



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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January 26, 2015

15-NWP-024

Ms. Stacy L. Charboneau, Manager
Richland Operations Office
United States Department of Energy
PO Box 550, MSIN: A7-50
Richland, Washington 99352

Re: Final *Waste Encapsulation and Storage Facility (WESF) and Capsule Storage Area (CSA) Permitting Plan*,
January 2015

Dear Ms. Charboneau:

This letter transmits the referenced permitting plan (enclosed) between the United States Department of Energy (USDOE) and the Department of Ecology (Ecology) in support of the permitting of WESF and CSA.

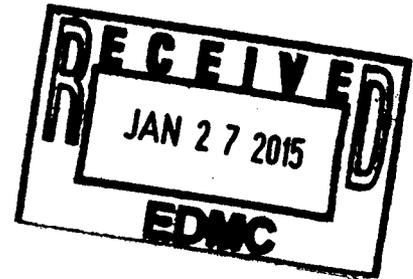
Ecology appreciates USDOE's participation and support in developing the permitting plan. We look forward to working with USDOE and its contractors in permitting the WESF and CSA facilities.

If there are any questions, please contact Stephanie Schleif at stephanie.schleif@ecy.wa.gov or (509) 372-7929, or Mandy Jones at mandy.jones@ecy.wa.gov or (509) 372-7916.

Sincerely,

Suzanne Dahl
Tank Waste Treatment Section Manager
Nuclear Waste Program

ss/jc
Enclosure



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1 **Waste Encapsulation and Storage Facility (WESF) and Capsule Storage**
2 **Area (CSA) Permitting Plan**

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Contents

2	1 Purpose.....	1
3	1.1 Background.....	1
4	1.2 Overall Regulatory Approach.....	1
5	1.2.1 Project W-130 Replacement of the K-3 Ventilation System and Stabilization of Hot	
6	Cells.....	1
7	1.2.1.1 Project W-130 Permitting/Schedule Details.....	2
8	1.2.1.2 Project W-130 Contents of the Revised WESF Part B Permit Application	3
9	1.2.2 Project W-135 Relocation of Capsules and New TSD (CSA)	4
10	1.2.2.1 Project W-135 Permitting/Schedule Details.....	4
11	1.2.2.2 Project W-135 Contents of the Revised WESF Part B Permit Modification	
12	Request	5
13	1.2.2.3 CSA Dangerous Waste Permitting	6
14	1.2.2.4 Contents of the CSA Permit Modification Request (New TSD Unit).....	6
15	2 Issue Resolution	7
16	3 References	7

17

Appendix

18	A Air Permitting Strategy - Air Permitting.....	A-i
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19

Figures

20	Figure 1. Project W-130 Contamination Stabilization and Ventilation Modification	
21	Permitting Path Forward	9
22	Figure 2. Project W-135 Capsule Storage Area Dangerous Waste Permitting and Project Schedule	10

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Terms

AOP	Air Operating Permit
CAP	Conceptual Agreement Package
CSA	Capsule Storage Area
Cs/Sr	cesium/strontium
DOE	U.S. Department of Energy
DW	dangerous waste
Ecology	Washington State Department of Ecology
LDR	Land Disposal Restriction
NEPA	<i>National Environmental Policy Act of 1969</i>
OUG	operating unit group
RL	DOE Richland Operations Office
ROD	record of decision
SEPA	<i>State Environmental Policy Act of 1971 (RCW 43.21C, "State Environmental Policy")</i>
TA	temporary authorization
TSD	treatment, storage, and disposal
WDOH	Washington State Department of Health
WESF	Waste Encapsulation and Storage Facility

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1 Purpose

The purpose of this plan is to document an agreed regulatory approach, between the U.S. Department of Energy (DOE), Richland Operations Office (RL) and the Washington State Department of Ecology (Ecology), regarding upcoming permitting modifications to the Hanford Sitewide Dangerous Waste (DW) Permit. These actions are necessary to address the scope of the Waste Encapsulation and Storage Facility (WESF) Stabilization and Ventilation Project, removal of the cesium/strontium (Cs/Sr) capsules that are currently in the pool cells at WESF, and subsequent transfer of the capsules to a newly constructed treatment, storage, and disposal (TSD) unit (Capsule Storage Area [CSA]). The dates in this Permitting Plan are target dates, and all parties are striving to meet them as detailed.

