

Greenwood, Carol

From: Gibson, Kathy - RES
Sent: Tuesday, November 09, 2010 5:44 PM
To: Bush-Goddard, Stephanie
Subject: Re: for your eyes only....

Yes maybe it is a matter of making staff work more visible to us managers. Can OPA help with making it plain language? Also should make it a Q&A for the comm plan?

From: Bush-Goddard, Stephanie
To: Gibson, Kathy
Sent: Tue Nov 09 17:32:19 2010
Subject: for your eyes only....

Regarding Terry's e-mail to Chris....

...now we need to figure out how to get a "plain language" response to Brian....we are waiting to see what Chris Lui will say about Terry comments below...we will probably rearrange to make it plain language.

Additionally, this is what I mean about Terry being very smart.....this would have taken me about 2 days to research...he can do it in 10 minutes.....

-Steph

From: Brock, Terry
Sent: Tuesday, November 09, 2010 4:27 PM
To: Lui, Christiana
Cc: Bush-Goddard, Stephanie; Gibson, Kathy; Uhle, Jennifer; Anzenberg, Vered
Subject: RE: Periodic with Chairman Jaczko

Chris,

Below is some of my thinking for a draft response to Brian's question, re: Marty's question. Let me know what you think.

Not really for LERF and CDF since these are subsidiary goals derived from the prompt fatality quantitative health objective (QHO) safety goal for reactor accidents. Brian is correct in the limited use of the cancer study to determine if we need to adjust the QHOs for latent cancer fatality. The answer to Marty's question is actually simpler than that. As you probably remember from our Risk Task Group days in developing the latent cancer QHO for NMSS, all we have to do is check the annual cancer mortality death rates published by the Centers for Disease Control. A quick check of the CDC website for the latest year of cancer mortality data in 2007 found the annual cancer mortality death rate was 186.6 deaths per 100,000 people. This equates to an annual average individual risk of $\sim 2E-3$, multiply that by the 0.1% QHO LCF safety goal and you get $\sim 2 E-6$ annual average individual latent cancer fatality risk. This value is what is being used now and has not reduced significantly—at least at one significant digit—since the original safety goal policy statement was published in 1986. This is consistent with what we found during the RTG work with BNL.

Terry

From: Sheron, Brian
Sent: Tuesday, November 09, 2010 10:19 AM
To: Uhle, Jennifer; Gibson, Kathy; Bush-Goddard, Stephanie; Brock, Terry; Lui, Christiana
Cc: Lyons, James
Subject: FW: Periodic with Chairman Jaczko

Is (or can) the study be designed to obtain the detail needed to answer Marty's question?

From: Virgilio, Martin
Sent: Tuesday, November 09, 2010 9:06 AM
To: Sheron, Brian; Weber, Michael; Sanfilippo, Nathan
Subject: Re: Periodic with Chairman Jaczko

Thanks, Brian. I was thinking about the 2nd objective and the issues around lower cancer fatality risks (from all sources). What if these cancer risks are shown to be an order of magnitude lower? Would we need to reexamine our numerical targets for CDF and LERF, to stay true to the goals and objectives ?

Marty

From: Sheron, Brian
To: Virgilio, Martin; Weber, Michael; Sanfilippo, Nathan
Sent: Tue Nov 09 08:04:57 2010
Subject: RE: Periodic with Chairman Jaczko

Looking back at the safety goals, there were two quantitative objectives:

- 1.) The risk to an average individual in the vicinity of a nuclear power plant of prompt fatalities that might result from reactor accidents should not exceed one-tenth of one percent (0.1 percent) of the sum of prompt fatality risks resulting from other accidents to which members of the U.S. population are generally exposed.
- 2.) The risk to the population in the area near a nuclear power plant of cancer fatalities that might result from nuclear power plant operations should not exceed one-tenth of one percent (0.1 percent) of the sum of cancer fatality risks resulting from all other causes.

