

NOV 29 1985

Docket No: 50-193

Rhode Island Atomic Energy Commission  
ATTN: Dr. A. Francis DiMeglio  
Director  
Nuclear Science Center  
South Ferry Road  
Narragansett, Rhode Island 02882

Gentlemen:

Subject: Inspection Report No. 50-193/85-02

This refers to your letter dated September 6, 1985, in response to our letter dated August 12, 1985.

Thank you for informing us of the corrective and preventive actions documented in your letter. These actions will be examined during a future inspection of your licensed program.

Your cooperation with us is appreciated.

Sincerely,

Original Signed By:

*for* *Ronald R. Bellamy*  
Thomas T. Martin, Director  
Division of Radiation Safety  
and Safeguards

cc:  
Professor G. Seidel, Commissioner, RIAEC  
Rev. W. Murtaugh, O.P., Commissioner, RIAEC  
John Pascalides, Commissioner, RIAEC  
Dr. V. C. Rose, Commissioner  
Dr. S. J. Pickart, Physics Department  
Public Document Room (PDR)  
Local Public Document Room (LPDR)  
Nuclear Safety Information Center (NSIC)  
State of Rhode Island

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PDR ADOCK 05000193  
PDR  
Q

OFFICIAL RECORD COPY

RL RIAEC 85-02 - 0001.0.0  
11/05/85

11 JE04

bcc:

Region I Docket Room (with concurrences)

~~Management Assistant, DRMA (w/o encl)~~

RI:DRSS  
Dioffi/mmb  
11/6/85

RI:DRSS  
Shanbake  
11/25/85

RI:DRSS  
Bellamy  
11/26/85

RI:DRSS  
Martin  
11/ /85

OFFICIAL RECORD COPY

RL RIAEC 85-02 - 0002.0.0  
11/05/85



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

RHODE ISLAND ATOMIC ENERGY COMMISSION  
Nuclear Science Center  
South Ferry Road  
Narragansett, R.I. 02882-1197

September 6, 1985

U. S. Nuclear Regulatory Commission  
Region 1  
631 Park Avenue  
King of Prussia, PA 19406

Attention: Thomas T. Martin, Director  
Division of Radiation Safety  
& Safeguard

Gentlemen:

Please refer to the notice of violation in inspection report 50-193/85-02, dated August 12, 1985. This violation consists of the inability of the Nuclear Science Center to provide the manufacturer's documentation for the efficiency of the absolute filters which are part of the emergency clean up system.

These filters were provided by the manufacturer as an integral part of a clean up filter system in 1963 during the construction phase of the facility. This efficiency specification was part of the equipment specification and the manufacturer's documentation was reviewed before installation of the system. In addition, before issuance of an operating license, the USAEC inspected this facility to insure compliance with construction requirements. It is therefore reasonable to assume that the filter efficiency was one of the items checked by USAEC for compliance before issuing an operating license, especially since the clean up system was an addition to the original facility design and was a well documented amendment to the original construction permit. We cannot, however, document the manufacturer's certification nor the inspection by the USAEC because we cannot locate these records some twenty-two years later.

The efficiency of this filtering system was reviewed during a previous inspection on September 13, 1971. A copy of the inspection report is attached. As a result of the inspection, we performed a test on October 4, 1971. The test report and results are attached showing an efficiency of 99.986% for the system. It is again reasonable to assume that this test was reviewed during the next inspection. However, the report of the next inspection, September 7, 1972, does not contain the information. A copy of this inspection report is attached.

8509170153

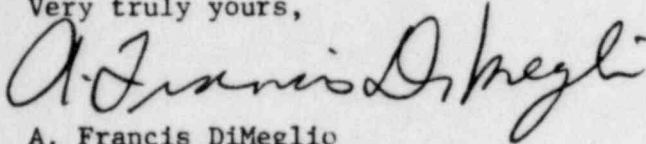
September 6, 1985

Following the most recent inspection, June 11-12, 1985, we arranged to have the filters tested in place. The test was performed by B & B Testing Company of Waltham, Massachusetts on August 13, 1985. Their test of the system showed no penetration of test smoke. Because of the sensitivity of the monitoring instruments, their result is a penetration of 0.01%.

