

**Annual Change Report 2014/2015**

**From July 1, 2014, to June 30, 2015**

**November 2015**

Prepared for:

**The U.S. Department of Energy**

Prepared by:

**Nuclear Waste Partnership LLC**

**Regulatory Environmental Services**

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## Introduction

The U.S. Environmental Protection Agency (EPA) requires the U.S. Department of Energy (DOE) to provide information on any change in conditions or activities pertaining to the disposal system since the most recent compliance application. This requirement is identified in Title 40 Code of Federal Regulations (CFR) Part 194.4(b)(4), which states:

“No later than six months after the administrator issues a certification, and at least annually thereafter, the Department shall report to the Administrator, in writing, any changes in conditions or activities pertaining to the disposal system that were not required to be reported by paragraph (b)(3) of this section and that differ from information contained in the most recent compliance application.”

The DOE provides an annual report each November of applicable changes under this requirement. This annual report informs the EPA of changes to information in the most recent compliance application (the 2014 Compliance Recertification Application (CRA)). Significant planned changes must be reported to the EPA prior to implementation by the DOE. In addition, Title 40 CFR Part 194.4(b)(3) requires that significant unplanned changes be reported to the EPA within 24 hours or ten days, depending on the severity of the activity or condition. Planned changes are submitted on an individual basis. Other changes are reported annually.

Proposed changes in activities or conditions are reviewed to determine if 40 CFR Part 194.4(b)(3) reporting is necessary. The enclosed tables list those items identified for reporting under 40 CFR Part 194.4(b)(4). The majority of the items described in this report are inspections, reports, and modifications to written plans and procedures for Waste Isolation Pilot Plant (WIPP) operations.

This report captures the summary of each change within seven tables for the period July 1, 2014, through June 30, 2015:

Table 1: Changes in WIPP Conditions or Activities Reportable under Title 40 CFR Part 194.4(b)(4), documents EPA and DOE interactions during the reporting period with a high-level summary of each correspondence.

Table 2: Procedure/Plan Revision, documents changes to relevant plans and procedures during the reporting period.

Table 3: Waste Emplacement Summary Report, documents the transuranic (TRU) waste inventory for the waste parameters. The summary provides the total emplaced inventory in the repository as of June 30, 2015.

Table 4: Performance Assessment, Software, and Hardware Changes, documents the changes to relevant codes, software, and hardware that have occurred during the reporting period.

Table 5: Passive Institutional Controls (PICs) Activity, documents the relevant activities that would be applicable to the development of PICs. This table has been added in compliance with the EPA revised PICs schedule. (Reyes to Moody, March 7, 2008)

Table 6: EPA Waste Characterization Inspections – January 2008 to June 2015, documents inspections performed by the EPA pertaining to Tier 1 changes to the baseline approvals at generator and storage sites for TRU waste. This table was added to the Annual Change Report at the request of the EPA during the EPA/DOE management meeting held July 29, 2010. Inspections prior to January 2008 were documented in Table CARD 8-1, EPA Waste Characterization Inspections, submitted with the five-year recertification applications and are included. (EPA request, July 29, 2010)

Table 7: EPA Quality Assurance Audits by Site – January 2008 to June 2015, documents audits performed by the EPA for generator and storage sites for TRU waste. This table was added to the Annual Change Report at the request of the EPA during the EPA/DOE management meeting held July 29, 2010. Audits prior to January 2008 were documented in Table CARD 8-2, EPA Quality Assurance Audits by Site, submitted with the five-year recertification applications and are included. (EPA request, July 29, 2010)

In accordance with the EPA requests (personal communication) and feedback, this report incorporates suggestions and guidance for capturing the appropriate level of detail and the layout of information with respect to the WIPP certification criteria. This report does not include administrative changes to procedures such as editorial changes, reformatting, correcting references, correcting inconsistency within a procedure, and other changes that do not change the substance or intent of the document.

Due to an underground fire on February 5, 2014, and a radiological event occurring on February 14, 2014, normal underground activities have been suspended. Suspended activities include waste receipt and waste emplacement. In the interim, the WIPP's work focus has been on recovery activities. These activities include: "catch-up" roof bolting, decontamination of equipment and selected mine surfaces, initial closure of Panel 6 and Panel 7, Room 7, and providing additional fans and filtration to increase air flow to the underground. Non-WIPP experimental activities are currently performing recovery activities resulting from the underground fire.

**Table 1:**  
**Changes in WIPP Conditions or Activities Reportable under Title 40 CFR Part 194.4(b)(4)**

**Table 1: Changes in WIPP Conditions or Activities Reportable under Title 40 CFR Section 194.4(b)(4)**

| Regulatory Requirements   | Implementing Document or Activity that Changed | Description of the Change and DOE Assessment of the Impact of the Change   |
|---|--|--|
| 194.4(b)(3), Conditions of Compliance Certification.  | Reporting unplanned changes to disposal system | <u>EPA to DOE, October 1, 2014</u> . Release of EPA reports pertaining to the radiological incident at WIPP.   |
| 194.4(b)(4) Conditions of Compliance Certification  | 2013/2014 Annual Change Report                 | <u>DOE to EPA, November 10, 2014</u> . Submittal of the Annual Change Report in compliance with 40 CFR 194.4(b)(4).  |
| 194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP | Advanced Mixed Waste Treatment Project (AMWTP) | <p><u>DOE to EPA, December 16, 2014</u>. Response to concerns identified during the EPA continued compliance inspection at AMWTP.</p> <p><u>DOE to EPA, February 9, 2015</u>. Tier 1 request for load management at AMWTP.</p> <p><u>DOE to EPA, March 25, 2015</u>. Tier 1 request to add compacted containers (pucks) that cannot be directly measured to CH waste payloads.</p> <p><u>DOE to EPA, April 13, 2015</u>. Tier 1 request to add the retrieval box assay system (RBAS) – DHH-04-15 at AMWTP.</p> <p><u>EPA to DOE, May 13, 2015</u>. EPA concurrence to allow the assembly of CH waste payloads at AMWTP to include compacted containers (pucks) that cannot be directly measured.</p> |
| 194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP | Argonne National Laboratory (ANL)              | None to report.  |

**Table 1: Changes in WIPP Conditions or Activities Reportable under Title 40 CFR Section 194.4(b)(4)**

| Regulatory Requirements  | Implementing Document or Activity that Changed | Description of the Change and DOE Assessment of the Impact of the Change  |
|--|--|---|
| <p>194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP</p> | <p>Idaho National Laboratory (INL)</p>         | <p><u>EPA to DOE, July 15, 2014.</u> EPA approval to add additional containers (Lot 5C) to the ID-HFEF-S5400-Remote Handled (RH) waste stream. EPA Docket No. A-98-49; II-A4- 185.</p> <p><u>EPA to DOE July 15, 2014.</u> Notification of results of the EPA continued compliance inspection of the Central Characterization Project (CCP) at INL. EPA Docket No. A-98-49; II-A4-190.</p> <p><u>EPA to DOE, September 10, 2014.</u> EPA approval to add RH waste stream ID-MFC-SOLID-RH to the RH SCG3000. EPA Docket No. A-98-49; II-A4-188.</p> <p><u>DOE to EPA, November 4, 2014.</u> Tier 1 request for waste stream ID-ANLW-W269-RH (Lot 8C) at INL.</p> <p><u>EPA to DOE, November 5, 2014.</u> EPA approval of Tier 1 request to add the RH waste stream ID-TRA-W345-RH (Lot 8B). EPA Docket No. A-98-49; II-A4-194.</p> <p><u>EPA to DOE, November 10, 2014.</u> EPA approval of Tier 1 request to add the RH waste stream IN-ID-BTO-030 (Lot 3). EPA Docket No. A-98-49; II-A4-191.</p> <p><u>DOE to EPA, November 12, 2014.</u> Tier 1 request for waste stream ID-RF-S5300-RH and ID-RF-S5100-RH at INL.</p> <p><u>DOE to EPA, February 12, 2015.</u> Tier 1 request for the radiological approach of RH INL waste stream ID-HFEF-S5400-RH liner-3 generated product containers.</p> |
| <p>194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP</p> | <p>Los Alamos National Laboratory (LANL)</p>   | <p><u>DOE to EPA, January 12, 2015.</u> Tier 1 request for LANL-CCP High Energy Neutron Counter (HENC) 3 and submittal of calibration report.</p> <p><u>DOE to EPA, March 23, 2015.</u> LANL responses to EPA continue compliance inspection concerns. (LANL-CCP-CC-CH-2015-VE-01F, LANL-CCP-CC-CH-2015-NDE-02CR, LANL-CCP-CC-CH-2015-RTR-03CR, and LANL-CCP-CC-CH-2015-RTR-04CR)</p> <p><u>DOE to EPA, March 26, 2015.</u> LANL response to concern (AK-05CR) EPA continued compliance inspection pertaining to review and updating of the waste parameter and AK-NDA memoranda.</p> <p><u>DOE to EPA, April 30, 2015.</u> Response to concern NDA-6CR from EPA continued compliance inspection.</p> <p><u>DOE to EPA, April 30, 2015.</u> Notification of completed actions from EPA continued compliance inspection for VE-01F.</p>  |

