

Meeting Notes:

Worst Case is a seismic event up to 1 month after shutdown: 30 minutes to do something before reaching temperatures of 200 C.

Best Case, we'll have up to two hours to get some mitigative actions in place.

Concerns brought out by Mark and Pat:

- (1) How much foam needed to extinguish the fire? Have to keep a backup supply.
- (2) The spent fuel pool would require fire brigade to develop a 20' layer of foam on top of the spent fuel assemblies. This will not work because as fire brigade sets up nozzles to apply foam, the heat will consume the foam at a rate faster than it could be applied.
- (3) Manpower. The average fire brigade response time is 20 minutes. Worst case, we have 30 minutes to get in apply some mitigation actions. How do we intend to set up foam generators around the SFP? Worst case, no person is going to be able to get into the SFP to set anything up. Even for brief amounts of time due to increasing radiation levels.
- (4) How do we intend to get hoses into the SFP area? Requires some planning on how to get a 500' hose from a fire truck to the Aux. Bldg.
- (5) The foam and reflooding are just temporary measures. Eventually, after the seismic event, something has to happen long-term (covering the spent fuel with sand or dirt).
- (6) Look at all extinguishing agents. Not just foam. That is limiting what is available. Examples: MetalX (need tons of it), water mist or water spray systems hooked up to SW (seismically qualified).
- (7) Is this feasible from a cost perspective.
- (8) Provide a train available for reflood?

Just look at the physics:

- (1) Steam will vaporize foam and never penetrate into the assembly.
- (2) Can't apply enough foam to keep up with consumption rate of foam due to heat generation.
- (3) There would be holes in the liner for a seismic event. This would allow fresh air to be entrained into the spent fuel pool, which will feed the fire. Even if the foam is completely covering the upper portions.
- (4) Steam jets could form and destroy the foam layer that is being applied. Never get to 20' depth layer of foam due to faster foam consumption rate.

My thoughts:

- (1) Despite NEI claims of us trying to require more than necessary, we owe it to ourselves to be thorough and consider all possibilities. I think we should maybe look into all extinguishing methods. Come up with any recommendations that look worthwhile pursuing, are cost effective, and easily implemented. If we don't have any, then we could say there is nothing to

4/20

do. All efforts rely on preventative measures that are in place? In the case of 3 X SSE, there is little that anybody can really do.

(2) Have NEI discuss with us for a change, what plans they have regarding mitigative capabilities? In the event that they were unable to recover pumps, what plans would they have in place? (Call for state help, US gov't help).

(3) Can't requirement new equipment due to nature of problem.

(4) Contract it out and have somebody look at mitigative actions. Not telling them about foam/reflood specifically so we can't bias the outcome of the report. In this time period, it might take 1 month to complete something that could be factored into the final draft report. Just to say we had a contractor look at it, here are our conclusions.

Look at all mitigative actions?

Consider radiological hazards if it requires men to operate equipment?

If it requires water source, what might be available?

Could it be implemented? Is it a rather inexpensive and quick method?

Would any requirements have to be changed? If so, where?