

BSC

Criteria/Basis Change Notice

1. QA: QA
2. Page 1 of 3

Complete only applicable items.

3. Document Identifier: 000-3DR-MGR0-00300-000		4. Rev.: 002	5. CBCN: 003
6a. Title: <i>Basis of Design for the TAD Canister-Based Repository Design Concept</i>		6b. Safety Classification of SSC: ITS / Non-ITWI	
7. Reason for Change: The referenced section numbers of the <i>Monitored Geologic Repository System Requirements Document (MGR-RD)</i> , YMP/CM-0026, in the <i>Basis of Design for the TAD Canister-Based Repository Design Concept (BOD)</i> , 000-3DR-MGR0-00300-000, needs to be changed, or added as required, based on Revision 02 of the MGR-RD. In general, the MGR-RD revision reflect changes that were already incorporated in Revision 002 of the BOD based on the latest CRWMS Requirements Document (CRD), DOE/RW-0406, Rev. 08, and the Integrated Interface Control Document (IICD) Volume 1 Rev. 03 and Volume 2 Rev. 00. The CO Letter (LTR No. 08-011) from the DOE Contracting Officer (R. Gomez) to the BSC Prime Contract Administrator (D. Schlismann) has authorized BSC to incorporate the most recent revision of the MGR-RD into the BSC requirements system. There are no technical impacts to this change.			
8. Supersedes Change Notice:		<input type="checkbox"/> Yes If, Yes, Change Notice: _____ <input checked="" type="checkbox"/> No	
9. Disciplines/Organizations Affected by this Change:			
Nuclear Facilities Project Engineer <i>12 MAR 08</i>	Electrical/I&C Discipline Engineering Manager <i>3/12/08</i>	Mechanical Discipline Engineering Manager <i>3/12/08</i>	
BOP Project Engineer <i>02.12.2008</i>	Preclosure Safety Analysis Manager <i>3/12/08</i>	LNS Document Review <i>3/12/08</i>	
Subsurface Facility Project Engineer <i>FOR US 03/12/08</i>	CSA Discipline Engineering Manager <i>3/12/08</i>	IOC Integration Manager <i>3/12/08</i>	
TSA Discipline Engineering Manager <i>3/12/08</i>	Mining Discipline Engineering Manager <i>3/12/08</i>	If 6b is ITS/ITWI: Quality Assurance: Quality Assurance <i>3/12/08</i>	
10. Description of Change:			
<p>A. REVISE the MGR-RD DIRS # and the referenced MGR-RD section number cited in the BOD Rationale [bracketed statement] as noted below. There will be no changes to the BOD requirement text since the changes in Rev. 02 of the MGR-RD were incorporated or revised with the incorporation of the CRD Rev. 8, IICD Volume 1 Rev. 03, and IICD Volume 2 Rev. 00 into the Rev. 02 of the BOD document.</p> <ol style="list-style-type: none"> 1) In all sections of the BOD where the MGR-RD is referenced, revise [DIRS 177491] to read [DIRS 184999]. 2) Sections 2.2.1.1 and 8.2.1.1: Revise the referenced MGR-RD Section 3.1.1.L to read Section 3.1.1.M. 3) Sections 2.2.1.4 and 2.2.2.4: Revise the referenced MGR-RD Section 3.1.1.T to read Section 3.1.1.AA. 4) Section 2.2.2.1: Revise the referenced MGR-RD Section 3.1.1.Z to read Section 3.1.1.AG. 5) Section 2.2.2.2: Revise the referenced MGR-RD Sections 3.1.1.M and 3.1.1.N to read Sections 3.1.1.N and 3.1.1.O. 6) Sections 2.2.2.3, 9.10.2.2.11, 10.2.1.1, 10.2.2.6, 11.2.2.7 and 11.2.2.8: Revise the referenced MGR-RD Section 3.1.1.O to read Section 3.1.1.P. 7) Section 2.2.4.6: Revise the referenced MGR-RD Section 3.1.1.AF to read Section 3.1.1.AM. 8) Section 3.2.1.6: Revise the referenced MGR-RD Section 3.1.2.I to read Section 3.1.2.J. 9) Sections 3.2.1.2 and 3.2.1.4: Revise the referenced MGR-RD Section 3.1.2.J to read Section 3.1.2.K. 10) Sections 4.2.1.8, 5.2.1.7, 6.2.1.5, 10.2.1.7, 13.2.1.2.1, 13.2.2.10, 13.2.2.11, 15.2.1.5, and 29.2.1.8: Revise the referenced MGR-RD Section 3.1.2.F to read Section 3.1.2.G. 11) Sections 5.2.1.4 and 30.2.1.5: Revise the referenced MGR-RD Section 3.1.1.P to read Section 3.1.1.Q. 			

