LWD/WS PROJECTS SAFETY BASIS MANUAL

DOCUMENT: WSRC-IM-94-10

REVISION: 774

TITLE: LWD/WS PROJECTS SAFETY BASIS MANUAL

APPROVALS

B. A. McKibbin, Safety Document Manager, LW Project

DATE 1/1/20

J. E. Occhipinti, Manager, CSTF Engineering

DATE 1-7-2020

W. H. Bryan, Facility Manager, CSTF/ETP

DATE 1-7-2020

a Revision 771 represents full approval by appropriate LWD/WS management. Revision 774 has been approved by the affected Safety Document Manager, Facility Engineering Manager, and appropriate Facility Manager or designee in accordance with Section 1.0 of this procedure.
# REVISIONS

Revisions 1 through 752 covering the period 7/20/94 through 12/20/18 are summarized in letter SRR-CES-2012-00040, Rev. 3. Copies of these revisions are available in Document Control.

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<td>753</td>
<td>Approvals, Revisions, Contents, Section 3.0.</td>
<td>Revised Section 3.0, Subsection 1.0 to replace U-ESS-G-00009 Rev. 0 with Rev. 1.</td>
<td>01/15/19</td>
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<td>754</td>
<td>Approval, Revisions, Contents, Section 4.0</td>
<td>Revised Section 4.0, Subsection 1.0 to replace WSRC-SA-2003-00001 Rev. 14 with Rev. 15 and replace S-TSR-Z-00002 Rev. 16 with Rev. 17. Revised Section 4.0, Subsection 2.0 to remove WSRC-SA-2003-00001 Rev. 15 and S-TSR-Z-00002 Rev. 2018-A, and add SBD-CRF-Z-19001 Rev. 0.</td>
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<td>755</td>
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<td>Revised Section 2.0, Subsection 2.0 to add SBD-S-19-001 Rev. 0 and S-TSR-S-00001 Rev. 2019-A. Revised Section 3.0, Subsection 2.0 to add HLW-CRF-19001 Rev. 0, HLW-CRF-18003 Rev. 1, and S-TSR-Z-00001 Rev. 2019-A.</td>
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<td>Approval, Revisions, Contents, Section 2.0, Section 3.0</td>
<td>Revised Section 2.0, Subsection 2.0 to add U-ESS-S-00008, Rev. 2 and U-ESS-S-00009, Rev. 1. Revised Section 3.0, Subsection 2.0 to add U-ESS-G-00007, Rev. 4, U-ESS-G-00008, Rev. 2, and U-ESS-G-00009, Rev. 2.</td>
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<td>758</td>
<td>Approval, Revisions, Contents, Section 2.0, Section 3.0</td>
<td>Revised Section 2.0, Subsection 1.0 to replace U-ESS-S-00008, Rev. 1 with Rev. 2, to clarify implementation of U-ESS-S-00009, Rev. 0 until Rev. 1 of this ESS is implemented, and to remove PISA PI-2018-0004. Revised Section 2.0, Subsection 2.0 to remove U-ESS-S-00008, Rev. 2. Revised Section 3.0, Subsection 1.0 to add PISA PI-2019-0001 and to replace U-ESS-G-00007, Rev. 3 with Rev. 4, U-ESS-G-00008, Rev. 1 with Rev. 2, and U-ESS-G-00009, Rev. 1 with Rev. 2. Revised Section 3.0, Subsection 2.0 to remove U-ESS-G-00007, Rev. 4, U-ESS-G-00008, Rev. 2, and U-ESS-G-00009, Rev. 2.</td>
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<td>759</td>
<td>Approval, Revision, Contents, Section 2.0</td>
<td>Revised Section 2.0, Subsection 1.0 to replace WSRC-SA-6, Rev. 36 with Rev. 37, WSRC-TS-95-0019/S-TSR-S-00001, Rev. 64 with Rev. 65, U-ESS-S-00009, Rev. 0 with Rev. 1, and SBD-S-18-009, Rev. 0 with Rev. 1. Revised Section 2.0, Subsection 1.0 to remove U-ESS-S-00007, Rev. 0, SBD-S-16-003, Rev. 2, SBD-S-17-001, Rev. 1, SBD-S-17-004, Rev. 1, SBD-S-17-006, Rev. 0, SBD-S-17-007, Rev. 0, SBD-S-17-008, Rev. 1, SBD-S-18-003, Rev. 0, and SBD-S-18-004, Rev. 0. Revised Section 2.0, Subsection 2.0 to remove WSRC-SA-6, Rev. 37, WSRC-TS-95-0019/S-TSR-S-00001, Rev. 2018-A, U-ESS-S-00009, Rev. 1, and SBD-S-18-009, Rev. 1.</td>
