

Tennessee Valley Authority, Post Office Box 2000, Decatur, Alabama 35609-2000

Brian O'Grady  
Vice President, Browns Ferry Nuclear Plant

October 24, 2007

TVA-BFN-TS-418

10 CFR 50.90

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Stop OWFN, P1-35  
Washington, D. C. 20555-0001

Gentlemen:

In the Matter of	)	Docket Nos. 50-260
Tennessee Valley Authority	)	50-296

**BROWNS FERRY NUCLEAR PLANT (BFN) - UNITS 2 AND 3 -  
TECHNICAL SPECIFICATIONS (TS) CHANGE TS-418 - EXTENDED  
POWER UPRATE (EPU) - RESPONSE TO ROUND 14 REQUEST FOR  
ADDITIONAL INFORMATION (RAI) - SBWB-85 (TAC NOS. MC5263 AND  
MC5264)**

By letter dated June 25, 2004 (ADAMS Accession No. ML041840301), TVA submitted a license amendment application for EPU operation of BFN Units 2 and 3. BFN Units 2 and 3 are currently licensed for operation at 3458 Megawatts thermal (MWt) and the pending EPU amendments would change the BFN operating licenses for Units 2 and 3 to increase the maximum authorized power level by approximately 14 percent to 3952 MWt.

On October 9, 2007 (ML072760660) the NRC staff issued a Round 14 RAI on TS-418, which included a single question, SBWB-85. Enclosure 1 to this letter provides TVA's response to SBWB-85. Enclosure 2 contains a compact disk with data from the Enclosure 1 figures, which was requested by NRC.

DD30  
MRK

U. S. Nuclear Regulatory Commission

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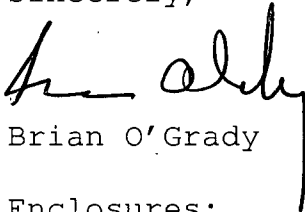
October 24, 2007

TVA has determined that the additional information provided by this letter does not affect the no significant hazards considerations associated with the proposed TS changes. The proposed TS changes still qualify for a categorical exclusion from environmental review pursuant to the provisions of 10 CFR 51.22(c)(9).

If you have any questions regarding this letter, please contact James Emens at (256)729-7658.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 24<sup>th</sup> day of October, 2007.

Sincerely,

A handwritten signature in black ink, appearing to read "Brian O'Grady", with a long vertical line extending downwards from the end of the signature.

Brian O'Grady

Enclosures:

1. Response to Round 14 Request for Additional Information - SBWB-85
2. Data CD Contents

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Enclosures

cc (Enclosures):

State Health Officer  
Alabama State Department of Public Health  
RSA Tower - Administration  
Suite 1552  
P.O. Box 303017  
Montgomery, Alabama 36130-3017

NRC Senior Resident Inspector  
Browns Ferry Nuclear Plant  
10833 Shaw Road  
Athens, AL 35611-6970

Branch Chief  
U.S. Nuclear Regulatory Commission  
Region II  
Sam Nunn Atlanta Federal Center  
61 Forsyth Street, SW, Suite 23T85  
Atlanta, Georgia 30303-8931

Eva Brown, Project Manager  
U.S. Nuclear Regulatory Commission  
(MS 08G9)  
One White Flint, North  
11555 Rockville Pike  
Rockville, Maryland 20852-2739

ENCLOSURE 1  
TENNESSEE VALLEY AUTHORITY  
BROWNS FERRY NUCLEAR PLANT (BFN)  
UNITS 2 and 3

TECHNICAL SPECIFICATIONS (TS) CHANGE TS-418  
EXTENDED POWER UPRATE (EPU)

RESPONSE TO ROUND 14 REQUEST FOR ADDITIONAL INFORMATION  
SBWB-85

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NRC RAI SBWB-85 (Units 2 and 3)

With regards to the AREVA fuel, provide the hot bundle and core average two-phase (or mixture) levels versus time for the 0.05 ft<sup>2</sup> break. Also for this break, please provide the liquid mass or liquid levels versus time in the average core and hot bundle.

TVA Response to RAI SBWB-85 (Units 2 and 3)

The requested level data is not available since the core volumes are modeled as homogeneous nodes. However, in response to the NRC request, the liquid mass in each of the core average and hot bundle nodes for both mid- and top-peaked 0.05 ft<sup>2</sup>/PD breaks is provided in Figures A.1 through A.4. These figures illustrate the liquid water distribution in the average core and hot channel calculations, similar to the information that a mixture level would provide if it were calculated. The requested total liquid mass versus time data is also provided in the files on the compact disk provided in Enclosure 2.

