

Annual Change Report 2015/2016

From July 1, 2015, to June 30, 2016

November 2016

Prepared for:

The U.S. Department of Energy

Prepared by:

Nuclear Waste Partnership LLC

Regulatory Environmental Services

Table of Contents

Introduction.....	3
Table 1: Changes in WIPP Conditions or Activities Reportable under Title 40 CFR Part 194.4(b)(4)	5
Table 2: Procedure/Plan Revision.....	18
Table 3: Waste Emplacement Summary Report.....	21
Table 4: Performance Assessment, Software, and Hardware Changes	21
Table 5: Passive Institutional Controls Activity	23
Table 6: EPA Waste Characterization Inspections – January 2008 to June 2016	30
Table 7: EPA Quality Assurance Audits by Site – January 2008 to June 2016	43
Summary	40
References.....	40

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) (EPA 1996), 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) (DOE 2014)). 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) (EPA 1996) 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.

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) (EPA 1996). 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. The changes reported in the WIPP Annual Change Report 2015/2016 do not represent significant changes pertaining to the disposal system.

This report captures the summary of each change within seven tables for the period July 1, 2015, through June 30, 2016:

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, 2016.

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 at the request of the EPA. (Reyes to Moody, 2008a)

Table 6: EPA Waste Characterization Inspections January 2008 to June 2016, document 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 2016, document 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 requests¹ 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 salt-haul truck fire on February 5, 2014, and a radiological event occurring on February 14, 2014, normal waste handling operation activities have been suspended. Suspended activities include waste receipt and waste emplacement. Currently, the WIPP's activities are focused on demonstrating operational readiness which will culminate in the resumption of normal waste emplacement.

¹ EPA to McFadden, 1998; Page to Klein, 1999a; Page to Triay, 1999b; Marcinowski to Triay, 2000; Marcinowski to Triay, 2001; Marcinowski to Triay, 2002a; Marcinowski to Triay, 2002b; Marcinowski to Triay, 2003a; Marcinowski to Triay, 2003b; Marcinowski to Triay, 2003c; Gitlin to Detwiler, 2004; Gitlin to Triay, 2005a; Gitlin to Piper, 2005b; Gitlin to Moody, 2006a; Gitlin to Moody, 2006b.