1.1 Background

WESF stores nearly 2,000 Cs/Sr capsules underwater in pool cells. Stabilization of legacy contamination in the WESF hot cells and replacement of the K3 ventilation system are needed to reduce risk of release to the environment. A project (Project W-130) has been initiated to stabilize the legacy contamination and replace the K3 ventilation system and its HEPA filter.

Additionally, continued management of the capsules in pool cells until final disposal does not align with Hanford Site cleanup goals for safe management of legacy material. A second project (Project W-135) has been initiated to transfer Cs/Sr capsules from WESF pool cells to a new dry storage facility. Due to the condition of the K3 ventilation system, it will be necessary to complete Project W-130 before transfer of the capsules is started.

Over the last several months, representatives from RL and the Washington State Department of Ecology (Ecology) have met and agreed on the following regulatory approaches regarding these two projects.

1.2 Overall Regulatory Approach

The approach in this Permitting Plan is to describe steps to be taken in association with Project W-130, for the replacement of the K-3 ventilation system and stabilization of hot cells, and then describe the steps to be taken to support Project W-135 to repackage and relocate the capsules to dry storage in a new CSA. Following the project information, the permitting steps needed to support the CSA, which is a new TSD, are addressed. Finally, the method for addressing important points and issues is described.

RL and Ecology will work collaboratively to develop application materials and draft final permits. Issues will be identified and resolved quickly to maintain schedules while developing compliant and enforceable permits.

1.2.1 Project W-130 Replacement of the K-3 Ventilation System and Stabilization of Hot Cells

The pool cells and hot cells are contained within a DW TSD operating unit group (OUG) following interim status standards in the Hanford Facility Sitewide DW Permit (WA7890008967). Modifications to be made to the TSD to stabilize the legacy contamination in the hot cells will require a revised Part A and an approved closure plan. A temporary authorization (TA) to conduct specific activities (physical changes to the TSD components and grouting of the hot cells) prior to permit issuance may be needed to support the project schedule.

This work is covered under the existing *National Environmental Policy Act of 1969* (NEPA) categorical exclusion (DOE-CX-00088, *CH2MHill Plateau Remediation Company – Cleanup Actions, August 2014 to August 2015*). An RCW 43.21C, “State Environmental Policy,” also known as the *State Environmental*

1 *Policy Act of 1971 (SEPA)*, checklist will be required for the permitting actions using information
2 currently available.

3 Air permitting will be accomplished using a phased approach, with the Washington State Department of
4 Health (WDOH) issuing a revised license, which will ultimately be incorporated into the Sitewide Air
5 Operating Permit (AOP), as described in Appendix A.

6 **1.2.1.1 Project W-130 Permitting/Schedule Details**

7 Figure 1 illustrates the DW permitting, air permitting (provided for completeness), and project schedules.
8 Ecology comments on draft documents will be consistent with Conceptual Agreement Package (CAP)
9 guidance as it is known at the time (i.e., these documents should be as close to what would be required in
10 Rev. 9 as possible); however, RL will submit redlines of the current Rev. 9 files that were issued for
11 public comment in 2012 because CAPs are not currently finalized:

