

February 10, 2004

NRC 2004-0014
10 CFR 50.55a

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Point Beach Nuclear Plant, Unit 1
Docket 50-266
License No. DPR-24
VRR 03-01, Request for Extension To Perform Inservice Testing of 1RH-861C

Pursuant to 10 CFR 50.55a(a)(3), Nuclear Management Company, LLC, (NMC) requests the NRC staff to authorize relief on a one-time basis from the requirements of subarticle I 1.3.5 of Mandatory Appendix I of the American Society of Mechanical Engineer's Operation and Maintenance (OM) Code, 1995 Edition with 1996 Addenda. Relief is requested for performing inservice testing (IST) of relief valve 1RH-861C as detailed in Relief Request VRR 03-01 (Enclosure 1). This relief request applies to Unit 1 of Point Beach Nuclear Plant (PBNP). Compliance with the OM Code would result in hardship or unusual difficulty without a compensating increase in the level of quality or safety, and the proposed alternative will provide reasonable assurance of pump and valve operability. The duration this alternative would be in effect is until the end of refueling outage U1R29, currently scheduled to commence October 8, 2005.

NMC requests the NRC to review and approve the subject relief request on or before April 1, 2004 to support refueling outage activities presently scheduled to commence April 3, 2004. If necessary, NMC personnel will be available to meet with your staff to discuss any concerns you may have.

This letter contains no new commitments and no revisions to existing commitments.



Gary D. Van Middlesworth
Site Vice-President, Point Beach Nuclear Plant
Nuclear Management Company, LLC

Enclosures

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cc: Administrator, Region III, USNRC
Project Manager, Point Beach Nuclear Plant, USNRC
Resident Inspector, Point Beach Nuclear Plant, USNRC
PSCW

**ENCLOSURE 1
VRR 03-01
REQUEST FOR EXTENSION TO PERFORM
INSERVICE TESTING OF RELIEF VALVE 1RH-861C**

COMPONENT IDENTIFICATION

UNIT: 1
SYSTEM: Residual Heat Removal (RHR)
VALVE: 1RH-861C, P-10A/B RHR Pump Suction Header Relief Valve to
Containment Floor Drain
CLASS: 2

ASME CODE TEST REQUIREMENT

American Society of Mechanical Engineers (ASME) Operation and Maintenance (OM) Code, 1995 Edition with 1996 Addenda, Mandatory Appendix I, Inservice Testing of Pressure Relief Devices of Light-Water Reactor Power Plants, subarticle I 1.3.5(a), Test Frequency, requires that class 2 and 3 pressure relief valves "shall be tested every 10 years, starting with initial electric power generation... The test interval for any individual valve shall not exceed 10 years".

RELIEF REQUESTED

Relief is requested from performing IST testing of valve 1RH-861C every 10 years. PBNP proposes to extend the 10-year test interval by approximately 7 months.

BACKGROUND

NMC had originally planned for the NRC-observed dry-run of initial use of Transnuclear TN-32PT dry cask storage system to be conducted at PBNP in December 2003, with subsequent first loading of this system in January 2004. Approval of the Certificate of Compliance (CoC) of the TN-32PT system was expected to have been obtained by November 3, 2003 by mechanism of direct rulemaking. However, comments received during the public comment period were deemed significant by the NRC, resulting in delay of CoC approval until January 7, 2004. The delay, coupled with the limited availability of the necessary loading equipment and constraints on plant resources, necessitated delay of the PBNP loading campaign until fall 2004.

NMC explored the option of cleaning the spent fuel pool to free enough spaces to restore full core offload capability. Assuming vendor availability, the cost of this complicated effort would have been approximately \$650,000. Undesired dose would also have resulted from this effort.

NMC decided that it cannot reasonably perform a full core offload during the U1R28 refueling outage. Instead, a fuel shuffle will be performed during the outage. As a result of this decision, work which required the core to be fully offloaded, such as testing of relief valve 1RH-861C, cannot be performed.

BASIS FOR RELIEF

1RH-861C performs the following functions:

Safety-Related Functions:

- 1RH-861C shall remain closed below its setpoint to maintain the "closed-system" containment integrity of the RHR system during a LOCA.

Non-Safety-Related QA Functions (Augmented Quality):

- 1RH-861C shall provide Low Temperature Overpressure Protection (LTOP) of the RCS while the RCS is solid and the RHR system is in operation.

Non-Safety-Related, Non-QA Functions:

- 1RH-861C shall automatically open to prevent over-pressurization of the RHR system supply line piping in the event of RCS leakage past motor operated valves RH-700 and RH-701 during normal power operation.
- 1RH-861C shall remain closed below its setpoint to prevent an inadvertent loss of coolant when the RHR System is operating.

PBNP RHR has only one suction path. In order to perform this IST surveillance test on 1RH-861C, the RHR system must be inoperable. Valve 1RH-861C, one of two valves used as a pressure relief device for the supply side of the RHR pumps cannot be removed for testing with the RHR system in operation. Since there will be fuel in the reactor pressure vessel throughout U1R28, the RHR system will be in operation and the valve cannot be removed for testing.