**Table 1: Changes in WIPP Conditions or Activities Reportable under Title 40 CFR Section 194.4(b)(4)**

| Regulatory Requirements   | Implementing Document or Activity that Changed | Description of the Change and DOE Assessment of the Impact of the Change   |
|---|--|--|
| 194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP | Oak Ridge National Laboratory (ORNL)           | <p><u>EPA to DOE, July 9, 2014.</u> EPA approval to add Summary Category Group (SCG) S3000 to the Contact Handled (CH) waste categories characterized by CCP. EPA Docket No. A-98-49; II-A4-189.</p> <p><u>EPA to DOE, October 21, 2014.</u> EPA approval of Tier 1 change to add the MILCC2 as a new Non-Destructive Assay (NDA) System. EPA Docket No. A-98-49; II-A4-192.</p> <p><u>EPA to DOE, November 10, 2014.</u> EPA approval of Tier 1 to add Visual Examination (VE) process to characterize S4000 and S5000 of CH waste. EPA Docket No. A-98-49; II-A4-193.</p> <p><u>DOE to EPA, November 18, 2014.</u> Notification of additional compacted waste streams at ORNL.</p> |
| 194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP | Sandia National Laboratories (SNL)             | None to report.  |
| 194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP | Savannah River Site (SRS)                      | <p><u>DOE to EPA, September 2, 2014.</u> Tier 1 request to use the Nondestructive Assay Box Counter (NABC) five-foot setback configuration for CH waste in Standard Large Box 2s (SLB2s) and to add three sealed sources included in the RH waste stream SR-RH-SDD.01.</p> <p><u>DOE to EPA, December 2, 2014.</u> Tier 1 request to add waste stream SR-RH-SWD.01.</p> <p><u>EPA to DOE, February 5, 2015.</u> EPA concurrence with the addition of one 55-gallon drum of RH debris waste to existing RH waste stream SR-BCLDP.003.</p> <p><u>EPA to DOE, February 23, 2015.</u> EPA approval of RTR operations at SRS-CCP. EPA Docket No. A-98-49; II-A4-195.</p>                  |
| 194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP | Waste Control Specialists (WCS)                | None to report.  |



**Table 1: Changes in WIPP Conditions or Activities Reportable under Title 40 CFR Section 194.4(b)(4)**

| Regulatory Requirements   | Implementing Document or Activity that Changed                          | Description of the Change and DOE Assessment of the Impact of the Change   |
|---|---|--|
| NOTE: Dates correspond to CCP quarterly reports.  |   |  |
| 194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP | Fiscal Year (FY) 2014 Quarterly Tier 2 reports generated, first quarter | <u>EPA to DOE, August 7, 2014.</u> EPA concurrence with FY 2014, first and second quarter Tier 2 information with request for additional information on AMWTP MP-TRUW-8.13 R25.<br><u>DOE to EPA, September 4, 2014.</u> Response to request for additional information for first and second quarter Tier 2 reports.   |
| 194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP | FY14 Quarterly Tier 2 reports generated, second quarter                 | <u>EPA to DOE, August 7, 2014.</u> EPA concurrence with FY 2014, first and second quarter Tier 2 information with request for additional information on AMWTP MP-TRUW-8.13 R25.<br><u>DOE to EPA, September 4, 2014.</u> Response to request for additional information for first and second quarter Tier 2 reports.   |
| 194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP | FY14 Quarterly Tier 2 reports, third quarter                            | <u>DOE to EPA, August 7, 2014.</u> Notification of Tier 2 changes for AMWTP and CCP activities for FY14, third quarter.<br><u>EPA to DOE, September 10, 2014.</u> Request for additional information pertaining to the FY14, Tier 2 Report.<br><u>DOE to EPA, September 17, 2014.</u> Response to request for additional information pertaining to the FY 14, third quarter Tier 2 report. |
| 194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP | FY14 Quarterly Tier 2 reports, fourth quarter                           | <u>DOE to EPA, November 13, 2014.</u> Notification of Tier 2 changes for AMWTP and CCP activities for FY14, fourth quarter.<br><u>EPA to DOE, June 15, 2015.</u> EPA acceptance of the Tier 2 FY14 fourth quarter report and request for supporting information.   |
| 194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP | Fiscal Year FY15 Quarterly Tier 2 reports generated, first quarter      | <u>EPA to DOE, June 15, 2015.</u> EPA acceptance of the Tier 2 FY15 first quarter report and request for supporting information.   |

**Table 1: Changes in WIPP Conditions or Activities Reportable under Title 40 CFR Section 194.4(b)(4)**

| Regulatory Requirements   | Implementing Document or Activity that Changed          | Description of the Change and DOE Assessment of the Impact of the Change   |
|---|---|--|
| 194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP | FY15 Quarterly Tier 2 reports generated, second quarter | <p><u>DOE to EPA May 8, 2015</u>. Notification of Tier 2 changes for AMWTP and CCP activities FY15 second quarter.</p> <p><u>EPA to DOE, June 15, 2015</u>. EPA acceptance of the Tier 2 FY15 second quarter report and request for supporting information.</p>  |
| 40 CFR 194.11-15  | Certification/Recertification                           | <p><u>EPA to DOE, September 29, 2014</u>. Notification to DOE that the completeness review of the March 2014 DOE Compliance Recertification Application (CRA-2014) has begun.</p> <p><u>EPA to DOE, December 17, 2014</u>. Letter to DOE of the first set of completeness questions and comments on CRA-2014.</p> <p><u>DOE to EPA, January 28, 2015</u>. First response to 6 completeness questions identified in EPA’s letter of December 17, 2014.</p> <p><u>EPA to DOE, February 27, 2015</u>. Letter to DOE of the second set of completeness questions and comments on CRA-2014.</p> <p><u>DOE to EPA, March 18, 2015</u>. Second response to 11 completeness questions identified in EPA’s letter of December 17, 2014.</p> <p><u>DOE to EPA, April 8, 2015</u>. Third response to 8 completeness questions identified in EPA’s letters of December 17, 2014 and February 27, 2015.</p> <p><u>DOE to EPA, May 29, 2015</u>. Fourth response to 22 completeness questions identified in EPA’s letters of December 17, 2014 and February 27, 2015.</p> <p><u>EPA to DOE, June 5, 2015</u>. Letter to DOE of the third set of completeness questions and comments on CRA-2014.</p> |

**Table 1: Changes in WIPP Conditions or Activities Reportable under Title 40 CFR Section 194.4(b)(4)**

| <b>Regulatory Requirements</b>          | <b>Implementing Document or Activity that Changed</b>                        | <b>Description of the Change and DOE Assessment of the Impact of the Change</b>  |
|---|--|--|
| 194.14(b) Design of the Disposal System | Status of Experiments in the WIPP Underground July 1, 2014 to June 30, 2015. | <p>SEGA (Segmented Enriched Germanium Assembly) and MEGA (Multiple Element Germanium Array)<br/>                     All activities are currently on hold and the Q-room area of S-90 is partitioned off due to ground evaluation.</p> <p>EXO (Enriched Xenon Observatory)<br/>                     Entries have been conducted to stabilize the pressures across the detector, configure the experiment to prevent contamination due to soot and dust, and to configure the electrical loads in preparation for power restoration. Power was restored on February 8, 2015, and work restoring functionality of the air handling units and cleaning activities has begun. Troubleshooting of the electrical system is ongoing. The Xe system has been restored for operation.</p> <p>LBRE (Low Background Radiation Experiment)<br/>                     LBRE investigators were on site June 9, 2015, to begin summer investigations.</p> <p>DMTPC (Dark Matter Time Projection Chamber)<br/>                     All activities are on hold. Investigators continue their planning for a new, larger detector.</p> <p>Salt Disposal Investigations (SDI)/Salt Defense Disposal Investigations (SDDI)<br/>                     All underground activities are on hold.</p> <p>Compaction Testing (panel closure salt compaction testing at W-30/S-3650)<br/>                     Data collection on hold.</p> |

