June 3, 2008

MEMORANDUM TO: Thomas G. Hiltz, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

FROM: Jack N. Donohew, Senior Project Manager /RA/
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF INTERACTIONS WITH THE LICENSEE ON ITS RELIEF REQUEST SUBMITTED MAY 15, 2008, FOR FORT CALHOUN (TAC NO. MD8722)

By letter dated May 15, 2008 (LIC-08-0066, Agencywide Documents Access and Management System (ADAMS) Accession No. ML081370578), Omaha Public Power District (OPPD, the licensee) requested relief from the U.S. Nuclear Regulatory Commission (NRC) to certain requirements of Section III of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (the ASME Code) with regard to flaw acceptance criteria for the Fort Calhoun Station, Unit 1 (Ft. Calhoun). The relief request applied to the Fisher Control valve procured as a replacement for the outlet header level control valve LCV-383-2 on the safety injection and refueling water tank (SIRWT). The relief from the ASME Code, in accordance with Section 50.55a of Title 10 of the *Code of Federal Regulations* (10 CFR 50.55a), was requested for only one operating cycle, which would start from the end of the current 2008 refueling outage (RFO).

The licensee stated in its letter that approval of this relief request was urgent in that its was needed within three days, prior to May 19, 2008, to support restart from the 2008 RFO.

On May 16, 2008, the licensee informed the NRC staff that it would be installing the valve on May 16th, with the testing of the valve scheduled for the night of May 17th. Since the schedule was to install the reactor vessel head late on May 18th, the licensee stated it needed to have a final NRC decision approving the relief request on or before May 18th to continue the restart from the outage.

A call was held with the licensee on May 16, 2008, and a request for additional information (RAI) with eight questions that had been emailed to the licensee on May 16, 2008, was discussed. The RAI questions are Enclosure 1. The licensee stated that it would provide the Westinghouse flaw tolerance analysis that was referred to in its May 15, 2008, application and the responses to the RAI questions by email to the NRC staff around noon on May 17, 2008. In addition, the licensee said that it would follow up the RAI response email with a letter containing the same information. A second call was scheduled for the morning of May 18, 2008.

The emails with the Westinghouse analysis and the licensee's responses were emailed to the NRC staff on May 17, 2008, and reviewed by the NRC staff. A letter providing this information to NRC was submitted on May 17, 2008 (LIC-08-0067, ADAMS Accession No. ML081400663).

In the licensee's response to the RAI Question 2, dated May 17, 2008, the licensee stated that it was unable to procure an acceptable qualified replacement valve for LCV-383-2 which is needed for installation prior to startup from the current 2008 RFO. Replacement of the existing valve is necessary because it exhibited excessive leakage during Technical Specification surveillance testing. Repair of the installed valve is not considered possible at this time because of the long lead time for obtaining replacement parts to refurbish the current valve. Therefore, a commercial grade replacement valve was procured. The valve was rejected due to surface discontinuities discovered during the liquid penetrant examination as part of the dedication process. The licensee stated that, based on the results of the flaw tolerance analysis, the minimum wall thickness calculation, and radiography conducted, the replacement valve with existing surface discontinuities provides a level of quality and safety consistent with the ASME Code requirements.

A conference call was held with the licensee on May 18, 2008, to discuss the responses to the RAI questions. The attendance list for the call is Enclosure 2. During the call, the NRC staff stated that the responses to the RAI questions were acceptable; however, it requested that the licensee clarify its response to the RAI Question 2. RAI Question 2 stated that the licensee should have requested its relief pursuant under 10 CFR 50.55a(a)(3)(ii) instead of under 10 CFR 50.55a(a)(3)(i) and, therefore, the licensee needed to more completely describe how compliance with the ASME Code would result in a hardship without a compensating increase in the level of quality and safety. The regulation 10 CFR 50.55a(a)(3)(ii) states that "…Compliance with the specified requirements of this section would result in hardship or unusual difficult without a compensating increase in the level of quality and safety…"

In the conference call on May 18, 2008, the NRC staff requested clarification on the resulting hardship and lack of a compensating increase in the level of quality and safety in the above response to RAI Question 2. The licensee clarified that the hardship is due to 6 weeks of delivery time for the replacement parts to refurbish the existing valve. The delay would significantly affect the start up of Ft. Calhoun from its current RFO. The licensee also stated that the compensating increase in the level of quality and safety of installing a defect-free valve is small in comparison to installation of the degraded valve because the licensee has performed flaw tolerance analysis, the minimum wall thickness calculation, radiography and increased the frequency of visual examination of the valve. Therefore, the licensee concluded that installing a defect-free valve (i.e., compliance with the requirements) would result in hardship or unusual difficult without a compensating increase in the level of quality and safety.