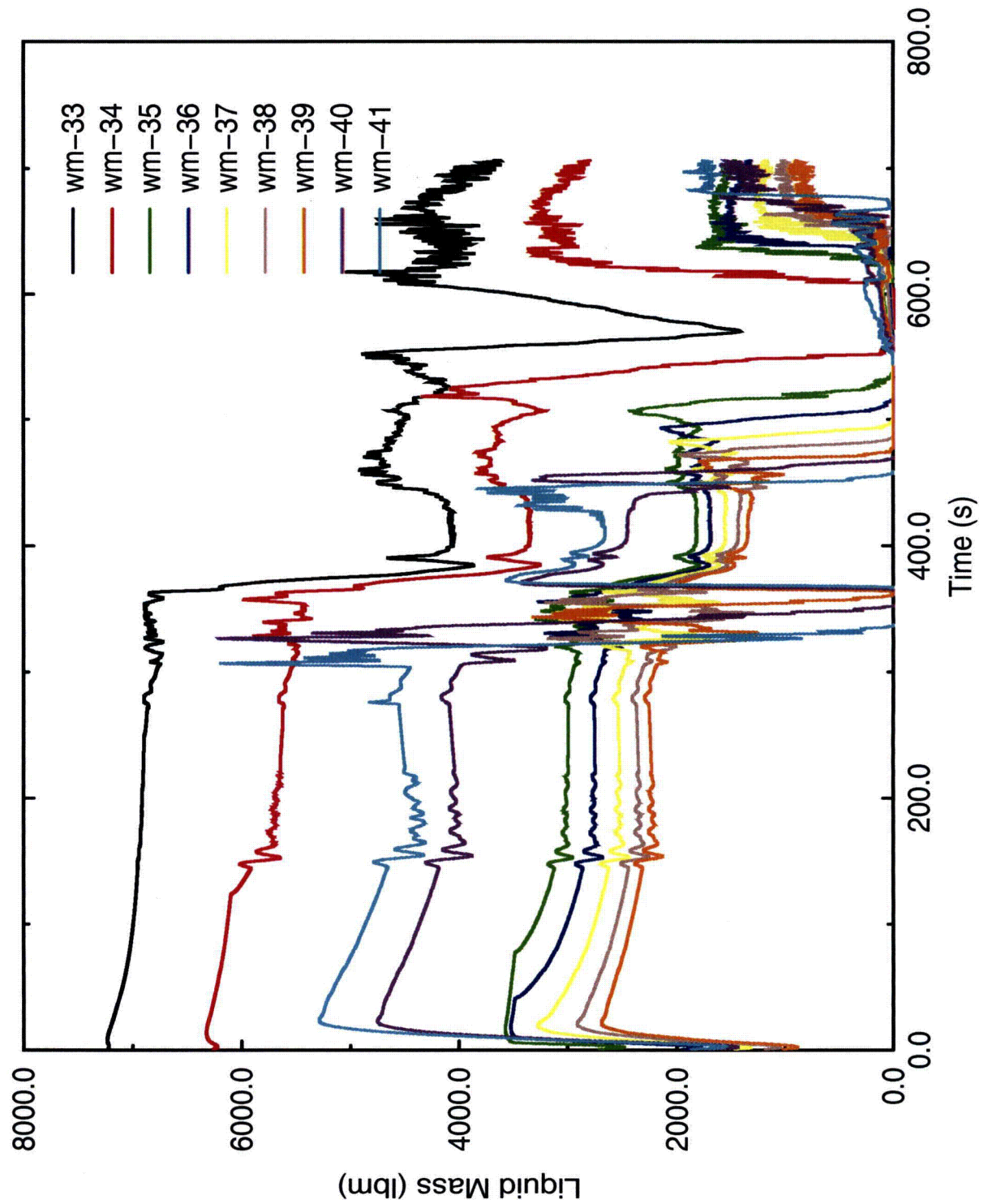


Figure A.1 Liquid Mass in the Core Average Nodes  
0.05 FT2/PD SF-BATT MID 102P/105F EPU