**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)(4) Conditions of Compliance Certification	2014/2015 Annual Change Report	<u>DOE to EPA, November 17, 2015.</u> Submittal of the Waste Isolation Pilot Plant 2014/2015 Annual Change Report.
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, July 31, 2015.</u> Submittal of second set of responses to EPA’s continued compliance inspection.</p> <p><u>DOE to EPA, August 24, 2015.</u> Submittal of replicate results for the Retrieval Box Assay System (RBAS).</p> <p><u>EPA to DOE, October 19, 2015.</u> EPA approval of Tier 1 request to add the RBAS non-destructive assay (NDA) system to AMWTP’s contact-handled (CH) transuranic (TRU) waste characterization program.</p> <p><u>DOE to EPA, October 28, 2015.</u> Responses to concerns identified during EPA’s continued compliance inspection.</p> <p><u>DOE to EPA, January 25, 2016.</u> Carlsbad Field Office (CBFO) response to EPA correspondence on AMWTP transition from Central Characterization Program (CCP) to AMWTP-Idaho Treatment Group (ITG).</p> <p><u>DOE to EPA, June 13, 2016.</u> Notification of closure of EPA continued compliance inspections at INL, CCP and AMWTP based upon EPA approval of the Waste Acceptance Criteria (WAC) 8.0.</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 23, 2015.</u> Notification of findings from the July 14-16, 2015 evaluation of the CH2M-WG-Idaho Analytical Chemistry Laboratory (CWI-ACL).</p> <p><u>EPA to DOE, September 8, 2015.</u> Approval to add remote-handled (RH) debris waste stream ID-HFEF-S5400-RH (Lot 5C) liner-3 generated product containers. EPA docket no. A-98-49; II-A4-198.</p> <p><u>EPA to DOE, November 10, 2015.</u> Approval of Tier 1 request to add waste stream ID-ANLW-W269-RH (Lot 8C) for disposal at the Waste Isolation Pilot Plant. EPA docket no. A-98-49; II-A4-201.</p> <p><u>EPA to DOE, November 13, 2015.</u> Approval of Tier 1 request to add waste streams ID-RF-S5300-RH and ID-RF-S5100-RH (Lot 8A).</p> <p><u>DOE to EPA, June 13, 2016.</u> Notification of closure of EPA continued compliance inspections at INL, CCP and AMWTP based upon EPA approval of the Waste Acceptance Criteria (WAC) 8.0.</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
<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, July 31, 2015.</u> Submittal of second set of responses to EPA’s continued compliance inspection.</p> <p><u>EPA to DOE, September 8, 2015.</u> Approval to add the High Efficiency Neutron Counter #3 (HENC 3) non-destructive assay (NDA) to the Central Characterization Program (CCP).</p> <p><u>EPA to DOE, October 7, 2015.</u> EPA correction of omission of S4000 and S3000 waste to the approved use of the HENC 3. EPA docket no. A-98-49; II-A4-199.</p> <p><u>DOE to EPA, October 28, 2015.</u> Submittal of responses to concerns identified during EPA’s continued compliance inspection.</p> <p><u>DOE to EPA, December 10, 2015.</u> Notification of completion of Management Assessment Action in response to EPA issue LANL-CCP-CC-CH-2015-VE-01F resulting from EPA’s continued compliance inspection.</p> <p><u>DOE to EPA, April 11, 2016.</u> Submittal of the calibration verification report for HENC#2 closing EPA issue number LANL-CC-CH-2015-NDA-06CR.</p> <p><u>EPA to DOE, May 19, 2016.</u> EPA notification that a new baseline characterization inspection of the LANL CH-TRU waste characterization activities will be performed when DOE is ready.</p> <p><u>DOE to EPA, June 13, 2016.</u> Notification of closure of EPA Continued Compliance inspection at INL, CCP, and AMWTP based upon EPA approval of the Waste Acceptance Criteria (WAC) 8.0.</p>
<p>194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP</p>	<p>Oak Ridge National Laboratory (ORNL)</p>	<p>None to report.</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	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>EPA to DOE, August 3, 2015.</u> Approval of the Tier 1 request for the remote-handled (RH) transuranic (TRU) debris waste stream SR-RH-SWD.01. EPA air docket no. A-98-49; II-A4-197.</p> <p><u>DOE to EPA, October 16, 2015.</u> Tier 1 request for the radiological approach of 13 RH containers waste stream SR-RH-MNDPAD1.01.</p> <p><u>EPA to DOE, November 25, 2015.</u> Approval of Tier 1 request to add RH TRU waste stream SR-RH-772F.01. EPA docket no. A-98-49; II-A4-202.</p> <p><u>EPA to DOE, June 15, 2016.</u> Approval of Tier 1 request to add Waste Stream SR-RH-MNDPAD1.01. EPA docket no. A-98-49; II-A4-204.</p> <p><u>EPA to DOE, June 20, 2016.</u> Tier 1 request to evaluate the dual utilization of CH and RH radiological data approach from the generator sites.</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	Waste Control Specialists (WCS)	None to report.
NOTE: Dates correspond to CCP quarterly reports.		
194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP	FY15 Quarterly Tier 2 reports, third quarter	<p><u>DOE to EPA, August 13, 2015</u>. Notification of Tier 2 changes for AMWTP and CCP activities for FY15 third quarter.</p> <p><u>EPA to DOE, December 21, 2015</u>. EPA acknowledgement of receipt of the Tier 2 changes for AMWTP and CCP for FY15 third quarter and request for additional information.</p>
194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP	FY15 Quarterly Tier 2 reports, fourth quarter	<p><u>DOE to EPA, November 26, 2015</u>. Notification of Tier 2 changes for AMWTP and CCP activities for FY15, fourth quarter.</p> <p><u>EPA to DOE, December 21, 2015</u>. EPA acknowledgement of receipt of the Tier 2 changes for AMWTP and CCP for FY15 fourth quarter and request for additional information.</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	FY16 Quarterly Tier 2 reports, first quarter	<u>DOE to EPA, February 3, 2016</u> . Notification of Tier 2 changes for AMWTP and CCP activities for FY16, first quarter.
194.8 Approval Process for Waste Shipment from Waste Generator Sites for Disposal at the WIPP	FY16 Quarterly Tier 2 reports, second quarter	<u>DOE to EPA, April 25, 2016</u> . Notification of Tier 2 changes for AMWTP and CCP activities for FY 16, second quarter.