- 12 1. RL will submit a 30 day advance notice of an upcoming public involvement period as required by
13 DOE et al., 2012, *Hanford Federal Facility Agreement and Consent Order Hanford Public*
14 *Involvement Plan*, hereinafter called the Hanford Public Involvement Plan (notification the first week
15 of November of a pending review period in December).
- 16 2. RL will submit a certified class 3 permit modification request to Ecology. The approved permit
17 modification will be incorporated into Rev. 8C of the Sitewide DW Permit and include the following
18 items:
 - 19 • Part A permit application changes include the following:
 - 20 – Update the nature of business section.
 - 21 – Identify waste that will no longer be accepted for storage at this unit.
 - 22 – Update the total storage capacity at WESF.
 - 23 – Update the co-operators titles and names.
 - 24 – Update and provide maps.
 - 25 • The closure plan for Hot Cells A through F will reflect initiation of clean closure activities, by
26 grouting the hot cells, with a request for an extended closure schedule to coincide with closure of
27 the pool cells and Hot Cell G (WAC 173-303-610(4)(b), “Dangerous Waste Regulations,”
28 “Closure and Post-Closure”). The closure plan will also describe the basis for a RL request
29 regarding a Land Disposal Restriction (LDR) Treatability Variance pursuant to 40 CFR 268.44,
30 “Land Disposal Restrictions,” “Variance from a Treatment Standard.”
- 31 3. RL will submit a Treatability Variance as a separate document which will be approved by Ecology
32 and referenced in detail in the approved closure plan. The Treatability Variance will be submitted
33 during the 60-day public comment period for the class 3 permit modification.
- 34 4. RL will submit a red-line strikeout of the Part B permit application for WESF based on the Revision 9
35 draft permit documents; however, Ecology will not act on that application until it is later revised
36 consistent with CAP guidance that is currently being developed.

37 Note: A TA request for specific activities (WESF preparations) that are envisioned to occur, prior to
38 the permit becoming effective, will identify when TA approval is expected to be needed and will
39 contain the information necessary for Ecology to approve the TA (WAC 173-303-830(4)(e), “Permit
40 Changes”). RL will send a public notice about the TA request within 7 days of submission of the

- 1 request and draft a SEPA (RCW 43.21C) checklist. If needed, a second TA may be requested to
2 support grouting of the hot cells.
- 3 5. RL will begin a 60 day public comment period on (Rev 8C) the Revised Part A and Hot Cell A
4 through F closure plan.
- 5 6. Ecology will review the permit modification request and treatability variance request during the
6 60 day public review period. The LDR Treatability Variance is for the floor sweepings in trays
7 (boats) in the B Cell and sealed segments of pipe in the C Cell:
- 8 • Ecology should determine completeness within 60 days of receipt of the permit modification
9 request (WAC 173-303-840(1)(b), "Procedures for Decision Making"). If the application is
10 complete, Ecology may request information necessary to clarify, modify, or supplement
11 previously submitted material. Effective date of the application is when Ecology notifies RL that
12 the permit modification request is complete (WAC 173-303-840(1)(e)).
 - 13 • Ecology will review the LDR Treatability Variance and approve or deny it, in accordance with
14 WAC 173-303-140(2)(a), "Land Disposal Restrictions."
 - 15 • Ecology will respond to comments received during the public comment period.
- 16 7. Ecology intends to develop the draft permit and respond to public comments within 60 days of the
17 application becoming effective.
- 18 • Ecology will share drafts of the permit and conditions with RL through the development process.
- 19 8. Ecology will submit a 30 day advance notice of an upcoming public involvement period as required
20 by the Hanford Public Involvement Plan (DOE et al., 2012).
- 21 9. Ecology will prepare a fact sheet.
- 22 10. Ecology will begin a 45 day public comment on the draft permit for Rev 8C and hold a public
23 meeting, if requested (WAC 173-303-840(5)(a)).
- 24 11. Grouting of the hot cells will not begin until a permit is issued, unless some other form of
25 authorization has been established.

26 **1.2.1.2 Project W-130 Contents of the Revised WESF Part B Permit Application**

27 RL will revise the current WESF Part B Permit Application to reflect the changes required for the Project
28 W-130 ventilation replacement and contamination stabilization project. RL will submit a certified copy to
29 Ecology to maintain a current application, and Ecology will not act on the revised application at this time.
30 Compliance with Part B permit application requirements (WAC 173-303-806(2), "Final Facility
31 Permits") will be maintained for the following addendums:

- 32 • Process information
- 33 • Security
- 34 • Preparedness and prevention
- 35 • Training plan
- 36 • Closure plan for entire WESF
- 37 • Inspection plan
- 38 • Contingency plan

1 **1.2.2 Project W-135 Relocation of Capsules and New TSD (CSA)**

2 DOE-RL will seek project approval to move Cs/Sr capsules to a new permitted storage facility (CSA)
3 located in the 200 Area of the Central Plateau. CSA will be permitted as a newly constructed TSD OUG
4 through incorporation into the current revision of the Sitewide DW Permit in place at that time (expected
5 to be Rev. 9). RL will be proposing that the CSA be permitted as a miscellaneous unit under WAC 173-
6 303-680, "Miscellaneous Units." The primary reason for the classification of miscellaneous unit is the
7 radioactive component of DW and the unique nature of the dry storage casks. For example, normal
8 container inspections cannot occur, and labeling of the capsules inside the cask containers are both
9 contrary to requirements to maintain radiation exposure to levels as low as reasonably achievable.
10 Ecology will determine the appropriateness of this classification through a review of the RL
11 permit application.

