



Department of Energy

Office of Civilian Radioactive Waste Management
1551 Hillshire Drive
Las Vegas, NV 89134-6321

QA: N/A
Docket Number: 63-001

February 19, 2009

ATTN: Document Control Desk
Michael F. Weber, Director
Office of Nuclear Material Safety
and Safeguards
U.S. Nuclear Regulatory Commission
EBB-2B2
11545 Rockville Pike
Rockville, MD 20852-2738

UPDATE TO THE YUCCA MOUNTAIN REPOSITORY LICENSE APPLICATION (LA) FOR CONSTRUCTION AUTHORIZATION

Reference: Federal Register Notice: 74 FR 4477, dated January 26, 2009, "*Department of Energy; Establishment of Atomic Safety and Licensing Boards*"

Dear Mr. Weber:

The purpose of this letter is to transmit the U.S. Department of Energy's (DOE) first update to the Yucca Mountain Repository LA, which meets the requirements of 10 CFR § 63.22(c) to update the application on notification of the appointment of an Atomic Safety and Licensing Board. DOE initially transmitted its LA for construction authorization to the U.S. Nuclear Regulatory Commission (NRC) on June 3, 2008. In accordance with 10 CFR § 63.22(e), DOE certifies that this revision reflects the updated LA as of October 16, 2008. Changes made to this revision were determined not to be significant and did not impact the conclusions of the LA. The update was initiated soon after the docketing of the LA by the NRC in anticipation of notification of the appointment of an Atomic Safety and Licensing Board. Due to the lengthy process required to maintain configuration control between the paper version and the electronic version, and the time required to print the paper version, DOE is submitting the update prepared as of that time.

Enclosed are optical storage media which contain: 1) the first update of the LA, with revised sections clearly identified as Revision 1, and text and figure changes noted with marginal change bars; and 2) updates to the primary reference documents to the LA, affecting 36 of the original 196 references. In addition, enclosed in paper format are: 1) a detailed listing of the contents of the optical storage media submitted with this letter; 2) a summary of the specific LA changes that have been made, including the sections revised and a description of each change; and 3) copies of the individual LA pages affected by changes since the June 3, 2008, submittal. The updates to the primary reference documents are included for information, and these references are not part of the LA.

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DOE is also providing paper copies of the entire LA with the revised sections marked as Revision 1.

Please note that Appendix A of the Safety Analysis Report has been determined by DOE to contain Official Use Only (OUO) information. Such information is exempt from public disclosure under the Freedom of Information Act and 10 CFR § 2.390. Optical storage media containing the OUO and public versions of the LA are clearly marked.

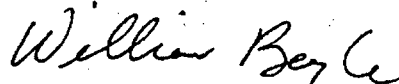
As a courtesy to the three Construction Authorization Boards, DOE is providing three complete copies of the LA update, in both paper and optical storage media, to the chief counsel of the Atomic Safety and Licensing Board Panel. As required by 10 CFR § 63.22(d), DOE is also making copies of the public version of the LA available at appropriate locations near the proposed geologic repository operations area. The public version of the LA has also been included in DOE's Licensing Support Network collection.

In addition to the above information, an update to the Naval Nuclear Propulsion Program (NNPP) Technical Support Document (TSD) is being transmitted concurrently, under separate cover. Because the NNPP TSD contains classified information related to naval spent nuclear fuel, the DOE has separated this part of the LA from the unclassified Safety Analysis Report in accordance with 10 CFR § 63.21(a).

On October 3, 2008, NRC was notified of DOE's plan to supplement its 2002 Final Environmental Impact Statement (EIS) and 2008 Supplemental EIS. DOE anticipates providing this supplement to the NRC no later than fall 2009. The 2009 Supplemental EIS will provide the updated environmental information required by 10 CFR § 63.22(c).

If you have any questions regarding this information, please contact Jeffrey R. Williams at (202) 586-9620 or jeff.williams@rw.doe.gov.

Sincerely,



William J. Boyle, Director
Regulatory Affairs Division
Office of Technical Management

Enclosures (5):

1. Yucca Mountain Repository License Application, Revision 1, indicating Docket Number 63-001
 - a. Thirty-four (34) DVDs marked as "Official Use Only" (to be withheld from public release)
 - b. One (1) DVD marked "For Public Release"
 - c. Thirty-four (34) paper copies
2. Revised primary reference documents to the LA
 - a. Thirty-four (34) CDs marked as "For Public Release" containing all changes to the 196 primary reference documents
3. Listing of electronic files provided on enclosed DVDs/CDs. The listing is provided in both paper and electronic format.
4. Two tables summarizing all changes made in this LA update
5. The individual pages affected by changes since the June 3, 2008, submittal. Some of these pages are marked as "Official Use Only" and are to be withheld from public release.

cc w/encls (including Official Use Only):

L.E. Kokajko, NRC, Rockville, MD
B. J. Benney, NRC, Rockville, MD
J. R. Davis, NRC, Rockville, MD
A. S. Mohseni, NRC, Rockville, MD
N. K. Stablein, NRC, Rockville, MD
A.C. Eitrem, NRC, Rockville, MD
D. B. Spitzberg, NRC, Arlington, TX
J. D. Parrott, NRC, Las Vegas, NV
L. M. Willoughby, NRC, Las Vegas, NV
Bob Brient, CNWRA, San Antonio, TX
W. C. Patrick, CNWRA, San Antonio, TX
Budhi Sagar, CNWRA, San Antonio, TX

cc w/encls (Public Release version only):

The Honorable James A. Gibbons, Office of the Governor, Carson City, NV
Nevada State Legislature, State of Nevada, Carson City, NV
Rod McCullum, NEI, Washington, DC
B. J. Garrick, NWTRB, Arlington, VA
Bruce Breslow, State of Nevada, Carson City, NV
Alan Kalt, Churchill County, Fallon, NV
Irene Navis, Clark County, Las Vegas, NV
Ed Mueller, Esmeralda County, Goldfield, NV
Ron Damele, Eureka County, Eureka, NV
Richard Cervantes, Inyo County, Independence, CA

cc w/encls (Public Release version only) [continued]:

Chuck Chapin, Lander County, Battle Mountain, NV

Connie Simkins, Lincoln County, Pioche, NV

Linda Mathias, Mineral County, Hawthorne, NV

Darrell Lacy, Nye County, Pahrump, NV

Timbisha Shoshone Tribe of California, Bishop, CA

Joe Kennedy, Timbisha Shoshone Yucca Mountain Oversight Program, Pahrump, NV

Mike Simon, White Pine County, Ely, NV

Barbara Byron, California Energy Commission, Sacramento, CA

Ian Zabarte, Native Community Action Council, Baker, NV

John Huston, Caliente Hot Springs Resort LLC, Las Vegas NV

NNSA Nevada Site Office Public Reading Room, Las Vegas, NV

DOE Forrestal Public Reading Room, Washington, DC

Pahrump Community Library, Pahrump, NV

Beatty Library District, Beatty, NV

Amargosa Valley Public Library, Amargosa, NV

Enclosure 3

Electronic Files Provided on Enclosed OSM

In accordance with Section 2.7 of *Guidance for Electronic Submissions to the NRC*, this document provides a list of the electronic files contained on the following optical storage media (OSM):

<u>CD/DVD</u>	<u>Page</u>
1. Yucca Mountain Repository License Application.....	2
2. Updates to Primary Reference Documents for the Yucca Mountain Repository License Application.....	4

For each of these OSM, this listing identifies the folder in bold and provides the file names and file sizes of each file. Documents or document components to be withheld for public release are identified in this listing as "Official Use Only;" all others are indicated as "For Public Release." Any material indicated in this listing as "Official Use Only" has been omitted from OSM marked "For Public Release," but the folder and file names are otherwise identical.

The listing of files on the DVD containing the updates to the 196 primary reference documents provided on June 3, 2008, also includes a bibliographic reference to identify each document. Note that the numbering and naming of the documents and folders is left unchanged from the numbering applied in the initial submittal to ensure that the updated files are clearly related to the files initially submitted.

The PDF files for the *Yucca Mountain Repository License Application* were prepared with Adobe Acrobat Version 8 using the current job options file provided by the NRC on its website. Other PDF files included in this submittal (i.e., the 36 document updates to the 196 primary reference documents previously submitted) 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 November 2007 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.

In accordance with Sections 2.7 and 2.12.1 of the NRC's *Guidance for Electronic Submissions to the NRC*, this statement regarding hyperlinks is provided: This submittal contains PDF files, one or more of which contains hyperlinks to other files or to the Internet. These hyperlinks are either inoperable or are not essential to the use of the filing. Any material referenced by hyperlinks to the Internet that was essential for use of this filing has been submitted as part of the filing. Any material referenced by a hyperlink to another PDF that was essential for the use of this filing has either been included by reference or submitted as part of this filing.

Yucca Mountain Repository License Application

001_GI (For Public Release)

File Name	File Size
001_GI_1-GI_5_figures_part_1_YMR_LA.pdf	49,167 KB
002_GI_5_figures_part_2_YMR_LA.pdf	47,334 KB
003_GI_5_figures_part_3_YMR_LA.pdf	24,774 KB

002_SAR_1 (For Public Release)

File Name	File Size
004_SAR_1-1.1_figures_part_1_YMR_LA.pdf	48,595 KB
005_SAR_1.1_figures_part_2_YMR_LA.pdf	49,408 KB
006_SAR_1.1_figures_part_3_YMR_LA.pdf	44,961 KB
007_SAR_1.2-1.2.3_YMR_LA.pdf	39,415 KB
008_SAR_1.2.4_YMR_LA.pdf	43,007 KB
009_SAR_1.2.5_YMR_LA.pdf	34,926 KB
010_SAR_1.2.6-1.2.8_YMR_LA.pdf	27,971 KB
011_SAR_1.3-1.3.3_YMR_LA.pdf	36,990 KB
012_SAR_1.3.4-1.3.6_YMR_LA.pdf	31,822 KB
013_SAR_1.4-1.4.5_YMR_LA.pdf	29,941 KB
014_SAR_1.5_YMR_LA.pdf	33,219 KB
015_SAR_1.6-1.8_YMR_LA.pdf	25,465 KB
016_SAR_1.9-1.14_YMR_LA.pdf	29,021 KB

003_SAR_2 (For Public Release)

File Name	File Size
017_SAR_2-2.1_figures_part_1_YMR_LA.pdf	29,628 KB
018_SAR_2.1_figures_part_2_YMR_LA.pdf	36,657 KB
019_SAR_2.2_YMR_LA.pdf	31,232 KB
020_SAR_2.3-2.3.1_figures_part_1_YMR_LA.pdf	37,249 KB
021_SAR_2.3.1_figures_part_2_YMR_LA.pdf	42,096 KB
022_SAR_2.3.2_figures_part_1_YMR_LA.pdf	25,952 KB
023_SAR_2.3.2_figures_part_2_YMR_LA.pdf	33,415 KB
024_SAR_2.3.3_figures_part_1_YMR_LA.pdf	37,297 KB
025_SAR_2.3.3_figures_part_2_YMR_LA.pdf	25,201 KB
026_SAR_2.3.4_figures_part_1_YMR_LA.pdf	20,323 KB
027_SAR_2.3.4_figures_part_2_YMR_LA.pdf	48,092 KB
028_SAR_2.3.4_figures_part_3_YMR_LA.pdf	43,258 KB
029_SAR_2.3.5_YMR_LA.pdf	40,497 KB
030_SAR_2.3.6_YMR_LA.pdf	28,963 KB
031_SAR_2.3.7_YMR_LA.pdf	35,578 KB
032_SAR_2.3.8_YMR_LA.pdf	44,389 KB
033_SAR_2.3.9_figures_part_1_YMR_LA.pdf	42,664 KB
034_SAR_2.3.9_figures_part_2_YMR_LA.pdf	16,091 KB
035_SAR_2.3.10-2.3.11_YMR_LA.pdf	39,596 KB
036_SAR_2.4_figures_part_1_YMR_LA.pdf	45,593 KB
037_SAR_2.4_figures_part_2_YMR_LA.pdf	45,668 KB
038_SAR_2.4_figures_part_3_YMR_LA.pdf	49,194 KB

004_SAR_3 (For Public Release)

File Name	File Size
039_SAR_3_YMR_LA.pdf	10,683 KB

005_SAR_4 (For Public Release)

File Name	File Size
040_SAR_4_YMR_LA.pdf	11,842 KB

006_SAR_5 (For Public Release)

File Name	File Size
041_SAR_5_YMR_LA.pdf	28,933 KB

007_SAR_Appendix_A (Official Use Only)

File Name	File Size
042_SAR_App_A_figures_part_1.pdf	34,834 KB
043_SAR_App_A_figures_part_2.pdf	44,153 KB

YMR_LA_Searchable_Index (For Public Release)

File Name	File Size
index.idx	5 KB
index1.idx	38,027 KB

[Located in the OSM Root]

File Name	File Size
YMR_LA_Searchable_Index.pdx	1 KB

Updates to Primary Reference Documents for the Yucca Mountain Repository License Application

020_TDR-CRW-GS-000001 REV 02 ICN 01 (For Public Release)

BSC 2004. *Yucca Mountain Site Description*. TDR-CRW-GS-000001 REV 02 ICN 01 ERD 2. Two volumes. Las Vegas, Nevada: Bechtel SAIC Company. ACC: DOC.20040504.0008; LLR.20080423.0019; DOC.20080707.0002.

This Error Resolution Document is an addition to the two files provided previously for document #20.

File Name	File Size
03_TDR-CRW-GS-000001 REV 02 ICN 01 ERD 02.pdf	3,619 KB

026_ANL-EBS-MD-000016 REV 02 (For Public Release)

BSC 2004. *Defense HLW Glass Degradation Model*. ANL-EBS-MD-000016 REV 02 ACN 01 ERD 2. Las Vegas, Nevada: Bechtel SAIC Company. ACC: DOC.20041020.0015; DOC.20050922.0002; LLR.20080408.0271; DOC.20081021.0002.