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

40 CFR 194.11-15	Certification/Recertification	<p><u>DOE to EPA, July 15, 2015.</u> Response to the EPA letters of completeness comments dated February 27, 2015 and June 5, 2015, regarding the 2014 Compliance Recertification Application (CRA-2014). Provided responses to 15 of EPA’s completeness questions.</p> <p><u>EPA to DOE, July 30, 2015.</u> Transmittal of the fourth set of eight completeness comments on the CRA-2014.</p> <p><u>EPA to DOE, August 26, 2015.</u> EPA request a sensitivity study to vary parameters related to the non-waste region of the repository.</p> <p><u>DOE to EPA, September 25, 2015.</u> Response to the EPA’s letter dated February 27, 2015 and June 5, 2015, regarding the CRA-2014. Provided responses to six of the EPA’s completeness questions.</p> <p><u>DOE to EPA, December 8, 2015.</u> Response to EPA’s letters dated June 5, and July 30, 2015, regarding the CRA-2014. Provided responses to six of the EPA’s completeness questions.</p> <p><u>EPA to DOE, February 26, 2016.</u> Transmittal of clarification to EPA’s CRA-2014 completeness question, 2-C-4, and withdrawal of two Features, Events and Process (FEP) related questions, 2-32-S16 and 2-32-S17.</p> <p><u>EPA to DOE, February 26, 2016.</u> EPA request for DOE to conduct an additional sensitivity study, SEN2 12, to evaluate the effect of models and parameters for two-phase flow on pressures and saturations in the waste and non-waste areas of the repository and to assess the overall impact on predicted releases. This request is in support of the completeness review of CRA-2014.</p> <p><u>DOE to EPA, May 6, 2016.</u> Response to EPA letters dated August 26, 2015, and February 26, 2016, requesting a performance assessment sensitivity analysis for the CRA-2014.</p> <p><u>DOE to EPA, May 25, 2016.</u> Submittal of response to EPA letters of June 5, 2015, July 30, 2015, and February 26, 2016, regarding the CRA-2014. With this submittal DOE/CBFO is providing responses to all of the remaining EPA completeness questions on the CRA-2014.</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
		<p><u>EPA to DOE, June 6, 2016</u>. EPA requests DOE perform a sensitivity study on BRAGFLO parameters related to the run-of-mine (ROM) salt panel closure system (PCS) as part of the EPA’s completeness review for CRA-2014.</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
<p>194.14(b) Design of the Disposal System</p>	<p>Status of Experiments in the WIPP Underground July 1, 2014 to June 30, 2015.</p>	<p>SEGA (Segmented Enriched Germanium Assembly) and MEGA (Multiple Element Germanium Array) All SEGA activities are currently on hold and the Q-room area of S-90 is partitioned off pending evaluation of the status of ground stability which will occur after waste disposal operations restart.</p> <p>EXO (Enriched Xenon Observatory) EXO activities include: The EXO-200 experiment is in operation.</p> <p>LBRE (Low Background Radiation Experiment) LBRE investigators are on site. Testing of biological samples continues.</p> <p>DMTPC (Dark Matter Time Projection Chamber) DMTPC has stood-down data collection due to problems of scheduling academic personnel in the underground.</p> <p>Salt Disposal Investigations (SDI)/Salt Defense Disposal Investigations (SDDI) Ground control and roof bolting activities in mined portions of the SDI and SDDI areas continue. A full-scale prototype heater canister is in operational testing in Carlsbad, NM to support future underground testing. All 12 inch diameter core stored underground were transported to Carlsbad, NM on March 4, 2016. A test proposal document has been developed and is under review. A meeting was held with DOE-NE to discuss plans for the start of small-scale thermal test activities.</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	WIPP and Generator site inspections	<p><u>EPA to DOE, November 13, 2015.</u> EPA notification of INL inspection of transition from CCP to Idaho Treatment Group (ITG).</p> <p><u>EPA to DOE, February 9, 2016.</u> Results of EPA inspection of the WIPP performed the week of April 7, 2015, under 40 CFR Part 191, Subpart A. EPA concluded that the DOE continues to adequately implement a radiological monitoring and sampling program for WIPP disposal operations in which it collects representative samples and appropriately performs calculations to estimate potential releases to the public. EPA docket no. EPA-HQ-OAR-2001-0012-0458.</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
194.22, Quality Assurance (QA)	Quality Assurance Audit	<p><u>EPA to DOE, July 16, 2015.</u> EPA audit results showing that CBFO QA program continues to comply with Nuclear Quality Assurance (NQA)-1-1989 elements and continues to have sufficient independence, authority and resources to verify the quality of items and activities that are important to long-term isolation of TRU waste. EPA docket no. A-98-49; II-A1-120.</p> <p><u>DOE to EPA, December 14, 2015.</u> Submittal of revised response to issue number NWP-QA-2015-01CR identified during Nuclear Waste Partnership's (NWP) QA program audit. This issue was concerned with documenting evidence that items conform to procurement documents being available prior to installation or use.</p> <p><u>EPA to DOE, February 1, 2016.</u> EPA performed an audit of the CBFO QA program on September 1-3, 2015 to verify implementation of CBFO's QA program relative to the requirements of the standard NQA-1-1989. EPA determined that the CBFO QA program continues to comply with the NQA-1-1989 requirements. No concerns were identified. EPA docket no. A-98-49; II-A1-121.</p> <p><u>EPA to DOE, February 4, 2016.</u> EPA determination from their audit of October 27-29, 2015, that the CBFO-QA program at the AMWTP complies with NQA-1-1989 elements. EPA Docket No. A-98-49; II-A1-122.</p> <p><u>EPA to DOE, March 10, 2016.</u> EPA notification of the results of their NWP NQA-1-1989 audit performed remotely from August 6 to September 24, 2015. The scope of this audit was limited. Four concerns were identified and corrected during the audit. The EPA will revisit the NQA-1-1989 elements during future audits. EPA Docket No. A-98-49; II-A1-123.</p> <p><u>EPA to DOE May 9, 2016.</u> EPA notification of the results of the AMWTP NQA-1-1989 QA program audit held remotely from September 24, 2014 to February 26, 2015. EPA determined that AMWTP QA program continues to comply with the elements of NQA-1-1989.</p>
194.32 Scope of Performance Assessments	Migration from Compaq to Solaris	<p><u>EPA to DOE, August 13, 2015.</u> Approval of the migration of 30 computer codes, 5 libraries and 3 databases from Compaq ES40, ES45 and ES47 computational machines with Open VMS 8.2 to the Solaris Blade platform with SunOS 5.11.</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
194.42 Monitoring	Ground Water Monitoring	<u>October 9, 2015</u> . Well H-10c has been plugged and replaced with well H-10cR.