On the basis of the NRC staff review of the information submitted on May 17, 2008, and the clarifying information described above that was provided during the call on May 18, 2008, the NRC staff concluded that the relief requested for Valve LCV-383-2 was in accordance with 10 CFR 50.55a(a)(3)(ii). Based on the information obtained, the NRC staff granted verbal authorization during the call on May 18, 2008, for the use of the proposed relief request in the licensee's letters dated May 15 and 17, 2008, for one operating cycle.

This ended the conference call.

Docket No. 50-285

Enclosures: 1. Request for Additional Information
2. List of Attendees on May 18, 2008, Call

A conference call was held with the licensee on May 18, 2008, to discuss the responses to the RAI questions. The attendance list for the call is Enclosure 2. During the call, the NRC staff stated that the responses to the RAI questions were acceptable; however, it requested that the licensee clarify its response to the RAI Question 2. RAI Question 2 stated that the licensee should have requested its relief pursuant under 10 CFR 50.55a(a)(3)(ii) instead of under 10 CFR 50.55a(a)(3)(i) and, therefore, the licensee needed to more completely describe how compliance with the ASME Code would result in a hardship without a compensating increase in the level of quality and safety. The regulation 10 CFR 50.55a(a)(3)(ii) states that "…Compliance with the specified requirements of this section would result in hardship or unusual difficult without a compensating increase in the level of quality and safety…"

In the licensee's response to the RAI Question 2, dated May 17, 2008, the licensee stated that it was unable to procure an acceptable qualified replacement valve for LCV-383-2 which is needed for installation prior to startup from the current 2008 RFO. Replacement of the existing valve is necessary because it exhibited excessive leakage during Technical Specification surveillance testing. Repair of the installed valve is not considered possible at this time because of the long lead time for obtaining replacement parts to refurbish the current valve. Therefore, a commercial grade replacement valve was procured. The valve was rejected due to surface discontinuities discovered during the liquid penetrant examination as part of the dedication process. The licensee stated that, based on the results of the flaw tolerance analysis, the minimum wall thickness calculation, and radiography conducted, the replacement valve with existing surface discontinuities provides a level of quality and safety consistent with the ASME Code requirements.

In the conference call on May 18, 2008, the NRC staff requested clarification on the resulting hardship and lack of a compensating increase in the level of quality and safety in the above response to RAI Question 2. The licensee clarified that the hardship is due to 6 weeks of delivery time for the replacement parts to refurbish the existing valve. The delay would significantly affect the start up of Ft. Calhoun from its current RFO. The licensee also stated that the compensating increase in the level of quality and safety of installing a defect-free valve is small in comparison to installation of the degraded valve because the licensee has performed flaw tolerance analysis, the minimum wall thickness calculation, radiography and increased the frequency of visual examination of the valve. Therefore, the licensee concluded that installing a defect-free valve (i.e., compliance with the requirements) would result in hardship or unusual difficult without a compensating increase in the level of quality and safety.

On the basis of the NRC staff review of the information submitted on May 17, 2008, and the clarifying information described above that was provided during the call on May 18, 2008, the NRC staff concluded that the relief requested for Valve LCV-383-2 was in accordance with 10 CFR 50.55a(a)(3)(ii). Based on the information obtained, the NRC staff granted verbal authorization during the call on May 18, 2008, for the use of the proposed relief request in the licensee's letters dated May 15 and 17, 2008, for one operating cycle.

This ended the conference call.
Docket No. 50-285
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2. List of Attendees on May 18, 2008, Call

DISTRIBUTION:

PUBLIC	RidsNrrDorl Resource	RidsNrrPMMMarkley Resource
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ADAMS Accession No.: ML081410005 NRC-001

OFFICE	NRR/LPL4/PM	NRR/LPL4/LA	NRR/DCI/BC(A)	NRR/LPL4/BC
NAME	JDonohew	JBurkhardt	JTsao	THiltz
DATE	6/3/08	5/22/08	06/02/08	6/3/08

OFFICIAL RECORD COPY

REQUEST FOR ADDITIONAL INFORMATION

RELIEF REQUEST FOR VALVE REPLACEMENT

SAFETY INJECTION AND REFUELING WATER TANK

FORT CALHOUN STATION UNIT NO.1

DOCKET NUMBER 50-285

TAC NO. MD8722

By letter dated May 15, 2008, the Omaha Public Power District (the licensee) requested relief from certain requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) with regard to flaw acceptance criteria. The DRAFT relief request applies to the Fisher Control valve procured as a replacement for the currently installed safety injection and refueling water tank (SIRWT) outlet header level control valve LCV-383-2. To complete its review, the Nuclear Regulatory Commission (NRC) staff requests the following additional information.