This Error Resolution Document is an addition to the two files provided previously for document #20.

File Name	File Size
04_ANL-EBS-MD-000016 REV 02 ERD 02.pdf	1,590 KB

028_ANL-EBS-MD-000038 REV 01 (For Public Release)

BSC 2004. *Evaluation of Potential Impacts of Microbial Activity on Drift Chemistry*. ANL-EBS-MD-000038 REV 01 ACN 02 ERD 2. Las Vegas, Nevada: Bechtel SAIC Company. ACC: DOC.20041118.0005; DOC.20050505.0001; DOC.20050609.0001; LLR.20080324.0016; DOC.20080814.0002.

This Error Resolution Document is an addition to the four files provided previously for document #28.

File Name	File Size
05_ANL-EBS-MD-000038 REV 01 ERD 02.pdf	786 KB

029_ANL-NBS-GS-000008 REV 01 (For Public Release)

BSC 2004. *Future Climate Analysis*. ANL-NBS-GS-000008 REV 01. Las Vegas, Nevada: Bechtel SAIC Company. ACC: DOC.20040908.0005; DOC.20080813.0003.

This Error Resolution Document is an addition to the file provided previously for document #29.

File Name	File Size
02_ANL-NBS-GS-000008 REV 01 ERD 01.pdf	4,550 KB

031_ANL-NBS-HS-000005 REV 03 (For Public Release)

BSC 2004. *In Situ Field Testing of Processes*. ANL-NBS-HS-000005 REV 03 ACN 02 ERD 1. Las Vegas, Nevada: Bechtel SAIC Company. ACC: DOC.20041109.0001; DOC.20051010.0001; DOC.20060508.0001; DOC.20080724.0006.

This Error Resolution Document is an addition to the three files provided previously for document #31.

File Name	File Size
04_ANL-NBS-HS-000005 REV 03 ERD 01.pdf	1,700 KB

050_ANL-MGR-GS-000002 REV 03 (For Public Release)

SNL 2007. *Characterize Eruptive Processes at Yucca Mountain, Nevada*. ANL-MGR-GS-000002 REV 03 ERD 1. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20070301.0001; LLR.20080401.0273.

This Error Resolution Document is an addition to the two files provided previously for document #50.

File Name	File Size
03_ANL-MGR-GS-000002 REV 03 ERD 02.pdf	1,431 KB

055_MDL-NBS-HS-000011 REV 03 (For Public Release)

SNL 2007. *Saturated Zone Site-Scale Flow Model*. MDL-NBS-HS-000011 REV 03 ACN 01 ERD 3. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20070626.0004; DOC.20071001.0013; LLR.20080408.0261; LLR.20080512.0162; DOC.20080623.0001.

This Error Resolution Document is an addition to the eight files provided previously for document #55.

File Name	File Size
09_MDL-NBS-HS-000011 REV 03 ERD 03.pdf	1,334 KB

062_ANL-EBS-MD-000045 REV 03 (For Public Release)

SNL 2007. *In-Drift Precipitates/Salts Model*. ANL-EBS-MD-000045 REV 03 ERD 2. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20070306.0037; LLR.20080401.0242; DOC.20080707.0001.

This Error Resolution Document is an addition to the two files provided previously for document #62.

File Name	File Size
03_ANL-EBS-MD-000045 REV 03 ERD 02.pdf	1,569 KB

068_ANL-WIS-MD-000006 REV 02 (For Public Release)

SNL 2007. *Radionuclide Screening*. ANL-WIS-MD-000006 REV 02 ACN 01 ERD 2. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20070326.0003; DOC.20070522.0023; LLR.20080401.0247; DOC.20080722.0003.

This Error Resolution Document is an addition to the three files provided previously for document #68.

File Name	File Size
04_ANL-WIS-MD-000006 REV 02 ERD 02.pdf	1,517 KB

069_MDL-MGR-GS-000005 REV 02 (For Public Release)

SNL 2007. *Dike/Drift Interactions*. MDL-MGR-GS-000005 REV 02 ERD 2. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20071009.0015; LLR.20080414.0028; DOC.20080929.0005.

This Error Resolution Document is an addition to the two files provided previously for document #69.

File Name	File Size
03_MDL-MGR-GS-000005 REV 02 ERD 02.pdf	1,305 KB

071_ANL-MGR-GS-000003 REV 03 (For Public Release)

SNL 2007. *Number of Waste Packages Hit by Igneous Events*. ANL-MGR-GS-000003 REV 03 ERD 1. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20071002.0001; DOC.20080805.0003.

This Error Resolution Document is an addition to the file provided previously for document #71.

File Name	File Size
02_ANL-MGR-GS-000003 REV 03 ERD 01.pdf	1,579 KB

072_ANL-WIS-MD-000024 REV 01 (For Public Release)

SNL 2008. *Postclosure Nuclear Safety Design Bases*. ANL-WIS-MD-000024 REV 01 ACN 01 ERD 2. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20080226.0002; DOC.20080314.0004; LLR.20080507.0018; DOC.20080610.0007.

This Error Resolution Document is an addition to the three files provided previously for document #72.

File Name	File Size
04_ANL-WIS-MD-000024 REV 01 ERD 02.pdf	3,860 KB

078_ANL-EBS-MD-000076 REV 00 (For Public Release)

SNL 2007. *Analysis of Mechanisms for Early Waste Package/Drip Shield Failure*. ANL-EBS-MD-000076 REV 00 ACN 01 ERD 2. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20070629.0002; DOC.20071003.0015; LLR.20080311.0094; DOC.20080918.0002.

This Error Resolution Document is an addition to the three files provided previously for document #78.

File Name	File Size
04_ANL-EBS-MD-000076 REV 00 ERD 02.pdf	1,116 KB

081_MDL-WIS-AC-000001 REV 00 (For Public Release)

SNL 2007. *Mechanical Assessment of Degraded Waste Packages and Drip Shields Subject to Vibratory Ground Motion*. MDL-WIS-AC-000001 REV 00 ERD 2. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20070917.0006; DOC.20080623.0002; DOC.20081021.0001.

These Error Resolution Documents are additions to the two files provided previously for document #81.

File Name	File Size
03_MDL-WIS-AC-000001 REV 00 ERD 01.pdf	1,664 KB
04_MDL-WIS-AC-000001 REV 00 ERD 02.pdf	1,486 KB

088_000-3DR-MGR0-00100-000-007 (For Public Release)

BSC 2007. *Project Design Criteria Document*. 000-3DR-MGR0-00100-000-007 CBCN 013. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20071016.0005; ENG.20071108.0001; ENG.20071220.0003; ENG.20080107.0001; ENG.20080107.0002; ENG.20080107.0016; ENG.20080107.0017; ENG.20080131.0006; ENG.20080305.0002; ENG.20080305.0011; ENG.20080305.0012; ENG.20080306.0009; ENG.20080313.0004; ENG.20080710.0001.

This Criteria/Basis Change Notice is an addition to the thirteen files provided previously for document #88.

File Name	File Size
14_000-3DR-MGR0-00100-000-007 CBCN 013.pdf	2,769 KB

090_ANL-NBS-HS-000057 REV 00 (For Public Release)

SNL 2008. *Postclosure Analysis of the Range of Design Thermal Loadings*. ANL-NBS-HS-000057 REV 00 ERD 2. Las Vegas, Nevada: Sandia National Laboratories.
ACC: DOC.20080121.0002; LLR.20080408.0251; DOC.20080828.0006.

This Error Resolution Document is an addition to the two files provided previously for document #90.

File Name	File Size
03_ANL-NBS-HS-000057 REV 00 ERD 02.pdf	713 KB

095_51A-PSA-IH00-00100-000-00A (For Public Release)

BSC 2008. *Initial Handling Facility Event Sequence Development Analysis*. 51A-PSA-IH00-00100-000-00A CACN 002. Las Vegas, Nevada: Bechtel SAIC Company.
ACC: ENG.20080207.0005; ENG.20080314.0002; ENG.20080828.0010.

This Calculation/Analysis Change Notice is an addition to the two files provided previously for document #95.

File Name	File Size
03_51A-PSA-IH00-00100-000-00A CACN 002.pdf	2,312 KB

097_200-PSA-RF00-00100-000-00A (For Public Release)

BSC 2008. *Receipt Facility Event Sequence Development Analysis*. 200-PSA-RF00-00100-000-00A CACN 002. Las Vegas, Nevada: Bechtel SAIC Company.
ACC: ENG.20080211.0006; ENG.20080314.0004; ENG.20080828.0011.

This Calculation/Analysis Change Notice is an addition to the two files provided previously for document #97.

File Name	File Size
03_200-PSA-RF00-00100-000-00A CACN 002.pdf	2,882 KB

098_000-PSA-MGR0-00800-000-00A (For Public Release)

BSC 2008. *Intra-Site Operations and BOP Event Sequence Development Analysis*. 000-PSA-MGR0-00800-000-00A CACN 002. Las Vegas, Nevada: Bechtel SAIC Company.
ACC: ENG.20080212.0004; ENG.20080314.0006; ENG.20080811.0001.

This Calculation/Analysis Change Notice is an addition to the two files provided previously for document #98.

File Name	File Size
03_000-PSA-MGR0-00800-000-00A CACN 002.pdf	1,173 KB

099_000-PSA-MGR0-00400-000-00A (For Public Release)

BSC 2008. *Subsurface Operations Event Sequence Development Analysis*. 000-PSA-MGR0-00400-000-00A CACN 002. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20080214.0004; ENG.20080314.0001; ENG.20080811.0002.

This Calculation/Analysis Change Notice is an addition to the two files provided previously for document #99.

File Name	File Size
03_000-PSA-MGR0-00400-000-00A CACN 002.pdf	1,830 KB

107_000-00C-MGR0-00500-000-00C (For Public Release)

BSC 2008. *External Events Hazards Screening Analysis*. 000-00C-MGR0-00500-000-00C CACN 002. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20080219.0001; ENG.20080310.0025; ENG.20080828.0009.

This Calculation/Analysis Change Notice is an addition to the two files provided previously for document #107.

File Name	File Size
03_000-00C-MGR0-00500-000-00C CACN 002.pdf	1,937 KB

108_000-PSA-MGR0-00700-000-00A (For Public Release)

BSC 2007. *Characteristics for the Representative Commercial Spent Fuel Assembly for Preclosure Normal Operations*. 000-PSA-MGR0-00700-000-00A CACN 001. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20070521.0008; ENG.20081003.0002.

This Calculation/Analysis Change Notice is an addition to the file provided previously for document #108.

File Name	File Size
02_000-PSA-MGR0-00700-000-00A CACN 001.pdf	3,556 KB

111_000-00C-MGR0-03400-000-00A (For Public Release)

BSC 2007. *Release Fractions for Spent Nuclear Fuel and High-Level Waste*. 000-00C-MGR0-03400-000-00A CACN 001. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20071105.0010; ENG.20080826.0001.

This Calculation/Analysis Change Notice is an addition to the file provided previously for document #111.

File Name	File Size
02_000-00C-MGR0-03400-000-00A CACN 001.pdf	987 KB

119_MDL-NBS-HS-000019 REV 01 AD 01 (For Public Release)

SNL 2007. *Abstraction of Drift Seepage*. MDL-NBS-HS-000019 REV 01 ADD 01. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20070807.0001; DOC.20080813.0004.

This Error Resolution Document is an addition to the file provided previously for document #119.

File Name	File Size
02_MDL-NBS-HS-000019 REV 01 AD 01 ERD 01.pdf	1,738 KB

127_000-M0A-FP00-00200-000-00A (For Public Release)

BSC 2007. *Site Fire Hazard Analysis*. 000-M0A-FP00-00200-000-00A CACN 002. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20070814.0003; ENG.20080310.0021; ENG.20080528.0002.

This Calculation/Analysis Change Notice is an addition to the two files provided previously for document #127.

File Name	File Size
03_000-M0A-FP00-00200-000-00A CACN 002.pdf	875 KB

133_ANL-WIS-MD-000027 REV 00 (For Public Release)

SNL 2008. *Features, Events, and Processes for the Total System Performance Assessment: Analyses*. ANL-WIS-MD-000027 REV 00 ACN 01 ERD 2. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20080307.0003; DOC.20080407.0009; LLR.20080522.0166; DOC.20080722.0002.

This Error Resolution Document is an addition to the three files provided previously for document #133.

File Name	File Size
04_ANL-WIS-MD-000027 REV 00 ERD 02.pdf	1,489 KB

135_060-SYC-CR00-00800-000-00B (For Public Release)

BSC 2008. *CRCF Seismic Analysis—2007 Seismic Input Ground Motions*. 060-SYC-CR00-00800-000-00B. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20080616.0015.

This file is a full revision and replacement for the two files provided previously for document #135.

File Name	File Size
01_060-SYC-CR00-00800-000-00B.pdf (Electronic Attachments 26 Files, 15 Folders)	4,107 KB 18.9 MB

138_800-M0C-FP00-00100-000-00A (For Public Release)

BSC 2007. *Subsurface Fire Exposure Calculation*. 800-M0C-FP00-00100-000-00A CACN 001. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20070726.0020; ENG.20080528.0003.

This Calculation/Analysis Change Notice is an addition to the file provided previously for document #138.

File Name	File Size
02_800-M0C-FP00-00100-000-00A CACN 001.pdf	888 KB

144_MDL-WIS-PA-000005 REV 00 AD 01 (For Public Release)

SNL 2008. *Total System Performance Assessment Model/Analysis for the License Application*. MDL-WIS-PA-000005 REV 00 ADD 01 ERD 4. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20080312.0001; LLR.20080414.0037; LLR.20080507.0002; LLR.20080522.0113; DOC.20080724.0005.