**Table 1: Changes in WIPP Conditions or Activities Reportable under Title 40 CFR Section 194.4(b)(4)**

| Regulatory Requirements        | Implementing Document or Activity that Changed | Description of the Change and DOE Assessment of the Impact of the Change  |
|--------------------------------|--|---|
| 194.21, Inspections            | Inspection under 194.21 and 191 Subpart A      | <p><u>EPA to DOE, October 1, 2014</u>. Release of report on EPA’s April 2014, inspection performed under the authority of 40 CFR 194.21 and 40 CFR Part 191, Subpart A. EPA Docket No. A-98-49; II-B3-129.</p> <p><u>EPA to DOE, October 1, 2014</u>. Release of the EPA annual Subpart A inspection report for the inspection that occurred October 22-24, 2013. EPA Docket No. A-98-49; II-B3-127.</p> <p><u>DOE to EPA, November 25, 2014</u>. Response to items identified in the EPA annual Subpart A inspection report (Docket No. A-98-49; II-B3-129).</p> <p><u>EPA to DOE, March 30, 2015</u>. EPA review of “U.S. Department of Energy Plan for Addressing the Areas for Improvement Identified by the U.S. Environmental Protection Agency”. This plan adequately addresses the major areas of concern identified by the EPA during its April 2014, inspection.</p> <p><u>DOE to EPA, June 11, 2015</u>. Submittal of photographs and documentation requested by the EPA during the annual inspection that occurred April 7-9, 2015.</p> |
| 194.22, Quality Assurance (QA) | Quality Assurance Audit                        | <p><u>EPA to DOE, December 12, 2014</u>. Release of the EPA Quality Assurance audit of CBFO’s QA program for NQA-1-1989 compliance. The audit determined that the CBFO QA program continues to comply with NQA-1-1989 elements. EPA Docket No. A-98-49; II-A1-117.</p> <p><u>EPA to DOE, January 15, 2015</u>. EPA QA audit of the Sandia National Laboratory –Carlsbad Office (SNL-CO), Waste Isolation Pilot Plant QA Program conducted remotely from May 1-29, 2014. The audit team determined that the SNL-CO WIPP QA program complies with the elements of NQA-1-1989. EPA Docket No. A-98-49; II-A1-115; EPA-HQ-OAR-2001-0012-0444.</p> <p><u>EPA to DOE, June 1, 2015</u>. Results of EPA QA audit for NQA-1-1989 implementation at ORNL. EPA determined that the CBFO QA program at ORNL continues to comply with NQA-1-1989 requirements.</p>  |
| 194.24 Waste Characterization  | Radiological Characterization of TRU Waste     | <p><u>EPA to DOE, January 16, 2015</u>. Notification of concerns related to reviews of waste characterization programs experienced during continued compliance inspections at AMWTP and SRS.</p>  |

**Table 1: Changes in WIPP Conditions or Activities Reportable under Title 40 CFR Section 194.4(b)(4)**

| <b>Regulatory Requirements</b> | <b>Implementing Document or Activity that Changed</b> | <b>Description of the Change and DOE Assessment of the Impact of the Change</b>   |
|--------------------------------|---|---|
| 194.42, Monitoring             | CAP88-PC Code Version 3                               | EPA notification on February 10, 2015, of the release of CAP88-PC Code Version 4 for use in demonstrating compliance with 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants (NESHAPs). CAP88 is a computer code used in support of compliance with 40 CFR 191 Subpart A. |

**Table 2:  
Procedure/Plan Revision**

**Table 2: Procedure/Plan Revision**

| Procedure/Plan  | Revision and Effective Date     | Description of Change   |
|---|---------------------------------|---|
| WP 05-WH1058, CH Waste Handling Abnormal Operations             | Revision 14, July 28, 2014      | <ul style="list-style-type: none"> <li>• Added step 4.1 regarding underground configuration.</li> <li>• Added step 6.2 regarding Waste Handling Building configuration.</li> <li>• Added sub-step 6.3.1[C] regarding marking filters to be plugged.</li> <li>• Added step 8.3 regarding jack stand installation.</li> <li>• Added section 11.0, Removal of Ten-Drum OverPack (TDOP) Pipe Plugs.</li> <li>• Added attachment 3, Removal of TDOP Pipe Plugs.</li> </ul>   |
| WP 12-ER4902, Hazardous Material Spill and Release Response     | Revision 14, July 31, 2014      | <ul style="list-style-type: none"> <li>• Modified to address CAP10 findings resulting from an independent internal assessment of the Nuclear Safety Program, including clarifying immediate and subsequent actions and branching to other procedures.</li> <li>• Added in Entry Conditions: on-site fuel and ethylene glycol spills and breached waste containers with spilled contents.</li> <li>• Added step 2.2 regarding Central Monitoring Room Officer (CMRO) actions following a radioactive waste spill.</li> <li>• Added steps 3.2 through 3.4 regarding actions to take if the Contingency Plan has or has not been implemented.</li> </ul> |
| WP 12-ER4903, Surface Radiological Event Response               | Revision 21, July 31, 2014      | <ul style="list-style-type: none"> <li>• Extensive revision to eliminate underground radiological event response instructions which can now be located in procedure WP 12-ER4904, and address the implementation of the Contingency Plan.</li> </ul>  |
| WP 08-NT.01, Waste Data System Program and Data Management Plan | Revision 29, September 30, 2014 | <ul style="list-style-type: none"> <li>• Added new Section 6.6, Data Management.</li> <li>• Deleted Section 7.1, Access Control and Contingency Planning for Off-Normal Events.</li> </ul>  |
| WP 08-NT.04, Waste Data System Software Quality Assurance Plan  | Revision 22, October 1, 2014    | <ul style="list-style-type: none"> <li>• Complete rewrite. Major changes include:               <ol style="list-style-type: none"> <li>1. Added/modified content in multiple sections to address entire software lifecycle and to differentiate between supplier and NWP tasks.</li> </ol> </li> </ul>  |

**Table 2: Procedure/Plan Revision**

| Procedure/Plan   | Revision and Effective Date    | Description of Change   |
|--|--------------------------------|---|
|  |                                | <ol style="list-style-type: none"> <li>2. Merged content from canceled WP 08-NT.05 into this plan.</li> <li>3. Added information and references to new EA08NT04-1-0 and EA08NT04-2-0.</li> </ol>  |
| WP 08-NT1004, Waste Data System Verification, Validation, and Deployment of Application Software | Revision 2, October 1, 2014    | <ul style="list-style-type: none"> <li>• Complete rewrite to implement and align with new requirements in WP 08-NT.04. Major changes include:               <ol style="list-style-type: none"> <li>1. Converted attachments 3 through 5 into standalone electronic attachments.</li> <li>2. Added new Performance section 1.0, 2.0, 4.0, and 5.0 discussing review of software design, development, testing, and implementation.</li> <li>3. Modified multiple steps throughout document to clarify new actions for Team Lead, Data Administrator, SQA Specialist, and System Administrator.</li> </ol> </li> </ul> |
| SP 9-12, Well Video Logging  | Revision 3, October 7, 2014    | <ul style="list-style-type: none"> <li>• Removed section 2.4 which is discussed in the governing test plan.</li> <li>• Updated Appendix A to include operation of the new Camera Trailer Laval DC-5150 borehole video system.</li> <li>• Updated Appendix B for minor changes to the operation of the Mt. Sopris Optical Televiewer Geophysical Logging System.</li> <li>• Added Appendix C for description of operation of the new Laval R-cam 1300/SC-166 portable, borehole video system which was recently added to the SNL/CPG borehole video systems inventory.</li> </ul>                                    |
| WP 12-9, WIPP Emergency Management Plan  | Revision 41, November 3, 2014  | <ul style="list-style-type: none"> <li>• Complete rewrite. Major changes include:               <ol style="list-style-type: none"> <li>1. Incorporated National Incident Management System principles, concepts, and terminologies.</li> <li>2. Organized content to more closely align with DOE G 151.1-3, Appendix A.</li> </ol> </li> </ul>  |
| WP 05-WH1058, CH Waste Handling Abnormal Operations  | Revision 15, November 12, 2014 | <ul style="list-style-type: none"> <li>• Added new section 12.0, Relocation of Site-Derived Waste Containers to Room 108.</li> </ul>  |



**Table 2: Procedure/Plan Revision**

| Procedure/Plan   | Revision and Effective Date    | Description of Change  |
|--|--------------------------------|--|
| WP 12-5, Waste Isolation Pilot Plant Radiation Safety Manual | Revision 18,<br>March 10, 2015 | <ul style="list-style-type: none"> <li>• Complete rewrite to align document with post incident practices and conditions of the WIPP facility.</li> </ul>   |
| WP 12-HP1308, Portable Alpha-6 Continuous Air Monitors       | Cancelled<br>April 8, 2015     | <ul style="list-style-type: none"> <li>• No longer in use and not replaced.</li> </ul>   |
| WP 12-HP1318, RADOS Continuous Air Monitor                   | Cancelled<br>April 8, 2015     | <ul style="list-style-type: none"> <li>• No longer in use and not replaced.</li> </ul>   |
| WP 12-HP1312, RAM 31 Remote Operations                       | Cancelled<br>April 8, 2015     | <ul style="list-style-type: none"> <li>• No longer in use and not replaced.</li> </ul>   |
| NP 19-1, Software Requirements                               | Revision 17,<br>April 22, 2015 | <ul style="list-style-type: none"> <li>• A section for regression testing was added as well as Appendix M “Regression Test Report Format”. This revision incorporates the requirements of SP 19-1, Revision 2, “Regression Testing for Software Modifications or Platform Changes”. As a result, SP 19-1 has been recalled.</li> </ul>   |
| WP 12-HP3200, Radioactive Material Control                   | Revision 18,<br>June 1, 2015   | <ul style="list-style-type: none"> <li>• Complete rewrite, changes include:               <ul style="list-style-type: none"> <li>• Updated Precautions and Limitations.</li> <li>• Replaced Section 1.0, Radioactive Sources with Radioactive Material.</li> <li>• Added Section 1.2, Release of Items, Material, and Equipment (Not Real Property).</li> <li>• Deleted Attachments 1, 2, 3, 4, 10, and 11.</li> </ul> </li> </ul> |
| WP 12-ER4902, Hazardous Material Spill and Release Response  | Cancelled<br>June 5, 2015      | <ul style="list-style-type: none"> <li>• Consolidated into WP 12-ER4920 Revision 2, RCRA Contingency Plan Implementation.</li> <li>• Consolidated into WP 12-ER4925 Revision 0, Incident Recognition and Initial Response.</li> <li>• Consolidated into WP 12-ER4926 Revision 0, Expanded Staffing Operations.</li> </ul>  |

