

July 18, 2007

LICENSEE: Omaha Public Power District (OPPD, the licensee)
FACILITY: Fort Calhoun Station
SUBJECT: MEETING WITH REPRESENTATIVES OF OMAHA PUBLIC POWER DISTRICT FOR FORT CALHOUN STATION

A meeting was held on Thursday, June 28, 2007, between the Nuclear Regulatory Commission (NRC) staff and the licensee for Fort Calhoun Station. The meeting was held at the request of the licensee to discuss the licensee's plans to upgrade or uprate the auxiliary building and building crane for the crane to lift a 100-ton spent fuel cask. The licensee has not submitted a license amendment request (LAR) on the crane, and this meeting is not to discuss a licensing action involving Fort Calhoun Station (FCS) under review by the NRC. The notice for the meeting was issued on June 12, 2007.

Enclosure 1 is the list of attendees. Enclosure 2 is the material handed out by the licensee. There was no handout from the NRC staff. Enclosure 3 is a list of abbreviations in the licensee's handout.

The agenda for the licensee's presentation at the meeting, page 2 of Enclosure 2, was the following:

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|---|-----------------------------|----------------------------------|
| • | Background | Pages 3 through 9 of Enclosure 2 |
| • | Analysis | Pages 10 through 46 |
| | Auxiliary Building Analysis | Page 10 |
| | Crane Static Analysis | Page 29 |
| | Crane Dynamic Analysis | Page 35 |
| • | Licensing Review | Pages 47 through 49 |
| • | Schedule | Pages 50 through 52 |
| • | Summary | Page 53 |
| • | Questions | Page 54 |

In the presentation on the background for the meeting, the licensee provided a history of the licensing basis of the auxiliary building crane (i.e., what NRC has approved for the crane). The crane was originally rated to lift 100 tons. However, the crane was licensed as a single-failure-proof crane to lift 75 tons, in the NRC safety evaluation (SE) dated May 22, 1984, because 75 tons was the original projected maximum cask weight to be lifted.

The plant layout for the auxiliary building, top view and side view, is shown on pages 6 and 7 of Enclosure 2. The location of the building with respect to the entire FCS plant is shown in the lower part of the picture on page 12. A picture of the crane in the building is on page 13.

In 2004, the licensee elected to use a modified transfer cask design to remain below the 75-ton single-failure-proof-rated capacity of the crane; however, the licensee was not able to incorporate the modified cask within its license under the criteria in 10 CFR 72.48 and use the cask without NRC review and approval. The licensee loaded a limited number of casks pursuant to an exemption submitted to and granted by NRC. For future cask loadings, one of the licensee's options, which are shown on page 9 of Enclosure 2, is to uprate the crane to being capable of lifting a design load of 105 tons. Even though the crane is only currently licensed to lift 75 tons, the licensee explained that uprating the crane to a single-failure-proof capacity of 105 tons was considered achievable. This uprating of the crane would also involve the auxiliary building because it is the building that supports the crane and thus the load the crane lifts.

The analyses that the licensee presented in the meeting involved the following: (1) the structural analysis of the auxiliary building (the auxiliary building analysis), (2) the mechanical analysis of the crane (the crane static analysis), and (3) the seismic design of the crane (the crane dynamic analysis).

In its presentation on licensing, the licensee explained that the evaluation that is required to be performed in accordance to 10 CFR 50.59 (the 50.59 evaluation) to allow a licensee to make a change to its plant (i.e., the change to design load of the crane and building) without NRC review and approval has not been completed. However, the licensee stated that it appeared at this time that, based upon the information given in its earlier presentation on the auxiliary building and crane and the codes and standards taken from the current FCS licensing basis, the crane and auxiliary building might be able to be uprated to 105 tons without the requirement for an LAR submittal. However, the licensee has not completed its 10 CFR 50.59 evaluation and had requested the meeting with NRC to keep the NRC informed of this change to the plant and to address any NRC comments regarding the licensee's plans to uprate the crane.

The NRC staff stated that, at this time, it did not have any concerns regarding the licensee's approach for uprating the crane to a design load of 105 tons. However, the NRC staff stated that it was not endorsing or concurring on a conclusion that the plant change can be done without NRC review and approval. The licensee, after completing a 10 CFR 50.59 evaluation, must decide this. The criteria in the regulations whereby a licensee is required to obtain approval from NRC before making a change to a facility are given in 10 CFR 50.59(c)(2). The NRC staff noted that the licensee, in reviewing the safety evaluations issued by NRC on the FCS crane and similar cranes, should also consider whatever margins that the NRC assumed in its safety evaluations. The proposed uprate of the crane and building may meet all the codes and standards in the FCS licensing basis, but the proposed uprate could reduce the safety margins below what the NRC assumed in its safety evaluations.

In its presentation on schedules, the licensee discussed the chart on page 51 of Enclosure 2. The licensee explained that the chart shows an NRC LAR review because it has not been decided to not submit an LAR. This meeting with NRC and the licensee's decision on whether to submit an LAR or not is shown on the lower half of the chart. The chart shows the licensee's decision date is on or about the October 1, 2007, stated on page 9 of Enclosure 2. Although the NRC review of an LAR for the crane uprate is shown on the chart, the licensee, as stated above, has not decided that it will submit an LAR to NRC.

The licensee then summarized its presentation and opened the meeting to questions or comments from the NRC staff. In particular, the licensee wanted comments on how it had defined the uprating of the crane and building within the FCS licensing basis. It was in this part of the meeting that the NRC staff made its statement given above on the 10 CFR 50.59 evaluation to be performed by the licensee for this plant change. The NRC staff and the licensee completed their discussion and the meeting was closed.