This Error Resolution Document is an addition to the twenty-seven files provided previously for document #144.

File Name	File Size
28_MDL-WIS-PA-000005 REV 00 AD 01 ERD 04.pdf	11,425 KB

158_51A-SYC-IH00-00400-000-00B (For Public Release)

BSC 2008. *Initial Handling Facility (IHF) Mass Properties*. 51A-SYC-IH00-00400-000-00B. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20080616.0016.

This file is a full revision and replacement for the two files provided previously for document #158.

File Name	File Size
01_51A-SYC-IH00-00400-000-00B.pdf	10,627 KB
(Electronic Attachments 2 Files)	1324 KB

162_ANL-EBS-MD-000049 REV 03 AD 02 (For Public Release)

SNL 2008. *Multiscale Thermohydrologic Model*. ANL-EBS-MD-000049 REV 03 ADD 02 ERD 2. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20080201.0003; LLR.20080403.0162; LLR.20080617.0077.

This Error Resolution Document is an addition to the four files provided previously for document #162.

File Name	File Size
05_ANL-EBS-MD-000049 REV 03 AD 02 ERD 02.pdf	3,187 KB

166_000-PSA-MGR0-02300-000-00A (For Public Release)

BSC 2008. *ITS SSC/Non-ITS SSC Interactions Analysis*. 000-PSA-MGR0-02300-000-00A CACN 001. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20080312.0035; ENG.20080618.0001.

This Calculation/Analysis Change Notice is an addition to the file provided previously for document #166.

File Name	File Size
02_000-PSA-MGR0-02300-000-00A CACN 001.pdf	5,741 KB

167_100-S0C-CY00-00100-000-00E (For Public Release)

BSC 2008. *Supplemental Soils Report*. 100-S0C-CY00-00100-000-00E. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20080828.0016.

This file is a full revision and replacement for the two files provided previously for document #167.

File Name	File Size
01_100-S0C-CY00-00100-000-00E.pdf	7,411 KB

170_MDL-NBS-HS-000020 REV 02 AD 02 (For Public Release)

SNL 2008. *Particle Tracking Model and Abstraction of Transport Processes*. MDL-NBS-HS-000020 REV 02 ADD 02 ACN 01 ERD 3. Las Vegas, Nevada: Sandia National Laboratories. ACC: DOC.20080129.0008; DOC.20070920.0003; LLR.20080325.0287; LLR.20080522.0170; LLR 20080603.0082.

This Error Resolution Document is an addition to the four files provided previously for document #170.

File Name	File Size
05_MDL-NBS-HS-000020 REV 02 AD 02 ERD 03.pdf	2,665 KB

177_000-3DR-MGR0-00300-000-003 (For Public Release)

BSC 2008. *Basis of Design for the TAD Canister-Based Repository Design Concept*. 000-3DR-MGR0-00300-000-003. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20081006.0001.

This file is a full revision and replacement for the thirteen files provided previously for document #177.

File Name	File Size
01_000-3DR-MGR0-00300-000-003 Rev 3.pdf	10,748 KB

187_51A-SYC-IH00-00500-000-00C (For Public Release)

BSC 2008. *Initial Handling Facility (IHF) Soil Springs and Damping*. 51A-SYC-IH00-00500-000-00C. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20080617.0007.

This file is a full revision and replacement for the two files provided previously for document #187.

File Name	File Size
01_51A-SYC-IH00-00500-000-00C.pdf	37,550

Table 1 - LA Revision 1 Update – Change Summary by LA Page Number

LA Section	LA Page Number	LA Subsection Revised	Description of Change
GI-1	1-5	1.1.2.1	Deleted "Details of" and changed "are" to "is".
	1-16, 1-17	1.2.2	Changed "transfer canisters, transportation casks, and aging overpacks" to "transfer canisters from transportation casks, shielded transfer casks, and aging overpacks".
	1-22	1.4.2	Deleted "Additionally, Table 1-1 contains cross references to the appropriate SAR sections that summarize the listed materials".
	1-22	1.5	Updated reference citation.
	1-25	Table 1-1	Deleted the last column of the table.
	1-35	Figure 1-7	Updated Repository Operations Summary Timeline figure to reflect revised project schedule milestones. [See LA change number 32]
GI-2	2-9	Figure 2-1 (Sheet 1 of 3)	Updated High-Level Project Schedule figure to reflect revised project schedule milestones. Deleted last page of former schedule. Corrected aging pad area identifiers consistent with LA text. Deleted "CCCF – Central Control Center Facility" and "EL – elevation" and added "HEPA – high-efficiency particulate air" and "IFC – issue for construction" in the note. [See LA change number 32]
	2-11	Figure 2-1 (Sheet 2 of 3)	Updated High-Level Project Schedule figure to reflect revised project schedule milestones. Deleted last page of former schedule. Corrected aging pad area identifiers consistent with LA text. Deleted "CRCF – Canister Receipt and Closure Facility" and added "CCCF – Central Control Center Facility", "IHF – Initial Handling Facility", and "RF – Receipt Facility" in the note. [See LA change number 32]
	2-13	Figure 2-1 (Sheet 3 of 3)	Updated High-Level Project Schedule figure to reflect revised project schedule milestones. Deleted last page of former schedule. Corrected aging pad area identifiers consistent with LA text. Deleted "IHF – Initial Handling Facility" and "WHF – Wet Handling Facility" in the note. [See LA change number 32]
GI-5	5-25	5.1.6.4	Updated reference citation.
	5-48	5.2.2.3.1	Updated reference citation.
	5-64	5.2.3.2.2	Changed "Section 6.5.6" to "Section 6.5.7".
	5-98, 5-106, 5-107	5.3	Updated reference citations.
	5-153	Figure 5-33	Deleted "Paintbrush Canyon" from middle Structural Blocks labels (top of page).
	5-155	Figure 5-35	Changed "Gold Mountains" to "Gold Mountain" for acronym "GOM".
SAR 1.1	1.1-25	1.1.2.3	Changed "is projected to the expected first year of operation of the repository" to "was projected to the expected first year of operation of the repository in 2017" and changed "radioactive waste handling operations" to "radioactive waste handling operations in 2067" (first change bar). Deleted "which is" (second change bar). [See LA change number 32]
	1.1-25	1.1.2.3	Added a new last sentence to the end of the paragraph (third change bar). [See LA change number 32]
	1.1-26	1.1.3.1	Changed "are" to "were" (first change bar). Added two new sentences to the end of the paragraph (second change bar).
	1.1-27	1.1.3.1	Deleted reference to Quality Management Directive and moved reference to LA Section 5.1 (QARD) from the list to the lead-in paragraph. Clarified duration of meteorological monitoring program.
	1.1-28	1.1.3.1	Changed "do" to "did" (first change bar) and added "in" (last change bar). Changed "measurements made at each site are included" to "measurements that were made at each site during the period from 1994 through 2006" (second change bar).

Table 1 - LA Revision 1 Update – Change Summary by LA Page Number

LA Section	LA Page Number	LA Subsection Revised	Description of Change
	1.1-29	1.1.3.1	Changed "has" to "had", "is" to "was" (eight times), and "correspond" to "corresponded" (three times).
	1.1-30	1.1.3.1	Changed "correspond" to "corresponded" and "is" to "was".
	1.1-32	1.1.3.1.3	Added "(described in Section 5.1)" deleted the reference citation.
	1.1-107	1.1.5.3.1.2.4	Changed "3.7" to "4.7". [See LA change number 3]
	1.1-114	1.1.5.3.2	Updated reference citation (first change bar). Deleted "static and dynamic" before "soil properties" (second change bar).
	1.1-115	1.1.5.3.2	Updated reference citation.
	1.1-135	1.1.5.3.2.7	Updated reference citation.
	1.1-157	1.1.9.3.2.1	Changed "The fill covering the North Portal pad varies in thickness from 0 to 24.4 ft (BSC 2002b), Attachment I; BSC 2002c, Section 5, Assumption 10)." to "The fill covering the North Portal pad area varies in thickness as shown in the repository facility geologic logs for those drill holes drilled on the pad (Figures 1.1-95 through 1.1-128)" (first change bar). Updated reference citation (second change bar). [See LA change number 49]
	1.1-161	1.1.9.3.2.14	Updated reference citations.
	1.1-167, 1.1-168, 1.1-172, 1.1-179	1.1.10	Updated reference citations.
	1.1-299	Table 1.1-65	Changed "Fairview Peak, CA" to "Fairview Peak, NV" in the last column.
	1.1-395	Figure 1.1-57	Changed "Figure 1.2.2-5" to "Figure 1.2.2-7" in the note.
	1.1-400	Figure 1.1-61	Added "Source" to reference citation.
	1.1-412	Figure 1.1-73	Changed "Grapevine Mountain" to "Grapevine Mountains" for acronym "GM".
	1.1-528	Figure 1.1-111 (Sheet 1 of 3)	Inserted comma in the heading for the 0.0 to 7.0 ft interval (last column).
	1.1-529	Figure 1.1-111 (Sheet 2 of 3)	Inserted comma in the heading for the 71.8 to 75.4 ft interval (last column). Inserted question mark in the heading for the 75.4 to 84.0 ft interval (last column).
	1.1-533	Figure 1.1-113 (Sheet 1 of 3)	Inserted comma in the heading for the 31.0 to 38.3 ft interval (last column).
	1.1-539	Figure 1.1-115 (Sheet 1 of 2)	Inserted comma in the heading for the 1.5 to 7.7 ft interval (last column).
	1.1-540	Figure 1.1-115 (Sheet 2 of 2)	Inserted comma in the headings for the 59.8 to 64.6 ft interval and the 64.6 to 83.0 ft interval (last column).
	1.1-541	Figure 1.1-116 (Sheet 1 of 3)	Inserted comma in the headings for the 8.8 to 13.5 ft interval, the 18.2 to 20.7 ft interval, the 36.6 to 40.9 ft interval, and the 43.8 to 51.9 ft interval (last column).
	1.1-542	Figure 1.1-116 (Sheet 2 of 3)	Inserted comma in the headings for the 54.1 to 56.8 ft interval and the 59.0 to 68.6 ft interval (last column). Inserted forward slashes in the heading for the 90.0 to 97.0 ft interval (last column).
	1.1-544	Figure 1.1-117 (Sheet 1 of 3)	Inserted comma in the heading for the 6.3 to 9.5 ft interval (last column).
	1.1-545	Figure 1.1-117 (Sheet 2 of 3)	Inserted comma in the heading for the 80.0 to 84.7 ft interval (last column).
	1.1-553	Figure 1.1-120 (Sheet 1 of 3)	Inserted comma in the heading for the 42.6 to 46.0 ft interval (last column).
	1.1-554	Figure 1.1-120 (Sheet 2 of 3)	Inserted comma in the headings for the 77.6 to 80.5 ft interval, the 90.9 to 95.2 ft interval, and the 95.4 to 96.6 ft interval (last column).
	1.1-556	Figure 1.1-121 (Sheet 1 of 3)	Inserted comma in the headings for the 5.4 to 11.0 ft interval and the 35.2 to 40.3 ft interval (last column).
	1.1-557	Figure 1.1-121 (Sheet 2 of 3)	Inserted comma in the headings for the 61.6 to 68.4 ft interval and the 104.5 to 107.9 ft interval (last column).

Table 1 - LA Revision 1 Update – Change Summary by LA Page Number

LA Section	LA Page Number	LA Subsection Revised	Description of Change
	1.1-558	Figure 1.1-121 (Sheet 3 of 3)	Inserted comma in the heading for the 164.0 to 164.7 ft interval (last column).
	1.1-559	Figure 1.1-122 (Sheet 1 of 3)	Inserted comma in the headings for the 7.2 to 11.0 ft interval, the 29.9 to 31.0 ft interval, the 34.0 to 38.7 ft interval, and the 44.8 to 47.8 ft interval (last column).
	1.1-560	Figure 1.1-122 (Sheet 2 of 3)	Inserted comma in the headings for the 67.3 to 70.1 ft interval, the 84.8 to 86.6 ft interval, the 96.1 to 98.9 ft interval, and the 111.1 to 116.3 ft interval (last column).
	1.1-561	Figure 1.1-122 (Sheet 3 of 3)	Inserted comma in the heading for the 127.8 to 132.6 ft interval (last column).
	1.1-562	Figure 1.1-123 (Sheet 1 of 4)	Inserted comma in the heading for the 31.6 to 41.0 ft interval (last column).
	1.1-564	Figure 1.1-123 (Sheet 3 of 4)	Inserted comma in the heading for the 145.6 to 147.0 ft interval (last column).
	1.1-566	Figure 1.1-124 (Sheet 1 of 3)	Inserted comma in the headings for the 4.6 to 12.4 ft interval, the 40.2 to 47.0 ft interval, and the 47.9 to 58.4 ft interval (last column).
	1.1-569	Figure 1.1-125 (Sheet 1 of 5)	Inserted comma in the heading for the 37.7 to 46.3 ft interval (last column).
	1.1-570	Figure 1.1-125 (Sheet 2 of 5)	Inserted comma in the headings for the 77.6 to 81.2 ft interval, the 81.2 to 86.1 ft interval, and the 116.1 to 117.6 ft interval (last column).
	1.1-573	Figure 1.1-125 (Sheet 5 of 5)	Inserted question mark in the heading for the 406.3 to 408.7 ft interval (last column).
	1.1-577	Figure 1.1-127 (Sheet 1 of 4)	Inserted comma in the heading for the 8.6 to 12.0 ft interval (last column). Inserted commas and semicolons, and restored two missing letters to the words "maximum size" in the description under the heading for the 31.9 to 34.8 ft interval (last column).
	1.1-578	Figure 1.1-127 (Sheet 2 of 4)	Inserted comma in the heading for the 105.8 to 111.6 ft interval (last column).
	1.1-579	Figure 1.1-127 (Sheet 3 of 4)	Inserted comma in the heading for the 118.9 to 122.4 ft interval (last column).
	1.1-581	Figure 1.1-128 (Sheet 1 of 4)	Inserted comma in the headings for the 10.8 to 15.0 ft interval and the 31.5 to 33.6 ft interval (last column).
	1.1-582	Figure 1.1-128 (Sheet 2 of 4)	Inserted commas in the headings for the 58.0 to 60.0 ft interval, the 66.6 to 67.6 ft interval, the 67.6 to 68.5 ft interval, the 72.0 to 74.5 ft interval, and the 102.2 to 105.9 ft interval (last column).
	1.1-583	Figure 1.1-128 (Sheet 3 of 4)	Inserted comma in the headings for the 108.9 to 112.5 ft interval, the 119.0 to 120.6 ft interval, and the 135.7 to 140.6 ft interval (last column).
SAR 1.2.2	1.2.2-9	1.2.2.1.6.3.2.3	Updated reference citations.
	1.2.2-10	1.2.2.1.6.3.2.4	Updated reference citations.
	1.2.2-32 to 1.2.2-34	1.2.2.3.6	Revised thermal criteria/limits and methodology related to preclosure handling of the naval SNF canister in the IHF and during emplacement operations. The description of the one dimensional analysis was replaced with a description of on-going three dimensional thermal modeling for naval SNF canister handling in the IHF. [See LA change number 31/60]
	1.2.2-40, 1.2.2-41	1.2.2.5	Updated reference citations.
SAR 1.2.3	1.2.3-8	1.2.3.1.4	Added a postclosure procedural safety control for naval SNF canister handling in the IHF. [See LA change number 31/60]

