William J. Cahill, Jr.
Vice President

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September 10, 1973

Re Indian Point Unit No. 3
AEC Docket No. 50-286

Mr. James P. O'Reilly, Director
U. S. Atomic Energy Commission
Directorate of Regulatory Operations
Region 1
631 Park Avenue
King of Prussia, Penn. 19406

Dear Mr. O'Reilly

As requested by your July 18, 1973 letter, a review of the control circuit design for containment ventilation system isolation valves has been made. It can be reported that the circumstances described in RO Bulletin 73-2 do not exist at Indian Point Unit No. 3. Failure of a single control switch or component could not result in the simultaneous failure of redundant containment ventilation valves.

The Indian Point Unit No. 3 containment has three penetrations for ventilation purposes; two 36" diameter purge supply and exhaust lines, and a 10" diameter pressure relief line. Each purge system penetration has redundant air-operated isolation valves, one inside and one outside of containment, which fail closed on loss of air supply or interruption of power to the solenoid valve that controls supply air. Each isolation valve has its own separate solenoid valve and air supply. The control circuits for these solenoid valves require that power be maintained to the solenoid valves to keep their related isolation valves in the open position.

Two separate independent control circuits are provided; one for the isolation valves inside containment, and the other for the valves outside containment. Each control circuit is composed of a manual control switch (located in the Control Room) in series with an automatic containment isolation signal. Either the manual or the automatic portion of the control circuit can open the electrical circuit, thus interrupting control power and assuring closure of the isolation valves.

The pressure relief line has three isolation valves, two outside containment and one inside containment. Each valve has its own separate solenoid valve and air supply. There are two separate identical control systems for the isolation valves; one for the

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valve inside containment and the other for the valves outside containment. Each control circuit is composed of a manual control switch (located in the Control Room) in series with an automatic containment isolation signal. Either the manual or the automatic portion of the control circuit can open the electrical circuit, thus interrupting control power and assuring closure of the isolation valves.

Since each isolation valve fails closed upon interruption (or loss) of control power and because there are separate means provided in each control circuit (manual switch and automatic signal, either one of which will open the electrical circuit, thus interrupting control power), it is concluded that these circuits and isolation valves have sufficient separate redundant features to assure that containment isolation integrity is not compromised - ie, that no failure of a single control switch or any other single control device could prevent redundant containment isolation valves from closing upon initiation of appropriate automatic or manual isolation signals.

As a result of the above review, it is concluded that the present circuitry for operation of the containment ventilation system isolation valves is sufficient. Accordingly, no changes are considered necessary.

Very truly yours

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