**Table 2:
Procedure/Plan Revision**

Table 2: Procedure/Plan Revision

Procedure/Plan	Revision and Effective Date	Description of Change
SP 13-3, Field Water-Quality Measurements	Revision 2, July 15, 2015	This SNL procedure has been revised as part of the routine three-year review. As part of this routine update, the Troll 9500 system and Oakton pH meter were eliminated, and the YSI Model 60 pH meter was added. Also, the reference to disposal of solutions under the Sink Drain Discharge permit was eliminated.
WP 12-ER3906, Categorization and Classification of Operational Emergencies	Revision 15, August 7, 2015	<p>Complete rewrite. Major changes include:</p> <ul style="list-style-type: none"> • Changed title to “Categorization and Classification.” • Added Tables 1-4 and 1-5. • Updated all emergency action levels. • Added Attachment 3 to include container types. • Deleted sections 1.1, 2.0-3.0. • Added “or designee” to all FSM references. • Removed all references to WP 12-ER4920, RCRA Contingency Plan and associated language. • Changed format to Emergency Operating Procedure.
WP 12-HP3500, Airborne Radioactivity	Revision 20, August 17, 2015	Complete rewrite to align with current practices.
WP 12-9, WIPP Emergency Management Plan	Revision 42, November 2, 2015	Merged CBFO Emergency Management Plan into NWP/WIPP Emergency Management Plan.
WP 12-HP3500, Airborne Radioactivity	Revision 21, November 24, 2015	<ul style="list-style-type: none"> • Replaced Fixed Air Sampler filters with lapel air sample filters throughout document. • Changed radioactivity analysis times for air monitoring filters

Table 2: Procedure/Plan Revision

WP 13-1, Nuclear Waste Partnership LLC Quality Assurance Program	Revision 36, December 23, 2015	Revisions to incorporate DOE/CBFO-94-1012, Rev. 12, "Quality Assurance Program Document" changes.
WP 02-EM.02, Integrated Sample Control Plan	Revision 5, January 26, 2016	Updated sections 3.0 and 4.0 for samples and sample handling, and sample data documentation control and validation.
WP 08-NT3020, TRU Waste Receipt	Revision 26, February 15, 2016	Revised to implement ESS-2015-01, "Evaluation of the Safety of the Situation 2015, Revision 01".
WP 05-WH1025, CH Waste Downloading and Emplacement	Revision 14, February 15, 2016	Revised to implement ESS-2015-01, TSR "Technical Safety Requirement" Level Control #2, prohibiting the emplacement of Government Furnished Equipment or site-derived waste in the underground. Purpose is to allow hands-on practice to establish and maintain waste handling crews proficiency.
WP 05-WH1716, CNS 10-160B Cask Operation	N/A	Cancelled, procedure obsolete.
WP 05-WH1717, Cask Unloading Room Shield Door Operation	N/A	Cancelled, procedure obsolete.
WP 05-WH1725, RH Waste Downloading and Emplacement	N/A	Cancelled, procedure obsolete.
WP 12-ER4902, Hazardous Material Spill and Release Response	N/A	Cancelled, procedure obsolete.
WP 12-ER4903, Radiological Event Response	N/A	Cancelled, procedure obsolete.
WP 12-HP1312, RAM 31 Remote Operations	N/A	Cancelled, procedure obsolete.
WP 12-HP1318, RADOS Continuous Air Monitor	N/A	Cancelled, procedure obsolete.

