Chang, Richard

From: Chang, Richard
Sent: Monday, February 07, 2011 8:04 AM
To: Stutzke, Martin
Cc: Schaperow, Jason; Tinkler, Charles
Subject: RE: PRA Information for Surry

Marty,

Any luck in digging into items # 2 and 3 below?

Thanks,
Richard

From: Stutzke, Martin
Sent: Tuesday, February 01, 2011 5:00 PM
To: Chang, Richard; Guzman, Richard
Cc: Schaperow, Jason; Tinkler, Charles
Subject: RE: PRA Information for Surry

I'll look into this later this week (RES All-Hands meeting, etc.). Some quick information:

1) Surry has a Level 2 and Level 3 PRA for ISLOCA – some information is reported in the SAMA analysis for license renewal (this is dated – circa 2003). The contribution to the CDF from ISLOCAs was 1.6E-6/y (which is also the ISLOCA release frequency). Note that SGTRs were separately reported, and thus not included in the previous sentence.
2) I'll have to do some digging on how they assess ISLOCA risk (modeling assumptions, etc.).
3) More digging to find the LERF.

Marty

From: Chang, Richard
Sent: Tuesday, February 01, 2011 4:17 PM
To: Guzman, Richard; Stutzke, Martin
Cc: Schaperow, Jason; Tinkler, Charles
Subject: PRA Information for Surry

Marty and Rich,

For the ISLOCA scenario for Surry:

From our site visit from Surry- we recently were told by the licensee that the catastrophic failure of 2 inline one-way check valves had a frequency of 1x 10-8. We were then told that the catastrophic failure of a one-way check valve and leak-by of the other as well as a failure of a third isolation valve had a probability of 7x10-7.

However, Our current report states that the ISLOCA scenario does not meet the SOARCA screening criterion of 1×10-7 per reactor-year for a bypass
event. The SPAR model assigns it a frequency of 3x10-8/reactor-year, and the licensee's PRA assigns it a frequency of 7x10-7/reactor-year. The SPAR model's frequency does not meet the SOARCA screening criterion
for bypass events of 1x10-7/reactor-year, but the licensee's PRA frequency does. Therefore, it was retained for analysis. The main reason for the difference is that the licensee assumed the likelihood of subsequent low head

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injection piping rupture was 1, while the NRC estimated it to be 0.1.

So my questions are this:

1. Does Surry have a level 2 or 3 analysis for ISLOCA?
2. How do they treat ISLOCA?
3. What is their internal events LERF frequency?

I am trying to avoid going back to plant...so if you guys could help me out, I would appreciate it.

If not, I will try to give the Plant PRA guys a ring.

Thanks,

Richard Chang
Program Manager
RES/DSA/SPB
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