Table 1 - LA Revision 1 Update – Change Summary by LA Page Number

LA Section	LA Page Number	LA Subsection Revised	Description of Change
	1.2.3-25	1.2.3.4	Revised thermal criteria/limits and methodology related to preclosure handling of the naval SNF canister in the IHF and during emplacement operations. The description of the one dimensional analysis was replaced with a description of on-going three dimensional thermal modeling for naval SNF canister handling in the IHF. [See LA change number 31/60]
	1.2.3-53	Figure 1.2.3-2	All changes in the figure are described in the Appendix A change summary.
	1.2.3-77	Figure 1.2.3-14	All changes in the figure are described in the Appendix A change summary.
	1.2.3-99	Figure 1.2.3-23	Replaced "DCMIS" with "remote" in the note and added equipment identification numbers (HS-0010-1) for raise position on hoist raise and low position on hoist lower in the diagram. Also added "NO" before "Over Capacity Lift" in the diagram. [See LA change number 11]
SAR 1.2.4	1.2.4-34	1.2.4.2.3.1	Added "described in Section 5.1" and deleted the reference citation.
	1.2.4-47	1.2.4.2.4.2	Changed "positioned to allow the waste package" to "placed in position" (first change bar). Changed "retracted, and the" to "retracted and" (second change bar).
	1.2.4-60	1.2.4.4.2	Added discussion of ITS interlock for automatic starting of standby fans upon a fan failure or an operating fan trip. Also added a statement that the standby unit is manually started. [See LA change number 24]
	1.2.4-62	1.2.4.4.2	Clarified fan shutdown and fan standby unit startup discussion. [See LA change number 24]
	1.2.4-105	Figure 1.2.4-2	All changes in the figure are described in the Appendix A change summary.
	1.2.4-107	Figure 1.2.4-3	All changes in the figure are described in the Appendix A change summary.
	1.2.4-109	Figure 1.2.4-4	All changes in the figure are described in the Appendix A change summary.
	1.2.4-119	Figure 1.2.4-9	Added "HR=handrail;" in the note.
	1.2.4-181	Figure 1.2.4-36	Replaced "DCMIS" with "remote" in the note and added equipment identification numbers (HS-0002-1) for raise position on hoist raise and low position on hoist lower in the diagram. [See LA change number 11]
	1.2.4-183	Figure 1.2.4-37	Replaced "DCMIS" with "remote" in the note and added equipment identification numbers (HS-0010-1) for raise position on hoist raise and low position on hoist lower in the diagram. [See LA change number 11]
	1.2.4-211	Figure 1.2.4-50	Deleted "is within 3° of vertical" in the note.
	1.2.4-319, 1.2.4-321	Figures 1.2.4-101, 1.2.4-102	Revised the note for the ventilation and instrument diagram for clarity and to add an interlock for automatic starting of standby fans upon an operating fan trip. Revised the diagram to change "ASD Trouble" label to "Fan Tripped" and to show fan tripped signal from ASD hardwired to ITS interlock. Changed description for off sheet from "To Supply Fan" to "To Supply AHU". [See LA change number 24]
	1.2.4-323, 1.2.4-335, 1.2.4-337, 1.2.4-339	Figures 1.2.4-103, 1.2.4-109, 1.2.4-110, 1.2.4-111	Added "Digital" to figure title. Added new column "Logic Input Tripped" to table. Added "Fan Tripped" logic to diagram. [See LA change number 24]
	1.2.4-327, 1.2.4-329, 1.2.4-331, 1.2.4-333	Figures 1.2.4-105, 1.2.4-106, 1.2.4-107, 1.2.4-108	Added hardwired interconnections for shutdown of operating fan on low D/P and flow and start of standby fan on operating trip. Changed "ASD Trouble" label to "Fan Tripped". Added interlock shutdown note to diagram. [See LA change number 24]
	1.2.4-343	Figure 1.2.4-113	Changed figure from a single shared to two independent exhausts to atmosphere (right side of figure). [See LA change number 51]

Table 1 - LA Revision 1 Update – Change Summary by LA Page Number

LA Section	LA Page Number	LA Subsection Revised	Description of Change
SAR 1.2.5	1.2.5-29	1.2.5.2.4.1.1	Added "described in Section 5.1" and deleted the reference citation.
	1.2.5-103	Figure 1.2.5-2	All changes in the figure are described in the Appendix A change summary.
	1.2.5-107	Figure 1.2.5-4	All changes in the figure are described in the Appendix A change summary.
	1.2.5-151	Figure 1.2.5-22	Replaced "DCMIS" with "remote" in the note, added equipment identification numbers (HS-0002-1) for raise position on hoist raise and low position on hoist lower in the diagram, and added "ARMS" after "Cask Handling Yoke" and "Pool Cask Handling Yoke" in the diagram (two times each). [See LA change number 11]
	1.2.5-203	Figure 1.2.5-41	Replaced "DCMIS" with "remote" in the note, added equipment identification numbers (HS-0041-1) for raise position on hoist raise and low position on hoist lower in the diagram, and added "NO" before "Over Capacity Lift" in the diagram. [See LA change number 11]
	1.2.5-305, 1.2.5-307	Figures 1.2.5-84, 1.2.5-85	Revised the note for the ventilation and instrument diagram for clarity and to add an interlock for automatic starting of standby fans upon an operating fan trip. Revised the diagram to change "ASD Trouble" label to "Fan Tripped" and to show fan tripped signal from ASD hardwired to ITS interlock. Changed description for off sheet from "Interlock Signal to Supply Fans" to "Interlock Signal to Supply AHU's". [See LA change number 24]
	1.2.5-313, 1.2.5-317	Figures 1.2.5-88, 1.2.5-90	Added hardwired interconnections for shutdown of operating fan on low D/P and flow and start of standby fan on operating fan trip. Changed "ASD Trouble" label to "Fan Tripped". Added "ITS" label to hardwired interlocks on diagram. Added interlock shutdown note to diagram. [See LA change number 24]
	1.2.5-315, 1.2.5-319	Figures 1.2.5-89, 1.2.5-91	Added hardwired interconnections for shutdown of operating fan on low D/P and flow and start of standby fan on operating fan trip. Changed "ASD Trouble" label to "Fan Tripped". Added interlock shutdown note to diagram. [See LA change number 24]
	1.2.5-359	Figure 1.2.5-111	Changed twenty equipment identification numbers throughout the figure.
	1.2.5-363	Figure 1.2.5-113	Changed two equipment identification numbers in the welding machine control system.
SAR 1.2.6	1.2.6-10	1.2.6.2.1.1.3	Changed "Figure 1.2.3-33" to "Figure 1.2.3-38".
	1.2.6-41, 1.2.6-43, 1.2.6-45	Figures 1.2.6-2, 1.2.6-3, 1.2.6-4	All changes in the figure are described in the Appendix A change summary.
SAR 1.2.8	1.2.8-25	1.2.8.3.1.2	Changed "when the operating unit fails" to "when either of the following occurs: (1) low differential pressure across the operating fan coincident with low air flow (fan failure); (2) fan trip". [See LA change number 24]
	1.2.8-129	Figure 1.2.8-29	Added hardwired interconnections for shutdown of operating fan on low D/P and flow and start of standby fan on operating fan trip. Changed "ASD Trouble" label to "Fan Tripped". Added interlock shutdown note to diagram (center of diagram). [See LA change number 24]
	1.2.8-139	Figure 1.2.8-34	Added "Digital" to Figure title. Added new column "Logic Input Tripped" to table. Added "Fan Tripped" logic to diagram. [See LA change number 24]
SAR 1.3.1	1.3.1-2	1.3.1.1	Updated reference citation.
	1.3.1-4	1.3.1.1	Changed "from mapped faults with vertical displacements greater than 6.5 ft (2m)" to "from any mapped fault which is determined to have a cumulative offset of at least 6.6 ft (2 m)". [See LA change number 27]
	1.3.1-6	1.3.1.1	Updated reference citation.

Table 1 - LA Revision 1 Update – Change Summary by LA Page Number

LA Section	LA Page Number	LA Subsection Revised	Description of Change
	1.3.1-24	1.3.1.2.5	Deleted discussion related to preclosure handling of the naval SNF canister in the IHF and clarified the thermal discussion following emplacement operations. [See LA change number 31/60]
	1.3.1-37, 1.3.1-38, 1.3.1-39	1.3.1.5	Updated reference citations.
	1.3.1-59	Figure 1.3.1-8	Added "and Section 6.3.2" to the Source citation.
SAR 1.3.2	1.3.2-3	1.3.2.1	Changed "braking systems" to "braking processes" and "collision avoidance" to "collision prevention". [See LA change number 5]
	1.3.2-8	1.3.2.3	Added a reference citation.
	1.3.2-8	1.3.2.3.1	Changed "include the drive motors and integral disc brakes, gearboxes, driveshafts, wheels, and rail brakes" to "include high-torque drive motors with high-ratio gearboxes, driveshafts, wheels, and integral disc brake in each drive motor, and rail brakes". [See LA change number 5]
	1.3.2-9	1.3.2.3.1	Changed "drive motor minimizes the potential" to "drive motor supports the capability of the drive mechanism to limit the potential" (first change bar). Changed "The brake system design allows the TEV" to "The brake system design supports the capability of the TEV" (second change bar). [See LA change number 5]
	1.3.2-23	1.3.2.4.7	Changed "subsurface rolling stock" to "subsurface mobile equipment" and changed the last reference citation to "Sections 6.1.2.2 and 6.3.1.3". [See LA change number 39]
	1.3.2-36	1.3.2.10	Updated reference citation.
SAR 1.3.3	1.3.3-27	1.3.3.4.3	Updated reference citation.
	1.3.3-29	1.3.3.5.1	Updated reference citation – added "3.2.1.32 and 3.2.1.33".
	1.3.3-30	1.3.3.5.1.1	Clarified TEV braking process discussion. [See LA change number 5]
	1.3.3-31	1.3.3.5.1.1	Updated reference citations – added "3.3.4 and 4.0" (first change bar) and "and 3.3.5" (second change bar).
	1.3.3-32	1.3.3.5.1.1	Updated reference citation – modified to "Sections 3.1.1.1, 3.2.1.1, and 3.2.1.3" (first change bar). Changed – "collision avoidance" to "collision prevention". [See LA change number 5]
	1.3.3-33	1.3.3.5.1.1	Deleted reference citation.
	1.3.3-34	1.3.3.5.1.1	Added a discussion (new paragraph) of TEV design related to handling of naval SNF canisters. [See LA change number 5]
	1.3.3-37	1.3.3.5.2.1	Changed "the emplacement pallet using remote handling equipment. The emplacement" to "the waste package and emplacement pallet. Using remote handling equipment the emplacement". [See LA change number 5]
	1.3.3-41	1.3.3.5.2.3	Updated reference citation – "Figure 39" to "Figure 41".
	1.3.3-42	1.3.3.5.2.3	Changed "collision avoidance" to "collision prevention". [See LA change number 5]
	1.3.3-43	1.3.3.5.3	Changed "the use of drive motors with integral disc brakes, high-ratio gearboxes, rail brakes" to "the use of high-torque drive motors with high-ratio gearboxes, supplemented by integral disc brakes in the drive motors, rail brakes". [See LA change number 5]
	1.3.3-48, 1.3.3-50, 1.3.3-51	1.3.3.7	Updated reference citations.
	1.3.3-57	Table 1.3.3-5	Changed "mechanism and brakes limit the probability" to "mechanism limits the probability" and added the new last sentence. (Text modified in the second entry in the Design Criteria column). [See LA change number 5]
	1.3.3-59	Table 1.3.3-6	Clarified the TEV collision prevention design description in the first entry in the Design Implementation Descriptions column (first three change bars). [See LA change number 5]