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<td>Revised Section 2.0, Subsection 2.0 to update SBD-S-19-001, Rev. 0.</td>
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<td>Revised Section 3.0, Subsection 1.0 to replace TRP-WPT-2018-00031, Rev. 1 with Rev. 3.</td>
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<td>Approval, Revision, Contents, Section 2.0, Section 4.0</td>
<td>Revised Section 2.0, Subsection 2.0 to add U-ESR-S-00025, Rev. 0. Revised Section 4.0, Subsection 2.0 to add SBD-CRF-Z-19003, Rev. 0.</td>
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<td>Revised Section 2.0, Subsection 2.0 to replace U-ESR-S-00025, Rev. 0 with Rev. 1.</td>
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<td>Approval, Revision, Contents, Section 2.0</td>
<td>Revised Section 2.0, Subsection 2.0 to add WSRC-SA-6, Rev. 38, WSRC-TS-95-0019/S-TSR-S-00001, Rev. 2019-B, and SBD-S-19-003, Rev. 0.</td>
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<td>Revised Section 2.0, Subsection 1.0 to add U-ESR-S-00025, Rev. 1. Revised Section 2.0, Subsection 2.0 to remove U-ESR-S-00025, Rev. 1.</td>
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<td>Approval, Revision, Contents, Section 2.0</td>
<td>Revised Section 2.0, Subsection 2.0 to add SBD-S-19-004, Rev.0 and Rev. 1.</td>
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<td>Revised Section 3.0, Subsection 1.0 to add TRP-WPT-2018-00130, Rev. 1 and TRP-HTF-2019-00575, Rev. 0.</td>
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<td>771</td>
<td>Approval, Revision, Contents, Section 2.0, Section 3.0, Section 4.0</td>
<td>Revised Section 2.0, Subsection 1.0 to replace WSRC-TS-95-0019/S-TSR-S-00001, Rev. 65 with Rev. 66; to add SBD-S-19-001, Rev. 0 and SBD-S-19-004, Rev. 0; to remove U-ESS-S-00008, Rev. 2, U-ESS-S-00009, Rev. 1, and U-ESR-S-00026, Rev. 0; and to add a note explaining the implementation strategy for SDI SB changes. Revised Section 2.0, Subsection 2.0 to remove WSRC-TS-95-0019/S-TSR-S-00001, Rev. 2019-A, SBD-S-19-001, Rev. 0, and SBD-S-19-004, Rev. 0. Revised Section 3.0, Subsection 1.0 to replace S-TSR-G-00001, Rev. 57 with Rev. 58, and HLW-CRF-18003, Rev. 0 with Rev. 1; to add HLW-CRF-19001, Rev. 0, and HLW-CRF-19002, Rev. 0; and to add a note explaining the implementation strategy for SDI SB changes. Revised Section 3.0, Subsection 2.0 to add S-TSR-G-00001, Rev. 2019-B, and HLW-CRF-19003, Rev. 0; to remove S-TSR-G-00001, Rev. 2019-A, HLW-CRF-18003, Rev. 0, and HLW-CRF-19001, Rev. 0, and HLW-CRF-19002, Rev. 0. Revised Section 4.0, Subsection 1.0 to add SBD-CRF-Z-19001, Rev. 0, and to add a note explaining the implementation strategy for SDI SB changes. Revised Section 4.0, Subsection 2.0 to delete SBD-CRF-Z-19001, Rev. 0.</td>
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<td>Revised Section 2.0, Subsection 1.0 to remove SBD-S-19-002, Rev. 0, and U-ESR-S-00025, Rev. 1, and to add TRP-WD-2019-00611, Rev. 1.</td>
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<td>Revised Section 3.0, Subsection 1.0 to replace S-TSR-G-00001, Rev. 58 with Rev. 59; to remove TRP-WPT-2018-00031, Rev. 3, TRP-WPT-2018-00098, Rev. 4, TRP-WPT-2018-00130, Rev. 1, and TRP-HTF-2019-00575, Rev. 0; and to add HLW-CRF-19003, Rev. 0, and HLW-CRF-19005, Rev. 0. Revised Section 3.0, Subsection 2.0 to remove S-TSR-G-00001, Rev. 2019-B, and HLW-CRF-19003, Rev. 0.</td>
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## LWD/WS PROJECTS SAFETY BASIS MANUAL