12 The Part B application for WESF will be revised a second time to incorporate the modifications necessary
13 to move the capsules and initiate the closure process at WESF and document the steps for final closure.
14 The application will be updated based on Ecology CAP guidance and incorporated into Rev. 9 of the
15 Sitewide DW permit.

16 DOE/EIS-0391, *Final Tank Closure and Waste Management Environmental Impact Statement for the*
17 *Hanford Site, Richland, Washington (TC & WM EIS)*, will provide the NEPA evaluation necessary to
18 support an amended record of decision (ROD). A SEPA (RCW 43.21C) checklist will be required for the
19 permitting actions using the Final TC & WM EIS (DOE/EIS-0391) information.

20 CSA radioactive air permitting requirements will be based on the result of discussions with WDOH to
21 verify applicability of the sealed source exemption (WAC 246-247-020(b), "Radiation Protection—Air
22 Emissions," "Exemptions") to the Cs/Sr capsules.

23 **1.2.2.1 Project W-135 Permitting/Schedule Details**

24 The details of Project W-135, modifications to WESF and moving capsules to CSA, will be developed as
25 the project matures. Figure 2 illustrates the DW permitting and project schedules (specific dates will be
26 added as the project schedule develops):

- 27 1. RL will provide an amended ROD to allow capsules to be moved from WESF to a new long-term
28 storage facility (CSA) to address RL NEPA requirements after approval of the conceptual design
29 deliverable (CD-1).
- 30 2. RL will submit draft revisions to the WESF Part A forms and Part B permit application to reflect
31 physical changes to the TSD unit needed for capsule removal. Revisions will be submitted as a
32 Class 3 permit modification request (prepared in accordance with WAC 173-303-803, "Permit
33 Application Requirements") to be incorporated into the Hanford Sitewide DW Permit (Rev. 9).
- 34 3. RL will submit a draft permit modification request for the new CSA. The application will consist of a
35 Part A and Part B permit application as a Class 3 permit modification request (prepared in accordance
36 with WAC 173-303-803) to incorporate the CSA into Rev. 9 of the Hanford Sitewide DW Permit
37 (if Rev. 9 is not ready, the permit will be incorporated into Rev. 8C). The draft permit application will
38 be based on CD-1 (approximately 30 percent design information) provided by the selected contractor.
- 39 4. RL, Ecology, and CH2M HILL Plateau Remediation Company will work collaboratively to finalize
40 the permit modification requests.
- 41 5. RL will submit a 30 day advance notice of an upcoming public involvement period as required by the
42 Hanford Public Involvement Plan (DOE et al., 2012).