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LA Section	LA Page Number	LA Subsection Revised	Description of Change
	1.3.3-59	Table 1.3.3-6	Deleted "ITS" in the first sentence of the second entry in the Design Implementation Descriptions column (fourth change bar). [See LA change number 5]
	1.3.3-59	Table 1.3.3-6	Deleted "motor brakes" in the second sentence of the second entry in the Design Implementation Descriptions column (last change bar). [See LA change number 5]
	1.3.3-60	Table 1.3.3-6	Deleted "it credits components that are ITS" from the first sentence of the last entry in the Design Implementation Descriptions column. [See LA change number 5]
	1.3.3-62	Table 1.3.3-6	Changed "rockfalls that exceeds the maximum total mass" to "rockfalls having a total mass" in the second sentence of the last entry in the Design Implementation Descriptions column. [See LA change number 5]
	1.3.3-107	Figure 1.3.3-24	Added the note to the figure. [See LA change number 18]
	1.3.3-111	Figure 1.3.3-26	Changed details in the figure and added the note. [See LA change number 18]
	1.3.3-121	Figure 1.3.3-31	Added the note to the figure. Removed "(REF)" from figure. [See LA change number 17]
	1.3.3-123	Figure 1.3.3-32	Added the note to the figure. Added "Sole Plate" to splice center line in Section A (four times). Changed dimensions on Section B. [See LA change number 17]
	1.3.3-125	Figure 1.3.3-33	Changes made on all figures. [See LA change number 17]
SAR 1.3.4	1.3.4-8	1.3.4.4	Corrected punctuation.
	1.3.4-26	1.3.4.6.9	Changed "nominal hoisting speed of 3 ft/min" to "maximum hoisting speed of 9 ft/min". [See LA change number 39]
	1.3.4-28	1.3.4.7.2	Updated reference citation – "Section 5" to "Section 4.3 and 5".
	1.3.4-36	1.3.4.8.2.3	Clarified TEV operational controls. Updated reference citation – added "and 3.3.15" (last change bar). [See LA change number 39]
	1.3.4-38	1.3.4.8.2.5	Updated reference citation – added "and 3.3.15" (first change bar). Removed extra word "Section" (second change bar).
	1.3.4-42	1.3.4.10	Updated reference citations.
	1.3.4-46	Table 1.3.4-3	Changed drip shield dimensions from metric to English. [See LA change number 28]
	1.3.4-91	Figure 1.3.4-15	Changed one drip shield dimension in top center detail and replaced top left detail. Removed "TYP" from lower left detail. Inadvertently changed centerline (dashed line) to solid line in top right detail (will be corrected in next LA update). [See LA change number 28]
SAR 1.3.5	1.3.5-19	1.3.5.3	Clarified that naval SNF safety analyses are discussed in the NNPP TSD. [See LA change number 31/60]
	1.3.5-27	1.3.5.6	Updated reference citation.
	1.3.5-38	Figure 1.3.5-3	Added details to the figures, changed dimensions, and deleted the note. [See LA change number 41]
SAR 1.3.6	1.3.6-1, 1.3.6-2, 1.3.6-3, 1.3.6-4	1.3.6.1	Updated reference citation – changed "BSC 2008" to "BSC2008a".
	1.3.6-2	1.3.6.1	Updated reference citations – changed "Section 6.7" to "Section 6.6" and changed "Section 6.2" to "Section 6".
	1.3.6-6, 1.3.6-7	1.3.6.1.4	Updated reference citations.
	1.3.6-9	1.3.6.11	Updated reference citation.
	1.3.6-19	Table 1.3.6-3	Changed the title in the Structure, System and Component column from "Waste Package Emplacement Pallet" to "Subsurface Facility Closure".

Table 1 - LA Revision 1 Update – Change Summary by LA Page Number

LA Section	LA Page Number	LA Subsection Revised	Description of Change
SAR 1.4.1	1.4.1-21	1.4.1.5	Updated reference citation.
SAR 1.4.3	1.4.3-31	Figure 1.4.3-1	Added underground yard fire water mains connection to the fire water riser valve room in the IHF (Area 51A). [See LA change number 10]
SAR 1.4.4	1.4.4-3	1.4.4.2.1	Changed "storage tanks, high pressure cylinders, or mobile gas tube trailers located near the facility" to "storage vessels located outside the facility". [See LA change number 35]
	1.4.4-4	1.4.4.2.1	Changed "helium and argon gas supply and distribution subsystem piping" to "helium and argon-helium mixture piping" (first change bar). [See LA change number 35]
	1.4.4-4	1.4.4.2.2	Changed "gas storage tanks" to "gas storage vessels" (second change bar). [See LA change number 35]
	1.4.4-8	1.4.4.6	Updated reference citation.
	1.4.4-11	Table 1.4.4-1	Changed all four capacities in the second column, the second capacity in the third column, and all four capacities in the last column. [See LA change number 36]
	1.4.4-11	Table 1.4.4-2	Changed all consumption rates in the last column. [See LA change number 35]
	1.4.4-15	Figure 1.4.4-2	Changed general purpose air receiver capacity to 1000 cfm, added bird screens to compressors, changed number and location of end users, and deleted "bldg." from inside/outside labels. [See LA change number 36]
	1.4.4-17	Figure 1.4.4-3	Changed the number and location of end users. [See LA change number 36]
	1.4.4-19	Figure 1.4.4-4	Changed the figure title, replaced the liquid argon storage system with a gaseous storage system, changed the argon-helium mixture storage module and the number and routing of end users. [See LA change number 35]
SAR 1.5.1	1.5.1-2	1.5.1	Clarified that some analyses are indexed to specific dates in order to calculate thermal and radioactive decay and, that in such cases, additional drift by drift analyses will be performed as necessary. [See LA change number 32]
	1.5.1-6	1.5.1	Added "described in Section 5.1" and deleted the reference citation.
	1.5.1-69	1.5.1.4.1.2.5.1	Added "corrosion-resistant cans" (first change bar), deleted "assemblies" and added "and corrosion-resistant cans" (second change bar), deleted "The following design criteria apply to the naval corrosion resistant can.", and deleted the previous fourth bullet of the criteria (third change bar). [See LA change number 73]
	1.5.1-70	1.5.1.4.1.2.5.3	Provided a commitment to meet revised thermal criteria/limits and methodology related to preclosure handling of the naval SNF canister in the IHF and during emplacement operations and added a cross reference for the analyses of performance of a naval SNF canister during a fire event. [See LA change number 31/60]
	1.5.1-73	1.5.1.4.1.2.6.2	Revised thermal criteria/limits related to the preclosure handling of the naval SNF canister in the IHF and during emplacement operations. A statement was added to identify the requirement for naval SNF canister surface temperature control while in the TEV. [See LA change number 31/60]
	1.5.1-78	1.5.1.4.2	Changed "containing four naval SNF types" to "containing two naval SNF types". [See LA change number 12]
	1.5.1-81, 1.5.1-82, 1.5.1-84, 1.5.1-87	1.5.1.5	Updated reference citations.

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LA Section	LA Page Number	LA Subsection Revised	Description of Change
	1.5.1-224	Table 1.5.1-29	Changed "to the revised repository operational date of 2017 because there will not be any significant change in the nominal and bounding values" to "to the repository proposed operational date of 2020". [See LA change number 32]
	1.5.1-228	Table 1.5.1-31	Added a reference citation to the bottom row of the relevant control parameter characteristics column.
SAR 1.5.2	1.5.2-19	1.5.2.7.2.1	Updated reference citation.
	1.5.2-22, 1.5.2-23	1.5.2.9	Updated reference citations.
SAR 1.6	1.6-24	1.6.3.4.3	Relocated reference citation.
SAR 1.8	1.8-11	1.8.1.3.1	Added two new sentences to the end of the paragraph. [See LA change number 32]
	1.8-69	Table 1.8-3	Changed Representative PWR (second column) entries for ¹⁴ C, ³⁶ Cl, and ³ H. [See LA change number 59]
	1.8-74	Table 1.8-5	Added two new sentences to the end of the note. [See LA change number 32]
SAR 1.9	1.9-22	1.9.5	Updated reference citations.
	1.9-114	Table 1.9-8	Updated reference citation (third row of last column).
	1.9-115	Table 1.9-8	Clarified note (d) describing criterion for naval waste package standoff distance from a mapped fault and added a new note (e). [See LA change number 27]
SAR 1.10	1.10-27	1.10.3.3.1.2	Changed "contains an 11-in. thick shield plug" to "contains a shield plug". [See LA change number 38]
SAR 2.2	2.2-2	2.2	Added "Section 2.2.1.2.2.3: Acceptance Criterion 1(2) and Acceptance Criterion 2" to the NUREG-1804 Reference column for SAR Section 2.2.1.4.
	2.2-27	2.2.1.4	Added "Section 2.2.1.2.2.3: AC 1(2), AC 2" to the list of applicable NUREG-1804 acceptance criteria.
	2.2-55, 2.2-56	2.2.1.4.1.3.2.2	Added "Note, the salt separation aspects of localized corrosion initiation were not implemented." [See LA change number 62]
	2.2-107	2.2.3	Deleted reference to the QARD.
	2.2-113	2.2.3	Updated reference citations.
	2.2-204	Table 2.2-4	Deleted reference citation in last paragraph of last column.
	2.2-283	Table 2.2-8	Added the second sentence to the note. [See LA change number 62]
	2.2-310	Figure 2.2-16	Deleted "Paintbrush Canyon" from middle Structural Blocks labels (top of page).
SAR 2.3.2	2.3.2-4	2.3.2.1	Changed "underlying vitric CHn unit" to "underlying zeolitic CHn unit". [See LA change number 64]
	2.3.2-7	2.3.2.2	Deleted "immediately above and". [See LA change number 64]
	2.3.2-9	2.3.2.2.1.3	Deleted "above and". [See LA change number 64]
	2.3.2-17	2.3.2.3.1	Deleted "the lower horizons of the TSw unit and". [See LA change number 64]

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LA Section	LA Page Number	LA Subsection Revised	Description of Change
	2.3.2-20	2.3.2.3.2.4	Changed "basal TSw and vitric CHn hydrogeologic units" to "basal Topopah Spring Tuff and vitric Calico Hills Formation (Tac) units", and changed "The TSw and CHn units" to "These units" (first change bar). Changed "buried vitric CHn beneath" to "buried vitric units beneath" (second change bar). Changed "vitric CHn unit" to "vitric units" (third change bar). Changed "within the CHn Tptpv1 and Tac hydrologic units" to "within the Tptpv1 and Tac" (fourth change bar). Changed "in the lower TSw (Tptpv2) hydrologic unit" to "in the Tptpv2" (fifth change bar). Changed "of the CHn unit" to "of the Tptpv2, Tptpv1, and Tac" (last change bar). [See LA change number 64]
	2.3.2-21	2.3.2.3.2.4	Changed "of the vitric CHn unit are likely to limit fracture flow within these units" to "of these units are likely to limit fracture flow", and changed "fluorescein" to "fluoresce in".(first change bar). Changed "the vitric CHn unit is" to "the vitric Tptpv2, Tptpv1, and Tac is" (second change bar). [See LA change number 64]
	2.3.2-28	2.3.2.3.3.2	Added "e.g.". [See LA change number 64]
	2.3.2-28	2.3.2.3.3.3	Added a discussion of the assignment of fracture permeability and fault permeability values for the Tptpv2. [See LA change number 64]
	2.3.2-36	2.3.2.3.5.3	Deleted "lower layers of the TSw unit and the upper layers of". [See LA change number 64]
	2.3.2-42	2.3.2.4.1.1.1	Changed "in the CHn unit" to "in the TSw and CHn units". [See LA change number 64]
	2.3.2-48	2.3.2.4.1.2.2	Deleted "top layer of the". [See LA change number 64]
	2.3.2-51	2.3.2.4.1.2.3.2	Changed "Table 2.3.2-8, except the zeolitic portion of the CHn unit, for which perched properties are developed in the perched-water calibration (SNL 2007a, Sections 6.2.2.2 and 6.2.3), although in some cases" to "Table 2.3.2-8, properties for the zeolitic portion of the CHn unit are developed in the perched-water calibration (SNL 2007a, Sections 6.2.2.2 and 6.2.3). In some cases". [See LA change number 64]
	2.3.2-52	2.3.2.4.1.2.3.2	Changed "of the TSw and CHn-CFu units" to "of the CHn and CFu units". [See LA change number 64]
	2.3.2-54	2.3.2.4.1.2.3.4	Added a discussion of the assignment of fracture permeability and fault permeability values for the Tptpv2. [See LA change number 64]
	2.3.2-101	2.3.2.7	Updated reference citation. [See LA change number 64]
	2.3.2-163	Figure 2.3.2-9	Moved the boundary between TSw and CHn from between Tptpv1 and Tptpv2 to between Tptpv2 and Tptpv3 of bottom figure. [See LA change number 64]
SAR 2.3.3	2.3.3-53	2.3.3.2.4.2.2	Changed "rockfall in 25-m-long drift" to "rockfall in approximately 22-m-long drift". [See LA change number 63]
	2.3.3-123, 2.3.3-124, 2.3.3-125	Figures 2.3.3-24, 2.3.3-25, 2.3.3-26	Added "density" to the y-axis label. [See LA change number 63]
SAR 2.3.4	2.3.4-25, 2.3.4-27, 2.3.4-28	2.3.4.3.2.2	Updated reference citations.
	2.3.4-105	2.3.4.4.8.3.1	Changed drip shield dimensions – "2,885 mm" to "2,886 mm" and (2,533 m" to "2.535 m". Updated reference citation and pointer "Table 4-1" to "Table 4-2". [See LA change number 33]
	2.3.4-115	2.3.4.5.1.1	Changed drip shield dimensions and mass – "5,804 mm" to "5,805 mm", "2,885 mm" to "2,886 mm", "11,600 lb" to "11,000 lb", and "5,270 kg" to "5,000 kg". Updated reference citation and added pointer "Table 4-2". [See LA change number 33]
	2.3.4-124	2.3.4.5.1.3.6	Updated reference citation.