**Table 3:
Waste Emplacement Summary Report**

Table 3: Waste Emplacement Summary Report

TRU Waste Inventory				
	Reporting Period ¹ Emplaced Volume (m ³)*	Cumulative ² Emplaced Volume (m ³)		
RH TRU	0	357		
CH TRU	0	90,627		
Waste Components Inventory				
	Reporting Period ¹ Emplaced Mass (kg)*	Cumulative ² Emplaced Mass (kg)	Maximum Emplaced Limiting Value ³ (kg)	Percent of Limiting Value ³ Emplaced
Cellulose, Plastic, Rubber Materials ⁴	0	8,914,542	22,000,000	40.52%
	Reporting Period ¹ Emplaced Mass (kg)*	Cumulative ² Emplaced Mass (kg)	Minimum Emplacement Limiting Value ³ (kg)	Percent of Limiting Value ³ Emplaced
Fe-Metals ⁵	0	27,736,311	20,000,000	Minimum met
Non-Fe Metals	0	438,100	2,000	Minimum met
Emplaced Radiological Activity Inventory (curies)				
Radionuclide	Cumulative Activity in FY 2014/2015 Annual Change Report ⁶	CH Repository Reporting Period Activity ⁶	RH Repository Reporting Period Activity ⁶	Total Activity as of June 30, 2016 ⁶
²⁴¹ Am	2.587E+05	2.581E+05	6.208E+02	2.587E+05
¹³⁷ Cs	1.445E+04	1.421E+01	1.444E+04	1.445E+04
²³⁸ Pu	4.835E+05	4.828E+05	7.289E+02	4.835E+05
²³⁹ Pu	3.337E+05	3.333E+05	3.839E+02	3.337E+05
²⁴⁰ Pu	8.267E+04	8.239E+04	2.802E+02	8.267E+04
²⁴² Pu	2.759E+01	2.720E+01	3.821E-01	2.759E+01

Table 3: Waste Emplacement Summary Report

⁹⁰ Sr	7.615E+03	1.595E+01	7.599E+03	7.615E+03
²³³ U	6.921E+00	6.536E+00	3.848E-01	6.921E+00
²³⁴ U	8.783E+01	8.669E+01	1.140E+00	8.783E+01
²³⁸ U	1.762E+01	1.758E+01	3.915E-02	1.762E+01
Total	1.181E+06	1.157E+06	2.405E+04	1.181E+06
Magnesium Oxide (MgO)⁷ and Cellulose, Plastic and Rubber (CPR) Mass Emplaced Per Waste Panel				
Panel	Room	MgO (kg)	CPR* (kg)	Excess Factor
1	all	4,482,355	1,237,732	1.87 ⁸
2	2-7	5,972,300	1,241,928	2.26 ⁸
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 ⁷
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

Table 3: Waste Emplacement Summary Report

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

Footnotes

1. Reporting Period is July 1, 2015, through June 30, 2016.
2. Cumulative period includes from the beginning of emplacement until June 30, 2016.
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. All isotopic activities reported are from the time of the original assay. It is understood that some isotopes may have reached secular equilibrium after disposal.
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.

Due to an underground salt haul truck fire on February 5, 2014, and a radiological event occurring on February 14, 2014, normal waste handling operational activities have been suspended. Suspended activities include waste receipt and waste emplacement. Currently, the WIPP's activities are focused on readiness leading to resumption of normal waste emplacement.

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

Table 4: Performance Assessment, Software, and Hardware Change

WIPP Codes/Software and Code Version	Version Date	Description of Change	New Code Version
CCDFGF 7.01	July 1, 2015	CCDFGF was modified to add security features, connect to an updated CCDFGF database and correct issues identified in Software Problem Report (SPR) 14-002.	CCDFGF 7.02
CCDFGF 6.01	July 1, 2015	CCDGFG was modified to add security features, connect to an updated CCDFGF database and correct issues identified in SPR 14-002.	CCDGFG 6.02
MATSET 9.22	December 8, 2015	Change default retrieval analysis from zero to blank. This will correct software problem report (SPR) 15-002.	MATSET 9.23
EPAUNI 1.17	December 8, 2015	Change default retrieval analysis from zero to blank. This will correct SPR 15-004	EPAUNI 1.18
POSTLHS 4.09	December 8, 2015	POSTLHS will be linked to a new version of DB_LIB. It will now return a count of 0 records and POSTLHS will abort with a reasonable error message. This will correct SPR 15-005.	POSTLHS 4.10
PRELHS 2.42	December 8, 2015	Changed the default retrieval analysis revision from zero to	PRELHS 2.43

Table 4: Performance Assessment, Software, and Hardware Change

WIPP Codes/Software and Code Version	Version Date	Description of Change	New Code Version
		blank. This will correct SPR 15-003.	

