



UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION I
970 BROAD STREET
NEWARK, NEW JERSEY 07102

201 645.3940

SEP 13 1971

Rhode Island Atomic Energy Commission
ATTN: Dr. Arthur L. Quirk, Chairman
Rhode Island Nuclear Science Center
Narragansett, Rhode Island 02882

Docket No. 50-0193

Gentlemen:

This refers to the inspection conducted by Mr. J. J. Rizzo of our Bethesda, Maryland office on June 22 and 23, 1971, of operations authorized under AEC Operating License No. R-95 and to the discussions of our findings held by Mr. Rizzo with Mr. A. F. DiMeglio of your staff at the conclusion of the inspection.

Areas examined during the inspection included the following subjects for the period since May 6, 1970: reactor operations, facility operating procedures and administrative controls, performance of the Reactor Utilization Committee, reactivity and core physics measurements, personnel exposures and radiation surveys, reactor maintenance, and liquid and gaseous releases. Within these areas, the inspection consisted of selected examinations of procedures and representative records, interviews with plant personnel and observations by our inspector.

Within the scope of this inspection, no items of noncompliance with AEC requirements were identified.

As discussed with Mr. DiMeglio, we understand that you plan to test the efficiency of the absolute filters located in the scrubber system within the next three months and that arrangements will be made to have an independent audit performed of your operations on an annual basis. These items will be reviewed during our next inspection.

No reply to this letter is necessary; however, should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Very truly yours,

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PDR ADOCK 05000193
G PDR

James P. O'Reilly
James P. O'Reilly
Director

cc: A. F. DiMeglio

Efficiency Test of Emergency Absolute Filters

On 10-4-71 the emergency filters were tested with DOP smoke to determine the efficiency. The smoke generator was positioned to discharge the smoke into the intake to the cleanup system on the main floor of the reactor room. The flow in the cleanup system was reduced by covering the intake to the system except for a small opening. The smoke was introduced through this opening.

The particle detector was calibrated at the upstream side of the filters. The baseline reading was set at 70 % (100 % base line could not be achieved because with the gain set to give 100% the dark current from the phototube gave a large signal which could not be zeroed with the straylight adjustment). With the instrument calibrated the air downstream of the filters was introduced into the detector and the % penetration was measured. The reading on the meter was less than 0.01 %. With 70% as the baseline the efficiency is

$$E = 1 - 0.01/70$$

$$E = 1 - 0.00014$$

$$E = .99986 \text{ or } 99.986 \%$$