**Table 2: Procedure/Plan Revision**

| <b>Procedure/Plan</b>                     | <b>Revision and Effective Date</b> | <b>Description of Change</b>  |
|---|------------------------------------|---|
| WP 12-ER4903, Radiological Event Response | Cancelled<br>June 5, 2015          | <ul style="list-style-type: none"><li>• Consolidated into WP 12-ER4920 Revision 2, RCRA Contingency Plan Implementation.</li><li>• Consolidated into WP 12-ER4925 Revision 0, Incident Recognition and Initial Response.</li><li>• Consolidated into WP 12-ER4926 Revision 0, Expanded Staffing Operations.</li></ul> |

**Table 3:  
Waste Emplacement Summary Report**

Table 3: Waste Emplacement Summary Report

| TRU Waste Inventory                               |   |   |  |   |
|---|---|---|--|---|
|   | Reporting Period <sup>1</sup> Emplaced Volume (m <sup>3</sup> )*  | Cumulative <sup>2</sup> Emplaced Volume (m <sup>3</sup> ) |  |   |
| RH TRU  | 0   | 357   |  |   |
| CH TRU  | 0   | 90,627  |  |   |
| Waste Components Inventory                        |   |   |  |   |
|   | Reporting Period <sup>1</sup> Emplaced Mass (kg)*   | Cumulative <sup>2</sup> Emplaced Mass (kg)                | Maximum Emplaced Limiting Value <sup>3</sup> (kg)    | Percent of Limiting Value <sup>3</sup> Emplaced |
| Cellulose, Plastic, Rubber Materials <sup>4</sup> | 0   | 8,914,542   | 22,000,000   | 40.52%  |
|   | Reporting Period <sup>1</sup> Emplaced Mass (kg)*   | Cumulative <sup>2</sup> Emplaced Mass (kg)                | Minimum Emplacement Limiting Value <sup>3</sup> (kg) | Percent of Limiting Value <sup>3</sup> Emplaced |
| Fe-Metals <sup>5</sup>                            | 0   | 27,736,311  | 20,000,000   | Minimum met                                     |
| Non-Fe Metals                                     | 0   | 438,100   | 2,000  | Minimum met                                     |
| Residual Liquids                                  | Liquid waste is prohibited at the WIPP repository. The total residual liquid in any payload container shall not exceed one percent by volume of that payload container. |   |  |   |
| Emplaced Radiological Activity Inventory (curies) |   |   |  |   |
| Radionuclide                                      | Cumulative Activity in FY 2013/2014 Annual Change Report <sup>6</sup>   | CH Repository Reporting Period Activity <sup>6</sup>      | RH Repository Reporting Period Activity <sup>6</sup> | Total Activity as of June 30, 2015 <sup>6</sup> |
| <sup>241</sup> Am                                 | 2.585E+05   | 2.581E+05   | 6.208E+02  | 2.587E+05                                       |
| <sup>137</sup> Cs                                 | 1.445E+04   | 1.421E+01   | 1.444E+04  | 1.445E+04                                       |
| <sup>238</sup> Pu                                 | 4.835E+05   | 4.828E+05   | 7.289E+02  | 4.835E+05                                       |
| <sup>239</sup> Pu                                 | 3.337E+05   | 3.333E+05   | 3.839E+02  | 3.337E+05                                       |
| <sup>240</sup> Pu                                 | 8.267E+04   | 8.239E+04   | 2.802E+02  | 8.267E+04                                       |
| <sup>242</sup> Pu                                 | 2.759E+01   | 2.720E+01   | 3.821E-01  | 2.759E+01                                       |
| <sup>90</sup> Sr                                  | 7.615E+03   | 1.595E+01   | 7.599E+03  | 7.615E+03                                       |
| <sup>233</sup> U                                  | 6.921E+00   | 6.536E+00   | 3.848E-01  | 6.921E+00                                       |
| <sup>234</sup> U                                  | 8.783E+01   | 8.669E+01   | 1.140E+00  | 8.783E+01                                       |
| <sup>238</sup> U                                  | 1.762E+01   | 1.758E+01   | 3.915E-02  | 1.762E+01                                       |
| <b>Total</b>                                      | <b>1.181E+06</b>  | <b>1.157E+06</b>  | <b>2.405E+04</b>                                     | <b>1.181E+06</b>                                |

**Table 3: Waste Emplacement Summary Report**

| <b>Magnesium Oxide (MgO)<sup>7</sup> and Cellulose, Plastic and Rubber (CPR) Mass Emplaced Per Waste Panel</b> |             |                 |                  |                      |
|--|-------------|-----------------|------------------|----------------------|
| <b>Panel</b>   | <b>Room</b> | <b>MgO (kg)</b> | <b>CPR* (kg)</b> | <b>Excess Factor</b> |
| 1  | all         | 4,482,355       | 1,237,732        | 1.87 <sup>8</sup>    |
| 2  | 2-7         | 5,972,300       | 1,241,928        | 2.26 <sup>8</sup>    |
| 2  | 1           | 691,515         | 186,200          | 1.71                 |
| 3  | 7           | 960,120         | 104,831          | 4.03                 |
| 3  | 6           | 954,405         | 228,033          | 1.95                 |
| 3  | 5           | 1,022,985       | 284,651          | 1.70                 |
| 3  | 4           | 960,120         | 255,054          | 1.79                 |
| 3  | 3           | 931,545         | 243,860          | 1.89                 |
| 3  | 2           | 944,880         | 227,889          | 2.03                 |
| 3  | 1           | 662,940         | 183,072          | 1.76                 |
| 4  | 7           | 942,975         | 248,903          | 1.90                 |
| 4  | 6           | 925,830         | 267,494          | 1.71                 |
| 4  | 5           | 948,690         | 265,302          | 1.71                 |
| 4  | 4           | 1,049,655       | 290,739          | 1.76                 |
| 4  | 3           | 1,015,365       | 285,755          | 1.70                 |
| 4  | 2           | 931,545         | 374,327          | 1.22 <sup>7</sup>    |
| 4  | 1           | 668,655         | 265,884          | 1.23                 |
| 5  | 7           | 937,260         | 353,262          | 1.28                 |
| 5  | 6           | 875,477         | 140,009          | 2.85                 |
| 5  | 5           | 782,346         | 298,808          | 1.24                 |
| 5  | 4           | 737,167         | 225,425          | 1.64                 |
| 5  | 3           | 714,286         | 215,937          | 1.61                 |
| 5  | 2           | 730,612         | 194,045          | 1.84                 |
| 5  | 1           | 485,714         | 135,742          | 1.75                 |
| 6  | 7           | 744,218         | 167,581          | 2.11                 |
| 6  | 6           | 666,667         | 189,857          | 1.74                 |
| 6  | 5           | 474,294         | 203,473          | 1.24                 |
| 6  | 4           | 471,586         | 202,410          | 1.25                 |
| 6  | 3           | 406,533         | 171,306          | 1.25                 |
| 6  | 2           | 291,716         | 121,686          | 1.22                 |
| 6  | 1           | 235,107         | 80,199           | 1.46                 |
| 7  | 7           | 57,692          | 15,876           | 1.77                 |
| 7  | 6           | 0               | 28               | *.00                 |

**Table 3: Waste Emplacement Summary Report**

**Footnotes**

1. Reporting Period is July 1, 2014, through June 30, 2015.
2. Cumulative period includes from the beginning of emplacement until June 30, 2015.
3. Limiting Value—Values from CRA 2009 Section 24. These values are based on inventory assumptions.
4. Cellulose, Plastic, Rubber Materials (CPR) include CPR within the waste, container materials and emplacement materials.
5. Fe-Metals include both materials in the waste and containers in total.
6. There is no decay correction for the listed isotope activities.
7. New minimum value for excess factor of MgO to be implemented as approved by EPA (February 11, 2008) reduces excess factor from 1.67 to 1.20 and ensures minimum reactivity of 94%.
8. MgO, CPR and Excess Factor results for all of panel 1 and rooms 2-7 of panel 2 have been recalculated to replace averaged data with actual emplaced data.

**\* Notes**

Waste emplacement is a three-step process. The first step is emplacement of RH waste into the walls of the emplacement room. The second step involves CH waste emplacement into the room. The third step involves emplacement of MgO onto the waste stacks as each row is completed and the MgO calculations are performed.

Due to an underground fire on February 5, 2014, and a radiological event occurring on February 14, 2014, normal underground activities have been suspended. Suspended activities include waste receipt and waste emplacement. In the interim, WIPP's work focus has been on recovery activities. These include: "catch-up" roof bolting, decontamination of equipment and selected mine surfaces, initial closure of Panel 6 and Panel 7, Room 7. and providing additional fans and filtration to increase air flow to the underground. Non-WIPP experimental activities are currently undergoing recovery operations.

