



**Department of Energy**  
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QA: N/A

MAR 0 2 2001

**OVERNIGHT MAIL**

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High-Level Waste and Performance  
Assessment Branch  
Division of Waste Management  
Office of Nuclear Materials Safety  
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U.S. Nuclear Regulatory Commission  
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**SECOND TRANSMITTAL OF ANALYSIS AND MODEL REPORTS (AMR), CALCULATIONS  
AND OTHER ITEMS ADDRESSING KEY TECHNICAL ISSUES (KTI) TECHNICAL EXCHANGES**

Reference: Ltr, Brocoum to Reamer, dtd 2/2/01

The enclosed is a second submittal of items agreed upon in recent Technical Exchanges (TE) addressing the KTIs.

Enclosure 1 is a list of KTI agreement items for January which were provided with the referenced letter. This enclosure is provided in order to allow identification of the KTI agreement number associated with the item provided.

Enclosure 2 is a list of enclosed agreement items provided with this submittal and their respective KTI agreement identifier. Exceptions are noted in the footnotes.

Enclosure 3 is a list of agreement items that we previously expected to have available for transmittal to the U.S. Nuclear Regulatory Commission by this time. This enclosure indicates the new schedule of availability for those items.

Enclosure 4 is a compact disc (CD) of the items as noted in Enclosure 2. Enclosure 5 is a hard copy of the items as noted in Enclosure 2.

Please direct questions concerning this letter and enclosures to Timothy C. Gunter at (702) 794-1343.

Stephan Brocoum  
Assistant Manager, Office of  
Licensing and Regulatory Compliance

OL&RC:TCG-0791

**Enclosures:**

1. List of Agreement Items and their KTI Identifier  
(January Items)

YMP-5

NMSS07  
WM-11

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Enclosures: (continued)

2. List of Agreement Items and their KTI Identifier (February Items)
3. List of January and February Agreement Items Not Yet Available with their KTI Identifier
4. CD Titled "AMRs, Calculations and Other Items Addressing KTI Technical Exchanges February 2001" (contains agreement items listed in Enclosure 2 except as noted in that enclosure footnotes.)
5. Hard copy of Items Listed in Enclosure 2

cc w/encls 1-4:

K. C. Chang, NRC, Rockville, MD  
J. W. Anderson, NRC, Rockville, MD (5 copies)  
C. J. Glenn, NRC, Las Vegas, NV  
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Richard Major, ACNW, Washington, DC  
W. D. Barnard, NWTRB, Arlington, VA  
Budhi Sagar, CNWRA, San Antonio, TX  
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R. R. Loux, State of Nevada, Carson City, NV  
Alan Kalt, Churchill County, Fallon, NV  
D. A. Bechtel, Clark County, Las Vegas, NV  
Harriet Ealey, Esmeralda County, Goldfield, NV  
Leonard Fiorenzi, Eureka County, Eureka, NV  
Andrew Remus, Inyo County, Independence, CA  
Mickey Yarbrow, Lander County, Battle Mountain, NV  
Jason Pitts, Lincoln County, Caliente, NV  
L. W. Bradshaw, Nye County, Pahrump, NV

cc w/ encls 1-3:

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S. L. Wastler, NRC, Rockville, MD  
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W. L. Belke, NRC, Las Vegas, NV  
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John Meder, State of Nevada, Carson City, NV  
Michael King, Inyo County, Edmonds, WA  
Judy Shankle, Mineral County, Hawthorne, NV  
Jerry McKnight, Nye County, Tonopah, NV  
Josie Larson, White Pine County, Ely, NV  
R. I. Holden, National Congress of American Indians, Washington, DC

MAR 02 2001

cc w/encls 1-3: (continued)

Allen Ambler, Nevada Indian Environmental  
Coalition, Fallon, NV

F. S. Echols, Winston & Strawn, Washington, DC

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J. T. Sullivan, DOE/YMSCO, Las Vegas, NV

C. A. Kouts, DOE/YMSCO (RW-2) FORS

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(ENCLS = READILY AVAILABLE)