- 12) Section 8.2.2.4: Revise the referenced MGR-RD *Section 3.1.1.Y* to read **Section 3.1.1.AF**.
- 13) Section 11.2.2.1: Revise the referenced MGR-RD *Section 3.1.2.E* to read **Section 3.1.2.F**.
- 14) Section 23.2.1.1: Revise the referenced MGR-RD *Sections 3.1.1.U, 3.1.1.V, 3.1.1.W, and 3.1.1.X* to read **Sections 3.1.1.AB, 3.1.1.AC, 3.1.1.AD, and 3.1.1.AE**.
- 15) Sections 23.2.1.8 and 23.2.1.9: Revise the referenced MGR-RD *Section 3.1.1.V* to read **Section 3.1.1.AC**.
- 16) Section 23.2.2.23: Revise the referenced MGR-RD *Section 3.1.1.X* to read **Section 3.1.1.AE**.
- 17) Sections 30.2.1.1 and 31.1.2.1.1: Revise the referenced MGR-RD *Section 3.1.1.Q* to read **Section 3.1.1.R**.
- 18) Section 31.2.1.3: Revise the referenced MGR-RD *Section 3.1.1.AB* to read **Section 3.1.1.AI**.
- 19) Sections 3.2.1.2, 4.2.1.3, 4.2.1.8, 4.2.2.7.9, 4.2.2.7.10, 4.2.4.2, 13.1.2.1, 13.1.2.2, and 13.2.1.2.19: Revise the referenced MGR-RD *Sections 3.1.2.G and 3.1.2.H* to read **Section 3.1.2.H and Section 3.1.2.I**.
- 20) Sections 3.2.1.3, 13.2.1.2.7, and 13.2.1.2.33: Revise the referenced MGR-RD *Section 3.1.2.G* to read **Section 3.1.2.H**.
- 21) Section 4.2.2.7.14: Revise the referenced MGR-RD *Section 3.1.2.H* to read **Section 3.1.2.I**.

B. REVISE the following BOD requirements as follows:

2.2.1.4 Initial Operating Capability

The repository surface and subsurface facilities shall be designed and constructed in phases with an IOC phase. Because the availability of DOE funding and prioritization for project construction authorizations are outside BSC control, the timing for achieving IOC is as specified by DOE and not considered a requirement on BSC. The IOC includes an IHF, a CRCF (CRCF-1), a WHF, **an Aging Pad**, and supporting surface and subsurface facilities that are capable of receiving the waste types listed in Criterion 2.2.1.1 at the rates specified in Criterion 2.2.1.2. The Receipt Facility and additional CRCFs are required to meet the ramp-up throughput rates.

[Although CO Letter, (Hamilton-Ray 2006 [DIRS 177484]), 2nd paragraph, provided direction to implement a particular baseline schedule for facility operations, with modification provided by BCP YMP-2006-053 [DIRS 177483], Block 11, Page 5 of 1159, the revised schedule is in Section 2.2.1.10. These dates will be used for planning and allocating throughput among the various facilities. CRD (DOE 2007 [DIRS 182960]), Section 3.5C, as flowed down through the MGR-RD [DIRS 184999/177494], Sections 3.1.1.L, 3.1.1.AAF, and 3.2.14.F. An Aging Pad is required to be constructed to provide holding capability prior to emplacement. Sell 2006 is an embedded reference in the CRD and is NOT a BOD reference requiring tracking. This criterion previously overlapped with Criterion 2.2.2.4. However, with the latest revision to the CRD, this is being consolidated. This also supersedes the modular criterion previously in 2.2.2.4.]

2.2.1.6 Retrievability of Waste

The geologic repository operations area (GROA) shall be designed to preserve the option of waste retrieval throughout the period during which waste is being emplaced and thereafter, until the completion of a performance confirmation program and NRC review of the information obtained from such a program. The GROA shall be designed so that any or all of the emplaced waste could be retrieved on a reasonable schedule starting at any time up to 50 years after waste emplacement operations are initiated.

[10 CFR 63.111(e)(1)-(3) [DIRS 180319] as flowed down through the MGR-RD [DIRS 184999], Section 3.1.1.AN. This requirement may not preclude decisions by the NRC to allow backfilling in part, or all of, or permanent closure of the GROA before the end of the period of design for retrievability. A reasonable schedule for retrieval is one that would permit retrieval in about the same time as that required to construct the geologic repository operations area and emplace waste.]

8.2.2.3 Waste Package Retrieval

The Subsurface Facility shall be designed to preserve the option of initiating waste package retrieval at any time up to 50 years after waste package emplacement operations are initiated, **or until the completion of a performance confirmation program and NRC review of the information obtained from such a program** unless a different time period is approved or specified by the Commission.

