

GPU Nuclear Corporation

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September 18, 1984

Mr. Walter A. Paulson, Acting Chief
Operating Reactors Branch No. 5
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Paulson:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
NUREG-0737, Item II.B.2

In accordance with your letter of December 7, 1983, which requested additional information relative to NUREG-0737, Item II.B.2 "Design Review of Plant Shielding", GPU Nuclear Corporation provided a response on June 21, 1984. By telephone conversation on August 28, 1984 your staff indicated that the NRC's evaluation of SEP Topic XV-19 "Radiological Consequences of a LOCA" had not considered charcoal filter loading during the course of an accident. Thus, the cancellation of the Standby Gas Treatment System (SGTS) Tie-in modification could not be granted based on the above evaluation.

As a result, GPUN contracted United Engineers & Constructors Inc. (UE&C) to analyze post-LOCA iodine loading for the SGTS charcoal filter. On September 11, 1984, a meeting was held at UE&C between GPUN personnel and Mr. G. Kelly of NRC Region I to review the results of the analysis. The analysis demonstrates that post-LOCA iodine loading for the SGTS charcoal filter will not reach the Regulatory Guide 1.52 limit of 2.5 mg per gram of charcoal until the end of 30 days after a LOCA.

These results, summarized in Table I, have been obtained by conservatively assuming that primary containment leaks at the design value of 0.5% per day, for the entire 30 day duration. The design leakage is determined at the Primary containment design pressure of 62 psig. However, thermo-hydraulic analyses (reference G.E. Primary Containment Design Report), show that the post-LOCA peak pressure is only 33 psig, and the pressure drops to atmospheric level in 24 hours due to operation of the Containment Spray System. Therefore, for all practical purposes, the leakages from primary containment will be reduced to negligible levels within the first 24 hours and the actual post-LOCA

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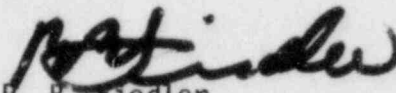
iodine loading will be well below the values presented in Table I. The analysis also conservatively assumes that all the iodines will be accumulated in one SGTS filter train (one out of two redundant filter trains).

The post-LOCA iodine loading should not cause any significant change in filter efficiency for the duration of the accident. Therefore, cancellation of the SGTS tie-in modification is justified.

The results of the shielding analysis indicate that the maximum post-LOCA dose rate on the floor, directly above the filters, is only approximately 1.3 mr/hr. The SGTS filters are well shielded, below grade and inside a concrete pipe tunnel. Therefore, they do not pose any post-LOCA access restrictions to any vital areas.

Should you require any further information on this subject, please contact Mr. Michael Laggart, Manager BWR Licensing at (201) 299-2341.

Very truly yours,


P. B. Fiedler
Vice President and Director
Oyster Creek

Tr:0394e
Enclosure

cc: Mr. G. Kelly
U.S. Nuclear Regulatory Commission
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NRC Resident Inspector
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ENCLOSURE 1

TABLE 1Post-LOCA Iodine Loading for SGTs Charcoal Filter

<u>Time</u>	Iodine Loading (mg of iodines per gram of charcoal)		
	<u>Stable Iodines</u>	<u>Radioactive Iodines</u>	<u>Total</u>
0	0	0	0
12 hours	1.8×10^{-2}	2.1×10^{-3}	2.0×10^{-2}
24 hours	5.5×10^{-2}	4.6×10^{-3}	5.9×10^{-2}
3 days	0.24	1.0×10^{-2}	0.25
10 days	0.88	1.8×10^{-2}	0.90
20 days	1.8	1.5×10^{-2}	1.8
30 days	2.6	9.5×10^{-3}	2.6