Valve 1RH-861C was last tested on March 24, 1995. In order to comply with the requirements of the OM Code, the next required test is due by March 23, 2005. NMC desires to delay the testing of this valve until the next refueling outage. The next Unit 1 refueling outage, U1R29, is currently scheduled to commence October 8, 2005, which would mean the next test would be performed approximately 10 years, 7 months after the last test.

A review of the past maintenance history of 1RH-861C indicated that its performance is highly reliable. Indications of valve degradation would be apparent by the accumulation of boric acid at the discharge of the valve, which is open to the containment. However, no leakage has been observed. The favorable maintenance history for this valve provides reasonable assurance that the valve will continue to perform its function to open. Testing of this valve in 1990 and 1995 showed it lifted at 510 lbs each time. This

is within the plus or minus 3% allowed by I 1.3.5(c)(1) (Enclosure 2). A review of the test history of this valve showed no drift between the tests. This same type of testing performed on the Unit 2 valve shows essentially the same results. The trending would indicate that the valve setting did not change between tests.

A review of the INPO Equipment Performance and Information Exchange System (EPIX) was also performed. This review identified only one instance of this type of valve exhibiting problems. The problem occurred with a valve used in a similar application and with the lift setting outside the technical specification limits. The valve setting was higher than its initial setting by 6.5% (474 psig instead of the required 445 psig), but still well within the design limits of the piping system, which was 600 psig at 400 degrees. Therefore, there is reasonable assurance that the valve was continuing to perform its function.

NRC Safety Evaluation dated May 20, 1980 states that the RHR relief valves can be considered a diverse and redundant relief system to the pressurizer power operated relief valves (PORV). 1RH-861C is considered a backup to the LTOP function performed by the PORVs.

The valve lift setpoint and valve capacity are determined by LTOP considerations. The function to provide over pressure protection for the RHR system piping is bounded by the LTOP considerations. Redundant system piping protection is provided by 1RH-861B, a 3/4" inlet by 1" outlet relief valve. This valve is set at 600 PSIG, which is also within the design specifications of this system.

This system is normally in operation only for shutdown cooling. When the plant is operating, this system and valve 1RH-861C are isolated from the RCS by normally closed motor operated valves at each end of the decay heat removal trains, and by two check valves and a motor operated valve in series at each safety injection line. The suction piping from the RCS, and therefore 1RH-861C, is also isolated from the RWST suction piping by manual isolation valves with series check valves. Therefore, during normal operation, essentially no pressure is present. During a LOCA accident condition, this valve remains isolated, as the alignment of the plant will be such that suction is off the RWST and later switched to the containment sump, which is not connected to this portion of the system. Also during a LOCA accident, should the containment penetration be heated to the point where the water in the pipe should become pressurized, the other relief valve, 1RH-861B, which is in close proximity to 1RH-861C and in the same portion of the system, will lift at 600 psig.

Another method of controlling the RCS pressure is through the use of the PORVs. These valves can be used to control the RCS pressure and thus the RHR system pressure when the need arises. The PORVs are the primary method of reducing pressure in the system.

Because this system is normally in operation only to support shutdown cooling, the valve is not challenged during normal plant operation. Therefore, its useful life can be assumed to be somewhat extended. Since the valve is not being used at pressure most of the time, it does not experience significant challenges resulting in wear. The additional seven months between tests will not adversely affect the system function, as the valve is not being used during that time period. Additionally, Valve 1RH-861B, which was last tested on April 8, 1998, is within its 10-year testing interval.

PROPOSED ALTERNATIVE TESTING SCHEDULE

Pursuant to 10 CFR 50.55a(a)(3)(ii), NMC proposes extending the 10-year test frequency of 1RH-861C to test the valve during the U1R29 refueling outage instead of during the U1R28 refueling outage. The extended test interval is requested for a one-time basis only. The proposed alternative of extending the test interval for valve 1RH-861C will provide an acceptable level of quality and safety. Performing the test during the U1R28 outage will be a hardship without a compensating increase in safety.

DURATION RELIEF IS REQUESTED

The duration this alternative would be in effect is until the end of refueling outage U1R29. The period between tests will be approximately 10 years, 7 months.

ENCLOSURE 2
HISTORY OF VALVE 1RH-861C SETPOINT DATA
FOR PBNP UNITS 1 AND 2

Unit 1:

<u>WO Number</u>	<u>Date</u>	<u>Setting</u>	<u>Remarks</u>
00M046A	1/19/1976	625	Initial installation
00M455A	6/13/1978	500	Resetting valve to 500 lbs for better over pressure protection
044951A	4/21/1985	see remarks	Leak check only
0019318	4/19/1990	510	As found setpoint test
9501965	3/24/1995	510	As found setpoint test

Unit 2:

<u>WO Number</u>	<u>Date</u>	<u>Setting</u>	<u>Remarks</u>
00M046A	1/19/1976	625	Initial installation
00M456A	6/13/1978	500	Resetting valve to 500 lbs for better over pressure protection
0015499	10/18/1989	see remarks	Leak check only
9408024	10/7/1994	510	As found setpoint test valve
0307185	11/21/2003	508	As found setpoint test valve
0200287	10/16/2003	500	New valve installed