From: "Mark Whittaker" <MSWHITTAKER@duratekinc.com>
To: <MXR2@nrc.gov>
Date: 12/12/05 3:17PM
Subject: coverC.pdf;4.10.2.1B-12.pdf

Meraj,

Attached are a cover letter and revised page. If these are OK, I'll FedEx to you.

Thanks - Mark W

Attachment: coverC.pdf;4.10.2.1B-12.pdf

Mark S. Whittaker, CHP
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MESSAGE	302	12/12/05 03:16PM
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4.10.2.1B-12.pdf	20256	
Mime.822	45812	

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Expiration Date: None
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Return Notification: None

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Security: Standard

12 December 2005
E&L-115-05

Meraj Rahimi
Spent Fuel Project Office
Office of Nuclear Material Safety and Safeguards, NMSS
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Rahimi:

Subject: Amendment Request for the CNS 10-160B Certificate No. 9204

As we discussed, Duratek has made an additional change on one page of our amendment request for the CNS 10-160B cask SAR and C of C. The attached page for Appendix 4.10.2.1 should be substituted for that attached to our submittal dated December 2, 2005. We request that you approve this proposed Revision 20 to the SAR, with these changes, and revise the Certificate.

The changes have been noted with margin bars identifying the location of changes and deleted language is shown with "strikeout".

Page 4.10.2.1-12, attached to this letter, is to be substituted for the page previously submitted.

Should you or members of your staff have questions about the responses, please contact me at (803) 758-1898.

Sincerely,

Mark Whittaker, CHP
Sr. Analyst

Attachment: As stated

Table 10-2. Release Rates of Hydrogen			
Content Code	Confinement Layer	Release Rate (mol/sec/mol fraction) T = 233K	Release Rate (mol/sec/mol fraction) T = 348.6K
BC ~~121A~~121B	Polyethylene Liner	5.20×10^{-4}	5.66×10^{-4}
	Drum Filter	2.46×10^{-6}	4.98×10^{-6}
BC ~~121B~~121A	Liner bag	4.67×10^{-6}	4.67×10^{-6} [a]
	Polyethylene liner	5.20×10^{-4}	5.66×10^{-4}
	Drum filter	2.46×10^{-6}	4.98×10^{-6}
BC 312A	Drum Liner Filter	2.46×10^{-6}	4.98×10^{-6}
	Drum Filter	2.46×10^{-6}	4.98×10^{-6}
BC 314A	Drum Liner Filter	2.46×10^{-6}	4.98×10^{-6}
	Drum Filter	2.46×10^{-6}	4.98×10^{-6}
BC 321A	Drum Liner Filter	2.46×10^{-6}	4.98×10^{-6}
	Drum Filter	2.46×10^{-6}	4.98×10^{-6}
BC 321B	Drum Liner Filter	2.46×10^{-6}	4.98×10^{-6}
	Drum Filter	2.46×10^{-6}	4.98×10^{-6}
BC 322A	Drum Liner Filter	2.46×10^{-6}	4.98×10^{-6}
	Drum Filter	2.46×10^{-6}	4.98×10^{-6}

[a] This is the minimum measured value and is applicable to all temperatures.

Temperature: The input parameter affected by temperature is the release rate through the different confinement layers in the payload containers and the G values for hydrogen. Release rates increase with increasing temperature (Reference 12.4). Therefore, the minimum release rates would be those at the lowest operating temperature. These are the release rates indicated in Table 10-2 for 233K. The minimum decay heat limits are determined by the ratio of the release rates and the G values. In other words, the higher the release rates, the higher the decay heat limit; the higher the G value, the lower the decay heat limit. The dependence of G values on temperature is documented in Section 10.4. For determining the decay heat limit, the temperature that yielded the minimum decay heat limit for each content code was used as the input parameter.

In summary, the temperature dependence of the input parameters was accounted for in the calculation so that, in each case, the minimum possible limit (hydrogen generation rate or decay heat limit) was obtained. This provides an additional margin of safety in the analysis for each content code.

10.4 Determination of Maximum Allowable Decay Limits

The maximum allowable decay heat limits for the CH-TRU and RH-TRU waste content codes for BCL were calculated using the methodologies described in Appendix 4.10.2 of the CNS 10-160B SAR and the content code-specific G values and waste data described below.

10.4.1 G Value Data

G values for TRU waste are content specific. G values are determined based on the bounding materials present in the payload. The following G values were used for each of the content codes based on the