

**From:** Michael.Conroy@dot.gov  
**Sent:** Wednesday, April 22, 2009 11:00 AM  
**To:** Meraj Rahimi  
**Subject:** RE: Request for Review of TNBGC-1 Certificate, Rev. Iak

I'm on the 888 #. The 301 # got me the call center, not a conference line.

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**From:** Meraj Rahimi [mailto:Meraj.Rahimi@nrc.gov]  
**Sent:** Wednesday, April 22, 2009 10:11 AM  
**To:** GRANDHOMME Catherine (TN International); Conroy, Michael <PHMSA>  
**Subject:** RE: Request for Review of TNBGC-1 Certificate, Rev. Iak

What we would like to discuss are:

1. Changes to the design, analyses, and assumptions in the areas of structural, materials, containment, shielding, package operation, fabrication, and maintenance since the issuance of Safety Analysis Report, 9990-Z-1-6, Rev. 4.
2. The use of 0.95 for k-effective for determining the array size.

The conference call is set up for 11:00 a.m. (eastern U.S. time), and the bridge line to dial is 301-415-7026 or the toll free 888-455-3620. The passcode is 69208.

thanks,

Meraj Rahimi  
Senior Project Manager  
Licensing Branch  
Division of Spent Fuel Storage and transportation  
U.S. Nuclear Regulatory Commission  
6003 Executive Blvd., Suite 301  
Rockville, MD 20852  
Phone: 301-492-3338  
Fax: 301-492-3348  
e-mail: [meraj.rahimi@nrc.gov](mailto:meraj.rahimi@nrc.gov)

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**From:** GRANDHOMME Catherine (TN International) [mailto:catherine.grandhomme@areva.com]  
**Sent:** Wednesday, April 22, 2009 9:43 AM  
**To:** Michael.Conroy@dot.gov  
**Cc:** Meraj Rahimi  
**Subject:** RE: Request for Review of TNBGC-1 Certificate, Rev. Iak

11.00 a.m for you correspond to 5 p.m. for me, that means in a bit more than 2 hours. If it is correct then it is ok for me.

It would be helpful for better understanding by phone call to have a list of points (if possible detailed points) you want to discuss.  
If you can provide me such list before this phone call, it would be great !

what phone number shall I call ?

catherine

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**De :** Michael.Conroy@dot.gov [mailto:Michael.Conroy@dot.gov]  
**Envoyé :** mercredi 22 avril 2009 14:55  
**À :** GRANDHOMME Catherine (TN International)  
**Cc :** Meraj.Rahimi@nrc.gov  
**Objet :** FW: Request for Review of TNBGC-1 Certificate, Rev. Iak

Catherine - What is your preference?

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**From:** Meraj Rahimi [mailto:Meraj.Rahimi@nrc.gov]  
**Sent:** Wednesday, April 22, 2009 8:45 AM  
**To:** Conroy, Michael <PHMSA>  
**Subject:** RE: Request for Review of TNBGC-1 Certificate, Rev. Iak

We can do it today either at 11:00 a.m. or 1:00 p.m. If not, we can do it Monday or any other day next week.

Meraj Rahimi  
Senior Project Manager  
Licensing Branch  
Division of Spent Fuel Storage and transportation  
U.S. Nuclear Regulatory Commission  
6003 Executive Blvd., Suite 301  
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Phone: 301-492-3338  
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e-mail: [meraj.rahimi@nrc.gov](mailto:meraj.rahimi@nrc.gov)

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**From:** Michael.Conroy@dot.gov [mailto:Michael.Conroy@dot.gov]  
**Sent:** Wednesday, April 22, 2009 8:22 AM  
**To:** Meraj Rahimi  
**Subject:** FW: Request for Review of TNBGC-1 Certificate, Rev. Iak

Meraj- What is your preference for a call time? (I can't do Friday afternoon).

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**From:** GRANDHOMME Catherine (TN International) [mailto:catherine.grandhomme@areva.com]  
**Sent:** Wednesday, April 22, 2009 4:40 AM  
**To:** Conroy, Michael <PHMSA>  
**Cc:** Boyle, Rick <PHMSA>  
**Subject:** RE: Request for Review of TNBGC-1 Certificate, Rev. Iak

Mike,

the criticality study is done with 7 kg of Uranium for content 11.  
Your previous validation limited the weight to 5 kg of Uranium in order to fulfill criterion of 0.95.

It is acceptable for us to limit to 5 kg.

I understand that they may have some difficulties for your review and we are ready if needed to have a conference call with NRC to help for understanding.

We can propose this afternoon 4 or 5 p.m in France (morning for you) but if it is too time short maybe thursday or friday afternoon (in France).

catherine grandhomme

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**De :** Michael.Conroy@dot.gov [mailto:Michael.Conroy@dot.gov]

**Envoyé :** mardi 21 avril 2009 23:50

**À :** GRANDHOMME Catherine (TN International)

**Cc :** rick.boyle@dot.gov

**Objet :** RE: Request for Review of TNBGC-1 Certificate, Rev. Iak

Catherine-

I have had additional discussions with NRC staff. They do have some concerns on your criticality calculations. You used a criterion of  $k\text{-effective} + 3\sigma \leq .98$ , but the US NRC limit is .95. Your calculated results shown for content 11 exceed this NRC limit. Also, they have concerns about allowing other hydrogenous material, with densities less than water, in the package.

Also, looking closer at the table you sent, it is of limited use. I am not sure we have the referenced Previous SAR version. I have only portions of it from our last revalidations. The last full SAR that NRC has on file is the 1998 document 990-Z-1-6, Rev. 4. Therefore, it is difficult for us to determine what, if any, other changes there have been to the design, methodologies, assumptions, or approach that might impact our assessment. This makes doing an expedited review difficult.

NRC is willing to participate in a conference call with you and your colleagues if you think that might be helpful in understanding our concerns and in planning a path forward. Let me know if you wish to do that.

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**From:** Conroy, Michael <PHMSA>

**Sent:** Friday, April 17, 2009 4:32 PM

**To:** 'GRANDHOMME Catherine (TN International)'

**Subject:** RE: Request for Review of TNBGC-1 Certificate, Rev. Iak

Catherine-

Your table is helpful, but it would still be nice to have a listing of the non-editorial changes in the SAR. For instance, I understand there may be some changes in the tiedowns that are not evident in the certificate revisions.

Regarding your April 9<sup>th</sup> propositions, I have reviewed them, but as they pertain to the criticality calculations, I have asked NRC to give me a quick response to them as well. They have given me some preliminary thoughts and I should have more input from them next week.

I hope we can come to an agreement on them, but I can not commit to that yet. I will let you know more next week.

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**From:** GRANDHOMME Catherine (TN International) [mailto:catherine.grandhomme@areva.com]  
**Sent:** Thursday, April 16, 2009 11:59 AM  
**To:** Conroy, Michael <PHMSA>  
**Subject:** RE: Request for Review of TNBGC-1 Certificate, Rev. Iak

Mike,

please find enclosed the table of correlation between chapters of old SAR and new SAR.  
does it correspond to your need ?

did you have time to look at my propositions in my mail of April, 9th ?

catherine