The cancer study does not address the first goal, which is focused on risk from severe accidents. As for the second goal, I think the best we can hope for is for the study to show that there is no statistically significant increase in cancer risk (incidence or mortality) to members of the general population living within the vicinity of a nuclear power plant or fuel fabrication facility that is attributable to that facility. Thus, I think all the study will do is be able to conclude that we are meeting the second safety goal.

From: Virgilio, Martin
Sent: Monday, November 08, 2010 3:43 PM
To: Sheron, Brian; Weber, Michael; Sanfilippo, Nathan
Subject: Re: Periodic with Chairman Jaczko

Thanks Brian. Have you/RES considered what impact the NAS Cancer Study might have on the "Safety Goals". Specifically, if the study shows that cancer risk is significantly less today than when we established the quantitative health objectives?

Marty

From: Sheron, Brian

To: Borchardt, Bill; Weber, Michael; Virgilio, Martin; Ash, Darren; Johnson, Michael; Leeds, Eric; Wiggins, Jim; Miller, Charles; Haney, Catherine; Howard, Patrick; Boyce, Thomas (OIS); McCrary, Cheryl; Zimmerman, Roy; Dean, Bill; Reyes, Luis; Satorius, Mark; Collins, Elmo

Sent: Mon Nov 08 14:06:31 2010

Subject: Periodic with Chairman Jaczko

On Monday, November 8th, I had a periodic with Chairman Jaczko.

- 1.) The Chairman asked me if there was anything new regarding the NAS Cancer Study. I told him that as far as I knew, the NAS was still in the Committee selection process, and planned to start Phase I of the study in January. I said I would check and let him know if anything was different.
- 2.) The Chairman noted that the draft SOARCA report was available in ADAMS. I told him the big challenge for us, working with the other offices, will be to decide what to, if anything, with the results, and where do we go in the future.
- 3.) The Chairman asked about our long term aging management research program, especially in light of the fact that Constellation Energy announced they would come in 2019 with applications to extend the licenses of Nine Mile Point and Ginna for an additional 20 years for a total of 80 years of operation. I told the Chairman that we were moving forward with our research program and focusing on the components that could not be replaced (e.g., concrete) or could not be replaced easily (e.g., vessel, internals, cabling, buried pipes) and that we would work closely with NRR to provide them with the regulatory tools they would need to review the applications.
- 4.) The Chairman asked about the security workshop that was held at Sandia recently. I told him that it was primarily a brainstorming session, and that Sandia was preparing a summary record of the meeting which was scheduled to be sent out by the end of November.
- 5.) The Chairman asked if we were prepared to handle license applications for SMRs. I told him that the LWR SMRs (i.e., NuScale) were not a big challenge, since they were using light water, and, for the most part, this is what our regulations are based on. I said that we were working closely with NRO and DOE regarding the NGNP. I said that if we received applications for non-LWRs like the Toshiba 4S sodium reactor, or the Hyperion reactor, we would likely not have a lot of applicable regulatory infrastructure in place. I said that we would likely have to rely heavily on the information provided by the applicants.
- 6.) The Chairman said the staff provided him with a good briefing on the Generic Issue Program. He said he was concerned that the budget process does not capture the regulatory implementation part of the process and was looking at ways to integrate that into the budget process.
- 7.) The Chairman said he wanted to visit INL sometime. I told him we were planning to have the Halden Board meeting at INL in the Spring of 2011 at INL, and that might be a good time to schedule his trip out there. I said we would work with his office to look for times when he was available to travel there.
- 8.) I mentioned that in an Inside NRC article today, it spoke about EPRI and the development of ceramic clad fuel. Their plan was to put fuel rod segments in test reactors by 2015, and full-length rods in commercial reactors by 2020. I said that we have been following the ceramic clad development as part of the long term research program, and would need to see if we needed to do any independent confirmatory research, or if we could do cooperative research with EPRI.
- 9.) Finally, I mentioned the current issue we have with the CABRI reactor in France and the desire of IRSN to extend the testing program and request we increase our financial support. I said that we had made no decision, and that *IRSN was coming to the U.S. in the Spring to make a comprehensive proposal.