- 1 6. RL will start a 60 day public comment period (WAC 173-303-830(4)(c)(ii)) within 7 days of
2 submittal of permit modification requests. RL must hold a public meeting per
3 WAC 173-303-830(4)(c)(iv).
- 4 7. Ecology should review the permit modification requests during the 60 day public review period:
 - 5 • Ecology should determine completeness within 60 days of receipt of the permit modification
6 request (WAC 173-303-840(1)(b)). Effective date of the application is when Ecology notifies RL
7 that the permit modification request is complete (WAC 173-303-840(1)(e)).
 - 8 • Ecology will respond to comments received during the public comment period (no specified time
9 period per WAC 173-303-830(4)(c)(vi)).
- 10 8. Ecology will prepare draft permits following the completeness review (no specified time period is
11 established for this step per WAC 173-303-830(4)(c)):
 - 12 • Ecology will share drafts of the permit and conditions with RL through the development process.
13 The purpose will be to develop a compliant and enforceable permit for CSA and WESF.
 - 14 • RL will provide additional information, as requested by Ecology, per WAC 173-303-840(1)(b).
- 15 9. Ecology will submit 30 day advance notice of an upcoming public involvement period as required by
16 the Hanford Public Involvement Plan (DOE et al., 2012).
- 17 10. If the project requires a TA to begin project activities, RL will provide the TA with a request
18 consistent with the requirements of WAC 173-303-830(4)(e)(ii)(B) to Ecology 60 days before TA
19 approval is needed. RL will send a public notice about the TA request within 7 days of submission of
20 the request.
- 21 11. Ecology will prepare a fact sheet.
- 22 12. Ecology will begin public review (minimum 45 days) and hold a public meeting, if requested
23 (WAC 173-303-840(5)(a)).
- 24 13. Ecology will issue a final decision and response to comments (no specified time period is established
25 for this step per WAC 173-303-840(8) and (9)).
- 26 14. Permit will become effective 30 days after the date of the notice of decision
27 (WAC 173-303-840(8)(b)).
- 28 **1.2.2.2 Project W-135 Contents of the Revised WESF Part B Permit Modification Request**
- 29 WESF Part B Permit Application will be revised to reflect physical changes to the TSD unit needed for
30 capsule removal. Revisions will be submitted as a Class 3 permit modification request to be incorporated
31 into the Hanford Sitewide DW Permit (Rev. 9) and will include the following addendums:
 - 32 • Waste analysis plan (1 page, not applicable as no future shipments are planned)
 - 33 • Process information
 - 34 • Security
 - 35 • Preparedness and prevention
 - 36 • Training plan
 - 37 • Closure plan for the entire WESF
 - 38 • Inspection plan
 - 39 • Contingency plan

1 **1.2.2.3 CSA Dangerous Waste Permitting**

2 RL and Ecology will work together to establish CSA regulatory requirements. The following
3 WAC 173-303 titles are the initial proposed CSA requirements:

- 4 • WAC 173-303-280, "General Requirements for Dangerous Waste Management Facilities"
- 5 • WAC 173-303-281, "Notice of Intent"
- 6 • WAC 173-303-282, "Siting Criteria"
- 7 • WAC 173-303-283, "Performance Standards"
- 8 • WAC 173-303-290, "Required Notices"
- 9 • WAC 173-303-300, "General Waste Analysis"
- 10 • WAC 173-303-310, "Security"
- 11 • WAC 173-303-320, "General Inspection" (***)with alternatives)
- 12 • WAC 173-303-330, "Personnel Training"
- 13 • WAC 173-303-335, "Construction Quality Assurance"
- 14 • WAC 173-303-340, "Preparedness and Prevention"
- 15 • WAC 173-303-350, "Contingency Plan and Emergency Procedures"
- 16 • WAC 173-303-360, "Emergencies"
- 17 • WAC 173-303-370, "Manifest System"
- 18 • WAC 173-303-380, "Facility Recordkeeping"
- 19 • WAC 173-303-390, "Facility Reporting"
- 20 • WAC 173-303-395, "Other General Requirements"
- 21 • WAC 173-303-600, "Final Facility Standards"
- 22 • WAC 173-303-610, "Closure and Post-Closure"
- 23 • WAC 173-303-630, "Use and Management of Containers" (***)with alternatives)
- 24 • WAC 173-303-680, "Miscellaneous Units" (2)
- 25 • WAC 173-303-803, "Permit Application Requirements"
- 26 • WAC 173-303-806, "Final Facility Permits"
- 27 • WAC 173-303-830, "Permit Changes"

28 **1.2.2.4 Contents of the CSA Permit Modification Request (New TSD Unit)**

29 CSA Part B Permit Application will be submitted as a Class 3 permit modification request to be
30 incorporated into the Hanford Sitewide DW Permit (Rev. 9). If Rev. 9 is not ready, the permit will be
31 incorporated into Rev. 8C. The draft permit application will be based on CD-1 (approximately 30 percent
32 design information), provided by the selected contractor, and will include the following addendums:

- 33 • Waste analysis plan (1 page, not applicable as no future shipments are planned)
- 34 • Process information (1 page for process information as there are no future processes, will include
35 design information based on CD-1 level detail)
- 36 • Security
- 37 • Preparedness and prevention
- 38 • Training plan
- 39 • Closure plan
- 40 • Inspection plan
- 41 • Contingency plan

2 Issue Resolution

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2 RL and Ecology will work collaboratively to develop application materials and draft final permits.
3 Issues will be identified and resolved quickly to maintain schedules while developing compliant and
4 enforceable permits. The permitting working group will strive to resolve issues prior to elevating issues to
5 the Tier 1 and Tier 2 DW permitting committee.

