



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

March 13, 1987

Docket No. 50-219

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

SUBJECT: RECOMBINER CAPABILITY REQUIREMENTS OF 10 CFR 50.44(c)(3)(ii)
(GENERIC LETTER 84-09, TAC 57758, 58018 & 62980)

Re: Oyster Creek Nuclear Generating Station

This letter addresses the compliance of Oyster Creek to 10 CFR 50.44, combustible gas control systems, in general, and Sections 50.44(c)(3)(i), 50.44(c)(3)(ii) and 50.44(g) in particular. This has been the subject of discussions between GPU Nuclear (the licensee) and the staff in the licensing actions involving Generic Letter (GL) 84-09, Recombiner Capability Requirements of 10 CFR 50.44(c)(3)(ii), dated May 8, 1984, and your request to cancel the commitments to upgrade the containment inerting system. This involves your letters dated July 13, 1984, August 14 and September 24, 1985, and June 16, 1986; and the staff's letter dated May 5, 1986. This was also discussed in the meetings of April 10, 1986, and January 20, 1987, at NRR headquarters in Bethesda, Maryland. Section 50.44(c)(3)(i) applies to an inerted containment during power operation, 50.44(c)(3)(ii) applies to a recombinder capability and 50.44(g) applies to required General Design Criteria (GDC) for the safety-related combustible gas control systems. These systems are for the control of the hydrogen and oxygen (combustible gases) generated from the metal-water reaction and the radiolysis of water during the design basis loss-of-coolant accident (LOCA). The position of the licensee is that Oyster Creek complies with the above regulations in the following manner. The plant containment is inerted during power operation except briefly (24 hours) during startup and shutdown which is allowed by the Technical Specifications. The primary means of combustible gas control in the containment is the inerted containment and not a purge/repressurization system and it meets the three criteria in GL 84-09 and, therefore, a recombinder capability is not needed. And, the inerted containment is the control system required by 50.44(g) and this systems meets the required GDC 41, 42 and 43.

For section 50.44(c)(3)(i), the staff agrees that you comply with the regulations on inerted containments. The brief times during startup and shutdown when the containment is not inerted are acceptable because required surveillance are being done in the containment during this time and the containment should have a breathable atmosphere to protect workers. These surveillances cannot be done at another time outside of the run, startup or shutdown modes.

March 13, 1987

In the enclosed Safety Evaluation (SE), the staff has evaluated the responses for Oyster Creek to GL 84-09. These responses are to justify that a recombiner capability is not required. The conclusion of the SE is that the staff agrees that this capability is not needed provided the containment inerting system is upgraded. The specific upgrades are listed in the enclosed SE.

The regulation on recombiner capability required this capability to be installed by plants relying upon a purge/repressurization system as the primary means of controlling combustible gases following a LOCA by the end of the first scheduled outage beginning after July 5, 1982, of sufficient duration. In your letter dated August 2, 1982, you requested an exemption to the regulation on recombiner capability. The staff in its letter dated May 21, 1984, stated that it has given in some cases schedular relief for an interim period until completion of the NRC review of the BWR Mark I Owners Group studies. The staff explained that these studies have been completed and the results issued as GL 84-09. As stated in GL 84-09, the Commission determined that a Mark I BWR plant, such as Oyster Creek, will be found to not rely on purge/repressurization as the primary means of combustible gas control and that a recombiner capability is not required. This is in agreement with the staff's letter of May 5, 1986, that the primary means for combustible gas control at Oyster are the inerted containment and the containment inerting system. The staff concluded in its May 21, 1984 letter that the technical and/or schedular relief you requested would be granted through the conclusions of the staff's evaluation of your responses to GL 84-09. Because the staff's conclusions in the enclosed SE, that the containment needs to be upgraded, are also the staff's conclusion in its May 5, 1986 letter to you and because the staff has concluded that Oyster Creek will be found to not need the recombiner capability in addition to the inerted containment and the containment inerting system to control combustible gases during a LOCA, this GL 84-09 evaluation will be incorporated in the staff ongoing evaluation of the containment inerting system. As stated in the staff's May 5, 1986 letter, the staff is requiring that you provide a containment inerting system that meets 10 CFR 50.44(g) by the restart from Cycle 12R outage.

In the licensee's letter dated June 16, 1986, which was its response to the staff's letter dated May 5, 1986, the licensee requested a meeting with the staff on 10 CFR 50.44(g). This was the meeting of January 20, 1987. In this meeting on combustible gas control systems, the licensees in the BWR Owners Group explained the compliance of their Mark I plants to 10 CFR 50.44. At the conclusion of the meeting, the staff requested that each licensee submit its plant-specific position on its compliance to 10 CFR 50.44(g). This submittal should include the assumptions made by the licensees to justify their position. This submittal should also include the information discussed during the meeting regarding the reliability and capability of the containment inerting system and the window of the accident sequences for which this system would be effective in controlling combustible gases during a LOCA. The staff stated that a passive system, such as the inerted containment, is not sufficient alone to meet 10 CFR 50.44(g) and that an active system, such as the containment inerting system, is required. The staff further stated that the reliability and capability of the existing containment inerting systems may be sufficient

Mr. P. B. Fiedler

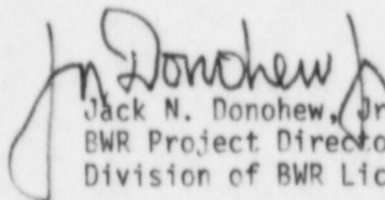
- 3 -

March 13, 1987

to meet, as a minimum, the intent of GDC 41, 42 and 43 as stated in 10 CFR 50.44(g). This is because the Regulatory Guide (RG) 1.7 source term for combustible gases may show that the licensee has sufficient time to respond with the existing inerting system to the increasing combustible gas concentrations in the containment from radiolysis of water before acceptable limits are exceeded. The time available until unacceptable concentrations are reached would allow the licensee to overcome the lack of redundancy in components and in providing power to the system. This time period for the plant and the actions taken by the licensee should be discussed in the licensee's justification of the reliability of its containment inerting system. You are requested to provide such a submittal for Oyster Creek at a time such that the modifications can be completed in the Cycle 12R outage. This submittal should also discuss the modifications listed in the enclosed SE.

The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,



Jack N. Donohew, Jr., Project Manager
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Enclosure:
As stated

cc w/enclosure:
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Oyster Creek Nuclear Generating Station

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