

From: [Conroy, Michael \(PHMSA\)](#)
To: [White, Bernie](#)
Subject: [External_Sender] FW: Query: Materials Review for the JRF-90Y-950K package containing the Spectrum Convertor
Date: Wednesday, February 09, 2022 9:52:03 AM
Attachments: [II-A SC rev1.pdf](#)

Bernie,
Let me know if this answers the question of if you need more.

From: Russell Neely <rneely@edlow.com>
Sent: Wednesday, February 9, 2022 9:27 AM
To: Conroy, Michael (PHMSA) <Michael.Conroy@dot.gov>
Cc: White, Bernie <Bernard.White@nrc.gov>; Diaz Sanabria, Yaira <Yaira.Diaz-Sanabria@nrc.gov>; Hansing, Nicholas <Nicholas.Hansing@nrc.gov>; Wise, John <John.Wise@nrc.gov>; Boyce, Tom <Tom.Boyce@nrc.gov>; Koch, Patrick <Patrick.Koch@nrc.gov>
Subject: RE: Query: Materials Review for the JRF-90Y-950K package containing the Spectrum Convertor

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Dear Mike: Our customer has revised the SAR accordingly, specifically:

“To satisfy NRC requirement, (II)-Table.A.4 and (II)-Table.A6 have been revised.
Attached is revised (II)-A of SAR. The revised parts are highlighted in yellow.”

Please let me know if this is sufficient, or if anything else is needed.

Thank you, best regards,
Russell
Tel: 202 483 4959

From: Conroy, Michael (PHMSA) <Michael.Conroy@dot.gov>
Sent: Tuesday, February 08, 2022 9:14 AM
To: White, Bernie <Bernard.White@nrc.gov>
Cc: Diaz Sanabria, Yaira <Yaira.Diaz-Sanabria@nrc.gov>; Russell Neely <rneely@edlow.com>; Hansing, Nicholas <Nicholas.Hansing@nrc.gov>; Wise, John <John.Wise@nrc.gov>; Boyce, Tom <Tom.Boyce@nrc.gov>; Koch, Patrick <Patrick.Koch@nrc.gov>
Subject: RE: Query: Materials Review for the JRF-90Y-950K package containing the Spectrum Convertor

Bernie,
Edlow asked their customer and I got this response:

“The temper of the fuel element hold down part is T6 and T651 (JIS H 4000 1988).

The cladding material of the spectrum converter is stated as A6061-T6, but not confirmed officially.

But, based on the analysis, the cladding for the spectrum converter is of strength level equal to A6061-T4 or better.

Therefore, option 1 is considered to be good.”

Let me know if you need any more on this issue.

From: White, Bernie <Bernard.White@nrc.gov>

Sent: Friday, February 4, 2022 3:54 PM

To: Conroy, Michael (PHMSA) <Michael.Conroy@dot.gov>

Cc: Diaz Sanabria, Yaira <Yaira.Diaz-Sanabria@nrc.gov>; Russell Neely <rneely@edlow.com>; Hansing, Nicholas <Nicholas.Hansing@nrc.gov>; Wise, John <John.Wise@nrc.gov>; Boyce, Tom <Tom.Boyce@nrc.gov>; Koch, Patrick <Patrick.Koch@nrc.gov>

Subject: Query: Materials Review for the JRF-90Y-950K package containing the Spectrum Converter

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Mike,

We have the following question on the temper used for the aluminum in the spectrum converter (and the hold down part):

1. Either:
 - a. Revise the safety analysis report (SAR) to clarify the temper for the A6061P material of the spectrum converter and fuel element hold down part as the T6 temper used in the structural analyses, or
 - b. Revise the SAR to use more conservative values for the mechanical properties in the structural analyses reflective of the softest temper of the A6061P material.

Otherwise, NRC will suggest that DOT specify the temper for these two aluminum materials as a condition of the revalidation.

NRC staff reviewed the material properties specified in (II)-Table.A.6 for A6061P. The values used in the structural analysis for the spectrum converter and the fuel element hold down part are specific to the T6 temper of the material, which is the hardest temper. The application does not specify the temper of the material, and thus the SAR creates the possibility for nonconservative analysis, should the A6061P material be softer than the temper assumed in the analysis. The SAR currently does not demonstrate that other tempers are acceptable for this material. If it acceptable that NRC suggests DOT add this temper as a condition of the revalidation, then no further SAR submittal would be needed.

This is to show compliance with the regulatory requirements in paragraphs 722, and 727 of Specific Safety Requirements No. SSR-6 (Rev. 1).

Please note that due to the urgent need for NRC review, the NRC will be sending questions as we get them, rather than our standard process of sending all the questions as a single request for additional information.

Thanks

Bernie White

Senior Project Manager

Division of Fuel Management

Office of Nuclear Material Safety and Safeguards

(301) 415-6577