**Table 5:
Passive Institutional Controls Activity**

Table 5: Passive Institutional Controls Activity

Date	Description of Activity
September 12-15, 2015	Tom Klein and Mindy Toothman represented the WIPP at the Waste Management (WM) 2016 Program Development Meeting, September 13-15, 2015. This meeting is to coordinate the WM 2016 Preliminary Schedule and review abstracts that pertained to the Records, Knowledge and Memory sessions. This involvement ensures the continued national and international conversation as it relates to the development of international standards for Passive Institutional Controls.
December 15, 2015	Paper presentation session #83, Records, Knowledge and Memory (RK&M) for Nuclear Waste Geologic Repositories, and panel session, #113 Experience of Records, Knowledge and Memory for Waste Geologic Repositories, has been confirmed for Waste Management 2016 conference. Session #83 has a full eight papers submitted and session #113 has five national/international panel members confirmed.
March 6-11, 2016	Russ Patterson (DOE), Dr. Abe Van Luik (DOE), Roger Nelson (DOE), Tom Klein (AECOM), Mindy Toothman (AECOM) and Rob Watson (AECOM) attended Waste Management Symposia 2016. Russ Patterson and Tom Klein co-chaired panel session 113 “Experience of Records, Knowledge and Memory for Nuclear Waste Geologic Repositories”. Panel members included: Dr. Abe Van Luik (DOE), Dr. Claudio Pescatore (OECD-retired), Dr. Stephan Hotzel (OECD-GRS mbH), and Tom Peake (EPA). Russ Patterson (DOE) and Tom Klein (AECOM) co-chaired paper session 83, “Records, Knowledge and Memory (RK&M) for Nuclear Waste Geologic Repositories”. Eight papers were presented in paper session 83.

Notes:

In a 2008 letter from EPA to DOE (Reyes, 2008b), EPA changed the schedule for Passive Institutional Controls development as previously defined in Triay (2002c).

Table 6:
EPA Waste Characterization Inspections – January 2008 to June 2016

Table 6: EPA Waste Characterization Inspections – January 2008 to June 2016

Generator Site	Date of Inspection	EPA Inspection No./Tier 1 Evaluation	Docket Number/Approval Date
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
	November 3-5, 2014	Continued compliance inspection	Final document has not been released at this time.
	May 13, 2015	Tier 1 change to allow assembly of CH waste payloads.	No Docket No. assigned
	November 17-19, 2015	Continued compliance inspection	EPA Docket No. A-98-49; II-A4-206, March 2016

Table 6: EPA Waste Characterization Inspections – January 2008 to June 2016

Generator Site	Date of Inspection	EPA Inspection No./Tier 1 Evaluation	Docket Number/Approval Date
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
	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

Table 6: EPA Waste Characterization Inspections – January 2008 to June 2016

Generator Site	Date of Inspection	EPA Inspection No./Tier 1 Evaluation	Docket Number/Approval Date
	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
	May 8-9, 2012 EPA Inspection	Tier 1 to include Lot 2 waste ID-ANLE-S5000	EPA Docket No. A-98-49; II-A4-163, July 25, 2012
	EPA Inspection July 31-August 1, 2012	Tier 1 of the analytical chemistry lab (ACL)	EPA Docket No. A-98-49; II-A4-165, September 4, 2012
	September, 2012 EPA Desktop evaluation	Tier 1 evaluation of waste stream AERHDM RERTR and second batch debris, (bldg. 212, 30-gallon container)	EPA Docket No. A-98-49; II-A4-167, October 4, 2012

Table 6: EPA Waste Characterization Inspections – January 2008 to June 2016

Generator Site	Date of Inspection	EPA Inspection No./Tier 1 Evaluation	Docket Number/Approval Date
	February 2014	Tier 1 evaluation of five containers of solidified liquid waste from K-Wing Bldg. 205 to be included in the AERHDM waste stream.	EPA Docket No. A-98-49; II-A4-181, March 24, 2014
Bettis Atomic Power Laboratory (BAPL)	August 30, 2010, September 23, 2010, December 8, 2010 and April 12-13, 2011 EPA Baseline Inspection	EPA Baseline Inspection No. EPA-BAPL-CCP-RH-04.11-8	EPA Docket No. A-98-49; II-A4-151, July 2011
General Electric Vallecitos 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 RLCCPPUNIT waste stream	EPA Docket No. A-98-49; II-A4-154, November 10, 2011
Idaho National Laboratory (INL)	January 2008	Tier 1 K cell waste	EPA Docket No. A-98-49; II-A4-97, January 1, 2008
	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

Table 6: EPA Waste Characterization Inspections – January 2008 to June 2016

Generator Site	Date of Inspection	EPA Inspection No./Tier 1 Evaluation	Docket Number/Approval Date
	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
	September 22, 2009	Tier 1 addition of ID-RTC-S3000 waste stream	EPA Docket No. A-98-49; II-A4-137, November 1, 2010

Table 6: EPA Waste Characterization Inspections – January 2008 to June 2016

Generator Site	Date of Inspection	EPA Inspection No./Tier 1 Evaluation	Docket Number/Approval Date
	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 2016