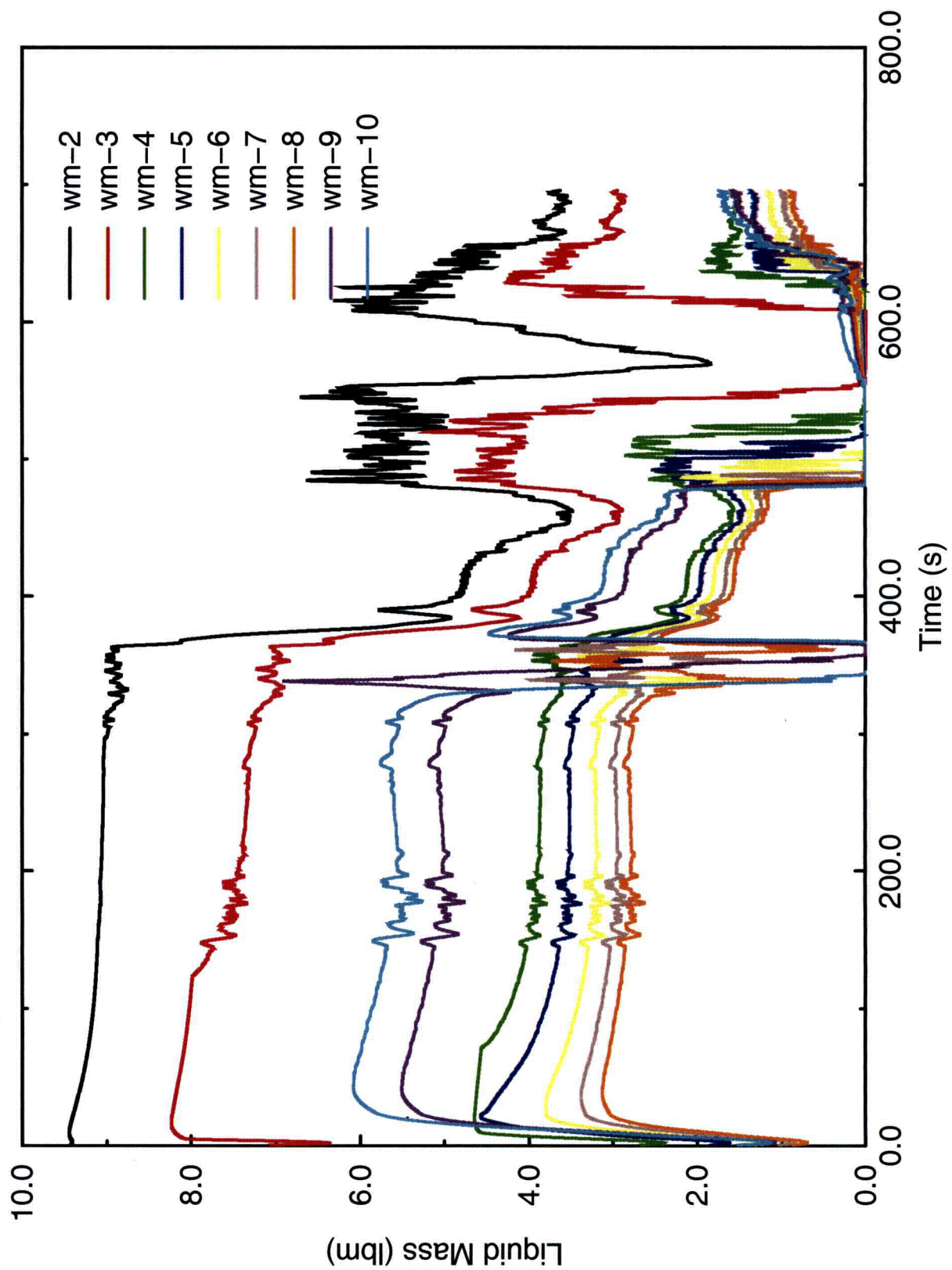


Figure A.2 Liquid Mass in the Hot Bundle Nodes  
0.05 FT2/PD SF-BATT MID 102P/105F EPU

