



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Rhode Island Atomic Energy Commission
NUCLEAR SCIENCE CENTER
South Ferry Road
Narragansett, R. I. 02882

August 17, 1979

DOCKET 50-193

U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: James R. Miller, Acting Asst. Director
for Site and Safeguards

Gentlemen:

Please refer to your letter of July 30, 1979 concerning the effect of the upgrade rule on the R. I. Nuclear Science Center. We have already been visited by a team from NRC and New Mexico.

Based on the discussions with the team and our existing security arrangements, we do not believe that significant changes in our facility will be necessary to meet the requirements of the upgrade rule. We also do not believe that significant changes in our security procedures will be necessary. This is because, although we are licensed for greater than 5000 grams of U-235, the amount of fuel that is not self protecting is always less than 5000 gms. In addition, since the reactor operates at 2MW, we do not anticipate problems in maintaining the fuel in the swimming pool at the self protection limit. To do this, however, may require recycling into the reactor, fuel elements which otherwise would have been allowed to decay until shipment to reprocessing.

The impact of implementing the Safeguards upgrade rule will not be great enough for us to consider closing the facility. We do not have an estimate of the cost of shutting down the facility or the cost of maintaining possession only status.

The annual budget for operating is about \$360,000. This does not include the funded research programs which approximately amount to an additional \$1,000,000.

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Enclosed is a copy of our annual report for the 77/78 fiscal year. Pages 12 thru 19 will provide the kinds of information requested in your letter.

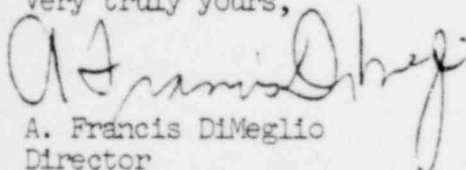
The following are the answers to your specific questions:

1. Minimal
2. Minimal
3. Minimal
4. No data available
5. No data available
6. The loss to industry will be through the loss of trained personnel with advanced degrees. The reactor is used for research in master and doctoral programs. We do not train operators for power reactors.
7. We have two research programs with applications in the medical area. We do not produce medical isotopes.
8. Based on NRC facility visit, minimal.
9. Yes
10. There are about 25 faculty members who use the facility and about 25 advanced degree students. There are about 40 publications annually resulting from the work.
11. Eleven. No
12. We do not run a training reactor
13. Twenty-five. Yes
14. \$360,000
15. Yes, by recycling back into reactor. However, fuel decay of 90 days prior to shipment to reprocessing may present a problem. Assuming no problem with shipping to reprocessing, the financial impact will be minimal.
16. About 19. However, some involve only a couple of hours at the facility. They will not be cut.

Based on our operating experience, we see two potential problems, both concerning spent fuel. The first is the decay time required by the reprocessing plant or the decay heat limits on the shipping cask and the availability of transportation companies who meet the requirements of 73.37. Since we received your letter on August 14, 1979, we have not, as yet, checked these items.

We will be pleased to provide more information, if necessary.

Very truly yours,


A. Francis DiMeglio
Director

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