

Re: Just in case you had a hydrologically uninteresting day...

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- *From:* Jo Schaper <joschapern4ospam@xxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Fri, 16 Dec 2005 19:32:57 -0600
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Al Zenner wrote:

Jo Schaper <joschapern4ospam@xxxxxxxxxxxxxxxxxxxxx> wrote in news:11q4ehrb6fhk614@xxxxxxxxxxxxxxxxxxxxx:

Hard to say at this early stage of the game if it was equipment or human failure. Or just the natural tendency of water to want to run downhill. Quickly.

That natural tendency is what engineering such a project is all about. When a facility is properly designed and operated it should be able to provide tremendously long service with failures limited to active mechanical and electrical components.

I'm not a conspiracy theorist, but the explanation of this failure smells of a bunch of coverup to me. First, the lower reservoir should never be designed to hold more water than is safe in the upper reservoir. That's elementary safety which belongs in all design. Next, either the walls are supposed to contain water to the brim, or spillways are supposed to be present maintaining contained water at a safe level based on the original design.

Remember that this thing was finished 40 years ago, and at the time, this was the largest such facility in the world. As I recall the explanation for the lower reservoir being essentially connected to the East Fork of the Black River, it was to provide a water source to compensate for natural evaporation at the upper reservoir, and losses due to leakage. If you have a dual reservoir system, in which the top and bottom are the

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same size, a)how do you fill it and b) how to you keep it filled and c)how do you compensate for 55 acres of rainfall at a time? (Not being smart alecky, just don't quite understand.)

The spillway notion has been brought up several times, but given the geography of the mountain, (which is pretty darn steep) I'm not sure how one would manage such a spillway. Definitely would add to the engineering cost, considering it's offset from the Black River valley.

These are passive safety considerations which are supposed to exist in the original design. If they were present then there is no possible way to overflow a reservoir to the point that it fails and I retract my earlier comments about employee performance being causal.

It appears that the wall which failed was not cored out rhyolite porphyry as were the other walls. This is an area of 1.5 Ga igneous ignimbrite and tuff ashfall/ashflows which were secondarily reheated over hundreds of millions of years, compressed, and devitrified into a whaling tough silicate stone. Most of the walls are composed of this stuff, which was also used dumped along the outside walls to make it look like a purple flat topped volcano. Apparently the blown out wall had a lot of fill used in the original construction. Not good.

The more I hear about this systems failure the more I dislike the stories I am hearing. The corporation will probably settle because they have a sense they can negotiate a better settlement than it is likely to cost them when a jury makes the awards should they force the claims through legal proceedings. And the way utility companies deal with this sort of loss is to pass the costs on to customers. The CEO can claim a victory (when they're calculating his bonus) by pointing out how much he saved the shareholders through his clever bargaining skills.

Hey, when on the day of a failure like this, the CEO comes out and says "Oops, we had a failure," that sort of shoots their corporate lawyers in their briefs, doesn't it?

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