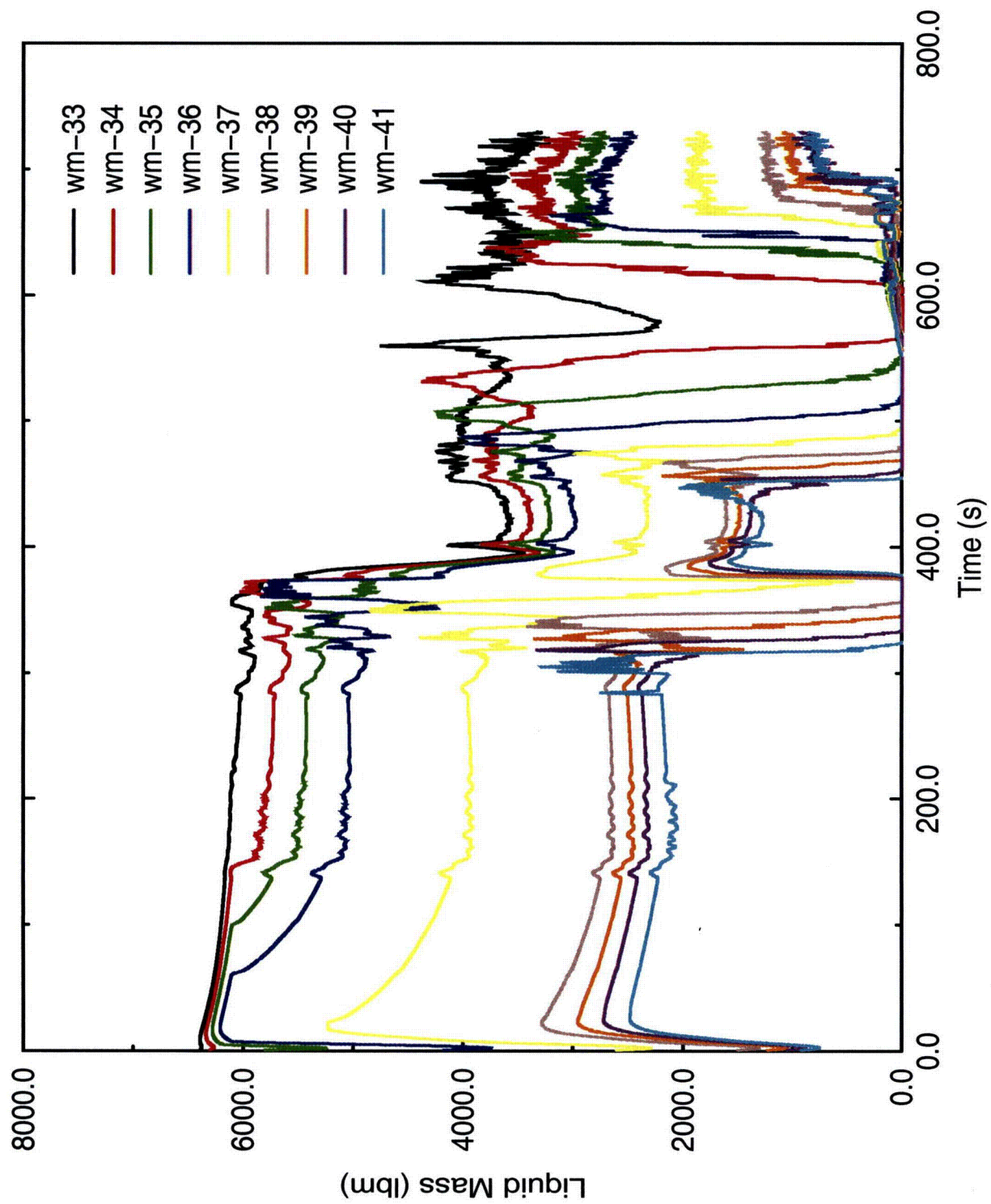


Figure A.3 Liquid Mass in the Core Average Nodes  
0.05 FT2/PD SF-BATT TOP 102P/105F EPU



