

October 2, 1984

Docket No. 50-219
LS05-84-10-005

Mr. P. B. Fiedler
Vice President & Director
Oyster Creek Nuclear Generating Station
Post Office Box 388
Forked River, New Jersey 08731

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Dear Mr. Fiedler:

SUBJECT: STANDBY GAS TREATMENT SYSTEM (SBGTS) FILTER TIE-IN, NUREG-0737,
ITEM II.B.2, PLANT SHIELDING

Re: Oyster Creek Nuclear Generating Station

The staff has reviewed your request to cancel your previously proposed modification of the SBGTS at Oyster Creek relative to NUREG-0737, Item II.B.2, Plant Shielding. Details supporting the enclosed Safety Evaluation (SE) are documented in the NRC Region I Inspection Report 50-219/84-28, and were based on your submittal dated April 15, 1983 and supplemented September 18, 1984.

Based on our review we conclude that your request to cancel your commitment to install provisions for a tie-in to the SBGTS charcoal filter trains is acceptable. Therefore, the staff considers that you have completed the requirements of Item II.B.2, Plant Shielding of the Order Confirming License Commitments on Post-TMI Related Issues dated March 14, 1983 regarding NUREG-0737.

Sincerely,

Original signed by

Walter A. Paulson, Acting Chief
Operating Reactors Branch #5
Division of Licensing

Enclosure:
As stated

cc: See next page

*SE01
DSU USE 51*

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CJamerson jfb
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Mr. P. B. Fiedler

- 2 -

October 2, 1984

cc

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

GPU NUCLEAR CORPORATION AND

JERSEY CENTRAL POWER & LIGHT COMPANY

OYSTER CREEK NUCLEAR GENERATING STATION

DOCKET NO. 50-219

STANDBY GAS TREATMENT SYSTEM FILTER TIE-IN

1.0 INTRODUCTION

By letter dated April 15, 1983 and supplemented September 18, 1984, GPU Nuclear Corporation (the Licensee) has requested to cancel a previously proposed commitment to install provisions for a tie-in to the Standby Gas Treatment System (SBGTS) charcoal filter trains relative to NUREG-0737, Item II.B.2, Plant Shielding.

The licensee had proposed to make the modifications to the SBGTS as an additional precaution based on a concern that the SBGTS filters might need changing during an accident and that the area would be inaccessible due to high radiation. Subsequent reanalysis of the filter loading by the licensee indicated that a single filter train is capable of handling (without change out) effluent loading associated with an excessive MSIV leakage accident, the major contributor to offsite doses during a LOCA.

2.0 EVALUATION

The staff has reviewed the licensee's submittals based on the following criteria and guidelines:

- NUREG-0737, Item II.B.2, requires that vital areas necessary for post-accident access be identified, and that dose rate levels and appropriate shielding be evaluated so that whole body doses do not exceed 5 Rem for the duration of an accident.
- Regulatory Guide 1.52 recommends that impregnated activated charcoal adsorbent be designed for a maximum loading of 2.50 mg of total iodine per gram of activated carbon present in the filter bed.
- The Oyster Creek Facility Description and Safety Analysis Report (FDSAR), Section 2.4.2, indicates that charcoal filter efficiencies of 99.9% or greater are to be expected for halogen removal under relative humidities of 70% or less.

- The Oyster Creek Technical Specifications (TS), Surveillance Requirement Section 4.5.k, specify filter efficiency tests every 18 months for radioactive methyl iodine.

The licensee's calculations were reviewed and based on conservative assumptions, such as: (1) 0.5% primary containment leakage per day for 30 days; (2) a single filter train; and, (3) 100% iodine filtration efficiency, the calculations demonstrated that the total iodine loading at 30 days was 2.60 mg per gram of charcoal. The staff considers that the 2.50 mg/gram limit recommended by Regulatory Guide 1.52 is at least one order of magnitude conservative so that the 2.60 mg per gram of charcoal is an acceptable loading.

The staff finds that the filter tie-in is not required in that, (1) the filters are not an appreciable post-accident radiation source affecting vital plant areas, (2) each filter train has been shown to approach the Regulatory Guide 1.52 limit of 2.50 mg per gram for iodine loading under post-accident conditions when the above conservatism is considered and, (3) under design basis accident conditions, a single train of SBGTS is capable of handling effluent concentrations such that 10 CFR Part 100 dose limits are not exceeded, and filter change-out should not be required.

3.0 CONCLUSION

Based on the above findings, the staff concludes that cancellation of modifications for a tie-in to the SBGTS charcoal filter train is acceptable.

4.0 ACKNOWLEDGEMENT

G. Kelly (RI) performed this evaluation.

Date: October 2, 1984