6 The following streamlined process is used to resolve permitting issues and comments:

7 • RL and Ecology will work in 2015 to finalize the major issues needing to be resolved to permit CSA.
8 The following examples of major points will be reviewed and adjusted with new issues, as needed:

9 – Justification for miscellaneous unit

10 – Performance standards for CSA

11 – Contingency plans: establish a model plan to follow (incorporating CAP guidance)

12 – Training plan addendum: establish a model plan to follow (incorporating CAP guidance)

13 – Waste analysis plans and process section addendums: level of detail/information to justify no
14 WAP/process section information

15 – Closure plan contents: establish a model plan to follow (incorporating CAP guidance)

16 – Use of a TA(s), if needed, for CSA construction

17 • Agreements on these major points will be documented and concurred with by agencies, including
18 attorney review, and issues will be brought to the Tier 1 and Tier 2 Dangerous Waste permitting
19 committee, as needed.

20

3 References

21 40 CFR 268.44, "Land Disposal Restrictions," "Variance from a Treatment Standard," *Code of Federal*
22 *Regulations*. Available at: [http://www.gpo.gov/fdsys/pkg/CFR-2010-title40-vol26/xml/CFR-](http://www.gpo.gov/fdsys/pkg/CFR-2010-title40-vol26/xml/CFR-2010-title40-vol26-sec268-44.xml)
23 [2010-title40-vol26-sec268-44.xml](http://www.gpo.gov/fdsys/pkg/CFR-2010-title40-vol26/xml/CFR-2010-title40-vol26-sec268-44.xml).

24 DOE-CX-00088, 2014, *CH2MHill Plateau Remediation Company – Cleanup Actions, August 2014 to*
25 *August 2015*, Rev. 1, U.S. Department of Energy, Richland Operations Office, Richland,
26 Washington. Available at: <http://www.hanford.gov/files.cfm/DOE-CX-00088-Rev1.pdf>.

