of one hour under the most adverse combination of Sewage Treatment Plant effluent and discharge canal flow conditions it would be physically impossible to exceed this limit of 0.5 ppm at the site effluent and it would also be impossible to exceed the 2 hour average maximum for the site of 0.2 ppm,

The Plant Operations Review Committee has reviewed this condition and come to the conclusion that this interpretation can be drawn from the Technical Specification. It has also concluded that there could no off-site environmental impact when STP effluent to the discharge canal has been greater than 2 ppm.

We have initiated actions to request a Technial Specification change to delete the limits on chlorine concentration in the Sewage Treatment Plant effluent, while still complying with the site discharge limits on chlorine such that there will be no deleterious effect upon the environment.

S. S. Zulla
Resident Manager

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