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YUCCA MOUNTAIN – REQUESTS FOR ADDITIONAL INFORMATION RE: LICENSE APPLICATION, SAFETY EVALUATION REPORT VOLUME 3, CHAPTERS 2.2.1.1 AND 2.2.1.3.7 – SUBMITTAL OF DEPARTMENT OF ENERGY REFERENCE CITATIONS

References: Ltr, Williams to Sulima, dtd 02/06/09, "Yucca Mountain – Request for Additional Information Re: License Application (Safety Analysis Report Section 2.1), Safety Evaluation Report Volume 3 – Postclosure Chapter 2.2.1.1 – System Description and Demonstration of Multiple Barriers, Set 1"

Ltr, Williams to Sulima, dtd 02/09/09, "Yucca Mountain – Request for Additional Information Re: License Application (Safety Analysis Report Section 2.3.8), Safety Evaluation Report Volume 3 – Postclosure Chapter 2.2.1.3.7 – Radionuclide Transport in the Unsaturated Zone, Set 1"

The purpose of this letter is to transmit ten (10) Department of Energy (DOE) documents, not previously provided to the NRC, that were cited as references in responses to Requests for Additional Information (RAIs) identified in the above-referenced letters. The enclosed documents contained on optical storage media are available, or will be made available, in the Licensing Support Network and will be provided to the public upon request.

Eight (8) additional DOE documents, not previously provided to the NRC, were cited in the above-referenced letters. These documents are not included in this transmittal, as they will be submitted to the NRC shortly, as part of the revised key supporting references accompanying the first update to the Yucca Mountain License Application.

There are no commitments in this letter or its enclosures. If you have any questions regarding this letter, please contact me at (202) 586-9620, or by email to jeff.williams@rw.doe.gov.

Steven E. Homberg *(B) jrw*

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Office of Technical Management

OTM: SEG-0443



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Enclosures (10):

1. BSC (Bechtel SAIC Company) 2004. *Development of Numerical Grids for UZ Flow and Transport Modeling*. ANL-NBS-HS-000015 REV 02. Las Vegas, Nevada: Bechtel SAIC Company. ACC: DOC.20040901.0001.
2. BSC 2008. *Development of Numerical Grids for UZ Flow and Transport Modeling*. ANL-NBS-HS-000015 REV 02 ERD 01. Las Vegas, Nevada: Bechtel SAIC Company. ACC: LLR.20080522.0082.
3. SNL (Sandia National Laboratories) 2009. *Radionuclide Transport Models Under Ambient Conditions*. MDL-NBS-HS-000008 REV 02 ADD 01 ERD 02. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20090114.0005.
4. SNL 2007. *Waste Form and In-Drift Colloids-Associated Radionuclide Concentrations: Abstraction and Summary*. MDL-EBS-PA-000004 REV 03. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20071018.0019.
5. SNL 2008. *Waste Form and In-Drift Colloids-Associated Radionuclide Concentrations: Abstraction and Summary*. MDL-EBS-PA-000004 REV 03 ERD 01. Las Vegas, Nevada: Sandia National Laboratories. ACC: LLR.20080325.0281.
6. SNL 2008. *Abstraction of Drift Seepage*. MDL-NBS-HS-000019 REV 01 ADD 01 ERD 02. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20081118.0049.
7. SNL 2008. *In-Package Chemistry Abstraction*. ANL-EBS-MD-000037 REV 04 ADD 01 ERD 02. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20081120.0004.
8. SNL 2009. *Particle Tracking Model and Abstraction of Transport Processes*. MDL-NBS-HS-000020 REV 02 ADD 02 ERD 04. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20090113.0002.
9. SNL 2009. *Site-Scale Saturated Zone Transport*. MDL-NBS-HS-000010 REV 03 ADD 01 ERD 01. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20090115.0001.
10. SNL 2009. *Total System Performance Assessment Model /Analysis for the License Application*. MDL-WIS-PA-000005 REV 00 ADD 01 ERD 05. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20090106.0001.

Document Components Provided on OSM:

Enclosure #	File Name	File Size
Enclosure 1	001_DOC.20040901.0001_ANL-NBS-HS-000015R2.pdf	8,631,498
Enclosure 2	002_LLR.20080522.0082_ANL-NBS-HS-000015R2E1.pdf	3,583,676
Enclosure 3	003_DOC.20090114.0005_MDL-NBS-HS-000008R2A1E2.pdf	3,099,278
Enclosure 4	004_DOC.20071018.0019_MDL-EBS-PA-000004R3.pdf	19,525,171
Enclosure 5	005_LLR.20080325.0281_MDL-EBS-PA-000004R3E1.pdf	1,562,741
Enclosure 6	006_DOC.20081118.0049_MDL-NBS-HS-000019R1A1E2.pdf	2,931,910
Enclosure 7	007_DOC.20081120.0004_ANL-EBS-MD-000037R4A1E2.pdf	2,327,943
Enclosure 8	008_DOC.20090113.0002_MDL-NBS-HS-000020R2A2E4.pdf	4,306,974
Enclosure 9	009_DOC.20090115.0001_MDL-NBS-HS-000010R3A1E1.pdf	11,812,934
Enclosure 10	010_DOC.20090106.0001_MDL-WIS-PA-000005R0A1E5.pdf	7,867,892

Note: These PDF files for supporting responding to Yucca Mountain Repository License Application RAIs were prepared with Adobe Acrobat Version 8 using the current job options file provided by the NRC on its website. Some files included in this submittal may have been initially prepared with another version of Acrobat and another job options file. All files were reviewed using the NRC preflight profile provided on its website and have been determined to meet NRC specifications in the October 2008 revision of Guidance for Electronic Submissions to the NRC. As discussed with NRC staff, the addition of accessibility tagging for compliance with Section 508 of the Rehabilitation Act frequently causes the preflight to return "fonts not embedded" error messages. Specifically, the content is usually flagged as unembedded Times-Roman font. The Adobe preflight errors for unembedded fonts have been reviewed and represent nonprinting and nondisplaying Section 508 tagging information.

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