Ex 20

Bluemner, Steven D

From: Cooper, Richard D
Sent: Tuesday, September 27, 2005 4:35 PM
To: Pierie, Thomas C; Hawkins, Chris P
Cc: Scott, Jeffrey T; Bluemner, Steven D; Ferguson, Robert W; Witt, Warren A
Subject: Wind created waves at UR

DNR Exhibit No. 20
Case No(s). ES-2007-0479
Date 8-01-07 Rptr KF

Guys,

This last weekend, Sunday, I had a couple of guys here on overtime on the AM getting ready for a ceremony we had Monday at the plant. The guys also did a walkdown of the plant to make sure everything was OK for us to ignore the plant on Monday.

When the guys went up to the upper reservoir they witnessed what they described as a Niagara Falls at the Northwest corner of the reservoir. We had some small rock washed away at the base of the parapet wall which left a trench a foot deep in some areas. The wave action on the upper reservoir surface was caused by some high winds when "Rita" was going through the area. The immediate action taken was to put the units on in Generate to lower the upper reservoir level to stop the falls.

Monday we didn't get a chance to look at things due to the all day ceremony. And anyway, load dispatch took the units off prematurely at 1595 elev, I guess due to load coming in on the system.

This morning Jeff and I went up to the upper reservoir when the controls indicated we were at 1596 elev. There were no waves on the surface but we could see a couple of wet areas on the west side of the reservoir parapet walls. We pulled the vehicle up to these wet areas and climbed on top of the vehicle to see the water level. We were surprised to see the level within four inches of the top of the wall. It was above the top batten strip holding the vinyl on. This level is at least six inches higher than what I remember from when we first came back from the controls upgrade last fall. Jeff looked at the level xmtrs when we got back to the plant and found one of the three reading a foot higher than the other two. When he took that one xmtr out of the average we now read about 1596.2. I still feel we are about another .4 feet higher than that. Jeff then added a .4 adjustment to the two remaining xmtr average making the current level now read 1996 .6. We'll check on what this does to the actual level the next several mornings.

Two things we can do or should do. Overflowing the upper reservoir is obviously an absolute "NO"-"NO". From the wave action on this past Sunday we need to

1) Permanently lower the present operating level of 1596 to 1595 **or**
2) Add a wind indicator to the upper reservoir so that an alarm can warn the Osage operators that the level needs lowering ASAP when at 1596 elev.

Jeff hasn't looked into the program that much yet but we need to know or alarm when one of the xmtrs is out of range of the other two. A foot difference is too much for one xmtr to be out.

Overflowing the upper reservoir or wave action causing the reservoir to overflow can eat away at the base of the parapet wall foundation and could cause a collapse of a parapet wall section and then it would be all down hill from there- literally. The dam would severely erode and cause eventual failure of the dam. Those kind of headlines we don't need.

Lowering the current operating level from 1596 to 1595 wouldn't be popular. I'm not sure what that would mean in $$ of generation. But we need to add additional monitoring and tighten up existing controls if we're going to continue to operate at 1596. I'm asking for some help and direction. For now we have built in the .4 fudge factor and switched out the one xmtr. We will be looking into all the xmtr indications soon to

see if they have all drifted off some. Maybe we need to establish periodic calibration checks on all our xmtrs instead of waiting for one to fail or go into alarm. We haven't done that on this new system. We've been trying to eliminate work not expand on it.

nks,
Rick