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U.S. HIGHWAY 46 AND SCHLEY STREET DOVER, NEW JERSEY 07801

201-361-0583

August 5, 1974

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

Subject: DRO Bulletin #74-7

Dear Mr. O'Reilly:

Thank you for sending us the bulletin describing the causes of the personnel overexposure to [REDACTED]. This bulletin has been reviewed with all our personnel and will be retained for specific instruction of future irradiator operators.

The operational test of the interlocks has been conducted. When we first heard of [REDACTED] accident on June 15, we conducted a test of the operational interlocks and the radiation monitoring system. All systems were functioning correctly. When your inspector Mr. Brandkamp was here on June 26, we again checked the interlock and the monitoring system in his presence. Again, all checked okay. Finally, after receipt of your bulletin we again checked the interlocks and the monitor of July 30, 1974. Again all checked okay.

I should point out that our system is significantly different from Isomedix. When the source is up, there are four lights plus two meters indicating the presence of radiation in the labyrinth. In addition, there are two lights indicating the mechanical fact that the source is up. All these are visible at the door for entrance to the cell. Two of these lights operate off of a battery supply and indicate the source up status even in the event of total power failure. In addition a Klaxon alarm sounds in event of power failure either to the entire building or the monitor system alone.

The primary interlock ties the cell door into the source lowering power system so that anytime the door is opened the source is automatically lowered. In normal operation the source is lowered by automatic timers so the door interlock is not normally used. Should the door interlock fail to function, or should the source fail to go down when the interlock operates properly (the radiation indicators would still show the presence of radiation) the final safeguard is the hand held meter. The meter storage rack is at the cell entrance. The labyrinth type

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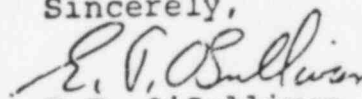
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of entrance gives additional safeguards. If the source were still in the up position a reading of approximately 30 mr/hr would be observed on the hand held meter after turning the first corner. After turning the second corner approximately seven feet later, (which means passing by another warning light) the reading increases to 9 R/hr. This point is still 20 feet from the source. The point here being that there is ample time, distance and warning lights to signal high radiation even in the unlikely instance of the source being up when the door is open.

There is no provision or means to bypass the radiation monitor. This monitor is operationally checked every time the source is raised.

Again, thank you for your bulletin. We feel it is very important for such incidents to be brought to the attention of other facilities so that we may learn and apply such lessons to our own facility.

Sincerely,


E.T. O'Sullivan
Vice President

ETO/mg