[10 CFR 63.111(e)(1) [DIRS 180319] provides for the GROA criteria as flowed down through the MGR-RD [DIRS 184999], Section 3.1.1.AN. Therefore, this criterion is split between the Subsurface Facility and the repository (2.2.1.6). It reflects the difference in the pre-closure durations for both the surface facilities and the Subsurface Facility.]

11.2.2.6 Retrieval Requirements

The waste package shall be designed to permit retrieval during the preclosure period until the completion of a performance confirmation program and commission review of the information obtained from such a program. The waste package shall be designed to permit retrieval during the preclosure period so that any or all of the emplaced waste could be retrieved on a reasonable schedule starting at any time up to 50 years after waste emplacement operations are initiated, **or until the completion of a performance confirmation program and NRC review of the information obtained from such a program.**

[10 CFR 63.111(e)(1) [DIRS 180319] **as flowed down through the MGR-RD [DIRS 184999], Section 3.1.1.AN.** Allocation is made to the repository, Subsurface Facility, Waste Packages, and emplacement retrieval.]

12.2.2.4 Waste Package Retrieval

The naval SNF waste package system shall be designed to permit retrieval during the preclosure period so that any or all of the emplaced waste could be retrieved on a reasonable schedule starting at any time up to 50 years after waste emplacement operations are initiated, **or until the completion of a performance confirmation program and NRC review of the information obtained from such a program.**

[10 CFR 63.111(e)(1) [DIRS 180319] **as flowed down through the MGR-RD [DIRS 184999], Section 3.1.1.AN,** and 10 CFR 61.7(b)(2) [DIRS 181966]. Allocation is made to the repository, Subsurface Facility, waste packages, and emplacement retrieval.]

14.2.1.1 Retrieval

The emplacement and retrieval/drip shield installation system shall be designed to preserve the option of waste retrieval during the preclosure period so that any or all of the emplaced waste could be retrieved on a reasonable schedule starting at any time up to 50 years after waste emplacement operations are initiated, **or until the completion of a performance confirmation program and NRC review of the information obtained from such a program.**

[10 CFR 63.111(e)(1) [DIRS 180319] **as flowed down through the MGR-RD [DIRS 184999], Section 3.1.1.AN.** Allocation is made to the repository, Subsurface Facility, waste packages, and E&R.]

C. ADD the following MGR-RD reference in the affected sections [bracketed rationale statement] of the BOD:

- 1) For the transportation cask handling, add **MGR-RD [DIRS 184999], Section 3.1.2.D** in BOD Sections 3.2.2.5.2, 4.2.2.7.2, 5.2.1.1.5, 6.2.2.2.1, and 13.2.2.3:
- 2) For the REMY Interface, add **MGR-RD [DIRS 184999], Section 3.2.6.A** in BOD Sections 9.5.2.1.3, 9.6.2.1.2, 9.7.2.1.1, 9.8.2.2.11, 9.8.2.2.12, 16.2.2.9, and 24.2.2.2.8.

D. DELETE the reference **MGR-RD [DIRS 177491], Section 3.2.12.G** in BOD Section 8.2.1.8 for the emplacement drift spacing. (MGR-RD Section 3.2.12.G, which describe the emplacement drift spacing, was deleted in Rev. 02 of the MGR-RD. The drift spacing is now described in the Postclosure Modeling and Analyses Design Parameters (BSC 2008 [DIRS 183627].)

E. Revise Chapter 34, Section 34.1, Documents Cited to reflect the following:

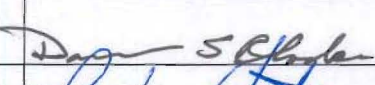
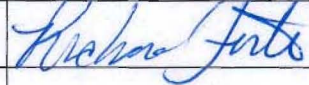
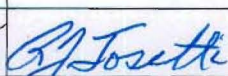
[DIRS 177491]

DOE (U.S. Department of Energy) 2006. *Monitored Geologic Repository Systems Requirements Document*. YMP/CM-0026, Rev. 1, ICN 0. Las Vegas, Nevada: U.S. Department of Energy, Office of Civilian Radioactive Waste Management. ACC: DOC.20060921.0002.

[DIRS 184999]

DOE (U.S. Department of Energy) 2008. *Monitored Geologic Repository Systems Requirements Document*. YMP/CM-0026, Rev. 2. Las Vegas, Nevada: U.S. Department of Energy, Office of Civilian Radioactive Waste Management. ACC: DOC.20080128.0001.

11. REVIEWS AND APPROVAL

Printed Name	Title	Signature	Date
11a. Preparer: David S. Rhodes	Discipline Engineering Manager		3-12-08
11b. Concurrence: Richard Foster	Manager of Discipline Engineering		3-12-08
11c. Concurrence: N/A	Project Engineering Manager	N/A	N/A
11d. Approved: Barbara Rusinko	Engineering Manager		3-12-08 SUK 3-13-08 3/12/08