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LA Section	LA Page Number	LA Subsection Revised	Description of Change
	2.3.4-132	2.3.4.5.2.1.1	Changed "5-DHLW/Naval Long package" to "5DHLW/DOE Long package". [See LA change number 22]
	2.3.4-138	2.3.4.5.2.1.3.2	Updated reference citation.
	2.3.4-166	2.3.4.5.3.3.2	Changed – "were" to "was".
	2.3.4-201	2.3.4.8.3	Changed – deleted period at end of title.
	2.3.4-204, 2.3.4-205, 2.3.4-206, 2.3.4-210	2.3.4.9	Updated reference citations.
	2.3.4-220	Table 2.3.4-6	Added "median" to the title of the third column. [See LA change number 63]
	2.3.4-227	Table 2.3.4-20	Changed all four values in each of bottom three rows. [See LA change number 63]
	2.3.4-254	Table 2.3.4-51	Updated the source column citation.
	2.3.4-280	Figure 2.3.4-21	Deleted "Paintbrush Canyon" from middle Structural Blocks labels (top of page).
SAR 2.3.5	2.3.5-50	2.3.5.3.3.3	Added "Note, the salt separation aspects of localized corrosion initiation were not implemented." [See LA change number 62]
	2.3.5-116	2.3.5.5	Added "Note, the salt separation aspects of localized corrosion initiation were not implemented." [See LA change number 62]
	2.3.5-119	2.3.5.5.1	Added "Note, the salt separation aspects of localized corrosion initiation were not implemented." [See LA change number 62]
	2.3.5-136	2.3.5.5.4.2.1	Added "Note, the salt separation aspects of localized corrosion initiation were not implemented." [See LA change number 62]
	2.3.5-141	2.3.5.5.4.3	Added "Note, the salt separation aspects of localized corrosion initiation were not implemented." [See LA change number 62]
	2.3.5-231	Figure 2.3.5-47	Changed x-axis label from "Time (Years)" to "Calendar Year" and delete second "yr" for Reference Case Shifted in box.
	2.3.5-239	Figure 2.3.5-55	Changed "pots" to "plots" (first change bar) and "separation" to "precipitation" (two times, second change bar).
SAR 2.3.6	2.3.6-4	2.3.6	Added "Acceptance Criterion 3(4)" to the NUREG-1804 column for SAR Section 2.3.6.5 and deleted "Acceptance Criterion 1(5)" from the NUREG-1804 column for SAR Section 2.3.6.7.
	2.3.6-41	2.3.6.4.4.1	Changed "increase" to "decreases" (first change bar). Added "Note, the salt separation aspects of localized corrosion initiation were not implemented." (second change bar). [See LA change number 62]
	2.3.6-45	2.3.6.5	Changed "AC 3(1) to (3)" to "AC 3(1) to (4)" for Section 2.2.1.3.1.3.
	2.3.6-46	2.3.6.5.2	Changed "AC 3(1) to (3)" to "AC 3(1) to (4)" for Section 2.2.1.3.1.3.
	2.3.6-48	2.3.6.5.2.2	Updated reference citation.
	2.3.6-62	2.3.6.7	Changed "AC 1(1) to (5)" to "AC 1(1) to (4)" for Section 2.2.1.3.1.3.
	2.3.6-66	2.3.6.7.3	Changed "AC 1(1) to (5)" to "AC 1(1) to (4)" for Section 2.2.1.3.1.3.
	2.3.6-76	2.3.6.8.2.2	Deleted "SSW," and "(in SSW also at 120 °C).
	2.3.6-84	2.3.6.8.6	Changed "200 °C" to "300 °C".
	2.3.6-95, 2.3.6-101, 2.3.6-102	2.3.6.10	Updated reference citations.
SAR 2.3.7	2.3.7-4	2.3.7	Deleted "Acceptance Criterion 1(5)" from the NUREG-1804 column for SAR Section 2.3.7.6.
	2.3.7-19	2.3.7.4.1.2	Changed "the repository closure date" to "the assumed repository closure date". [See LA change number 32]
	2.3.7-35	2.3.7.6	Changed "AC 1(1) to (5)" to "AC 1(1) to (4)" for Section 2.2.1.3.1.3.
	2.3.7-99	2.3.7.14	Updated reference citation.
SAR 2.3.8	2.3.8-23	2.3.8.3.3.1	Clarified discussion of lithostratigraphic unit.
	2.3.8-23	2.3.8.3.3.1.1	Deleted "which is part of the CHn hydrogeologic unit"

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LA Section	LA Page Number	LA Subsection Revised	Description of Change
	2.3.8-24	2.3.8.3.3.1.2	Changed "TSw" to "Tptpv2".
	2.3.8-25	2.3.8.3.3.1.3	Changed "lower Topopah Spring welded tuff (Tptpv2) and the hydrologic Calico Hills Formation (lithostratigraphic units Tptpv1 and Tac)" to "lower Topopah Spring Tuff (Tptpv2 and Tptpv1) and the hydrologic Calico Hills Formation (Tac)" (first change bar)
	2.3.8-25	2.3.8.3.3.1.3	Changed "represents the base of the TSw basal vitrophyre" to "represents part of the Topopah Spring Tuff basal vitrophyre" (second change bar).
	2.3.8-41	2.3.8.4.4.2	Changed "TSw" to "Topopah Spring Tuff".
	2.3.8-63	2.3.8.5.2.4	Changed "water table" to "TSw".
	2.3.8-68	2.3.8.5.4	Deleted "In this illustrative example, each species is modeled as a simple decaying species, with no daughter products tracked."
	2.3.8-83	2.3.8.7	Updated reference citations.
	2.3.8-148, 2.3.8-157, 2.3.8-158	Figures 2.3.8-48, 2.3.8-57, 2.3.8-58	Updated reference citations. [See LA change number 65]
SAR 2.3.9	2.3.9-20	2.3.9.2.2.3	Changed "8.4 kg/s" to "8.5 kg/s" (first change bar). Changed "49.6%" to "52%" and "13.2%" to "13%" (second change bar). [See LA change number 64]
	2.3.9-27	2.3.9.2.3.1	Updated reference citation – changed pointer from Section "6.5.5" to "6.5.6".
	2.3.9-67	2.3.9.3.2.1	Updated reference citation – changed pointer from Section "6.5.5" to "6.5.6" (two times).
	2.3.9-68	2.3.9.3.2.2	Updated reference citation – changed pointer from Section "6.5.6" to "6.5.7".
	2.3.9-72	2.3.9.3.2.2	Updated reference citation – changed pointer from Section "6.5.5" to "6.5.7".
SAR 2.3.10	2.3.10-10	2.3.10.2.2	Deleted "40 CFR Part 197, Appendix A, as required by". [See LA change number 70]
	2.3.10-64	2.3.10.5.1.1	Deleted reference citation.
	2.3.10-79	2.3.10.7	Deleted reference citation.
	2.3.10-112	Table 2.3.10-10	Changed "Mas" to "Mass" in the Parameter Name column.
SAR 2.4	2.4-5	2.4	Changed pointer from "Section 2.4.2.3.2.3.4" to "Section 2.4.2.3.2.4".
	2.4-5	2.4	Deleted "(see, for example, Effects of Uncertainty" in the proposed U.S. Environmental Protection Agency (EPA) rule, 40 CFR Part 197, at 70 FR 49014)". [See LA change number 70]
	2.4-60	2.4.2.2.1.1.3	Changed "peak" to "maximum". [See LA change number 61]
	2.4-63	2.4.2.2.1.2.1	Changed "peak" to "maximum". [See LA change number 61]
	2.4-76	2.4.2.2.2.1	Changed "demonstration of model stability is one of the procedurally required "during development" activities described below in Section 2.4.2.3.2.3" to "demonstration of stability is one of the model validation activities described below in Section 2.4.2.3.2" (first change bar). Changed pointer from "Section 2.4.2.3.2.3.4" to "Section 2.4.2.3.2.4" (second change bar). [See LA change number 61]
	2.4-77	2.4.2.2.2.1	Changed pointer from "Section 2.4.2.3.2.3.4" to "Section 2.4.2.3.2.4" (first change bar). Added "Table 7.1-2" to the citation (second change bar).
	2.4-107	2.4.2.3.1	Changed pointers from "Section 2.4.2.3.2.3.4" to "Section 2.4.2.3.2.4".
	2.4-112	2.4.2.3.1.4	Added "Note: the salt separation aspects of localized corrosion initiation were not implemented." [See LA change number 62]

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LA Section	LA Page Number	LA Subsection Revised	Description of Change
	2.4-121	2.4.2.3.2	Changed "contained in Quality Assurance Requirements and Description" to "contained in the version of the Quality Assurance Requirements and Description in existence at the time" and deleted the reference citation to QARD (first change bar).
	2.4-121	2.4.2.3.2	Clarified information regarding TSPA model validation and confidence-building activities (second and third change bars). [See LA change number 61]
	2.4-122, 2.4-123	2.4.2.3.2	Clarified information regarding TSPA model validation and confidence-building activities (all change bars). [See LA change number 61]
	2.4-151	2.4.2.3.2.1.5	Added "Note: the salt separation aspects of localized corrosion initiation were not implemented." [See LA change number 62]
	2.4-184	2.4.2.3.2.1.11	Deleted "40 CFR Part 197, Appendix A, as required by proposed". [See LA change number 70]
	2.4-210	2.4.2.3.2.2	Clarified information regarding TSPA model validation and confidence-building activities. [See LA change number 61]
	2.4-218	2.4.2.3.2.2.1	Deleted "During development".
	2.4-220	2.4.2.3.2.2.1	Changed "and include additional uncertainty to expand the temperatures" to "and provide bounding values for the temperature". [See LA change number 61]
	2.4-229	2.4.2.3.2.2.2	Added a "Note". [See LA change number 61]
	2.4-235	2.4.2.3.2.3	Added "and Additional Confidence-Building" to the title (first change bar) and clarified information regarding TSPA model validation and confidence-building activities (Second, third, and fourth change bars). [See LA change number 61]
	2.4-235	2.4.2.3.2.3.1	Clarified information regarding TSPA model validation and confidence-building activities. [See LA change number 61]
	2.4-236	2.4.2.3.2.3.1	Added "Section 7.1.3" to the citation (first change bar). Changed "criterion" to "activity" (second change bar).
	2.4-236	2.4.2.3.2.3.2	Added "and Independent Mathematical Models" to the title (third change bar) and clarified information regarding TSPA model validation and confidence-building activities (bottom two change bars). [See LA change number 61]
	2.4-237	2.4.2.3.2.3.2.2	Changed "auxiliary analyses" to "independent mathematical models". [See LA change number 61]
	2.4-240	2.4.2.3.2.3.2.3	Changed "auxiliary analyses used" to "an independent mathematical model". [See LA change number 61]
	2.4-245	2.4.2.3.2.3.2.3	Added "[a]" to "Table 7.7.3-3".
	2.4-246	2.4.2.3.2.3.2.4	Clarified information regarding TSPA model validation and confidence-building activities. [See LA change number 61]
	2.4-267, 2.4-268, 2.4-269	2.4.2.3.2.4	Clarified information regarding TSPA model validation and confidence-building activities. [See LA change number 61]
	2.4-331	2.4.4.1.1.2	Deleted "described in 40 CFR Part 197, Appendix A. Values in Appendix A of proposed 40 CFR Part 197 are used per the definition of weighting factor in", added "per". [See LA change number 70]
	2.4-336	2.4.4.1.1.4	Updated reference citation.
	2.4-340, 2.4-343, 2.4-347, 2.4-348, 2.4-349	2.4.5	Updated reference citations.
	2.4-364	Table 2.4-8	Added "and Confidence-Building" to the title (first change bar) and deleted column heading "During Development Validation Activities (Technical Work Plan Validation (SNL 2008i, Section 2.3.5.1))" (second change bar). [See LA change number 61]
	2.4-369	Table 2.4-8	Deleted column heading "Post-Development Validation Activities (Technical Work Plan Validation (SNL 2008i, Section 1.3.5.2))". [See LA change number 61]

Table 1 - LA Revision 1 Update – Change Summary by LA Page Number

LA Section	LA Page Number	LA Subsection Revised	Description of Change
	2.4-370, 2.4-371	Table 2.4-8	Added "and Independent Mathematical Models" to the column heading. [See LA change number 61]
	2.4-405	Table 2.4-12	Changed "SEPRM" to SEEPPRM" in last column.
	2.4-424	Figure 2.4-8	Deleted "amp" from between two left boxes on figure. [See LA change number 61]
SAR 4.0	4-30	4.2.2.2	Deleted text related to the specificity of a seismic monitoring station in the ESF. [See LA change number 65]
	4-41	4.3	Updated reference citation.
SAR 5.4	5.4-1	5.4	Deleted information stating that Acceptance Criterion 2 of NUREG-1804, Section 2.5.4.3, was not applicable (first change bar). Added Acceptance Criterion 2 of Section 2.5.4.3 for SAR Section 5.4.1 in table (second change bar). [See LA change number 46]
	5.4-3	5.4.1	Added AC 2 to the NUREG-1804 Section 2.5.4.3 references. [See LA change number 46]
	5.4-6	5.4.1	Modified PVHA discussion. [See LA change number 46]
	5.4-13	5.4.4	Updated reference citations.
SAR 5.7	5.7-19	5.7.7.2.2.3.5	Changed "Technical Support Center Manager" to "Technical Support Center Coordinator" in the title and twice in the paragraph).

