

## **NRR-PMDAPEm Resource**

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**From:** Sebrosky, Joseph  
**Sent:** Thursday, June 05, 2014 10:49 AM  
**To:** medwards@oppd.com; bhansher@oppd.com  
**Cc:** Rankin, Jennivine; George, Andrea; Davidson, Evan  
**Subject:** Fort Calhoun request for additional information associated with license amendment request to revise the method for controlling raw water intake cell level during floods (MF2591)

Mr. Hansher, and Mr. Edwards,

By letter dated August 13, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13231A178) Omaha Public Power District (OPPD) submitted a license amendment application to revise the method for controlling raw water intake cell level during floods. The U.S. NRC staff has reviewed the information provided in your August 13, 2013, license amendment request and determined that additional information is required in order to complete its review. These requests for additional information (RAIs) can be found below. Please provide a response to these RAIs by July 7, 2014. Should the NRC determine that the RAIs found below are no longer necessary prior to the dates found above, the request will be withdrawn. If circumstances result in the need to revise the requested response date, please contact me or Jennie Rankin.

Sincerely,

Joe Sebrosky  
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Nuclear Regulatory Commission  
Division of Operating Reactor Licensing  
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REQUEST FOR ADDITIONAL INFORMATION  
ON LICENSE AMENDMENT FOR REVISING THE METHOD  
FOR CONTROLLING RAW WATER INTAKE CELL LEVEL  
FORT CALHOUN STATION  
OMAHA PUBLIC POWER DISTRICT  
DOCKET NO. 50-285

### **SBPB RAI 1**

The revised intake cell water level control method assumes that the travelling screen sluice gates are fully closed. If a sluice gate cannot be closed, then the protection of the Raw Water (RW) pumps from flooding is not ensured by the proposed method for controlling the intake cell water level. Provide the following information regarding the sluice gates.

- a) How are the sluice gates verified closed in the event of a flood?
- b) Should a sluice gate fail to travel to the fully closed position, operators must be able to set it into place by other means. Describe the methods available to move a sluice gate that fails to travel to the fully closed position.

- c) What steps are taken to ensure the sluice gates are maintained free of obstructions (e.g., ice or debris)?
- d) Inadvertent opening of a sluice gate during a flood render the proposed method for controlling intake cell water level ineffective. What steps will be taken to prevent the inadvertent opening of a sluice gate during a flood?

**SBPB RAI 2**

The revised intake cell water level control method must be established before floodwaters impact the RW pumps. In the event of a design basis flood, sufficient time must be available to perform the operator actions associated with establishing the revised intake cell water level control method. Provide the following information regarding the ability to perform operator actions within the available time.

- a) Are the actions to establish and verify the effectiveness of the revised intake cell water level control method maintained in procedures?
- b) Following a plant shutdown in response to flood warnings or river level, how much time is available to establish the proposed intake cell water level control method before the RW pumps are impacted by flood waters?

- c) Following a plant shutdown, how much time passes before the RW system cooling loads can be met by the flow provided using the revised intake cell water level control method? (i.e., with only one RW pump in operation, as described in the Updated Final Safety Analysis Report (UFSAR) and License Amendment Request (LAR).
- d) Is the revised intake cell water level control method capable of supporting two RW pumps in operation?

### **SBPB RAI 3**

In order to maintain acceptable water level in the intake cells during a flood, the Intake Cell Flood Water Inlet Valves are operated manually to adjust inflow. Changes in the RW system flow rate and changes in the external flood elevation may require valve adjustments to adjust inflow. Therefore, operators should be available to take prompt action to control the intake cell water level. Provide the following information regarding the capability of operators to control the intake cell water level.

- a) Will an operator be stationed at the valves for the duration of a flooding event?
- b) Indication of the intake cell water level is necessary to necessary for the operator to determine whether valve adjustments were effective. Is there indication of the intake cell water level visible to the operator adjusting the Intake Cell Flood Water Inlet Valves? Describe how the indication provided is adequate to support the operator's assignment.
- c) Is the operator protected from outside conditions while stationed at the intake structure?

### **SBPB RAI 4**

Potential failures or inadvertent actuation of equipment may require actions to correct the intake cell water level by manipulating the Intake Cell Flood Water Inlet Valves. Sufficient time must be shown to be available for an operator to perform corrective actions before the RW pumps are impacted by high or low water levels. For the following scenarios, describe how much time is available to identify the problem and perform corrective actions:

- a) With water level being maintained at the minimum acceptable level allowed by procedure, an additional RW pump is started.
- b) With water level being maintained at the minimum acceptable level allowed by procedure, flow through one fully open Intake Cell Flood Water Inlet Valve ceases.
- c) With water level being maintained at the maximum acceptable level allowed by procedure, one additional Intake Cell Flood Water Inlet Valves goes full open.

### **SBPB RAI 5**

The trash rack backwash piping must remain intact throughout a flooding event to ensure the water level in the intake structure can be maintained. Fort Calhoun UFSAR Appendix N requires components that "resist failure that could prevent any SC-1, -2, or -3 equipment from performing its nuclear safety function" be classified as Non-Nuclear Safety Class 1. Appendix N also states that the requirements for Non-Nuclear Safety Class 1 equipment "are established on a case-by-case basis commensurate with the specific NNS function performed."

The LAR states that the trash rack backwash piping "has been designed to withstand hydrostatic loads due to the flood event which are bounded by normal operation design loads." Describe the normal design loads of the trash rack backwash piping.

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**From:** Sebrosky, Joseph

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