Three members of the public were in attendance. A Public Meeting Feedback form was given to each person, and one form was handed back. This form and any comments received in the future on this meeting will be forwarded to the NRR Senior Communications Analyst, who will forward then to the Office of the Executive Director for Operations.

Please direct any inquiries about this meeting to me at 301-415-1307, or by e-mail to jnd@nrc.gov.

/RA/

Jack Donohew, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No: 50-285

Enclosures: 1. List of Meeting Attendees
2. Licensee's Handout
3. List of Abbreviations

cc w/encls: See next page

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Jack Donohew, Senior Project Manager
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April 2006

LIST OF ATTENDEES AT MEETING OF JUNE 28, 2007

WITH OMAHA PUBLIC POWER DISTRICT

	NAME	AFFILIATION
NRC:	J. Donohew	NRC/NRR/LPLIV
	T. Hiltz	NRC/NRR/DORL
	S. Jones	NRC/NRR/SBPB
	G. Thomas	NRC/NRR/EMCB
	D. Tang	NRC/NMSS/SFST
Licensee:	T. Matthews	OPPD
	B. Van Sant	OPPD (participated by phone)
	R. Short	OPPD (participated by phone)
	J. Nelson	Ederer
	E. Landis	Ederer
	S. Parkhurst	Material Handling Equipment, Inc.
	L. Marsh	Abam Engineers
	S. Singh	Sargent & Lundy
Public:	M. Conley	Platts/Mcgraw-Hill
	W. Johnston	Transnuclear
	T. Neider	

where:

- DORL = Division of Operating Reactor Licensing
- EMCB = Mechanical and Civil Engineering Branch
- LPLIV = Plant Licensing Branch IV
- NMSS = Office of Nuclear Material Safety and Safeguards
- NRC = Nuclear Regulatory Commission
- NRR = Office of Nuclear Reactor Regulation
- OPPD = Omaha Public Power District
- SBPB = Balance of Plant Branch
- SFST = Division of Spent Fuel Storage and Transportation

LICENSEE'S HANDOUT FOR JUNE 28, 2007, MEETING

ADAMS* ACCESSION NO. ML071790654

The NRC staff's handout (54 pages) contained the following:

1. Cover Page (Page 1)
2. Background (Pages 3 through 9)
3. Analysis (Pages 10 through 46)
 - Auxiliary Building Analysis (Page 10)
 - Crane Static Analysis (Page 29)
 - Crane Dynamic Analysis (Page 35)
4. Licensing Review (Pages 47 through 49)
5. Schedule (Pages 50 through 52)
6. Summary (Page 53)
7. Questions (Page 54)

* = Agencywide Documents Access and Management System

ENCLOSURE 2

LIST OF ABBREVIATIONS

ASCM	=	FCS alternate seismic criteria and methodologies, which are documented in FCS report EA-FC-94-003 and approved by NRC in its letter and safety evaluation dated April 16, 1993.
A.S.M.E.	=	This is referring to the American Society Of Mechanical Engineers Committee On Cranes For Nuclear Facilities
CMAA 70	=	Crane Manufacturers Association of America Specification #70, "Specifications for Top Running Bridge & Gantry Type Multiple Girder Electric Overhead Traveling Cranes."
EA-FC-94-003	=	FCS document entitled "Alternate Seismic Criteria and Methodologies"
EDR-1	=	Ederer's topical report, "Nuclear Safety-Related Extra Safety and Monitoring (X-SAM) Cranes," dated August 3, 1983, for the X-SAM trolley of the FCS crane
FCS	=	Fort Calhoun Station
FEM	=	finite element method
GT STRUDL	=	name of computer code
LAR	=	license amendment request
Mathcad	=	computer code
MCL	=	maximum critical load, the maximum load a single-failure-proof crane is rated to handle while conforming with the single-failure-proof design criteria.
NOG-1	=	ASME NOG-1 is an industry standard entitled "Rules for Construction of Overhead and Gantry Cranes." The word "NOG" refers to nuclear overhead or gantry cranes.
NUREG 0554	=	technical report prepared by NRC staff entitled "Single-Failure- Proof Cranes for Nuclear Power Plants," dated May 1979.
OBE	=	operating basis earthquake
P&H	=	Pawling & Harnischfeger, manufacturer of the FCS crane.
R.G. or RG	=	NRC Regulatory Guide: RG 1.61, "Damping Values for Seismic Design of Nuclear Power Plants," and RG 192, "Combining Modal Responses and Spatial Components in Seismic Response Analysis."
Reg. Guide	=	NRC Regulatory Guide: RG 1.104, "Single-Failure- Proof Cranes for Nuclear Power Plants."
ROPE	=	wire rope
SER	=	NRC safety evaluation report, or safety evaluation, issued by NRC to a licensee by letter.
SRSS	=	square root of the sum of the squares
SRP	=	NRC Standard Review Plan in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants": SRP 3.7.2, "Seismic System Analysis."
SSE	=	safe shutdown earthquake
USAR	=	FCS Updated Safety Analysis Report
10 CFR	=	Title 10 of the <i>Code of Federal Regulations</i>
10 CFR 72.48	=	Section 72.48, "Changes, tests, and experiments," of Part 72 of Title 10 of the <i>Code of Federal Regulations</i>
50.59	=	Section 50.59, "Changes, tests, and experiments," of Part 50 of Title 10 of the <i>Code of Federal Regulations</i>