From: James Trapp
To: Alan Rubin, David Lew
Date: Fri, Jul 7, 2000 8:50 AM
Subject: Fwd: RE: IP2 Risk Assessment

Per your request, attached is a copy of the licensee's intial estimate of the CCDP for the Feb. 15th SGTL.

A/249

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From: James Trapp
To: Steven Long
Date: Mon, Mar 20, 2000 8:53 PM
Subject: Fwd: RE: IP2 Risk Assessment

Attached is the IP2 SGTR IE Frequency.

CC: Peter Wilson

From: "Gaynor, Douglas" <GAYNORD@coned.com>
To: "'James Trapp'" <JMT1@nrc.gov>
Date: Thu, Feb 24, 2000 2:19 PM
Subject: RE: IP2 Risk Assessment

Jim,

The frequency of core damage events per year resulting from Steam Generator Tube Rupture (SGTR) Initiating Events
in our model is 1.0 E-6 out of a total frequency of 2.4 E-5 core damage events per year in the current Internal Events baseline PSA model. Since the frequency of the SGTR initiating event itself is 1.3 E-2 per year, the conditional core damage probability is:

$$\frac{1.0\ E\text{-}6}{1.3\ E\text{-}2} = 7.7\ E\text{-}5$$

This is based on the year average unavailabilities and failure rates of the mitigating systems. Although, so far as I am aware, there was no relevant mitigating equipment out of service prior to the event, this would not reduce the above calculated CCDP significantly for this event.

Since this is a conditional core damage probability, it is not readily combined with the year average CDF associated with all the other initiating events which could have, but did not occur, to get a total "instantaneous" risk for the plant at that time.
If we had to force fit it, we could:

1) Simply add it to the year average value {(i.e. 2.4 E-5 + 7.7 E-5 = 1.01 E-4}

or, I think more appropriately,

2) Limit the impact of other initiating events to the 24 hour period following the SGTR (24 hours is the typical mission time considered for PSAs and is also approximately the time it took us to get out of the ALERT).
This would result in a CDF following the event of:

{2.4 E-5 x (1 day / 365 days) + 7.7 E-5} = {6.6 E-8 + 7.7 E-5} ~ 7.7 E-5

It can be seen that in this case, the other events would have no significant effect on the plant risk configuration during the period after the SGTR until we reached cold shut down.

I have been asked here to relate this to the daily plant risk status that we generate here using the SAFETY MONITOR. The Safety Monitor is designed to see the impact of taking equipment out of service and is not intended to be used to determine conditional core damage probability of events as we have done above. If we simply examine the impact of core damage frequency determined above, however, in both Cases 1 and 2, the resulting CDF is between the YELLOW color cutoff of
5.2 E-5 and the RED color cutoff of 5.2 E-4 (i.e. it would be in the YELLOW band).

Give me a call if you want specific dominant sequences or just want to talk.
If I'm not at 734-5336, try 788-3279 (or my beeper 917-802-7080)

P.S. It is not clear to me how, if at all, the Significant Determination

Process can be used for events like this since it appears to be geared toward inspection findings and violations. If you have any insights on this, please let me know.

Please pass this on to Tom as well. I don't have his email address. Maybe you can send it to me.

Doug

> -----Original Message-----
> From: James Trapp [SMTP:JMT1@nrc.gov]
> Sent: Thursday, February 24, 2000 11:05 AM
> To: GAYNORD@coned.com
> Subject: IP2 Risk Assessment
>
> It's us again! When you have a chance, Tom and I would appreciate a copy
> of your preliminary risk evaluation of the recent SGTR event. We do have
> your initial estimate but would appreciate any supporting documents you
> may have. Thanks!
>
> Jim Trapp 610-337-5186
> Tom Shedlosky 610-337-5171
>
>

Received: from igate.nrc.gov ([148.184.176.31])
by smtp (GroupWise SMTP/MIME daemon 4.1 v3)
; Thu, 24 Feb 00 14:18:07 EST
Received: from nrc.gov
by smtp-gateway SMTPœ id OAA04401
for <JMT1@nrc.gov>; Thu, 24 Feb 2000 14:19:24 -0500 (EST)
Received: from m020exg1.coned.com by m020-fw2.coned.com
via smtpd (for igate.nrc.gov [148.184.176.31]) with SMTP; 24 Feb 2000 19:19:28 UT
Received: by m020exg1.coned.com with Internet Mail Service (5.5.2448.0)
id <FM8WSMNM>; Thu, 24 Feb 2000 14:19:30 -0500
Message-ID: <61781CF310F3D011816A00805FEAA50C01EAAF2A@w071ex01.coned.com>
From: "Gaynor, Douglas" <GAYNORD@coned.com>
To: "'James Trapp'" <JMT1@nrc.gov>
Subject: RE: IP2 Risk Assessment
Date: Thu, 24 Feb 2000 14:19:27 -0500
Return-Receipt-To: "Gaynor, Douglas" <GAYNORD@coned.com>
MIME-Version: 1.0
X-Mailer: Internet Mail Service (5.5.2448.0)
Content-Type: text/plain