### Revisions, Rev. 774

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<td>774</td>
<td>Approval, Revision, Contents, Section 3.0</td>
<td>Revised Section 3.0, Subsection 1.0 to add PISA PI-2019-0004. Revised Section 3.0, Subsection 2.0 to add HLW-CRF-19004, Rev. 0, and S-TSR-G-00001, Rev. 2019-D.</td>
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PREFACE

The facility-specific Safety Basis (SB) Lists contained herein (Sections 2.0 through 5.0) are used as the basis for performing the Unreviewed Safety Question (USQ) process per 10CFR830, Subpart B (Ref. 1) and Manual 11Q, Procedure 1.05 (Ref. 2). The SB Lists are developed and maintained in accordance with Manual 11Q, Procedure 1.02 (Ref. 3). DOE and SRR have formally identified documents on these lists as Safety Basis Documents.

Safety Basis Documents (subsection 1.0 of Sections 2.0 thru 5.0) as defined in 10CFR830 Subpart B and Manual 11Q, are the documented safety analysis and hazard controls that provide reasonable assurance that a DOE nuclear facility can be operated safely in a manner that adequately protects workers, the public, and the environment.

For Concentration, Storage, and Transfer Facilities (CSTF), Defense Waste Processing Facility (DWPF), Saltstone Facility, and the Effluent Treatment Project (ETP), the "Safety Basis" is defined by the following documents for any given facility. (These documents are considered ABOVE THE LINE)

1. DOE approved and implemented Documented Safety Analysis (DSA)
2. DOE approved and implemented Technical Safety Requirements (TSRs)
3. DOE approved and implemented Justification for Continued Operation (JCO) or Basis for Interim Operation (BIO)
4. SRR approved and implemented Safety Basis Document Change Request Packages not requiring DOE approval or those that have been approved by DOE and implemented by SRR
5. Other documents that DOE has formally identified as Safety Basis Documents

Configuration Managed Documents (subsection 2.0 of Sections 2.0 thru 5.0) shall be reviewed during the USQ process to maintain configuration management for SRR approved Safety Basis documents pending DOE approval (when required) and waiting for implementation, open PISAs and for documents significant to the configuration management of Safety Basis controls. (These documents are all considered “BELOW THE LINE” and will be moved above the line after implementation).

Categorical Exclusions provide a basis and mechanism for exempting certain Proposed Activities (PA) from the USQ process.

TSR Interpretations are listed for information and provide clarifying information on specific portions of the TSR per S4, ENG.16 (Ref. 4).

Safety Basis documents in this manual will be updated when a significant piece of Safety Basis documentation such as a DSA, TSR, or BIO has been revised or identified for use. The update process is described in Section 1.0. The Document Control process provides the method for keeping the Safety Basis Manual current.

References

1. 10CFR830, Subpart B, Safety Basis Requirements
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SAFETY BASIS MANUAL CHANGE PROCESS


Note: Per Manual 11Q Procedure 1.02, the Safety Basis Regulatory Authority (SBRA) or designee is responsible for updating, approving and controlling a revision to this manual. For the Liquid Waste Operations (LWO), the SBRA has designated his authority for approving revisions to the “LWD/WS Projects Safety Basis Manual” to the respective Liquid Waste Facility Engineering Manager.
1.0 SAFETY BASIS DOCUMENTS:


TRP-WD-2019-00611, Rev. 1, November 2019, “Approval and Implementation of M-DCF-S-03400 Rev. 0 (Changes to Remove Formic and Nitric Acid Additions to the SME).”