Table 1 - LA Revision 1 Update – Appendix A Change Summary by LA Page Number

(Note: actual SAR Appendix A pages are marked as "Official Use Only" and are to be withheld from public release)

LA Section	LA Page Number	LA Subsection Revised	Description of Change
SAR Appendix A	A-3	Figure A-1 (SAR Figure 1.2.3-2)	Changed the general arrangement drawing to show the motor control center and load center in room 1023 resized and reconfigured, air compressors were relocated from room 1023 to outside east of room 1023, and location and quantities of electrical equipment in room 1002. [See LA change number 25]
	A-23	Figure A-11 (SAR Figure 1.2.3-12)	Removed redundant "Initial Handling Facility" wording in the figure title.
	A-27	Figure A-13 (SAR Figure 1.2.3-14)	Changed the general arrangement drawing to show revised configuration of MCC/LC in room 1023 and to show relocation of air compressors outside east of room 1023. [See LA change number 25]
	A-47	Figure A-22 (SAR Figure 1.2.4-2)	Changed the general arrangement drawing to add or change the configuration of doors in rooms 1036B, 1037, 1045, 1047, 1049, 1207, 1209, and 1212, and extend the wall labyrinth in rooms 1215 and 1216. Also changed "high" to "high" in the note.
	A-49	Figure A-23 (SAR Figure 1.2.4-3)	Changed the general arrangement drawing to add or change the configuration of doors in rooms 1049, 2004 (top and bottom left), 2012 (bottom left), 2038, 2041, 2045, 2046, and 2048.
	A-51	Figure A-24 (SAR Figure 1.2.4-4)	Changed the general arrangement drawing to add or change the configuration of doors in rooms 1047, 1049, 3045, and 3046.
	A-53	Figure A-25 (SAR Figure 1.2.4-5)	Changed "conditioning" to "conditioning" in the note.

Table 1 - LA Revision 1 Update – Appendix A Change Summary by LA Page Number

(Note: actual SAR Appendix A pages are marked as "Official Use Only" and are to be withheld from public release)

LA Section	LA Page Number	LA Subsection Revised	Description of Change
	A-87	Figure A-39 (SAR Figure 1.2.5-2)	Changed the general arrangement drawings to show the relocation and reconfiguration of electrical and ventilation equipment and doorways in rooms 1002, 1003, 1017, and 1019, and relocated and reconfigured air compressors near rooms 1017 and 1046. Changed "particualte" to "particulate" in the note. [See LA change number 26]
	A-91	Figure A-41 (SAR Figure 1.2.5-4)	Changed the general arrangement drawing to add a lighting panel in room 2001. Inadvertently removed pointer arrow from label to battery rack in room 2001 (will be corrected in next LA update). [See LA change number 26]
	A-129	Figure A-57 (SAR Figure 1.2.5-34, Sheet 2 of 2)	Changed "cansiter" to "canister" in the note.
	A-133	Figure A-58 (SAR Figure 1.2.5-35, Sheet 2 of 2)	Changed "cansiter" to "canister" in the note.
	A-155	Figure A-67 (SAR Figure 1.2.6-2)	Changed the general arrangement drawing to show revised and added electrical equipment in rooms 1005, 1018, and 1020, and the removal and reconfiguration of doors in rooms 1028 and 1220. Also, changed "HEPA=high level radioactive waste" to "HEPA=high efficiency particulate air" in the note.
	A-157	Figure A-68 (SAR Figure 1.2.6-3)	Changed the general arrangement drawing to show revised electrical equipment in room 2012, and the reconfiguration of doors in rooms 2002E, 2006, 2010, and 2012
	A-159	Figures A-69 (SAR Figures 1.2.6-4)	Changed the general arrangement drawing to show the reconfiguration of doors in rooms 3001, 3026, and 3029.
	A-161	Figure A-70 (SAR Figure 1.2.6-5)	Changed "low=level" to "low-level" in the note.

Table 2 - LA Revision 1 Update – Change Summary by LA Change Number

LA Change Number*	LA Sections Revised	Description of Change	LA Change Type**
1	SAR 1.2.2.1 SAR 1.2.2.5	This LA change was a reference citation change only to reflect a revision to a Canister Receipt and Closure Facility (CRCF) Seismic Input Ground Motions calculation. This revision corrected editorial errors in the calculation. The results presented in the LA were not impacted by this revision.	updated reference
2	SAR 1.2.2.1 SAR 1.2.2.5	This LA change was a reference citation change only to reflect revisions to Initial Handling Facility (IHF) mass properties and damping calculations correcting a multiplier error for an equipment dead load. The results presented in the LA were not impacted by this revision.	updated reference
3	SAR 1.1.5.3 SAR Table 1.1-65 SAR Figure 1.1-73	This LA change reflected a change to the Yucca Mountain Site Description document correcting editorial errors. The results presented in the LA were not impacted by this revision.	editorial
4	GI-2 Figure 2-1	This LA change corrected surface aging pad area identifiers on the High-Level Project Schedule figure to be consistent with similar information presented elsewhere in the LA. The schedule itself was revised under LA Change Number 32 and included the correct identifiers.	clarification/correction
5	SAR 1.3.2.1 SAR 1.3.2.3 SAR 1.3.3.5 SAR Table 1.3.3-5 SAR Table 1.3.3-6	This LA change clarified information associated with the Transport and Emplacement Vehicle (TEV) equipment descriptions and operational steps, and corrected the safety category classification of seismic motion switches to reflect that they are not important to safety (non-ITS). The LA change did not affect the nuclear safety design bases of the TEV.	clarification/correction
6	SAR 2.2 SAR 2.3.6 SAR 2.3.7	This LA change clarified the cross reference tables and subheadings that map the Safety Analysis Report (SAR) subsections to the NUREG-1804 Acceptance Criteria. The LA change improved the accuracy of the mapping information presented in the LA.	editorial
7	SAR Table 2.4-12	This LA change corrected a typographical error.	editorial
8	GI-5 Figure 5-33 GI-5 Figure 5-35 SAR Figure 2.2-16 SAR Figure 2.3.4-21	This LA change reflected a change to the Yucca Mountain Site Description document correcting editorial errors.	editorial
9	SAR 2.3.8.5	This LA change deleted an incorrect statement describing an illustrative example comparing breakthrough curves for 12 colloidal species. Specifically, the following statement was deleted: "In this illustrative example, each species is modeled as a simple decaying species, with no daughter products tracked."	clarification/correction
10	SAR Figure 1.4.3-1	This LA change reflected a revision to a Site Fire Water Distribution Piping and Instrumentation diagram implementing an additional underground yard fire water mains connection to the fire water riser valve room in the Initial Handling Facility (IHF). The additional yard firewater mains connection to IHF valve riser room #3 had not been originally shown in the source drawing. The LA change did not affect the nuclear safety design bases of the fire protection system.	design/analysis evolution
11	SAR Figure 1.2.3-23 SAR Figure 1.2.4-36 SAR Figure 1.2.4-37 SAR Figure 1.2.5-22 SAR Figure 1.2.5-41	This LA change reflected revisions to crane hoist logic diagrams for several handling facilities to correct inconsistencies in terminology and equipment identification numbers. The LA change did not affect the nuclear safety design bases of the crane hoists.	clarification/correction
12	SAR 1.5.1.4.2	This LA change corrected the number of naval spent nuclear fuel (SNF) types for which thermal analyses were presented in the Naval Nuclear Propulsion Program (NNPP) Technical Support Document (TSD). Specifically, the number of SNF types was changed from four to two.	clarification/correction

Table 2 - LA Revision 1 Update – Change Summary by LA Change Number

LA Change Number*	LA Sections Revised	Description of Change	LA Change Type**
14	SAR Figure 1.2.4-2 SAR Figure 1.2.4-3 SAR Figure 1.2.4-4 [OUO] Appendix A Figure A-22 Figure A-23 Figure A-24	This LA change reflected revisions to Canister Receipt and Closure Facility (CRCF) general arrangement floor plans related to the location and configuration of several doors that are not important to safety (non-ITS). The door configurations were revised to improve life safety features in the CRCF. The LA change did not affect the nuclear safety design bases of the CRCF or the structures, systems, or components (SSCs) contained within.	design/ analysis evolution
15	SAR Figure 1.2.6-2 SAR Figure 1.2.6-3 SAR Figure 1.2.6-4 [OUO] Appendix A Figure A-67 Figure A-68 Figure A-69	This LA change reflected revisions to Receipt Facility (RF) general arrangement floor plans related to the location and configuration of several doors that are not important to safety (non-ITS), and the location and configuration of electrical equipment. The drawings were revised to improve life safety features in the RF, and to make the electrical equipment number and sizes consistent with the underlying RF electrical equipment space requirements calculation. The LA change did not affect the nuclear safety design bases of the RF or the structures, systems, or components (SSCs) contained within.	design/ analysis evolution
16	SAR 1.3.3.4 SAR 1.3.3.7	This LA change reflected revisions to an Access Mains Invert and Rails calculation incorporating the estimated weight information for the Transport and Emplacement Vehicle (TEV). The revision to the calculation did not change any technical information in the LA, only references used to support summary design statements. The LA change did not affect the nuclear safety design bases of the TEV.	design/ analysis evolution
17	SAR Figure 1.3.3-31 SAR Figure 1.3.3-32 SAR Figure 1.3.3-33	This LA change updated figures to reflect design details of the source drawings for Access Main Invert and Rail Sections. The LA change corrected errors in supporting design information presented in the LA figures and improved the consistency with similar information presented elsewhere in the LA. The changes included the details associated with the rail attachment and leveling bolts, the anchor bolt details on the rails was changed including some dimensions and the terminology of the "slice" to "soleplate splice" was changed. The LA change did not affect the nuclear safety design bases of the invert or the rails.	design/ analysis evolution
18	SAR Figure 1.3.3-24 SAR Figure 1.3.3-26	This LA change reflected revisions to an Underground Layout Configuration drawing and Ground Control for Non-Emplacement Drifts calculation updating emplacement area drift intersections and turnout configurations design details. The ground support design concepts for intersections and turnouts did not change. The LA change updated design information presented in the two LA figures, and improved the consistency with drift configurations shown in figures presented elsewhere in the LA.	design/ analysis evolution
20	GI-1 Section 1.1.2.1	This LA change corrected a reference to another LA section and made a clarifying grammatical change.	editorial
21	GI-5 Section 5.2.2.3 SAR 2.3.4.8 SAR Table 2.3.10-10	This LA change corrected typographical errors.	editorial
22	SAR 2.3.4.5.2.1.1	This LA change corrected the identification of a waste package, from naval to DOE.	clarification/ correction
23	SAR Figure 1.2.5-111 SAR Figure 1.2.5-113	This LA change reflected revisions to two Wet Handling Facility Process and Instrumentation diagrams changing duplicated tag numbers to unique numbers. The LA change did not affect the technical content of the LA.	editorial

Table 2 - LA Revision 1 Update – Change Summary by LA Change Number

LA Change Number*	LA Sections Revised	Description of Change	LA Change Type**
24	SAR 1.2.4.4.2 SAR Figures 1.2.4-101, -102 1.2.4-103, -105 1.2.4-106, -107 1.2.4-108, -109 1.2.4-110, -111 SAR Figures 1.2.5-84, -85 1.2.5-88, -89 1.2.5-90, -91 SAR 1.2.8.3.1.2 SAR Figure 1.2.8-29 SAR Figure 1.2.8-34	This LA change reflected revisions to (18) logic diagrams and ventilation and instrumentation diagrams for several facilities to present the automatic signals for heating, ventilation, and air conditioning (HVAC) equipment. The change added an important to safety (ITS) interlock for automatic starting of standby fans upon an operating fan trip. The change was implemented to ensure availability of high-efficiency particulate air (HEPA) filtration of facility exhausts. The LA change updated design details without affecting the nuclear safety design bases and the procedural safety controls presented in the LA.	design/ analysis evolution
25	SAR Figure 1.2.3-2 SAR Figure 1.2.3-14 [OUO] Appendix A Figure A-1 Figure A-13	This LA change reflected revisions to Initial Handling Facility (IHF) general arrangement drawings. A Motor Control Center (MCC) and Load Center (LC) were resized and reconfigured, electrical equipment quantities and locations were changed, and air compressors were relocated. The drawings were revised to make them consistent with the IHF electrical space requirements calculation (for revised electrical quantities) and the general purpose and instrument air calculation (relocation of air compressors). The LA change updated design details without affecting the nuclear safety design bases of the IHF or the structures, systems, or components (SSCs) contained within.	design/ analysis evolution
26	SAR Figure 1.2.5-2 SAR Figure 1.2.5-4 [OUO] Appendix A Figure A-39 Figure A-41	This LA change reflected revisions to Wet Handling Facility (WHF) general arrangement drawings. Air compressors, electrical equipment, and doorways were relocated, and an electrical lighting panel was added. The drawings were revised to make them consistent with the WHF electrical space requirements calculation (for revised electrical quantities) and the general purpose and instrument air calculation (relocation of air compressors). The LA change updated design details without affecting the nuclear safety design bases of the WHF or the structures, systems, or components (SSCs) contained within.	design/ analysis evolution
27	SAR 1.3.1.1 SAR Table 1.9-8	This LA change corrected the criterion for naval waste package standoff distance from a mapped fault, and updated the referenced source document. Specifically, the phrase "mapped faults with vertical displacements greater than 6.5 ft (2 m)" was changed to "any mapped fault which is determined to have a cumulative offset of at least 6.6 ft (2 m)".	clarification/ correction
28	SAR Table 1.3.4-3 SAR Figure 1.3.4-15	This LA change corrected drip shield dimensions to be consistent with the source drawing. Changes due to rounding and unit conversion in the SAR Table were also included. The LA changes did not affect the nuclear safety design bases for the drip shields.	clarification/ correction
29	SAR Table 1.3.6-3	This LA change corrected a structure, system, and component (SSC) name in an LA table.	editorial
30	SAR 1.6.3.4.3	This LA change corrected the placement of a reference citation within a paragraph to make it consistent with the information presented in the source document.	editorial

