

From: "Daflucas, Ronda" <rdafluc@entergy.com>
To: "Rick Ennis" <RXE@nrc.gov>
Date: 9/18/05 7:34PM
Subject: PROPRIETARY INFO CD

Rick,

Attached are the contents of the Attachment 2 CD. The two MICROSOFT EXCEL files are PROPRIETARY. The "READ ME.doc" file is non-proprietary and is duplicated in the first E-mail that I sent you this evening.

— PROPRIETARY INFORMATION REMOVED

This E-mail completes electronic submittal of the files provided in BVY 05-086.

Thank you,

Ronda Daflucas
Vermont Yankee Project Manager, NRR
Entergy Nuclear Operations, Inc.
802-258-4232

CC: "Gucwa, Len" <LGUCW90@prod.entergy.com>, "Hobbs, Brian" <bhobbs@prod.entergy.com>, "Nichols, Craig" <cnicho1@prod.entergy.com>, "Dreyfuss, John" <jdreyfu@prod.entergy.com>

Mail Envelope Properties (432DF96F.493 : 8 : 29843)

Subject: PROPRIETARY INFO CD
Creation Date: 9/18/05 7:33PM
From: "Daflucas, Ronda" <rdafluc@entergy.com>

Created By: rdafluc@entergy.com

Recipients

nrc.gov
owf4_po.OWFN_DO
RXE (Rick Ennis)

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jdreyfu CC (John Dreyfuss)
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bhobbs CC (Brian Hobbs)
LGUCW90 CC (Len Gucwa)

Post Office
owf4_po.OWFN_DO

Route
nrc.gov
prod.entergy.com

Files	Size	Date & Time
MESSAGE	425	09/18/05 07:33PM
TEXT.htm	2653	
BVY 05-086 Attachment 2 READ ME.doc		27648
Lat_7009_T6_C4_FD_Data.xls	285696	
C4-TGBLA6_diff.Rev1.xls	715776	
Mime.822	1414524	

Options

Expiration Date: None
Priority: Standard
Reply Requested: No
Return Notification: None

Concealed Subject: No
Security: Standard

Vermont Yankee Nuclear Power Station
Data Supporting Response to RAI SRXB-A-66

Entergy's letter of September 10, 2005, responded to NRC RAI SRXB-A-66. Microsoft Excel spreadsheet files designated C4-TGBLA6_diff.Rev1.xls and Lat_7009_T6_C4_FD_Data.xls contain data supporting that response.

The file designated C4-TGBLA6_diff.Rev1.xls contains the basis of the RAI SRXB-A-66 plots of CASMO-4 and TGBLA06 data comparisons (K-inf, local peaking, plutonium isotopes, void coefficient, etc.) for a number of lattice designs, void history depletions, and instantaneous void cases. Void fraction definitions used in both methods are consistent and are based upon the heated channel area only with bypass and water rods at zero void. As noted in the response to RAI SRXB-A-66, these comparisons were within expectations for comparisons of different calculational methods. Larger differences are noted for 90% void history depletion cases, but consideration that only a small portion of any BWR core obtains these values for a small exposure window near beginning of life minimizes the impact. These cases are not currently used in any production or licensing basis applications. For the lower void fraction cases, the differences seen in K-inf and local peaking would be expected to be insignificant when incorporated into the homogenized nodal models in which the data are used. This has been demonstrated via comparisons of PANAC11 and SIMULATE-3 core-follow results.

The file designated Lat_7009_T6_C4_FD_Data.xls contains detailed pin-by-pin power data from CASMO-4 and TGBLA06 for a single lattice design for various void history depletions. These data were requested at the September 7, 2005, NRC audit to aid in the staff's evaluation of GNF's methods via an independent method. This information was taken from existing calculation files generated to support the response to RAI SRXB-A-66. Due to differences in the units of depletion (MWD/MT vs. MWD/ST), only a limited number of depletion points are close enough to the same exposure to provide meaningful comparisons at a pin level. Pin power differences (RMS for the entire lattice) are shown graphically and further detailed study is possible from the data available. The review performed of this information indicates that the difference in gadolinium treatment drives the difference in pin powers calculated by the two methods over the whole lattice. Peak pin agreement, as shown in the response to RAI SRXB-A-66, is generally good.