



## Opening Remarks for Session W14 Deterministic vs. Probabilistic Assessment of Component Integrity

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\* The opinions expressed here are those of the author.  
They do not represent an official position of the NRC.

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## The Motivation of Engineers



The risk/reward calculation for engineers looks something like this:

- **RISK:** Public humiliation and the death of thousands of innocent people.
- **REWARD:** A certificate of appreciation in a handsome plastic frame.



The Dilbert Principle  
Scott Adams, © 1996



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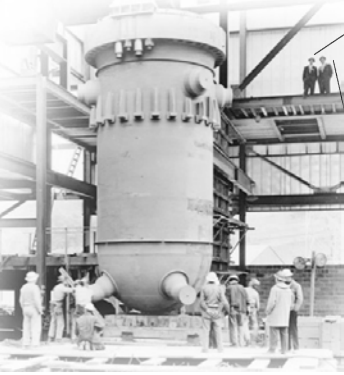
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## Stuff Engineers Do



We need to get this plant *finished* so there will be lights at the STEELERS game Sunday night. Since we don't know much about the RPV material, we'll use conservative models to be super-safe. Surely these models will be revised as knowledge improves.

Sure thing ... you just keep telling yourself that.

Photo Credit: <https://www.asme.org/about-asme/who-we-are/engineering-history/landmarks/47-shipping-of-nuclear-power-plant>

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Nobody wants to be this person



## Officials lift dam evacuation

Flood risk eases, but residents urged to be ready to leave again

AP/WIDE WORLD

Officials lifted an evacuation order Tuesday for nearly 200,000 California residents who live below the nation's tallest dam after declaring the risk of catastrophic collapse of a damaged spillway had been significantly reduced.

State County Sheriff Jerry Brown said residents can return home immediately. State safety officials said they have the control of the lake behind Oroville. They said the spillway emergency spillway will not be needed to handle runoff from an upcoming storm.



Water rushes forth from the Oroville Dam's main spillway on Tuesday.

Residents returning home "have to be vigilant," said "there is the prospect that we will be on another evacuation order if the situation changes," the sheriff said.

Concern about the spillway was first raised in 2005. The

spillway had led to flooding. Fixing the spillway would

Federal officials determined that nothing was wrong and the emergency spillway "would perform as designed."

Environmental groups

insisted that the spillway

be replaced with a

spillway that would

be able to handle

runoff from an

upcoming storm.

Officials working around the

dam reported progress Tuesday in

repairing the damaged spillway

and reducing the water level by

at least 6 feet at the reservoir.

Gov. Jerry Brown has asked

for a \$1-billion budget

to fund the project.

OST MILLIONS OF CALIF. S.  
**Federal officials determined that nothing was wrong and the emergency spillway "would perform as designed."**  
The group's work

The Washington Post Express, 15 Feb 2017

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