1. The licensee requested relief from ASME Code, Section III. It is staff's understanding that relief cannot be requested from the ASME Code, Section III. Discuss rationale for requesting relief from the ASME Code, Section III. The NRC staff believes that the relief should be requested under ASME Code, Section XI. The licensee needs to include applicable requirements of ASME Code Section XI in Section 3 (page 2) of its relief request.

2. In the cover letter, the licensee requested relief from 10 CFR 50.55a(a)(3)(i). This paragraph of the regulation is not the appropriate provision for the subject valve because the defective new valve can be repaired but the licensee chose not to repair the valve due to certain concerns. The relief should be requested under 10 CFR 50.55a(a)(3)(ii) which states that "… Compliance with the specified requirements of this section would result in hardship or unusual difficult without a compensating increase in the level of quality and safety…" Therefore, the licensee needs to describe the hardship and discuss that compliance with the ASME requirements (installing a defective-free valve versus a defective valve) would not provide compensating level of quality and safety.

3. ASME Code, Section XI, Code Case N-513-2, "*Evaluation Criteria for Temporary Acceptance of Flaws in Moderate Energy Class 2 or 3 Piping Section XI, Division 1,*" paragraph 1.0(e) specifies frequent periodic inspections of no more than 30-day intervals be conducted to determine flaw growth. Alternatively, if a flaw growth evaluation is performed, the periodic examination of no more than 90-day intervals be conducted to verify the flaw growth analysis predictions. The flaw evaluation method described in N-513-2 may not be applicable to the subject valve issue. However, the NRC staff believes that the licensee needs to provide additional examination. (a) Discuss additional examinations and associated inspection methods (e.g., visual examination or ultrasonic

examination) once the defective valve is installed. (b) Discuss whether the valve will be covered with insulation. If so, discuss whether insulation will be removed during augmented examination. (c) Discuss whether a daily walkdown will be performed to ensure that no leakage will occur.

4. The licensee needs to describe the worst-case scenario of valve failure and discuss why the valve would not reach the worst-case scenario.

5. The licensee needs to demonstrate the structural integrity (flaw tolerance) of the defective valve and the operability of the defective valve to perform its intended function (i.e., operability determination) for the upcoming operating cycle.

6. The licensee needs to provide a code of record for the current ISI interval, the specific ISI interval (fourth interval?), and the duration of the ISI interval with an ending date.

7. Provide a detailed description of the flaw locations, flaw sizes, and number of indications. The indications were found by dye penetrant. Discuss why ultrasonic examination was not performed.

8. Once the new valve is installed in the field, discuss the tests that will be performed to demonstrate its operability, the testing conditions and acceptance criteria. Discuss how the new valve will be installed (welded or bolted to the pipe?).

LIST OF ATTENDEES PARTICIPATING IN CONFERENCE CALL OF MAY 18, 2008

WITH OMAHA PUBLIC POWER DISTRICT

ON FORT CALHOUN STATION, UNIT 1

	NAME	AFFILIATION
NRC:	J. Donohew	NRC/NRR/DORL
	T. Hiltz	NRC/NRR/DORL
	M. Markley	NRC/NRR/DORL
	J. Tsao	NRC/NRR/DCI
	G. Replogle	NRC/RIV/DRP
Licensees:	Tom Matthews	OPPD
	Rich Clemens	OPPD
	Joe Gasper	OPPD
	Steve Andersen	OPPD
	Pat Downey	OPPD
	Donna Lippy	OPPD

Where:

DCI	=	Division of Component Integrity
DORL	=	Division of Operating Reactor Licensing
DRP	=	Division of Reactor Projects
NRC	=	Nuclear Regulatory Commission
NRR	=	Office of Nuclear Reactor Regulation
OPPD	=	Omaha Public Power District
RIV	=	NRC Region IV

ENCLOSURE 2