Table 2 - LA Revision 1 Update – Change Summary by LA Change Number

LA Change Number*	LA Sections Revised	Description of Change	LA Change Type**
31/60	SAR 1.2.2.3.6 SAR 1.2.3.1.4 SAR 1.2.3.4 SAR 1.3.1.2.5 SAR 1.3.3.5.1.1 SAR 1.3.5.3 SAR 1.5.1.4.1.2.5.3 SAR 1.5.1.4.1.2.6.2 SAR 1.5.1.5 SAR Table 1.5.1-31 SAR 1.9.5 SAR Table 1.9-8	<p>LA Change Number 31: This LA change modified the thermal limit for naval spent nuclear fuel (SNF) canister in the Initial Handling Facility (IHF) and transported in the Transport and Emplacement Vehicle (TEV), due to replacing a one-dimensional (1-D) thermal analysis with a more sophisticated three-dimensional (3-D) thermal analysis. As a result, the requirement for processing naval canisters was changed to limit the canister outside surface temperature to 400 degrees F with a processing time of 30 days. To ensure that these limits are met, preclosure handling requirements were added to the LA and operating conditions were modified to establish a temperature limit with an imposed administrative maximum handling duration. Since these limits exist to ensure naval SNF cladding integrity to support postclosure performance, a Postclosure Parameter limit on temperature and handling was added. This addition to the LA supports the existing postclosure nuclear safety design basis of the naval SNF canister. These limits are not relied upon to limit or prevent potential preclosure event sequences or mitigate their consequences.</p> <p>LA Change Number 60: To support the changes in the IHF and TEV emplacement described above, this LA change replaced the description of the 1-D thermal analysis with a description of on-going 3-D thermal modeling for naval SNF canister handling in the IHF and the TEV. The new 3-D analysis will demonstrate that the thermal limit of 400 degrees F is met during handling operations in the IHF and emplacement. The safety bases for the Total System Performance Assessment (TSPA) and Preclosure Safety Analysis (PCSA) for naval SNF remain unchanged.</p>	design/ analysis evolution
32	GI-1 Figure 1-7 GI-2 Figure 2-1 SAR 1.1.2.3 SAR 1.5.1 SAR Table 1.5.1-29 SAR 1.8.1.3.1 SAR Table 1.8-5 SAR 2.3.7.4.1.2	<p>This LA change updated the Repository Operations Summary Timeline and the High-Level Project Schedule figures and other related LA information (e.g., population projections) to be consistent with revised schedule milestones (e.g., waste receipt) based on the initial LA submittal date and current estimated project funding. SAR Section 1.5.1 acknowledges that some SAR analyses are indexed to specific dates in order to calculate thermal and radioactive decay and identifies that in such cases re-analysis will be performed as necessary. Revision was made to the OCRWM Integrated Scope, Cost, and Schedule Baseline Summary document which resulted in changing milestone dates referenced throughout the LA.</p>	design/ analysis evolution
33	SAR 2.3.4.4 SAR 2.3.4.5 SAR 2.3.4.9 SAR Table 2.3.4-51	<p>This LA change corrected drip shield dimensions to be consistent with the source document. The errors were primarily due to rounding and unit conversion. Several related reference citations were updated, and editorial changes were also made. The LA change did not affect the nuclear safety design bases for the drip shield.</p>	clarification/ correction
34	SAR 1.5.1.5	<p>This LA change consisted of reference changes only to reflect administrative changes to a Canister Receipt and Closure Facility (CRCF) shielding calculation.</p>	updated reference
35	SAR 1.4.4.2 SAR Table 1.4.4-2 SAR Figure 1.4.4-4	<p>This LA change reflected revisions to the service gases to the Canister Receipt and Closure Facility (CRCF). The argon storage was changed from a liquid to a gaseous arrangement, and the service gas 30-day consumption rates for the various handling facilities were updated. The LA change did not affect the nuclear safety design bases of the CRCF or the structures, systems, or components (SSCs) contained within.</p>	design/ analysis evolution

Table 2 - LA Revision 1 Update – Change Summary by LA Change Number

LA Change Number*	LA Sections Revised	Description of Change	LA Change Type**
36	SAR Table 1.4.4-1 SAR Figure 1.4.4-2 SAR Figure 1.4.4-3	This LA change reflected revisions to Canister Receipt and Closure Facility (CRCF) general purpose and instrument air piping and instrument diagrams incorporating pipe routing changes and updating number and location of end users. The LA change did not affect the nuclear safety design bases of the CRCF or the systems contained within.	design/ analysis evolution
38	SAR 1.10.3.3.1.2	This LA change deleted a specific thickness of the Transportation, Aging, and Disposal (TAD) canister shield plug that could be misinterpreted as a committed design feature detail. The dose reduction effectiveness of the shield plug was not changed. This LA change did not affect the nuclear safety design bases of the TAD.	clarification/ correction
39	SAR 1.3.1 SAR 1.3.2 SAR 1.3.3 SAR 1.3.4	This LA change consisted of reference changes only to reflect a revision to the Mechanical Handling Design Report: Waste Package Transport and Emplacement Vehicle primarily related to unit conversions.	updated reference
40	GI-5 Section 5.1.6.4 GI-5 Section 5.3 SAR 1.1.5.3.2 SAR 1.1.10	This LA change was a reference citation change only to reflect a revision to the Supplemental Soils Report updating ground motion information. The results presented in the LA were not impacted by this revision.	updated reference
41	SAR Figure 1.3.5-3	This LA change replaced a referenced source drawing for a figure with a more detailed drawing showing the subsurface ventilation exhaust fan installation configuration, section and plan view. Additional drawing details included the addition of drain valves, changes in the presentation of various shaft dimensions (no change in dimensions), and reference to a new source drawing.	design/ analysis evolution
42	GI-1 Section 1.2.2	This LA change clarified a statement regarding the design of the Canister Receipt and Closure Facility (CRCF). Specifically, the phrase stating that the CRCF "is designed to transfer canisters, transportation casks, and aging overpacks into waste packages for emplacement" was changed to "is designed to transfer canisters from the transportation casks and aging overpacks into waste packages for emplacement".	clarification/ correction
43	SAR 5.7.7.2.2.3.5	This LA change corrected a position title to be consistent with LA Figure 5.7-1. Specifically, Technical Support Center "Manager" was changed to "Coordinator".	editorial
44	SAR 1.1.3.1 SAR 1.1.10	This LA change clarified wording regarding the period of time during which meteorological data was collected. The results presented in the LA were not impacted by this change.	clarification/ correction
45	SAR 1.1.9.3.2.14 SAR 1.1.10 SAR Figure 1.1-57	This LA change corrected a typographical error in a cross-reference to another LA figure.	editorial
46	SAR 5.4 SAR 5.4.1 SAR 5.4.4	This LA change updated information related to expert elicitations to reflect completion of the Probabilistic Volcanic Hazard Analysis Update (PVHA-U). The LA change also added a reference to the PVHA-U document and identified the applicability of Acceptance Criterion 2 of NUREG-1804, Section 2.5.4.3. The initial LA submittal acknowledged that an update to the PVHA was in progress. The PVHA-U was completed in September 2008. The LA was updated to reflect the completed analysis, although the licensing basis did not change.	design/ analysis evolution
47	SAR 1.3.1 SAR 1.3.6	This LA change was a reference change only to reflect a revision to the Closure Design calculation.	updated reference
49	SAR 1.1.9.3.2.1	This LA change corrected a value in the description of the existing fill thickness on the North Portal pad.	clarification/ correction
50	SAR 2.3.4.5.2.1.3.2 SAR 2.3.4.9	This LA change corrected reference citations to a current source document.	updated reference

Table 2 - LA Revision 1 Update – Change Summary by LA Change Number

LA Change Number*	LA Sections Revised	Description of Change	LA Change Type**
51	SAR Figure 1.2.4-113	This LA change reflected a revision to a ventilation and instrumentation drawing for the Canister Receipt and Closure Facility (CRCF) exhaust discharge ventilation ductwork arrangement to atmosphere. The first and second floor exhausts discharge independently to the atmosphere instead of through a common exhaust. The LA change did not affect the nuclear safety design bases of the CRCF tertiary confinement exhaust and heating, ventilation, and air conditioning (HVAC) supply subsystem, which is not important to safety (non-ITS).	clarification/correction
52	SAR 1.5.1.5 SAR 2.2.3 SAR 2.3.7.14	This LA change was a reference change only to reflect a revision to the Monitored Geologic Repository Systems Requirements Document. The analyses and conclusions presented in the LA were not impacted by this revision.	updated reference
53	SAR 1.2 SAR 1.3 SAR 1.4 SAR 1.9	This LA change was a reference citation change only to reflect a revision to the Basis of Design for the TAD Canister-Based Repository Design Concept (BOD) document incorporating clarifications and updates to design details. The analyses and conclusions presented in the LA were not impacted by this revision.	updated reference
59	SAR 1.8.7 SAR Table 1.8-3	This LA change revised three radionuclide inventories for Pressurized Water Reactor (PWR) representative spent nuclear fuel. Based on expert judgment, it was concluded that these changes were not likely to impact the values presented in the LA. Table 7 of the calculation was revised. The only impact on the LA was to correct the tabulated PWR inventories for the three affected radionuclides in SAR Table 1.8-3.	clarification/correction
61	SAR 2.4.2 SAR Table 2.4-8 SAR Figure 2.4-8	This LA change improved the discussion of the Total System Performance Assessment (TSPA) model validation (e.g., added clarifying information). The TSPA model and associated calculations were not impacted.	clarification/correction
62	SAR 2.2.1.4.1.3.2.2 SAR Table 2.2-8 SAR 2.3.5.3.3.3 SAR 2.3.5.5 SAR Figure 2.3.5-47 SAR Figure 2.3.5-55 SAR 2.3.6.4.4.1 SAR 2.4.2.3	<p>This LA change incorporated a note acknowledging that the salt separation aspects of localized corrosion initiation on the waste package were not implemented in the localized corrosion initiation analysis. The note was incorporated to acknowledge an error in the model used for the analysis. Correction of this error is not expected to affect the conclusions of the localized corrosion initiation analysis.</p> <p>At the time of production of this LA update (October 2008), the salt separation aspects of localized corrosion initiation on the waste package had not been implemented in the TSPA or supporting analyses. These analyses have since been completed [MDL-WIS-PA-000005 ERD05, CAL-DN0-NU-000002 ERD02, ANL-DS0-NU-000001 ERD03]. The effects of the changes resulting from these analyses are minimal and will be reflected in a future LA update.</p>	design/analysis evolution
63	SAR 2.3.3.2.4.2.2 SAR Figure 2.3.3-24 SAR Figure 2.3.3-25 SAR Figure 2.3.3-26 SAR 2.3.4.5.1.3.6 SAR Table 2.3.4-6 SAR Table 2.3.4-20	This LA change corrected errors in information primarily associated with rockfall in drifts, and also made several editorial LA changes.	clarification/correction
64	GI-5 Section 5.2.3.2.2 SAR Figure 2.3.2-9 SAR 2.3.9.2 SAR 2.3.9.3	This LA change corrected errors in information primarily associated with net infiltration (unsaturated zone) mass flow rates and percentages, and also made several editorial LA changes.	clarification/correction

Table 2 - LA Revision 1 Update – Change Summary by LA Change Number

LA Change Number*	LA Sections Revised	Description of Change	LA Change Type**
65	SAR Figure 2.3.8-48 SAR Figure 2.3.8-57 SAR Figure 2.3.8-58 SAR 4.2.2.2	This LA change deleted information associated with the subsurface seismic monitoring station located in the Exploratory Studies Facility (ESF). The change was made to emphasize the seismic monitoring system rather than any one particular seismic station. Implementation of the seismicity monitoring portion of the Performance Confirmation Program relies on a network or system of seismic monitoring stations not a specific seismic station. Seismic monitoring continues in the area as part of the Performance Confirmation Program. The subsurface seismic monitoring station was taken off line due to power being turned off in the underground due to safety requirements. Since then, the subsurface monitoring station has been restored using battery power. This LA change also corrected references cited in three LA figures.	design/ analysis evolution
68	GI-1 Section 1.4.2 GI-1 Section 1.5 GI-1 Table 1-1 SAR 1.1 SAR 1.2 SAR 1.5 SAR 2.2 SAR Table 2.2-4 SAR 2.4	This LA change modified references to specific revisions of the Quality Assurance Requirements and Description (QARD) document to refer to the description in SAR Section 5.1. A reference was added to GI Table 1-1 citing QARD Revision 20, which is the version currently identified as incorporated by reference in the LA.	clarification/ correction
70	SAR 2.3.10 SAR 2.4	This LA change consisted of reference changes only to remove references to proposed 40 CFR 197 (Environmental Protection Agency (EPA) standard). The final rule was effective on November 14, 2008. In general, the affected LA sections continue to refer to the proposed rule 10 CFR 63 (2005).	updated reference
73	SAR 1.5.1.4.1.2.5.1 SAR 1.5.1.5	This LA change removed a structural requirement associated with the naval spent nuclear fuel (SNF) canister which was less restrictive than the design criteria already presented in this LA section. No design change was made and there was no impact on the safety design bases of the naval SNF canister system.	clarification/ correction
74	SAR Figure 1.2.4-50	This LA change corrected the note in the LA figure associated with the canister transfer machine (CTM) mechanical equipment envelope to be consistent with similar information presented in the Preclosure Safety Analysis (PCSA) sections of the LA. The statement that the design ensured a flat bottom drop within 3 degrees of vertical was deleted. The LA change did not affect the nuclear safety design bases of the CTM.	clarification/ correction

***LA Change Number:**

LA Change Number corresponds to a DOE numbering scheme for changes and is identified for reference and discussion purposes. Only those change numbers associated with the LA Revision 1 update are provided.

****LA Change Type:**

editorial = 11 changes
updated references = 10 changes
clarification/correction = 21 changes
design/analysis evolution = 18 changes