From: Dean, Bill
Sent: Thursday, June 05, 2014 10:46 AM
To: Heinly, Justin; Werkheiser, David; Dodson, Douglas; Perry, Neil; Rich, Sarah; Rutenkroger, Scott
Cc: Nieh, Ho; Scott, Michael; Lorson, Raymond; Trapp, James; Lew, David; Bower, Fred; McKinley, Raymond; Schroeder, Daniel; Burritt, Arthur; Dentel, Glenn; Powell, Raymond; DeFrancisco, Anne; Warnek, Nicole; Greives, Jonathan; Schmidt, Wayne; Cahill, Christopher; Cook, William; Daun, Travis; Bickett, Brice
Subject: FW: St. Lucie Jan 9 Reactor Auxiliary Building Flooding Video

So in reflecting on this video and the chronology of an actual recent St. Lucie flooding event described below (I am sure that Jon is having some flashbacks from the Susquehanna event a few years ago seeing the water pour out of electrical boxes) that happened earlier this year during a massive rainstorm, I can't help but think about how you have recently identified vulnerabilities at your sites related to flooding protection that have helped to preclude such an event from occurring. Thanks for being vigilant and finding these vulnerable areas so they could be addressed before the incipient event occurs. That would be too late to find out the problem exists.

BILL

From: McCree, Victor
Sent: Tuesday, May 27, 2014 1:33 PM
To: Johnson, Michael
Cc: Leeds, Eric; Dean, Bill; Pederson, Cynthia; Dapas, Marc
Subject: St. Lucie Jan 9 Reactor Auxiliary Building Flooding Video

Mike,

Attached, as we discussed, is the video of the St. Lucie Auxiliary Building Flooding event on January 9, 2014. We are completing the SDP on this event and it is likely to be greater-than-green. As I shared during your last Direct Reports meeting, flooding vulnerabilities remain a concern to me…..

Here's a synopsis of what occurred at St. Lucie:

- On January 9th, St. Lucie experienced a severe 5-hr rain event between 1400 and 1900, during which ~7 inches of rain fell in the area.
- At 1803 hrs, the licensee declared a UE based on HU1 *Natural or Destructive Phenomena Affecting Protected Area* and, HU1.5 *Visual sightings by station personnel that water levels are approaching storm drain system capacity*.
- At 1630 Unit 1 entered the AOP for aux building flooding. Storm water was entering the -0.5 ft elevation of the reactor auxiliary building through a conduit that was connected to an electrical box (see gray electrical box in the video). This water intrusion created in 1-2 inches of water on -0.5 ft elevation (~50,000 gal) for several hours.
- The licensee was able to manage this flooding by periodically cycling remotely operated drain valves that allowed the water to go to the safeguards room (ECCS) sump [note: this action was not included in their flood mitigation procedure]. Storm water stopped leaking from the conduit at ~ 2100 hrs.
- Portable pumps were installed in both units' condenser pits to remove the water. The B.5.b pump was used to remove water from the Unit 1 condenser pit which had more water to remove.
- The licensee determined that flood waters entered the RAB through degraded or missing conduit seals in the open condenser pits. Although water in these pits normally drain to through storm drains to overflow basins south of the plant, the storm water drains backed up, allowing storm water to flood the open condenser pits and enter the Aux Building. **[Note: these degraded and missing penetration seals were not identified during the Fukushima walkdowns].**
- The licensee removed blockage that allowed the basins to drain to the South overflow basin; established a flow path from the south overflow basin to the retention pond; licensee cleaned out the 36 inch pipe connecting the two. The licensee also opened up a gate valve that drained down the retention pond to the intake.

More to come.

Vic