UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 191 TO FACILITY OPERATING LICENSE NO. DPR-26

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

INDIAN POINT NUCLEAR GENERATING UNIT NO. 2

DOCKET NO. 50-247

1.0 INTRODUCTION

By letter dated August 22, 1996, as supplemented by letter dated March 28, 1997, the Consolidated Edison Company of New York, Inc. (the licensee), submitted a request for an amendment to the Technical Specifications (TSs) for Indian Point Nuclear Generating Unit No. 2. The licensee proposed to delete the requirement to utilize sodium hydroxide as an additive in the post-accident containment spray system and to replace it with a requirement regarding sump pH control by means of granular trisodium phosphate (TSP), stored in the baskets located in the containment sump. The licensee also proposed surveillance requirements for ensuring effectiveness of this pH control method. The March 28, 1997, supplemental letter did not change the initial proposed no significant hazards consideration determination or expand the scope of the amendment request as originally noticed.

2.0 EVALUATION

The proposed modification of pH control in the containment sump consists of replacing the existing sodium hydroxide pH control additive with TSP. The TSP will be stored in the baskets located in the lower portion of the sump. During an accident, when the sprays are activated, the injected water will accumulate in the containment sump and when it reaches the level where the baskets are located, dissolution of TSP will occur. The value of pH will depend on the amount of dissolved TSP. The licensee calculated that 8000 pounds (149 cu.ft.) of trisodium phosphate dodecahydrate (hydrated TSP) will be needed to maintain sump pH at a value between 7 and 9.5.

At the beginning of the spray operation (injection phase), spray water will come from the refueling water storage tank (RWST) which contains approximately 2000 ppm of boron in a form of boric acid and has, therefore, pH well below 7. However, since most of the iodine released to the containment is in a form readily soluble in low pH water, it will be removed during the injection phase. Also, because of a relatively short duration of this phase, no corrosion damage to the metallic components exposed to the sprays will occur. After water has been depleted from the RWST, recirculation phase commences during which spray water is recirculated from the containment sump. This water contains previously dissolved iodine, and high pH has to be maintained otherwise the iodine will be released to the containment atmosphere. Also, since the sprays will operate for a considerably longer time, metallic

components will corrode if exposed to low pH water. By introducing sump pH control by means of TSP and specifying surveillance requirements which will not allow the amount of TSP in containment sump to fall below the specified value for longer than 72 hours, the licensee ensured that after an accident neither iodine release nor corrosion of metallic components will take place.

2.1 Conclusions

The staff has evaluated the proposed amendment to TSs for post-accident control of pH water in the containment spray system in the Indian Point Nuclear Generating Unit No. 2 plant. This amendment consists of deleting the requirement for sodium hydroxide spray additive and replacing it with a rquirement regarding containment sump pH control by means of the TSP stored in the containment sump. On the basis of its evaluation, the staff finds that this amendment is acceptable because of the improvement in the operability of the containment spray system without affecting its design function.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New York State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (62 FR 4345). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement of environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: K. Parczewski

Date: April 23, 1997