**Table 4:**  
**Performance Assessment, Software, and Hardware Changes**

**Table 4: Performance Assessment, Software, and Hardware Change**

| <b>WIPP Codes/Software and Code Version</b> | <b>Version Date</b> | <b>Description of Change</b>  | <b>New Code Version</b> |
|---|---------------------|---|-------------------------|
| MWT3D 2.50                                  | July 8, 2014        | MWT3D 2.50 was ported to the new Solaris computer system.   | MWT3D 2.51              |
| DTRKMF 1.00                                 | July 14, 2014       | DTRKMF 1.00 was ported to the new Solaris computer system.  | DTRKMF 1.01             |
| MODFLOW 2K 1.6                              | July 17, 2014       | MODFLOW 2K was ported to the new Solaris computer system. Also, the official name has been changed to “MODFLOW2000,” rather than the “2K” suffix. | MODFLOW2000 1.07        |
| PEST 9.11                                   | August 15, 2014     | PEST 9.11 was ported to the new Solaris computer system.  | PEST 9.12               |
| GENMESH 6.09                                | January 12, 2015    | GENMESH was modified to flag unrecognized commands as fatal errors.   | GENMESH 6.10            |
| DRSPALL 1.21                                | April 28, 2015      | DRSPALL was modified to correct an error that was found solving partial differential equations.   | DRSPALL 1.22            |
| POSTLHS 4.08                                | June 25, 2015       | POSTLHS was modified to improve security and added flexibility using command line arguments.  | POSTLHS 4.09            |
| LHS 2.43                                    | June 26, 2015       | LHS was modified to correct an error writing very small numbers and to improve security.  | LHS 2.44                |
| PRELHS 2.41                                 | June 26, 2015       | PRELHS was modified to improve security and added flexibility using command line arguments.   | PRELHS 2.42             |



**Table 4: Performance Assessment, Software, and Hardware Change**

| <b>WIPP Codes/Software and Code Version</b> | <b>Version Date</b> | <b>Description of Change</b>  | <b>New Code Version</b> |
|---|---------------------|---|-------------------------|
| MATSET 9.21                                 | June 26, 2015       | MATSET was modified to improve security and added flexibility using command line arguments. | MATSET 9.22             |
| EPAUNI 1.16                                 | June 26, 2015       | EPAUNI was modified to improve security and added flexibility using command line arguments. | EPAUNI 1.17             |
| CCDFGF 6.01                                 | June 26, 2015       | CCDFGF was modified to correct an error writing very small numbers and to improve security. | CCDFGF 6.02             |
| CCDFGF 5.03                                 | June 29, 2015       | CCDFGF was modified to correct an error writing very small numbers and to improve security. | CCDFGF 5.04             |

**Table 5:  
Passive Institutional Controls Activity**

**Table 5: Passive Institutional Controls Activity**

| <b>Date</b>        | <b>Description of Activity</b>  |
|--------------------|---|
| September 15, 2014 | CBFO was granted a full session (session 119; Track 2.11) at Waste Management 2015, titled Records, Knowledge and Memory (RK&M) for Geologic Repositories. Session 119 has eight abstracts approved for papers relating to RK&M from the United States and France, and will be used as one of the conference sessions for gathering information to develop an expert judgment to change the WIPP Passive Institutional Controls conceptual model. |
| March 15-20, 2015  | Waste Management Symposia 2015. CBFO held session 119 titled Records, Knowledge and Memory (RK&M) for Geologic Repositories. Eight papers were presented from the United States, France and Israel. Due to the continued interest, Waste Management Planning Activity Committee has made the decision to include this category in future symposia and to move the session from Track 2 to Track 8.  |
| March 26, 2015     | Submitted response to questionnaire on “Information & Requirements Management in a Geological Disposal Programme (IRM).” This questionnaire was developed as a result of the 16 <sup>th</sup> meeting of the Integration Group for the Safety Case (IGSC) and was distributed by the Japan Atomic Energy Agency and the Belgian National Agency for Radioactive Waste and Enriched Fissile Material.  |

**Notes:**

In a 2008 letter from EPA to DOE (Reyes, 2008), EPA changed the schedule for Passive Institutional Controls development as previously defined in Triay (2002). In a 2014 email from DOE to EPA (Patterson 2013), DOE requested a change in the Passive Institutional Controls development schedule defined in the 2008 letter above.

**Table 6:**  
**EPA Waste Characterization Inspections – January 2008 to June 2015**

**Table 6: EPA Waste Characterization Inspections – January 2008 to June 2015**

| <b>Generator Site</b>  | <b>Date of Inspection</b>                           | <b>EPA Inspection No./Tier 1 Evaluation</b>  | <b>Docket Number/Approval Date</b>                    |
|--|---|--|---|
| Advanced Mixed Waste Treatment Plant (AMWTP)/Accelerated Retrieval Project (ARP) |   |  |   |
|  | March 2, 2010, Desk-top evaluation                  | Tier 1 evaluation adding BN510 waste stream  | EPA Docket No. A-98-49; II-14-127, June 10, 2010      |
|  | November 17-18, 2010                                | EPA unannounced continued compliance inspection  | EPA Docket No. A-98-49; II-A4-143, March 16, 2011     |
|  | October 30- November 1, 2012, and February 26, 2013 | EPA Continued Compliance Inspection  | EPA Docket No. A-98-49; II-A4-173, April 25, 2013     |
|  | October – December 2012                             | Tier 1 addition of ANLE-generated SCG S3000 and S5000 CH waste and SCG S5000 MFC CH waste. | EPA Docket No. A-98-49; II-A4-169, January 2013       |
|  | February 2013                                       | Tier 1 Subsurface Disposal Area (SDA) waste stream   | EPA Docket No. A-98-49; II-A4-174, July 9, 2013       |
|  | February 2013                                       | Tier 1 adding LANL debris waste to the super-compacted CH AMWTP debris waste               | EPA Docket No. A-98-49; II-A4-178, September 16, 2013 |
|  | February 11, 2014                                   | Tier 1 adding INL-generated waste.   | EPA Docket No. A-98-49; II-A4-180, February 11, 2014  |
|  | May 13, 2015  | Tier 1 change to allow assembly of CH waste payloads.                                      | No Docket No. assigned                                |
| Argonne National Laboratory-Illinois (ANL)                                       | May 28, 2008  | Tier 1 SRS-CCP RH Visual Examination (VE) newly packaged waste                             | EPA Docket No. A-98-49; II-A4-102, July 10, 2008      |
|  | October 2008  | Tier 1 addition of 100 drums of AGHCF debris waste to AERHDM waste stream                  | EPA Docket No. A-98-49; II-A4-136, October 2008       |

**Table 6: EPA Waste Characterization Inspections – January 2008 to June 2015**

| <b>Generator Site</b> | <b>Date of Inspection</b>                            | <b>EPA Inspection No./Tier 1 Evaluation</b>  | <b>Docket Number/Approval Date</b>                    |
|-----------------------|--|--|---|
|                       | May 20-21, 2010, Desk-top evaluation                 | Tier 1 SRS-CCP addition of 30 containers to AERHDM waste stream  | EPA Docket No. A-98-49; II-A4-132, September 13, 2010 |
|                       | June 29, 2010, Desk-top evaluation                   | Tier 1 SRS-CCP addition of 120 containers to AERHDM waste stream   | EPA Docket No. A-98-49; II-A4-134, September 28, 2010 |
|                       | May 4 and 18, 2010, EPA Inspection                   | Tier 1 SRS-CCP addition of 30-gallon containers of Fuel Examination Waste (FEW) to previously approved RH debris AERHDM waste stream             | EPA Docket No. A-98-49; II-A4-140, November 22, 2010  |
|                       | September 2011 EPA Inspection                        | Tier 1 to add eight 55-gallon K-Wing FEW containers to RH debris waste stream AERHDM   | EPA Docket No. A-98-49, II-A4-158, February 13, 2012  |
|                       | January 3, 2012 EPA Inspection (11-2060)             | Tier 1 to evaluate Radiation Characterization Approach of Solidified Liquid Waste from K-Wing, Building 205, 55-gallon                           | EPA Docket No. A-98-49: II-A4-162, June 14, 2012      |
|                       | February – June, 2012 EPA Inspection Desk-top Review | Tier 1 debris from the Reduced Enrichment Research and Test Reactor (RERTR) program and the second batch of FEW packaged in 30-gallon containers | EPA Docket No. A-98-49; II-A4-140, October 4, 2012    |
|                       | February – June, 2012 EPA Inspection                 | Tier 1 to evaluate solidified liquid waste from K-Wing, Bld. 205, 55-gallon drum   | EPA Docket No. A-98-49; II-A4-162, June 14, 2012      |