Generator Site	Date of Inspection	EPA Inspection No./Tier 1 Evaluation	Docket Number/Approval Date
	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
	May 19-21, 2015	Tier 1 adding waste stream ID-ANLW-W269-RH (Lot 8C)	EPA Docket No. A-98-49; II-A4-201, November 10, 2015
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

Table 6: EPA Waste Characterization Inspections – January 2008 to June 2016

Generator Site	Date of Inspection	EPA Inspection No./Tier 1 Evaluation	Docket Number/Approval Date
	May 25-26, 2010	LANL-CCP CH TRU Continued Compliance Inspection	EPA Docket No. A-98-49; II-A4-141, February 9, 2011
	April 28, 2010 (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

Table 6: EPA Waste Characterization Inspections – January 2008 to June 2016

Generator Site	Date of Inspection	EPA Inspection No./Tier 1 Evaluation	Docket Number/Approval Date
	February 2014	Continued compliance inspection	Final document has not been released at this time.
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
	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

Table 6: EPA Waste Characterization Inspections – January 2008 to June 2016

Generator Site	Date of Inspection	EPA Inspection No./Tier 1 Evaluation	Docket Number/Approval Date
	February-March, 2010 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
	December 2011-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

Table 6: EPA Waste Characterization Inspections – January 2008 to June 2016

Generator Site	Date of Inspection	EPA Inspection No./Tier 1 Evaluation	Docket Number/Approval Date
	September 30, 2010 Desk-top evaluation	Tier 1 addition of CH S3000 waste	EPA Docket No. A-98-49; II-A4-123, March 23, 2010
	November 2009 – March 2010	Tier 1 addition of SR-BCLDP.001.001, SR-BCLDP.001.002, SR-BCLDP.002, SR-BCLDP.003, SR-BCLDP.004.002, SR-BCLDP.004.003 waste 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 timeframe, EPA Desk-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 (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
	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

Table 6: EPA Waste Characterization Inspections – January 2008 to June 2016

Generator Site	Date of Inspection	EPA Inspection No./Tier 1 Evaluation	Docket Number/Approval Date
	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, May 2014
	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
	June 15, 2016	Tier 1 SR-RH-MNDPAD1.01 waste stream	EPA Docket No. A-98-49; II-A4-204, June 2016

Table 7:
EPA Quality Assurance Audits by Site – January 2008 to June 2016

Table 7: EPA Quality Assurance Audits by Site – January 2008 to June 2016

Site	Audit Date	Purpose
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
	September 24, 2014 to February 26, 2015	Remote audit of the AMWTP QA program for NQA-1-1989 compliance. EPA docket no: A-98-49; II-A1-121
	October 27-29, 2015	Recertification Audit A-16-01
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
	September 29 – October 1, 2015	CCP Recertification Audit A-15-24
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 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.

Table 7: EPA Quality Assurance Audits by Site – January 2008 to June 2016

Site	Audit Date	Purpose
	January 6-February 12, 2015	Audit of CBFO QA program for compliance with NQA-1-1989 elements. EPA Docket No. A-98-49; II-A1-120.
	September 1-3, 2015	Audit of CBFO QA program for compliance with NQA-1-1989 elements. EPA Docket No. A-98-49; II-A1-121.
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
	May 31 – June 1, 2016	CCP Recertification Audit A-16-11
Idaho National Laboratory (INL)-CCP	January 29-30, 2008	Expansion Audit (NMED approval of Acceptable Knowledge (AK)) Audit A-08-11
	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
June 14-16, 2016	CCP Recertification Audit A-16-18	
	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

Table 7: EPA Quality Assurance Audits by Site – January 2008 to June 2016

Site	Audit Date	Purpose
Los Alamos National Laboratory-CCP	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
	September 1-3, 2015	CCP Recertification Audit A-15-21
May 17-19, 2016	CCP Recertification Audit A-16-19	
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.
	January-November 2015	Audit of NWP QA program for compliance with NQA-1-1989 elements. Final document has not been released at this time.
	August 6 – September 24, 2015	Audit of NWP QA program for compliance with NQA-1-1989 elements. Scope was limited and will be revisited at a later date. EPA Docket No. A-98-49; II-A1-123.
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 2016

Site	Audit Date	Purpose
	January 14-26, 2014	CH and RH Recertification Audit A-14-03
	March 31- April 2, 2015	CH & RH Recertification Audit A-15-09
	April 19-21, 2016	CCP Recertification Audit A-16-15
Savannah River Site-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
	December 3-4, 2015	CCP Recertification Audit A-16-02
Sandia National 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 Laboratories-Carlsbad Office (SNL-CO)	May 1-29, 2014 and 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 changes reported in this version of the WIPP Annual Change Report do not represent significant changes pertaining to the disposal system.

