



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

January 27, 1986

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

Dear Mr. Fiedler:

SUBJECT: OYSTER CREEK CONTAINMENT PURGE AND VENT VALVE REPLACEMENT
CANCELLATION - REQUEST FOR ADDITIONAL INFORMATION

Re: Oyster Creek Nuclear Generating Station

In a letter dated September 24, 1985, you proposed to cancel your commitment to replace the large containment purge and vent valves in the Cycle 11 Refueling (Cycle 11R) outage. The staff is reviewing your request and finds that it needs additional information to complete its review. Questions detailing this needed information are enclosed and must be responded to before the review can continue.

You are requested to provide the additional information by March 7, 1986, so that the staff may complete its evaluation before the commencement of the Cycle 11R outage. A copy of the enclosed questions was sent to M. Laggart of GPU Nuclear (GPUN) and discussed by telephone with him and other GPUN personnel on January 15, 1986. An acceptable alternative to providing this information by the above date and to your commitment for the valve replacement is to propose a technical specification requiring the containment purge and vent valves to be closed whenever the reactor is in the power operation and hot shutdown modes. To meet your commitment, the technical specifications must be effective before restart from the Cycle 11R outage. An acceptable technical specification is provided in Enclosure 2.

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Mr. P. B. Fiedler

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January 27, 1986

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,

Original signed by:

John A. Zwolinski, Director
BWR Project Directorate #1
Division of BWR Licensing

Enclosures:

1. Request for Additional Information
2. Technical Specification

cc w/enclosure:
See next page

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Mr. P. B. Fiedler
Oyster Creek Nuclear Generating Station

Oyster Creek Nuclear
Generating Station

cc:

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ENCLOSURE

REQUEST FOR ADDITIONAL INFORMATION

OYSTER CREEK NUCLEAR GENERATING STATION

DOCKET NO. 50-219

CONTAINMENT PURGE AND VENT VALVE REPLACEMENT CANCELLATION

1.0 Historical Background

The licensee has been maintaining the purge and vent valves mechanically restricted from opening more than 30° in accordance with NRC's interim position as stated in the October 23, 1979 NRC letter. GPU committed to replace all containment purge and vent valves with qualified valves rather than qualifying the existing valves in their letter of July 31, 1980. A subsequent letter from GPU dated August 27, 1981 requested an extension in the schedule for replacing the containment purge and vent valves from December 1, 1981 to the end of their cycle 10 reload refueling/maintenance outage. The licensee's April 19, 1984 submittal included a report number 4-01-82 by the Clow Corporation containing operability demonstration information for the Clow replacement valves. This information was reviewed and found to demonstrate operability for the Clow valves from the 90° full open position under LOCA conditions in the proposed installation configuration (BNL TER dated July 26, 1984). The licensee's September 24, 1985 submittal proposes cancelling the replacement of the existing valves with Clow valves and contains an analysis (TDR 266, Revision 1) that is intended to demonstrate valve operability for the existing valves under combined seismic and DBA/LOCA conditions from a restricted valve opening angle of 30° open.

2.0 Preliminary Evaluation

The existing valves are shown in the table below:

<u>Valve Number</u>	<u>Size (Inches)</u>	<u>Location</u>	<u>Manufacturer</u>	<u>Use</u>
V27-1	18	Outside containment	Centerline	Drywell vent
V27-2	18	Outside containment	Centerline	Drywell vent
V27-3	18	Outside containment	Rockwell	Drywell purge
V27-4	18	Outside containment	Centerline	Drywell purge
V23-13	8	Outside containment	Continental	Drywell purge
V23-14	8	Outside containment	Fisher	Drywell purge
V23-15	8	Outside containment	Continental	Torus purge
V23-16	8	Outside containment	Fisher	Torus purge
V28-17	12	Outside containment	Fisher	Torus vent
V28-18	12	Outside containment	Fisher	Torus vent

The analysis included in the September 24, 1985 submittal from GPU (Technical Data Report TDR Number 266, Revision 1, dated May 9, 1985) has been examined and does not contain sufficient information for a complete review of operability demonstration under the postulated accident conditions for the presently installed valves.

The items listed below are intended as a guide for completing the information required to perform a valve operability review in order to comply with NUREG-0737 Item I.1.E.4.2.4.

- Dynamic Torque Coefficients (C_T). The licensee states on page 5 of TDR 266, Revision 1, that the torque coefficients used in his analysis may be obtained from the valve manufacturers and references a letter. This is inadequate for a review. Acceptable documentation in this area should include test reports that detail how the torque coefficients were determined including a description of the test setup, test disc size and shape, aspect ratio, flow conditions, media used, etc., so that confidence can be established in the torque coefficients used in predicting valve dynamic loads.
- Valve Installation Configuration. The licensee's analysis TDR 266, Revision 1 does not provide this information for each valve. Typically, the following information is required:
 1. Direction of flow.
 2. Disc closure direction.
 3. Curved side of disc, upstream or downstream (asymmetric discs).
 4. Orientation and distance of elbows, tees, bends, etc. within 5 pipe diameters of valve.
 5. Shaft orientation.
 6. Distance between valves.
- Dynamic Torque Analysis. The licensee provides in TDR 266, Revision 1 the methodology used for his torque analysis and references Oyster Creek Purge and Vent Valve Analysis Calculation Book Calculation 1302 SX-322C-A07. The referenced calculations, which should include assumptions used should be provided for the reviewer.
- Actuator Torque Margin. In order to demonstrate adequate torque margin by comparing valve torque loads during closure to actuator closure torque availability, curves or incremental data, such as spring torque at various valve angles need to be provided by the licensee.
- Seismic Qualification of Valves. The licensee has not indicated by referencing documentation that the valve assemblies are seismically qualified.

As an example, for further guidance in understanding the type of information required for operability demonstration, the licensee should examine the Clow "Purge and Vent Valve Operability Qualification Analysis Report" Number 4-01-82 submitted to the NRC with the CPU letter of April 19, 1984. In addition, Attachment A to the November 29, 1982 NRC letter (V. Noonan to D. Crutchfield) can be used as a guide for valve operability demonstration requirements.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT PURGE SYSTEM (Optional*)

LIMITING CONDITION FOR OPERATION

3.6.1.8 The drywell and suppression chamber purge supply and exhaust isolation valves shall be closed.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3

ACTION:

With a drywell or suppression chamber purge supply and/or exhaust isolation valve open, close the open valve(s) within one hour or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.8 The drywell or suppression chamber purge supply and exhaust isolation valves shall be verified to be closed at least once per 31 days.

<p>*This specification may be modified if the facility design conforms to Branch Technical Position CSB (6-4) of the Standard Review Plan.</p>
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