**Table 6: EPA Waste Characterization Inspections – January 2008 to June 2015**

| <b>Generator Site</b>                                 | <b>Date of Inspection</b>  | <b>EPA Inspection No./Tier 1 Evaluation</b>  | <b>Docket Number/Approval Date</b>                   |
|---|--|--|--|
|   | May 8-9, 2012<br>EPA Inspection  | Tier 1 to include Lot 2 waste<br>ID-ANLE-S5000   | EPA Docket No. A-98-49; II-A4-163, July 25, 2012     |
|   | EPA Inspection July<br>31-August 1, 2012   | Tier 1 of the analytical<br>chemistry lab (ACL)  | EPA Docket No. A-98-49; II-A4-165, September 4, 2012 |
|   | September, 2012<br>EPA Desktop<br>evaluation   | Tier 1 evaluation of waste<br>stream AERHDM RERTR and<br>second batch debris, (bldg. 212,<br>30-gallon container)                            | EPA Docket No. A-98-49; II-A4-167, October 4, 2012   |
|   | February 2014  | Tier 1 evaluation of five<br>containers of solidified liquid<br>waste from K-Wing Bldg. 205<br>to be included in the AERHDM<br>waste stream. | EPA Docket No. A-98-49; II-A4-181, March 24, 2014    |
| Bettis Atomic Power<br>Laboratory (BAPL)              | August 30, 2010,<br>September 23, 2010,<br>December 8, 2010 and<br>April 12-13, 2011<br>EPA Baseline<br>Inspection | EPA Baseline Inspection No.<br>EPA-BAPL-CCP-RH-04.11-8   | EPA Docket No. A-98-49; II-A4-151, July 2011         |
| General Electric Vallecitos<br>Nuclear Center (GEVNC) | December 2-4, 2008   | CCP RH Initial Certification   | EPA Docket No. A-98-49; II-A4-115, August 26, 2009   |
| Hanford   | April 27-29, 2010  | CH Baseline Inspection   | EPA Docket No. A-98-49; II-A4-138, December 21, 2010 |
|   | March 22-23, 2011  | Tier 1 adding SHENCA   | EPA Docket No. A-98-49; II-A4-146, May 2, 2011       |
|   | November 2011  | Tier 1 adding CH S3000<br>RLCCPPUNIT waste stream  | EPA Docket No. A-98-49; II-A4-154, November 10, 2011 |
| Idaho National Laboratory<br>(INL)                    | January 2008   | Tier 1 K cell waste  | EPA Docket No. A-98-49; II-A4-97, January 1, 2008    |

**Table 6: EPA Waste Characterization Inspections – January 2008 to June 2015**

| <b>Generator Site</b> | <b>Date of Inspection</b>                                      | <b>EPA Inspection No./Tier 1 Evaluation</b>                                | <b>Docket Number/Approval Date</b>                    |
|-----------------------|--|--|---|
|                       | April 11, 2008   | Tier 1 high-range gamma probe for DTC                                      | EPA Docket No. A-98-49; II-A4-98, April 11, 2008      |
|                       | June 9, 2008, Desk-top evaluation                              | Tier 1 Waste Area Groups (WAGs) density range extension                    | EPA Docket No. A-98-49; II-A4-107, October 7, 2008    |
|                       | December 9-11, 2008  | Tier 1 addition of VE CH S5000 retrievably stored waste stream             | EPA Docket No. A-98-49; II-A4-110, March 4, 2009      |
|                       | September 22, 2009   | Tier 1 visual examination technique  | EPA Docket No. A-98-49; II-A4-118, September 22, 2009 |
|                       | September 22, 2009   | Tier 1 recalibration of the HENC   | EPA Docket No. A-98-49; II-A4-119, September 22, 2009 |
|                       | December 8-9, 2009   | Tier 1 addition of ID-HFEF-S5400-RH Lot 1A and ID-ANLE-S5000 waste streams | EPA Docket No. A-98-49; II-A4-122, February 1, 2010   |
|                       | April-May 2010 Desk-top evaluation                             | Tier 1 addition of ID-MFC-S5400-RH waste stream                            | EPA Docket No. A-98-49; II-A4-126, June 11, 2010      |
|                       | December 8-9, 2009, January 12-13, 2010, and February 17, 2010 | Tier 1 addition of ID-INTEC-RH waste stream                                | EPA Docket No. A-98-49; II-A4-130, August 17, 2010    |
|                       | July 13, 2009, to June 2010 Desk-top evaluation                | Tier 1 addition of Osprey and ID-HFEF-S5400-RH Lot 1B waste stream         | EPA Docket No. A-98-49; II-A4-131, August 23, 2010    |
|                       | July 1, 2009 Desk-top evaluation                               | Tier 1 High Efficiency Neutron Counter (HENC) operating range extension    | EPA Docket No. A-98-49; II-A4-119, September 22, 2010 |



**Table 6: EPA Waste Characterization Inspections – January 2008 to June 2015**

| <b>Generator Site</b> | <b>Date of Inspection</b> | <b>EPA Inspection No./Tier 1 Evaluation</b>  | <b>Docket Number/Approval Date</b>                   |
|-----------------------|---------------------------|--|--|
|                       | September 22, 2009        | Tier 1 addition of ID-RTC-S3000 waste stream   | EPA Docket No. A-98-49; II-A4-137, November 1, 2010  |
|                       | August 9-10, 2010         | Tier 1 addition of IN-ID-NRF-153 waste stream  | EPA Docket No. A-98-49; II-A4-135, November 1, 2010  |
|                       | November 16-17, 2010      | Continued Compliance Inspection  | EPA Docket No. A-98-49; II-A4-142, March 16, 2011    |
|                       | March 23, 2011            | Tier 1 addition of Lot 4A to waste stream ID-HFEF-S5400-RH   | EPA Docket No. A-98-49; II-A4-145, March 23, 2011    |
|                       | June 23, 2011             | Tier 1 supplemental calibration for the WAGS to allow filters                                      | EPA Docket No. A-98-49; II-49-150, June 23, 2011     |
|                       | October 4-5, 2011         | Tier 1 to include RH waste stream IN-ID-NRF-SPC  | EPA Docket No. A-98-49; II-A4-159, March 12, 2012    |
|                       | January 4, 2012           | Inspection of Waste Stream ID-NRD.1  | EPA Docket No. A-98-49; II-A4-157, January 4, 2012   |
|                       | May 8-9, 2012             | Tier 1 radiation approach of 48 additional canisters for waste stream ID-ANLE-S5000 AERHDM (Lot 2) | EPA Docket No. A-98-49; II-A4-163, July 25, 2012     |
|                       | February 2013             | Tier 1 evaluate SWEPP Gamma-Ray Spectrometer (SGRS) new calibration                                | EPA Docket No. A-98-49; II-A4-172, February 26, 2013 |
|                       | May 7-9, 2013             | Continued Compliance Inspection  | EPA Docket No. A-98-49; II-A4-175, July 16, 2013     |
|                       | December 3-5, 2013        | Tier 1 adding waste stream IN-ID-BTO-030 (Lot 3)   | EPA Docket No. A-98-49; II-A4-191, November 10, 2014 |

**Table 6: EPA Waste Characterization Inspections – January 2008 to June 2015**

| <b>Generator Site</b>                 | <b>Date of Inspection</b> | <b>EPA Inspection No./Tier 1 Evaluation</b>                               | <b>Docket Number/Approval Date</b>                  |
|---------------------------------------|---------------------------|---|---|
|                                       | April 16, 2014            | Tier 1 addition of waste stream ID-EBR-S5000                              | EPA Docket No. A-98-49; II-A4-183, April 16, 2014   |
|                                       | May 5-7, 2014             | Continued Compliance Inspection   | EPA Docket No. A-98-49; II-A4-190, July 15, 2014    |
|                                       | July 15, 2014             | Tier 1 change for the addition of Lot 5C to waste stream ID-HFEF-S5400-RH | EPA Docket No. A-98-49; II-A4-185, July 15, 2014    |
|                                       | July 15, 2014             | Continued Compliance Inspection   | EPA Docket No. A-98-49; II-A4-190, July 15, 2014    |
|                                       | June – October 2014       | Tier 1 adding waste stream ID-TRA-W345-RH (Lot8B)                         | EPA Docket No. A-98-49; II-A4-194, November 5, 2014 |
| Los Alamos National Laboratory (LANL) | April 11-15, 2005         | Inspection for OSRP for Sealed Sources                                    | EPA Docket No. A-98-49; II-A4-55, June 17, 2005     |
|                                       | June 21, 2007             | CH Baseline Inspection  | EPA Docket No. A-98-49; II-A4-88, June 21, 2007     |
|                                       | October 28, 2007          | Tier 1 extension of range for the HENC2                                   | EPA Docket No. A-98-49; II-A4-91, October 28, 2007  |
|                                       | December 7, 2007          | Tier 1 extension of range for the HENC                                    | EPA Docket No. A-98-49; II-A4-95, December 7, 2007  |
|                                       | May 8-10, 2007            | Initial RH Certification  | EPA Docket No. A-98-49; II-A4-96, February 19, 2008 |
|                                       | May 25-26, 2010           | Tier 1 HENC unit 2 Report (non-approval)                                  | EPA Docket No. A-98-49; II-A4-139, November 8, 2010 |
|                                       | May 25-26, 2010           | LANL-CCP CH TRU Continued Compliance Inspection                           | EPA Docket No. A-98-49; II-A4-141, February 9, 2011 |