References

DOE 2014. U.S. Department of Energy (DOE). 2014. Title 40 CFR Part 191 Subparts B and C Compliance Recertification Application-2014 for the Waste Isolation Pilot Plant (March). DOE/WIPP-14-3503. Carlsbad Field Office, Carlsbad, NM.

Gitlin, B.C. 2004. Letter to R.P. Detwiler, Acting Manager (Subject: Review of Annual Change Report and request for additional reporting information). June 8, 2004. Washington, DC: U.S. Environmental Protection Agency, Radiation Protection Division.

Gitlin, B.C. 2005a. Letter to I. Triay, Acting Manager (Subject: Review of Annual Change Report and request for additional reporting information). April 28, 2005. Washington, DC: U.S. Environmental Protection Agency, Radiation Protection Division.

Gitlin, B.C. 2005b. Letter to L. Piper, Deputy Manager (Subject: Review of Annual Change Report and request for additional reporting information). September 21, 2005. Washington, DC: U.S. Environmental Protection Agency, Radiation Protection Division.

Gitlin, B.C. 2006a. Letter to D. Moody, Manager (Subject: Review of Annual Change Report and request for additional reporting information). February 2, 2006. Washington, DC: U.S. Environmental Protection Agency, Radiation Protection Division.

Gitlin, B.C. 2006b. Letter to D. Moody, Manager (Subject: Review of Annual Change Report and request for additional reporting information). April 28, 2006. Washington, DC: U.S. Environmental Protection Agency, Radiation Protection Division.

Marcinowski, F. 2000. Letter to I. Triay, Manager (Subject: Review of Annual Change Report and request for additional reporting information). February 24, 2000. Washington, DC: U.S. Environmental Protection Agency, Radiation Protection Division.

Marcinowski, F. 2001. Letter to I. Triay, Manager (Subject: Review of Annual Change Report and request for additional reporting information). July 2, 2001. Washington, DC: U.S. Environmental Protection Agency, Radiation Protection Division.

Marcinowski, F. 2002a. Letter to I. Triay, Manager (Subject: Review of Annual Change Report and request for additional reporting information). February 28, 2002. Washington, DC: U.S. Environmental Protection Agency, Radiation Protection Division.

Marcinowski, F. 2002b. Letter to I. Triay, Manager (Subject: Review of Annual Change Report and request for additional reporting information). June 3, 2002. Washington, DC: U.S. Environmental Protection Agency, Radiation Protection Division.

Marcinowski, F. 2002c. Letter to I. Triay, Manager (Subject: Revised schedule for development and testing of Passive Institutional Controls). November 7, 2002. Washington, DC: U.S. Environmental Protection Agency, Radiation Protection Division.

Marcinowski, F. 2003a. Letter to I. Triay, Manager (Subject: Review of Annual Change Report and request for additional reporting information). April 8, 2003. Washington, DC: U.S. Environmental Protection Agency, Radiation Protection Division.

Marcinowski, F. 2003b. Letter to I. Triay, Manager (Subject: Review of Annual Change Report and request for additional reporting information). May 22, 2003. Washington, DC: U.S. Environmental Protection Agency, Radiation Protection Division.

Marcinowski, F. 2003c. Letter to I. Triay, Manager (Subject: Review of Annual Change Report and request for additional reporting information). August 8, 2003. Washington, DC: U.S. Environmental Protection Agency, Radiation Protection Division.

Page, S. 1999a. Letter to K. Klein, Acting Manager (Subject: Review of Annual Change Report and request for additional reporting information). March 3, 1999. Washington, DC: U.S. Environmental Protection Agency, Office of Radiation and Indoor Air.

Page, S. 1999b. Letter to I. Triay, Manager (Subject: Review of Annual Change Report and request for additional reporting information). June 3, 1999. Washington, DC: U.S. Environmental Protection Agency, Office of Radiation and Indoor Air.

Reyes, J. 2008a. Letter to D. Moody, Manager (Subject: Passive Institutional Controls update). March 7, 2008. Washington, DC: U.S. Environmental Protection Agency, Radiation Protection Division.

Reyes, J. 2008b. Letter to D. Moody (Subject: EPA 1.67 to 1.20 Excess Factor Change Approval Letter). February 11, 2008. Washington, DC: U.S. Environmental Protection Agency, Office of Air and Radiation.

U.S. Environmental Protection Agency (EPA). 1996. "40 CFR Part 194: Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations; Final Rule." Federal Register, vol. 61 (February 9, 1996): 5224-45.

U.S. Environmental Protection Agency (EPA). 1998. Letter to M. McFadden, Acting Manager (Subject: Review of Annual Change Report and request for additional reporting information). September 30, 1998. Washington, DC: U.S. Environmental Protection Agency.