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From: Richard Rosano, NRR
To: Glenn Tracy, John Grobe
Date: Mon, Jun 19, 2000 5:16 PM
Subject: Re: Quad Cities OSRE - Use of Reactor SDP

Jack/Glenn,
The answer to this problem could be caught up in the history of the Sg SDP. When it was written, it was tested against historical cases in safeguards enforcement. It was not tested against exercise findings, in fact, it wasn't until late in the developmental stage that the decision block for "exercises" was added, to be consistent with other SDPs. I believe we should search for the answer in this area.

>>> John Grobe 06/19 2:12 PM >>>
Glenn,

I think after reflecting on this issue over the weekend that we have some higher level concerns about using the reactor SDP for the Quad Cities OSRE results that need to be considered before we formally proceed with the Quad Cities case.

I understand that this is the last of the OSREs as we have done them in the past and that we will be moving forward with the new security inspection program. We need to consider the appropriateness of handling these OSRE findings differently that others completed at other plants. I anticipate that these type of transition questions will occur occasionally during the initial implementation where due to the nature of the transition we are making we will occasionally run into aspects of our inspection program that will be bi-modal; some of the old and most of the new. These should be completely straightened out by the time we go to full implementation next year.

I recognize that our current program has us apply security inspection findings to the reactor SDP for determination of the risk significance, but upon having the opportunity to try this approach with the Qual Cities OSRE findings, I think there are some structural and analytical problems that arise.

When considering findings coming out of an OSRE, we are by definition setting the initiating event frequency to 1.0, and not the frequencies identified in the various SDP worksheets. For example, when an engineering or resident inspection finding results in identification of equipment actually inoperable, they apply that finding through the SDP to "colorize" the finding looking at considerations of redundant equipment availability, etc. These considerations include the frequency of the initiating events that would cause dependence on that equipment. By assuming through an OSRE finding that equipment is unavailable, we do two things: (1) we assign the initiating event frequency of having the "attack" to 1.0 which is clearly not the case (had the attack occurred, the outcome is as we demonstrated through the drill, but the attack did not occur and it has some likelihood of occurring not addressed in the reactor SDP), and (2) we include in the consideration the initiating event frequencies of the various accident scenarios by using the reactor SDP sheets.

By doing this, we are really looking at probablity (CCDP), not frequency (CDF), when we assume that the drill was an actual occurrence and do not factor in the likelihood of that occurrence happening. In addition, once you get into the phase 3 review, the issue gets very difficult when looking at remediating/recovery activities that may be performed by other staff, extent of damage to the equipment, etc.

The safety concern at Quad is that the protective strategy failed. By developing the target sets to be protected, the licensee defined that destroying thase target sets was a significant issue. We need to focus on corrective action and restoring sufficient security/safety margin at the facility. The licensee and staff agree on a deterministic basis that this is an issue that needs to be resolved. We should understand their corrective actions and do followup assessment like we did on the other OSREs; and then move on.

We could use this as a case study of applying the reactor SDP to security issues and engage your staff, the risk folks in Rich Barrett's branch, and the program/risk folks on Bill Dean's staff to try it and refine our

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application of the reactor SDP to security findings going forward. Applying the "new" SDP to this "old" inspection program outcome where its fit to the circumstances is tenuous could result in controversial issues. The "CCDP" numbers coming out of this application of the SDP will be significantly higher than the "CDF" numbers that were used to set the color thresholds and we could end up with false indications of very risk significant (red) findings.

We need to discuss these issues. I recommend that we go forward with the panel on Thursday to flesh these out and make a decision on what process is best to proceed with.

Jack

CC: Cornelius Holden, Doug Coe, Geoffrey Grant, James Caldwell, James Creed, Jim Dyer, Marc Dapas, Peter Wilson, Richard Barrett(...)