**Table 6: EPA Waste Characterization Inspections – January 2008 to June 2015**

| <b>Generator Site</b>                | <b>Date of Inspection</b>   | <b>EPA Inspection No./Tier 1 Evaluation</b>  | <b>Docket Number/Approval Date</b>                   |
|--------------------------------------|-----------------------------|--|--|
|                                      | April 28, 2010<br>(10-0810) | CH Tier 1 request expanding the calibration range to the HENC unit 2 to accommodate CH lead-lined 55-gallon drums  | EPA Docket No. A-98-49; II-A4-139, April 30, 2012    |
|                                      | October 28, 2011            | Tier 1 addition of the SuperHENC   | EPA Docket No. A-98-49; II-A4-153, October 28, 2011  |
|                                      | June 20-21, 2012            | CH Tier 1 request for calibration range extension for the SuperHENC and the extend ability for the HENC unit 1 to assay lead-lined 55-gallon drums containing solidified materials | EPA Docket No. A-98-49; II-A4-164, August 14, 2012   |
|                                      | September – November, 2012  | Tier 1 approval to add summary category group S4000  | EPA Docket No. A-98-49; II-A4-168, December 31, 2012 |
|                                      | June 4-5, 2013              | Tier 1 to include the Mobile ISOCS for SWBs, Corrugated Metal Boxes (CMBs), and 55-gallon drums  | EPA Docket No. A-98-49; II-A4-176, July 22, 2013     |
| Oak Ridge National Laboratory (ORNL) | (Desk-top evaluation)       | Tier 1 CH Calibration Extension for segmented gamma scanner (SGS)  | EPA Docket No. A-98-49; II-A4-108, October 8, 2008   |
|                                      | November 17, 2008           | Tier 1 CH Calibration Extension for Drum Waste Assay System (DWAS) Imaging Passive Active Neutron (IPAN)   | EPA Docket No. A-98-49; II-A4-109, January 8, 2009   |
|                                      | June 30-July 2, 2008        | EPA RH Baseline Inspection No. EPA-ORNL-CCP-RH-06.08-8   | EPA Docket No. A-98-49; II-A4-111, February 3, 2009  |

**Table 6: EPA Waste Characterization Inspections – January 2008 to June 2015**

| <b>Generator Site</b>              | <b>Date of Inspection</b>                   | <b>EPA Inspection No./Tier 1 Evaluation</b>  | <b>Docket Number/Approval Date</b>                   |
|------------------------------------|---|--|--|
|                                    | May 6, 2009                                 | Tier 1 OR-REDC-RH-HET to include Solvent Extraction Test Facility (SETF) Time Period (November 1978-November 1991) waste | EPA Docket No. A-98-49;II-A4-120, November 30, 2009  |
|                                    | August 11-12, 2009                          | Tier 1 addition of CH S4000 SCG waste  | EPA Docket No. A-98-49; II-A4-117, October 7, 2009   |
|                                    | November 23, 2009                           | Continued Compliance Inspection  | EPA Docket No. A-98-49; II-A4-121, November 23, 2009 |
|                                    | February 23-24, 2010                        | Tier 1 addition of CH VE and adding the IQ3  | EPA Docket No. A-98-49; II-A4-125, March 30, 2010    |
|                                    | February-March, 2010<br>Desk-top evaluation | Tier 1 addition of RH SETF Pre-79 waste stream   | EPA Docket No. A-98-49; II-A4-124, April 21, 2010    |
|                                    | March 23, 2011                              | Tier 1 addition of NFS Trench B soils to waste stream OR-NFS-CH-SOIL   | EPA Docket No. A-98-49; II-A4-144, March 23, 2011    |
|                                    | February 4-6, 2014                          | Continued Compliance Inspection  | EPA Docket No. A-98-49; II-A4-186, June 18, 2014     |
|                                    | June 18, 2014                               | Tier 1 Adding Refurbished IQ3  | EPA Docket No. A-98-49; II-A4-186, June 18, 2014     |
|                                    | July 2014                                   | Tier 1 evaluation of CH waste with addition of SCG S3000.  | EPA Docket No. A-98-49; II-A4-186, June 9, 2014      |
|                                    | August 5-6, 2014                            | Tier 1 adding MILCC2   | EPA Docket No. A-98-49; II-A4-192, October 21, 2014  |
| Sandia National Laboratories (SNL) | March 8, 2011, May 10, 2011, June 7-8, 2011 | Initial Baseline Inspection  | EPA Docket No. A-98-49; II-A4-155, November 23, 2011 |

**Table 6: EPA Waste Characterization Inspections – January 2008 to June 2015**

| <b>Generator Site</b>     | <b>Date of Inspection</b>                              | <b>EPA Inspection No./Tier 1 Evaluation</b>  | <b>Docket Number/Approval Date</b>                    |
|---------------------------|--|--|---|
|                           | December 2011-<br>January 2012                         | Tier 1 to include RH containers generated from waste groups PKE00027/54 and PKE00047 to existing waste stream SNL-HCF-S5400-RH                           | EPA Docket No. A-98-49; II-A4-160, March 28, 2012     |
| Savannah River Site (SRS) | March 24-26, 2009                                      | Tier 1 addition of Non-destructive Assay Box Counter (NABC)  | EPA Docket No. A-98-49; II-A4-114, August 4, 2009     |
|                           | September 30, 2010<br>Desk-top evaluation              | Tier 1 addition of CH S3000 waste  | EPA Docket No. A-98-49; II-A4-123, March 23, 2010     |
|                           | November 2009 –<br>March 2010                          | Tier 1 addition of<br>SR-BCLDP.001.001,<br>SR-BCLDP.001.002,<br>SR-BCLDP.002,<br>SR-BCLDP.003,<br>SR-BCLDP.004.002,<br>SR-BCLDP.004.003 waste<br>streams | EPA Docket No. A-98-49; II-A4-129, September 13, 2010 |
|                           | March 24-26, 2009                                      | Tier 1 extension of calibration to the NABC  | EPA Docket No. A-98-49; II-A4-133, September 14, 2010 |
|                           | May 12, 2011<br>timeframe, EPA Desk-<br>top evaluation | Tier 1 allowing use of American Society for Testing and Materials (ASTM) standard efficiency calibration method for NABC                                 | EPA Docket No. A-98-49; II-A4-148, May 31, 2011       |
|                           | July 26, 2011<br>(11-1419)                             | RH EPA Baseline adding SR-RH-FBL.01 (remainder of RH at SRS)   | EPA Docket No. A-98-49; II-A4-161, April 18, 2012     |

**Table 6: EPA Waste Characterization Inspections – January 2008 to June 2015**

| <b>Generator Site</b> | <b>Date of Inspection</b> | <b>EPA Inspection No./Tier 1 Evaluation</b>   | <b>Docket Number/Approval Date</b>                    |
|-----------------------|---------------------------|---|---|
|                       | August 14-15, 2012        | Tier 1 request for using 5-foot setback configuration of the NABC   | EPA Docket No. A-98-49; II-A4-166, September 11, 2012 |
|                       | February, 2013            | Tier 1 to evaluate waste stream SR-RH-235F.01   | EPA Docket No. A-98-49; II-A4-170, February 12, 2013  |
|                       | February, 2013            | Tier 1 NABC BSGS 5-foot setback for SWB's   | EPA Docket No. A-98-49; II-A4-171, February 2013      |
|                       | June – July, 2013         | Tier 1 SR-RH-221H.01 waste stream   | EPA Docket No. A-98-49; II-A4-177, August 20, 2013    |
|                       | March, 2014               | Tier 1 change calibration to include a 5-foot detector setback configuration on the NDA Box Counter to assay SLB's Type 2 | EPA Docket No. A-98-49; II-A4-182, March 2014         |
|                       | May 22, 2014              | Tier 1 SR-RH-SDD.01 (Sealed Sources)  | EPA Docket No. A-98-49; II-A4-184                     |
|                       | August – October 2014     | Continued Compliance Inspection   | EPA Docket No. A-98-49; II-A4-195, February 23, 2015  |
|                       | December 2014             | Inspection SR-BCLDP.003   | EPA Docket No. A-98-49; II-A4-196, December 31, 2014  |
|                       | February 2015             | Follow-up Continued Compliance Inspection for RTR Operations, 1-Drum BCO152   | EPA Docket No. A-98-49; II-A4-195, February 23, 2015  |