SB Document Change Request Packages:

Note: These are SB Document Change Request Packages that have been approved by the FOSC, implemented, but have not been incorporated into the affected document.

Copies of the Change Packages and De-inventory Plans are contained in WSRC-IM-2002-00006.

SBD-S-18-009, Rev. 1, (10/31/18) “DWPF FSAR changes to revise MCU transfers to DWPF WAC flush period and associated changes surrounding WAC and internal corrosion.” (Change to FSAR Rev. 37, Chapters 4, 9, and 11)

SBD-S-19-001, Rev. 0, (04/30/19) “DWPF FSAR changes in accordance with Salt Waste Processing Facility Integrated Operation. PISA closure is also included in this package.” (Change to FSAR Rev. 37, Chapters 1-11 and 14)*

SBD-S-19-003, Rev. 0, (08/22/19) “Removed the list of plugged LDBs entering the 512-S facility during the suspended operations as they will not be plugged.” (Change to FSAR Rev. 37 Chapters 4 and 5)

SBD-S-19-004, Rev. 0, (09/30/19) “Changes to key Diaphragm sump pump parameters.” (Change to FSAR Rev. 37, Chapters 5 and 9)

De-inventory Plans:


* This SB change supports the operation of the Salt Waste Processing Facility (SWPF) and includes interface controls/requirements to be implemented by SWPF for safe operations of the DWPF. However, the SWPF SB is not implemented at this time and the requisite interface controls/requirements are not formally in place. The requisite interface controls/requirements imposed upon SWPF will be verified complete by SWPF’s implementation/readiness/startup process.
2.0 CONFIGURATION MANAGED DOCUMENTS:

Copies of the Change Packages and Proposed TSR Revisions are contained in WSRC-IM-2002-00006.


SB Document Change Request Packages:

Note: These are SB Document Change Request Packages that have been approved by the FOSC, but not implemented or incorporated into the affected document(s).

SBD-S-19-004, Rev. 1, (09/30/19) “Changes to key Diaphragm sump pump parameters.” (Change to FSAR Rev. 38, Chapters 5 and 9)

3.0 CATEGORICAL EXCLUSIONS:

None

4.0 TSR INTERPRETATIONS:

Copies of the Interpretations are contained in WSRC-IM-2002-00006.

None
Concentration, Storage, and Transfer Facilities (CSTF)

1.0 SAFETY BASIS DOCUMENTS:


S-TSR-G-00001, Rev. 59, December 2019, “Concentration, Storage, and Transfer Facilities Technical Safety Requirements.”*


PISA PI-2019-0001, April 2019, “Non-Conservative Calculation of Radiological Consequences Resulting from Steam Jet Impingement Aerosolization in CSTF.”


SB Document Change Request Packages:

Note: These are SB Document Change Request Packages that have been approved by the FOSC, implemented, but have not been incorporated into the affected document.

Copies of the CRFs are contained in WSRC-IM-99-00009

HLW-CRF-17006, Rev. 3 (1/23/18) “Transfer Line Flushing Control” (Change to DSA, Rev. 20, Chapter 5)

HLW-CRF-17007, Rev. 1 (10/31/17) “NCSE Revision for Tank 49 Isolation Methods” (Change to DSA, Rev. 20, Chapter 6)

HLW-CRF-17008, Rev. 2 (12/11/18) “Tank Closure Cesium Removal (TCCR) Unit and Interim Safe Storage (ISS)” (Change to DSA, Rev. 20, Chapters ES, 2, 3, 4, 5, 6, and 11)
1.0 SAFETY BASIS DOCUMENTS (continued):

Copies of the CRFs are contained in WSRC-IM-99-00009

HLW-CRF-18003, Rev. 1 (02/28/19) “Salt Waste Processing Integrated Operation NPH Roll-Up Consequences” (Change to DSA Addendum: 25H, Rev. 0, Sections 3.0 and 8.0)*