We believe that this penetration test, together with the testing done in 1971, assures that the filters do meet the technical specifications.

The reoccurrence of this type of violation will be prevented by a better record retention system which has been in place for several years.

Very truly yours,



A. Francis DiMeglio  
Director

AFD:pb

Enclosures (3)





UNITED STATES  
ATOMIC ENERGY COMMISSION  
DIRECTORATE OF REGULATORY OPERATIONS  
REGION I  
370 BROAD STREET  
NEWARK, NEW JERSEY 07102

SEP 7 1972

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

Docket No. 50-193

Gentlemen:

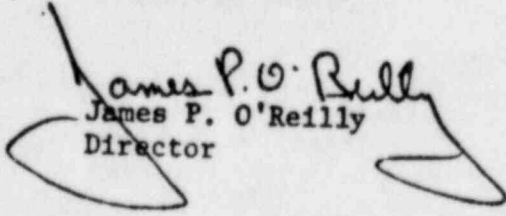
This refers to the inspection conducted by Mr. K. E. Plumlee and Mr. E. R. Loibl, of this office on June 26, 27, and 28, 1972, of operations authorized by AEC License No. R-95, and to the discussions of our findings held by Mr. Loibl and Mr. Plumlee with Dr. Quirk and Mr. DiMeglio of your staff at the conclusion of the inspection.

Areas examined during this inspection included: (for the period June 1971 to June 1972) reactor operation logs, records of fuel management, sample irradiations, personnel exposures to radiation, area health physics surveys, radioactive releases to the environment, and audits of operations; and the status of operating procedures, emergency procedures and facility security measures. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with facility personnel, and observations by our inspectors.

During this inspection it was found that certain of your activities appeared to be in noncompliance with AEC requirements. The items and references to the pertinent requirements are listed in the enclosure to this letter. Please provide us within 20 days, in writing, with your comments concerning these items, any steps which have been or will be taken to correct them, any steps that have been or will be taken to prevent recurrence, and the date all corrective actions or preventive measures were or will be completed.

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely yours,

  
James P. O'Reilly  
Director

Enclosure:  
Description of Noncompliance Items

880977164

ENCLOSURE

Description of Noncompliance Items

Rhode Island Atomic Energy Commission  
Rhode Island Nuclear Science Center  
Narragansett, Rhode Island 02882  
License No. R-95

Certain activities under your license appear to be in noncompliance with license requirements as indicated below:

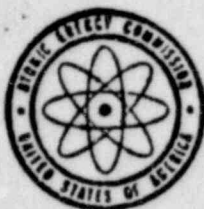
1. Paragraph K.3.d of the Technical Specifications to License No. R-95 states in part, "Corrective action shall be taken to avoid exceeding the pH limit . . . 5.5 to 7.5."

Contrary to the above, all measurements of secondary coolant pH recorded from July 13 to July 23, 1971 were in a range of 7.6 to 8.2.

2. Paragraph J.1 of the Technical Specifications to License No. R-95 states that the functions of the Reactor Utilization Committee are, in part, "c. Review at least annually the operating and emergency procedures and the overall radiation safety aspects of the facility," and, "The Reactor Utilization Committee shall maintain a written record of its findings regarding the above."

Contrary to the above, a review of records indicated that the Reactor Utilization Committee did not review procedures and record its findings within the 12-month interval preceding this inspection.

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UNITED STATES  
ATOMIC ENERGY COMMISSION  
DIVISION OF COMMERCE  
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.

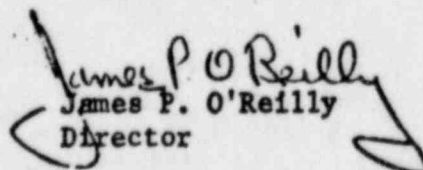
Areas examined during the inspection included the following subjects for the period since May 6, 1970: reactor operations, facility operating procedures and administrative controls, performance of the Reactor Utilization Committee, reactivity and core physics measurements, personnel exposures and radiation 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,

  
James P. O'Reilly  
Director

cc: A. F. DiMeglio

~~8509170171~~

## 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

$$E = 1 - 0.01/70$$

$$E = 1 - 0.00014$$

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