**ENCLOSURE 1**  
**List of KTI Agreement Items and their KTI Identifier**  
 Provided in February 2, 2001 letter

Document	Rev/ICN	Title/Description	IA	CLST	SDS	CRIT	SZ	RT	ENFE	TEF
<b>AMR</b>										
ANL-EBS-GE-000003	01/00	Longevity of Emplacement Drift Ground Support Materials							2.18	
ANL-EBS-HS-000003	00/01	Abstraction of NFE Thermodynamic Env & Perc Flux		3.8 & 4.8						2.3
ANL-EBS-MD-000001	00/01	Environment on Surfaces of Drip Shield & WP Outer Barrier							2.18	
ANL-EBS-MD-000004	00/00	General Corrosion & Localized Corrosion of Drip Shield							2.18	
ANL-EBS-MD-000005	00/01	Stress Corrosion Cracking of Drip Shield, WP Outer Barrier, & the Stainless Steel Structural Material							2.18	
ANL-EBS-MD-000006	00/01	Hydrogen Induced Cracking of Drip Shield							2.18	
ANL-EBS-MD-000012	00/00	Clad Degradation- Local Corrosion Zirc and its Alloys		3.6 & 4.6						
ANL-EBS-MD-000016	00/01	Defense HLW Glass Degradation		4.1						
ANL-EBS-MD-000027	01/00	Drift Degradation Analysis							2.18	
ANL-EBS-MD-000032	01/00	Water Distribution and Removal Model							2.18	
ANL-EBS-MD-000038	00/01	In-Drift Microbial Communities							2.18	
ANL-EBS-MD-000046	00/01	Physical and Chemical Environmental Abstraction Model							2.18	
ANL-EBS-MD-000048	00/01	Initial Cladding Condition		3.8 & 4.8						
ANL-EBS-MD-000049	00/01	Multiscale Thermohydrologic Model		6.4					2.18	2.3
ANL-EBS-PA-000004	00/01	Abstraction of Models for SCC of DS and WP Outer Barrier and H <sub>2</sub> Induced Corrosion of DS							2.18	
ANL-MGR-GS-000001	00/01	Characterize Framework for Igneous Activity	2.14							
ANL-MGR-MD-000001	01/00	Values for External Inhalation Rad Exposure Analysis	2.11, 2.12							
ANL-WIS-MD-000005	00/01	FEPs: Disruptive Events			1.1, 2.2, 2.4	5.2		4.2	1.1, 2.1, 4.7, 5.2	1.1
ANL-WIS-MD-000006	00/01	Inventory Abstraction						1.3		
ANL-WIS-MD-000008	00/01	Clad Degradation - FEPs Screening Arguments							1.1, 2.1, 4.7	
ANL-WIS-MD-000012	00/01	WF Colloid-Assoc. Concentration Limits : Abst & Sum		3.6 & 4.6				1.3	3.1	
ANL-WIS-MD-000015	00/01	Dike Propagation Near Drifts	2.14, 2.16							
ANL-WIS-MD-000017	00/01	Igneous Consequence Modeling for TSPA-SR	2.4, 2.14							
ANL-WIS-MD-000019	00/00	FEPs: System-level & Criticality				4.2			1.1, 2.1, 4.7	1.1

**ENCLOSURE 1**  
**List of KTI Agreement Items and their KTI Identifier**  
**Provided in February 2, 2001 letter**

Document	Rev/ICN	Title/Description	IA	CLST	SDS	CRIT	SZ	RT	ENFE	TEF
ANL-XCS-ME-000001	00/00	Design Analysis for the Ex-Container Components							2.18	
<b>PMRs</b>										
TDR-NBS-MD-000001 <sup>①</sup>	00/03	PMR: Near-Field Environment							2.18	2.3
TDR-NBS-HS-000002 <sup>②</sup>	00/02	PMR: Unsaturated Zone Flow and Transport							2.18	2.12
TDR-WIS-MD-000002 <sup>③</sup>	00/01	PMR: Waste Package Degradation							2.18	
<b>CALCULATIONS</b>										
CAL-WIS-MD-000011	00/00	Comparison of ASHPLUME Results to TEPHRA	2.7							
CAL-WIS-PA-000001	01/00	Number of Waste Packages Hit by Igneous Intrusion	2.14							
CAL-UDC-ME-000001	00/00	Thermal History of Cladding in PWR SNF WP		3.8 & 4.8						
<b>MODEL</b>										
MDL-WIS-PA-000002 <sup>④</sup>	00/00	TSPA Model for Site Recommendation						1.3	3.5, 4.5	
<b>OTHER</b>										
MOL.20000706.0396 <sup>⑤</sup>	N/A	Multi-Scale Thermohydrologic Model I/O files								2.2
TDP-EBS-ND-000005	00/00	WP FY00 Closure Methods Report		2.7						
TDR-EBS-MD-000015	00/00	Review of Expected Behavior of Alpha Titanium Alloys.		6.2						
TDR-EBS-ND-000003	01/00	WP Operations Fabrication Process Report		2.7						
TDR-WIS-PA-000001 <sup>⑥</sup>	00/01	TSPA for the Site Recommendation	1.1, 2.10				6.1	1.3	4.5, 4.6	
TER-EBS-ND-000001	00/00	WP Operations FY01 Closure Weld Tech Guidelines Doc's		2.7						
YMP/TR-004 <sup>⑥</sup>	01/00	Disposal Criticality Analysis Methodology Topical Report				5.1				

<sup>①</sup> This PMR was previously provided to the NRC and the parties on January 2, 2001.

<sup>②</sup> This PMR was previously provided to the NRC and the parties on September 11, 2000

<sup>③</sup> This PMR was previously provided to the NRC and the parties on August 2, 2000.

<sup>④</sup> These TSPA documents were previously provided to the NRC and the parties on January 18, 2001.

<sup>⑤</sup> These are input and output files for the Multiscale Thermohydrologic Model AMR ANL-EBS-MD-000049 Rev. 00, ICN 01 which is also included in this submittal. The input and output files are included on 24 CDs and have been provided only to the NRC because of the large file volume and limited serviceability.