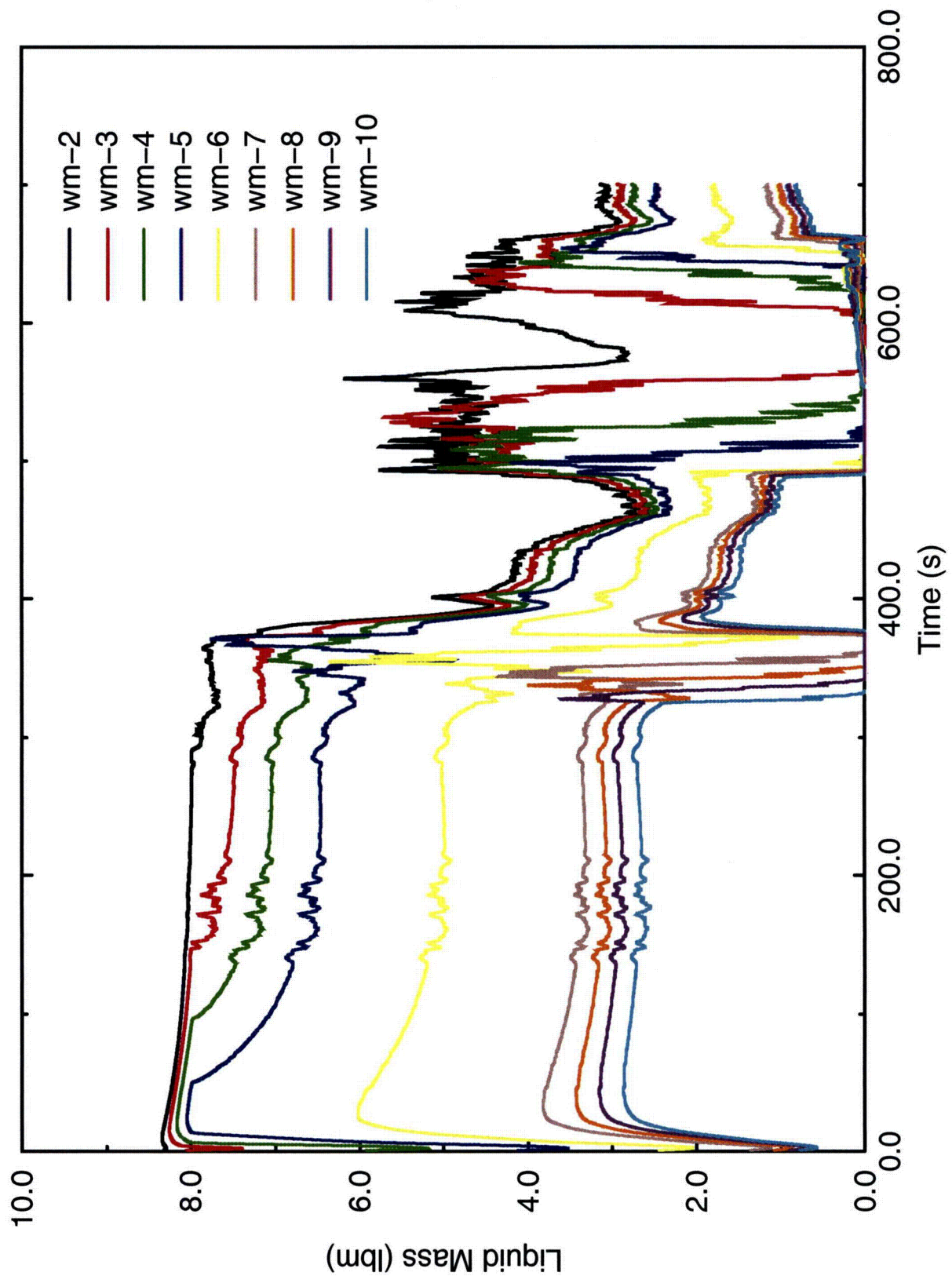


Figure A.4 Liquid Mass in the Hot Bundle Nodes  
0.05 FT2/PD SF-BATT TOP 102P/105F EPU



ENCLOSURE 2  
TENNESSEE VALLEY AUTHORITY  
BROWNS FERRY NUCLEAR PLANT (BFN)  
UNITS 2 and 3

TECHNICAL SPECIFICATIONS (TS) CHANGE TS-418  
EXTENDED POWER UPRATE (EPU)

DATA CD CONTENTS

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The data in each file is tabulated in an x-y data format. A brief description of the contents of each file is provided below.

Contents of data CD

mid_average_core	Total average core mass versus time for mid-peaked 0.05 ft <sup>2</sup> break case
mid_hot_bundle	Total hot bundle mass versus time for mid-peaked 0.05 ft <sup>2</sup> break case
top_average_core	Total average core mass versus time for top-peaked 0.05 ft <sup>2</sup> break case
top_hot_bundle	Total hot bundle mass versus time for top-peaked 0.05 ft <sup>2</sup> break case