

**Guthrie, Eugene**

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**From:** Lamb, John, *NRR*  
**Sent:** Thursday, November 12, 2009 2:26 PM  
**To:** Peter E Ruedel  
**Cc:** Raghavan, Rags; Milano, Patrick; Attard, Anthony; Mendiola, Anthony; Arildsen, Jesse; Monk, Robert; Haag, Robert; Guthrie, Eugene; Pribish, Michael; Bearden, William; Abuseini, Hasan; Nazario, Tomy  
**Subject:** GAO Meeting Held on November 12 at NRC headquarters  
**Attachments:** SRP 4\_3 Rev 2.pdf; SRP 4\_3 Draft Rev 3.pdf; SRP 4\_3 Rev 3.pdf; Tritium Task Force Report.pdf  
  
**Importance:** High

Peter,

This is a follow-up from today's discussion for information requested regarding SRP 4.3 and tritium. I will provide subsequent e-mails regarding the other information discussed.

SRP

Attached, as requested, are Standard Review Plan Section 4.3, "Nuclear Design," Revision 2, Draft Revision 3, and Revision 3.

Below is a link to the SRP from the NRC public webpage.

<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0800/index.html>

Tritium

Below is the link to the info regarding tritium from the NRC public webpage.

<http://www.nrc.gov/reactors/operating/ops-experience/grndwtr-contam-tritium.html>

Attached is the tritium task force report discussed at today's meeting. The most significant conclusion of the tritium task force regarded public health impacts. Although there have been a number of industry events where radioactive liquid was released to the environment in an unplanned and unmonitored fashion, based on the data available, the task force did not identify any instances where the health of the public was impacted.

Below is link to the safety requirements from the NRC public webpage.

<http://www.nrc.gov/reactors/operating/ops-experience/tritium/safety-requirements.html>

Thanks.  
John

-----Original Message-----

**From:** Peter E Ruedel [mailto:RuedelP@gao.gov]  
**Sent:** Monday, November 09, 2009 9:01 AM  
**To:** Raghavan, Rags  
**Cc:** William Horton; Attard, Anthony; Mendiola, Anthony; Lamb, John; Milano, Patrick  
**Subject:** RE: GAO Meeting Discussion Questions

Will do.

Thanks

>>> "Raghavan, Rags" <[Rags.Raghavan@nrc.gov](mailto:Rags.Raghavan@nrc.gov)> 11/6/2009 10:39 AM >>>

Peter:

thanks for the information. I am forwarding this email to Tony Mendiola and Tony Attard our technical staff as well as to our Project staff John Lamb and Pat Milano.

May I request that in your future emails you copy John Lamb and Pat Milano. This will ensure if one of us is not in the office one of will be able to take prompt actions on your email.

thanks

regards

rags

-----Original Message-----

From: Peter E Ruedel [mailto:[RuedelP@gao.gov](mailto:RuedelP@gao.gov)]

Sent: Friday, November 06, 2009 10:08 AM

To: Raghavan, Rags

Cc: William Horton

Subject: GAO Meeting Discussion Questions

Good Morning,

Here are some discussion topics / question that we can use to guide next Thursday's meeting. Please let me know if you have any questions.

Thanks

General

1. How is the NRC involved in NNSA's effort to reestablish U.S. tritium production?

Technical Issues

Historical / Background

2. How was the NRC involved in the R&D and testing of TPBARs? What issues did NRC discover during testing?

3. Initial testing of TPBARs were tests of limited numbers of rods in the reactor core. Please discuss in terms of testing for future operating conditions when plans called for operating with up to 736 TPBARs loaded into the Watts Barr reactor core?

Current

4. Outline the Watts Bar permeation issue from NRC's Perspective.

Discuss NRC regulation of tritium level. What are the limits? Are tritium levels below legal limits? How is the NRC monitoring the situation?

5. Discuss how the NRC is involved in the changes or planned changes made to TPBARs to address the permeation problem.

Licensing and Regulation

6. Discuss the license amendment process for the Watts Bar reactor.

What is the process for writing, reviewing, and approving new handling and operating procedures when irradiating TPBARs at TVA reactors?

Please include any cost information for amending a license.

7. Is TVA applying for a license amendment to irradiate more TPBARs at Watts Bar? Other TVA reactors?
8. Will NRC change it's process for amending a license to allow the irradiation of TPBARs as a result of lessons learned from the Watts Bar experience?
9. How is the State of Tennessee's Division of Radiological Health / Dept of Environment & Conservation involved in the regulation of Watts Bar?
10. What other environmental regulations (state and federal) apply to tritium production at civilian reactors?