**Table 7:**  
**EPA Quality Assurance Audits by Site – January 2008 to June 2015**

**Table 7: EPA Quality Assurance Audits by Site – January 2008 to June 2015**

| <b>Site</b>  | <b>Audit Date</b>                        | <b>Purpose</b>   |
|--|--|--|
| Advance Mixed Waste Treatment Plant                    | August 18-20, 2009                       | Recertification Audit A-09-19  |
|  | August 23-26, 2010                       | Recertification Audit A-10-24  |
|  | November 1-3, 2011                       | Recertification Audit A-12-03  |
|  | October 15-18, 2012                      | Recertification Audit A-13-01  |
|  | October 1-3, 2013                        | Recertification Audit A-14-01  |
|  | October 7-9, 2014                        | Recertification Audit A-15-01  |
| Argonne National Laboratory East-CCP                   | July 10, 2008                            | RH VE Newly Packaged Waste Audit A-08-03   |
|  | August 5-7, 2008                         | CCP RH Recertification Audit A-08-24   |
|  | August 4-6, 2009                         | CCP RH Recertification Audit A-09-21   |
|  | August 3-5, 2010                         | CCP RH Recertification Audit A-10-23   |
|  | August 2-4, 2011                         | CCP RH Recertification Audit A-11-20   |
|  | August 28-30, 2012                       | CCP RH Recertification Audit A-12-16   |
|  | December 19, 2012                        | CCP Recertification Audit A-12-16  |
|  | August 27-28, 2013                       | CCP Recertification Audit A-13-24  |
| September 16-18, 2014                                  | CCP Recertification Audit A-14-20        |  |
| Bettis Atomic Power Laboratory (BAPL)                  | April 19-21, 2011                        | Initial Certification Audit A-11-12  |
|  | April 24-26, 2012                        | Closeout Audit A-12-10   |
| Carlsbad Field Office                                  | June 29-July 1, 2010<br>August 3-4, 2010 | Audit of the DOE Peer Review used to qualify historical information for TRU waste streams SR-BCLDP-004.002 and SR-BCLDP-004.003. EPA Docket No. A-98-49; II-A1-108.                            |
|  | April 8-29, 2013                         | Remote records audit of CBFO Technical Assistance Contractor.  |
|  | June 18-20, 2013                         | Audit of the quality assurance program relative to the American Society of Mechanical Engineers (ASME) Nuclear Quality Assurance (NQA) Standard NQA-1-1989. EPA Docket no. A-98-49; II-A1-112. |
|  | July 22-24, 2014                         | Audit of CBFO QA program for compliance with NQA-1-1989 elements. EPA Docket No. A-98-49; II-A1-117.   |
| General Electric Vallecitos Nuclear Center (GEVNC)-CCP | December 2-4, 2008                       | Initial RH S5000 Certification Audit A-09-05   |
|  | January 26-28, 2010                      | Recertification Audit A-10-04  |
| Hanford-CCP  | April 6-8, 2010                          | Initial Certification Audit A-10-07  |
|  | April 5-7, 2011                          | Recertification Audit A-11-10  |
|  | May 14-17, 2012                          | Recertification/Closeout Audit A-12-11   |
|  | May 14-16, 2013                          | Recertification Audit A-13-15  |
|  | May 20-21, 2014                          | Recertification Audit A-14-16  |
|  | June 23-25, 2015                         | Recertification Audit A-15-19  |
| Idaho National Laboratory (INL)-                       | January 29-30, 2008                      | Expansion Audit (NMED approval of Acceptable Knowledge (AK)) Audit A-08-11   |



**Table 7: EPA Quality Assurance Audits by Site – January 2008 to June 2015**

| <b>Site</b>                        | <b>Audit Date</b>                       | <b>Purpose</b>   |
|------------------------------------|---|--|
| CCP                                | May 13-15, 2008                         | Recertification Audit A-08-10 INL and A-08-22 ID Labs  |
|                                    | December 9-11, 2008                     | VE of Records Audit A-09-08  |
|                                    | May 5-7, 2009                           | Recertification Audit A-09-14 INL and A-09-13 ID Labs  |
|                                    | June 8-10, 2010                         | Recertification Audit A-10-16 INL and A-10-17 ID Labs  |
|                                    | June 7-9, 2011                          | Recertification Audit A-11-13 INL Labs and A-11-14 INL   |
|                                    | June 11-14, 2012                        | Laboratory Recertification Audit A-12-14 and CCP Recertification Audit A-12-13   |
|                                    | June 3-6, 2013                          | Recertification Audit A-13-18  |
|                                    | July 9-11, 2013                         | Analytical Laboratories Close Out Audit A-13-19  |
|                                    | June 3-5, 2014                          | Recertification Audit A-14-18  |
|                                    | June 16-18, 2015                        | Recertification Audit A-15-18  |
| Los Alamos National Laboratory-CCP | February 19, 2008                       | Initial Certification Audit A-07-12 and A-07-13  |
|                                    | April 15-17, 2008                       | CCP CH and RH Recertification Audit A-08-16  |
|                                    | December 9-11, 2008                     | Addition of VE CH S5000 Retrievably Stored Waste Audit A-09-08   |
|                                    | April 7-9, 2009                         | CCP CH and RH Recertification Audit A-09-12  |
|                                    | April 27-29, 2010                       | CCP CH and RH Recertification Audit A-10-14  |
|                                    | May 17-19, 2011                         | CCP CH and RH Recertification Audit A-11-11  |
|                                    | July 24-26, 2012                        | CCP CH and RH Recertification Audit A-12-12  |
|                                    | July 23-25, 2013                        | CCP CH and RH Recertification Audit A-13-23  |
|                                    | July 22, 2013                           | CCP CH Recertification Audit revised A-13-23   |
|                                    | June 10 – July 8, 2014                  | Audit of the QA program for the WIPP as it pertains to NQA-1-1989. EPA Docket No. A-98-49; II-A1-116.  |
| August 19-21, 2014                 | CCP CH Recertification Audit A-14-19    |  |
| Nuclear Waste Partnership LLC      | June 18-20, 2013                        | Quality Assurance (QA) audit relative to the American Society of Mechanical Engineers (ASME) Nuclear Quality Assurance (NQA) Standard NQA-1-1989. EPA Docket no. A-98-49; II-A1-113. |
|                                    | July 22-24, 2014                        | Audit of NWP QA program for compliance with NQA-1-1989 elements. EPA Docket No. A-98-49; II-A1-118.  |
| Oak Ridge National Laboratory-CCP  | November 13-15, 2007                    | AK and NDA Activities Audit A-08-06  |
|                                    | June 30-July 2, 2008                    | Initial RH Certification Audit A-08-12   |
|                                    | January 13-15, 2009                     | CH Recertification Audit A-09-07   |
|                                    | June 23-25, 2009                        | RH Recertification Audit A-09-22   |
|                                    | July 28-30, 2009                        | Addition of S4000 SCG Audit A-09-24  |
|                                    | February 9-11, 2010                     | CH and RH Recertification Audit A-10-08  |
|                                    | February 8-10, 2011                     | CH and RH Recertification Audit A-11-08  |
|                                    | March 27-29, 2012                       | CCP CH and RH Recertification Audit A-12-08  |
| April 23-25, 2013                  | CH and RH Recertification Audit A-13-12 |  |

**Table 7: EPA Quality Assurance Audits by Site – January 2008 to June 2015**

| <b>Site</b>   | <b>Audit Date</b>                      | <b>Purpose</b>   |
|---|--|--|
|   | January 14-26, 2014                    | CH and RH Recertification Audit A-14-03  |
|   | March 31- April 3, 2015                | CH & RH Recertification Audit A-15-09  |
| Savannah River Site-<br>CCP                                     | October 28-30, 2008                    | CH and RH Recertification Audit A-09-01  |
|   | March 24-26, 2009                      | Addition of NABC Audit A-09-17   |
|   | June 23-24, 2009                       | Addition of Real-time Radiography (RTR) #4 Audit A-09-16   |
|   | October 27-29, 2009                    | BCL RH Recertification and CH S3000 Initial Certification Audit A-10-01  |
|   | October 26-28, 2010                    | Recertification Audit A-11-01 and RTR Unit 4 for SLB2s and Large Container Non-Destructive Examination (LCNDE) for SWBs and SLB2s.   |
|   | November 14-17, 2011                   | RH Recertification and Initial SR-RH-FBL-01 Audit A-12-04  |
|   | November 6-8, 2012                     | CH Recertification Audit A-12-02   |
|   | September 23, 2014                     | CH Recertification Audit A-14-04   |
|   | November 4-6, 2014                     | CH Recertification Audit A-15-02   |
| Sandia National<br>Laboratories - CCP                           | July 13-15, 2011                       | Recertification Audit A-11-23  |
|   | August 14-16, 2012                     | Closeout Audit A-12-15   |
|   | August 5-7, 2014                       | Initial Certification Audit A-14-26  |
|   | August 18-20, 2015                     | Recertification Audit A-15-25  |
| Sandia National<br>Laboratories-<br>Carlsbad Office<br>(SNL-CO) | May 1-29, 2014 and<br>July 22-24, 2014 | Verification of implementation of SNL-CO's QA program relative to requirements of NQA-1 Standard NQA-1-1989. EPA Docket No. A-98-49; II-A1-115, EPA-HQ-OAR-2001-0012-0444. |

## **Summary**

The DOE believes the changes reported in this version of the WIPP Change Report do not represent significant changes pertaining to the disposal system.

## **References**

Letter from Marcinowski (EPA) to Triay (DOE), November 7, 2002. Revised schedule for development and testing of Passive Institutional Controls.

Letter from Reyes (EPA) to Moody (DOE), March 7, 2008. Passive Institutional Controls update.

Letter from Reyes (EPA) to Moody (DOE), February 11, 2008. Reduction of MgO excess factor from 1.67 to 1.20.

EPA request, July 29, 2010. Addition of Tables 6 and 7 to the Annual Change Report.

Email correspondence, Patterson (DOE) to Peake (EPA), February 18, 2014. Passive Institutional Controls update.