

From: Michael.Conroy@dot.gov
Sent: Friday, September 18, 2009 9:18 AM
To: Staab, Christopher
Subject: FW: Queries Concerning NCS 45 Review (attached)
Attachments: HTL 2.pdf

Follow Up Flag: Follow up
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Chris-
What is your availability for a telecon mid to end of next week?

From: Hilbert Franz [mailto:franz.hilbert@ncsg.de]
Sent: Friday, September 18, 2009 6:20 AM
To: Conroy, Michael (PHMSA); Bergmann Wolfgang; Kettner Ulrich; mlambert@tliusa.com
Cc: Boyle, Rick (PHMSA); Christopher.Staab@nrc.gov
Subject: AW: Queries Concerning NCS 45 Review (attached)

Dear Mr. Conroy,

we have received the RAIs and review it. We will be prepared to discuss the questions mid to end of next week including a time schedule for our response.

However, we would like to respond to your comment in the Materials RAI concerning brazing immediately. We are currently discussing a transport of fuel rods from USA to Europe where this encapsulation in the storage pool is required. We would like to make sure, that our procedure is well understood and acceptable in USA.

Please find attached the data sheet for the brazing material HTL 2 we intend to use. This material is a high temperature nickel based brazing material. The melting range is **970 to 1000°C** which is much higher than the temperatures in the payload of the NCS 45. During normal conditions of transport the temperature is according to the SAR chapter 5 Table 5-11 max. **397°C**. For accident conditions the maximum temperature is 411°C (Table 5-16), however, for containment analysis a 100% failure of the cans was assumed in chapter 6 Containment analysis.

The shear strength of the brazing material at room temperature is the same or even better than the base material, i. e., the properties of the brazing connection are comparable to a welded connection. Currently, we are preparing the procedure qualification including non-destructive and destructive testing, all under supervision of the German competent authority BAM. Part of these testing will be the determination of the properties of the brazing connection at temperatures complying with the expected maximal temperature of the cans in the NCS 45.

We would appreciate your comments asap and are prepared to address any concerns in the procedure qualification program. We are also prepared to submit to you the draft of the procedure qualification program currently discussed with BAM.

Best regards

Franz Hilbert
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Von: Michael.Conroy@dot.gov [mailto:Michael.Conroy@dot.gov]
Gesendet: Mittwoch, 16. September 2009 17:43
An: Hilbert Franz; Bergmann Wolfgang; Kettner Ulrich; mlambert@tliusa.com
Cc: rick.boyle@dot.gov; Christopher.Staab@nrc.gov
Betreff: FW: Queries Concerning NCS 45 Review (attached)

Gentleman-

Please see the attached for follow-up questions from the U.S. NRC based on your responses to their earlier requests for additional information.
This information is requested to support our revalidation of the German Certificate of Approval No. D/4347/B(U)F-96 for the NCS 45 package.

After you have had an opportunity to review these files, I suggest that we schedule a conference call with the NRC staff to discuss their concerns so that you may prepare appropriate responses.

Michael Conroy
U.S. Department of Transportation
PHMSA, PHH-23
202-366-3597

From: Staab, Christopher [mailto:Christopher.Staab@nrc.gov]
Sent: Wednesday, September 16, 2009 9:28 AM
To: Conroy, Michael (PHMSA)
Subject: Queries Concerning NCS 45 Review (attached)

Mike,

Perhaps we could have a phone call with the applicant to discuss?

Chris Staab
NRC Project Manager
(301) 492-3321

E-mail Properties

Mail Envelope Properties (562790706699C84791677A45DCF6F4F80638E5)

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Christopher.Staab@nrc.gov (Staab, Christopher)
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