<sup>⑥</sup> This document will be provided under separate cover

**ENCLOSURE 2**  
**List of Enclosed Agreement Items and their KTI Identifier**  
February Agreement Items

Document	Rev/ICN #	Title/Description	IA	CLST	SDS	CRIT	SZ	RT	ENFE	TEF
<b><u>AMR</u></b>										
ANL-EBS-MD-000045	00/02	In-Drift Precipitates/Salts Analysis							2.9	
ANL-EBS-PA-000001	00/01	WAPDEG Analysis of WP and DS Degradation							3.1	
ANL-EBS-PA-000002	01/00	FEPs Screening of Processes and Issues in Drip Shield and Waste Package Degradation							1.1, 2.1, 4.7	
ANL-EBS-PA-000005	00/00	Abstraction of Models for Stainless Steel Structural Material Degradation							3.1	
ANL-MGR-MD-000011	01/00	FEPs: Evaluation of Applicability of Biosphere-related Features, Events, and Processes							1.1, 2.1, 4.7	
ANL-NBS-MD-000002	01/00	FEPs: SZ Flow & Transport					5.14	2.11	1.1, 2.1, 4.7	1.1
ANL-NBS-MD-000004	00/01	FEPs: Thermal Hydrology & Coupled Processes								1.1
ANL-WIS-MD-000007	00/01	Clad Degradation - Summary and Abstraction		3.9 & 4.9						
ANL-WIS-MD-000009	00/01	FEPs: Miscellaneous Waste Form								1.1
<b><u>CALCULATIONS</u></b>										
CAL-EBS-MD-000013	00/00	Pre-test Predictions for Ventilation Tests								2.7
CAL-EBS-PA-000002	01/00	Calculation of General Corrosion Rate of Drip Shield and Waste Package Outer Barrier to Support WAPDEG Analysis							3.1	
<b><u>OTHER</u></b>										
TDR-EBS-MD-000012	00/00	Data Qualification Report for Thermodynamic Data File, Data0.ympR0 for Geochemical Code EQ3/6							3.2	

**ENCLOSURE 2**  
**List of Enclosed Agreement Items and their KTI Identifier**  
**February Agreement Items**

Document	Rev/ICN #	Title/Description	IA	CLST	SDS	CRIT	SZ	RT	ENFE	TEF
MO0009THERMODYN.001		**Input Transmittal for Thermodynamic Data Input Files for Geochemical Calculations							3.2	
LL000509012312.002 (lower) LL000509112312.003 (mean) LL000509212312.004 (upper)		Multiscale Thermohydrologic Model Supplemental Files No Backfill * (CD)								2.2
Data: SD-6 & WT-24	N/A	**Update Technical Data Management System and provide SD-6 & WT-24 contents					5.7			

\*\* A hard copy of these items are not provided but are included in the Enclosure 4 CD

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\* Due to limited serviceability, the CD containing these files are only provided to the NRC. If however, any of the parties require access to these files, they will be provided upon request.

## ENCLOSURE 3

### List of January and February Agreement Items Not Yet Available with their KTI Identifier

Document	Rev/ICN #	Title/Description	Original Agreement / Expected Availability	IA	CLST	SDS	CRIT	SZ	RT	ENFE	TEF
<b>AMR</b>											
ANL-NBS-MD-000001	01/00	FEPs: UZ Flow & Transport 2/28	January/ March						2.11	1.1, 2.1, 4.7	1.1
ANL-EBS-MD-000037	01/00	In-package Chemistry Abstraction	February/ March							2.18	
ANL-WIS-PA-000002	01/00	FEPs: Engineered Barrier System	February/ March								1.1
ANL-WIS-MD-000012	00/01	Waste Form Colloid-Associated Concentration Limits: Abstraction and Summary	February/ March								1.1
ANL-EBS-MD-000056 <sup>1</sup>	01/00	Summary of In-Package Chemistry Waste Forms	January/ March		3.2 & 4.2					3.1	
<b>OTHER</b>											
FEPs DATABASE		Compilation of latest data references	January/ March				5.2		4.2	4.3	1.2
Letter Report #1 (Brocoum to Reamer)	N/A	Pre-test predictions for Alcove 8-Niche 3 Cross-Over Test	January/ March			3.2			3.6		
Letter Report #2	N/A	Techniques to Evaluate Colloidal Transport	February/ March						3.7		
Scoping Calculation		Preliminary Assessment of Radiolysis Effects from Criticality Event	February/ TBD <sup>2</sup>				1.5				
Data: SD-6	N/A	Update the Technical Data Management System to include additional SD-6 data	February/ March <sup>3</sup>					5.7			
STN: 10154-2.2-00	V2.2	Software Code: TOUGHREACT <sup>4</sup>	February/ March							4.1	

<sup>1</sup> Formerly ANL-EBS-MD-000050

<sup>2</sup> Evaluation of need for additional work required.

<sup>3</sup> One additional data package is currently being processed

<sup>4</sup> Licensed software code to be transmitted on CD-ROM under separate cover. License agreement being processed.