HLW-CRF-19001, Rev. 0 (02/28/19) “Salt Waste Processing Facility (SWPF) Integrated Operation” (Change to DSA, Rev. 20, Chapters ES, 1, 2, 3, 4, 5, 6, 9, and 17)*

HLW-CRF-19002, Rev. 0 (07/25/19) “Nuclear Criticality Safety Analysis Summary Report Reference Update” (Change to DSA, Rev. 20, Chapter 6)

HLW-CRF-19003, Rev. 0 (10/24/19) “Gas Release Program Update” (Change to DSA, Rev. 20, Chapters 2, 3, and 5)

HLW-CRF-19005, Rev. 0 (12/5/19) “CSTF NCSASR Revision for Waste Tank Operations NCSE” (Change to DSA, Rev. 20, Chapter 6)

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* This SB change supports the operation of the Salt Waste Processing Facility (SWPF) and includes interface controls/requirements to be implemented by SWPF for safe operations of CSTF. However, the SWPF SB is not implemented at this time and the requisite interface controls/requirements are not formally in place. The requisite interface controls/requirements imposed upon SWPF will be verified complete by SWPF’s implementation/readiness/startup process.

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2.0 CONFIGURATION MANAGED DOCUMENTS:

Copies of the Configuration Managed Documents are contained in WSRC-IM-99-00009


SB Document Change Request Packages:

Note: These are SB Document Change Request Packages that have been approved by the FOSC but have not been implemented or incorporated into the affected document(s).

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HLW-CRF-19004, Rev. 0 (12/19/19), “Tank 9 to Tank 10 Transfer for Tank 4 Ventilation” (Change to DSA, Rev. 20, Chapters 3, 4, and 5)
3.0 CATEGORICAL EXCLUSIONS:

CX-CSTF-00001, Rev. 0, September 2015 “Categorical Exclusion for Periodic Operational Impacts from Corrosion Control, Flammability Control, and Sludge Carryover Minimization Programs.”

4.0 TSR INTERPRETATIONS:

None
Saltstone Facility

1.0 SAFETY BASIS DOCUMENTS:


SB Document Change Request Packages:

Note: These are SB Document Change Request Packages that have been approved by the FOSC, implemented, but have not been incorporated into the affected document.

Copies of the CRFs are contained in WSRC-IM-2004-00028

SBD-CRF-Z-19001, Rev. 0 (01/24/19) “SWPF Integration” (Change to DSA Rev. 15, Chapters ES, 1, 2, 3, 4, 5, 6, 13, and 17)*

SBD-CRF-Z-19002, Rev. 0 (03/07/19) “Chemical Screening” (Change to DSA Rev. 15, Chapters 2, 3, 4, and 13)

* This SB change supports the operation of the Salt Waste Processing Facility (SWPF) and includes interface controls/requirements to be implemented by SWPF for safe operations of the Saltstone Facility. However, the SWPF SB is not implemented at this time and the requisite interface controls/requirements are not formally in place. The requisite interface controls/requirements imposed upon SWPF will be verified complete by SWPF’s implementation/readiness/startup process.

2.0 CONFIGURATION MANAGED DOCUMENTS:

Copies of the Configuration Managed Documents are contained in WSRC-IM-2004-00028

SB Document Change Request Packages:

Note: These are SB Document Change Request Packages that have been approved by the FOSC but have not been implemented or incorporated into the affected document(s).

SBD-CRF-Z-19003, Rev. 0 (06/25/19) “Grout Pump Head Vent Conductivity Probes” (Change to DSA Rev. 15, Chapter 2)

3.0 CATEGORICAL EXCLUSIONS:

None
4.0  TSR INTERPRETATIONS:

None
Effluent Treatment Project

1.0 SAFETY BASIS DOCUMENTS:


SB Document Change Request Packages:

None

2.0 CONFIGURATION MANAGED DOCUMENTS:

None

SB Document Change Request Packages:

None

3.0 CATEGORICAL EXCLUSIONS:

None

4.0 TSR INTERPRETATIONS:

None