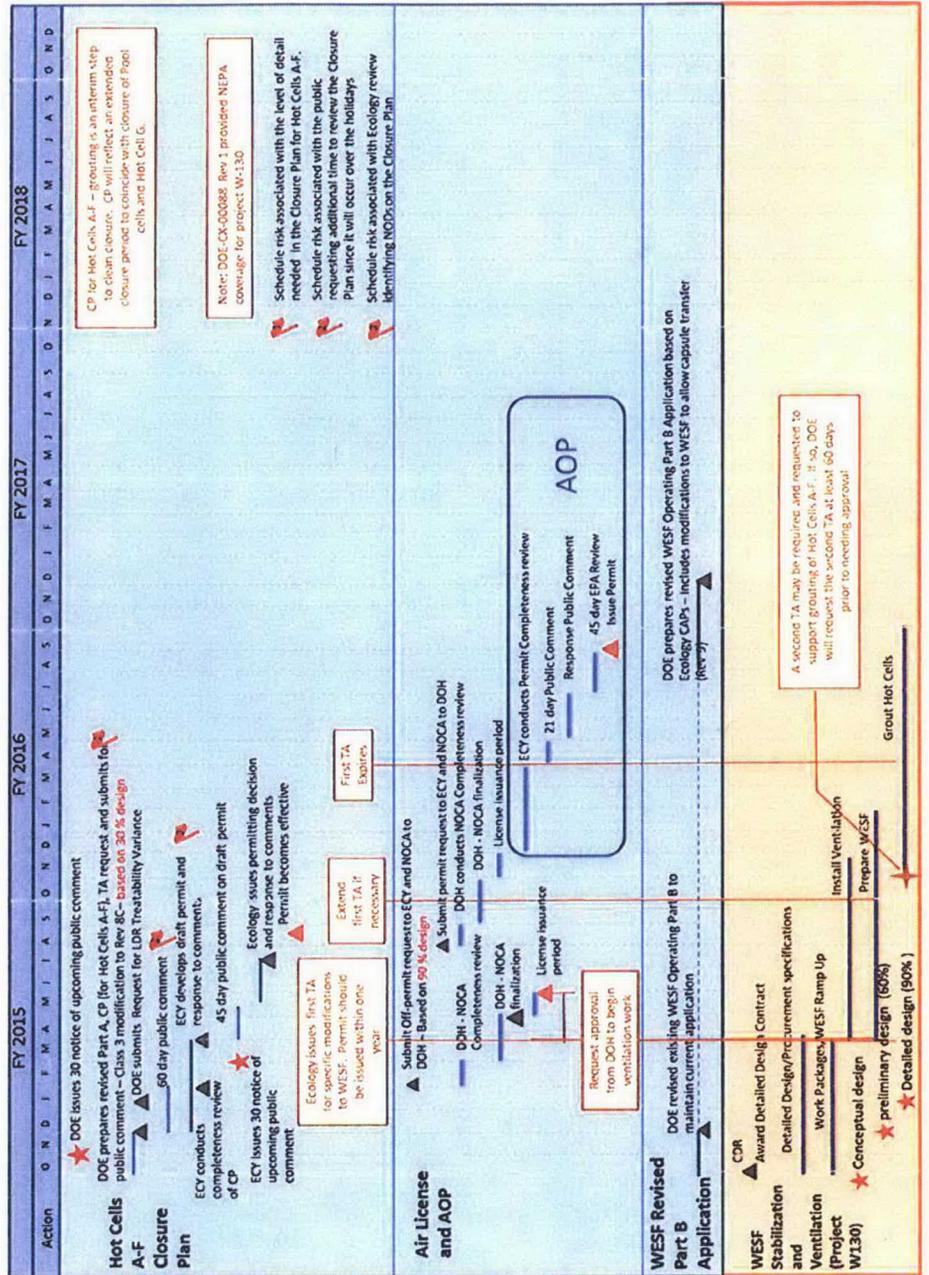
27 DOE/EIS-0391, 2012, *Final Tank Closure and Waste Management Environmental Impact Statement for*
28 *the Hanford Site, Richland, Washington (TC & WM EIS)*, U.S. Department of Energy, Office
29 of River Protection, Richland, Washington. Available at:
30 <http://energy.gov/nepa/downloads/eis-0391-final-environmental-impact-statement>.

31 DOE, Ecology, and EPA, 2012, *Hanford Federal Facility Agreement and Consent Order Hanford Public*
32 *Involvement Plan*, U.S. Department of Energy, Richland Operations Office; Washington State
33 Department of Ecology; and U.S. Environmental Protection Agency, Richland, Washington.
34 Available at: [http://www.hanford.gov/files.cfm/FacAgreementand-Consent-](http://www.hanford.gov/files.cfm/FacAgreementand-Consent-Order_FINAL.pdf)
35 [Order_FINAL.pdf](http://www.hanford.gov/files.cfm/FacAgreementand-Consent-Order_FINAL.pdf).

- 1 *National Environmental Policy Act of 1969*, 42 USC 4321, et seq. Available at:
2 <http://www.epw.senate.gov/nepa69.pdf>.
- 3 RCW 43.21C, "State Environmental Policy," *Revised Code of Washington*, Olympia, Washington.
4 Available at: <http://apps.leg.wa.gov/RCW/default.aspx?cite=43.21C>.
- 5 WAC 173-303, "Dangerous Waste Regulations," *Washington Administrative Code*, Olympia,
6 Washington. Available at: <http://apps.leg.wa.gov/WAC/default.aspx?cite=173-303>.
- 7 WAC 246-247-020, "Radiation Protection—Air Emissions," "Exemptions," *Washington Administrative*
8 *Code*, Olympia, Washington. Available at:
9 <http://apps.leg.wa.gov/WAC/default.aspx?cite=246-247-020>.

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Figure 1. Project W-130 Contamination Stabilization and Ventilation Modification Permitting Path Forward



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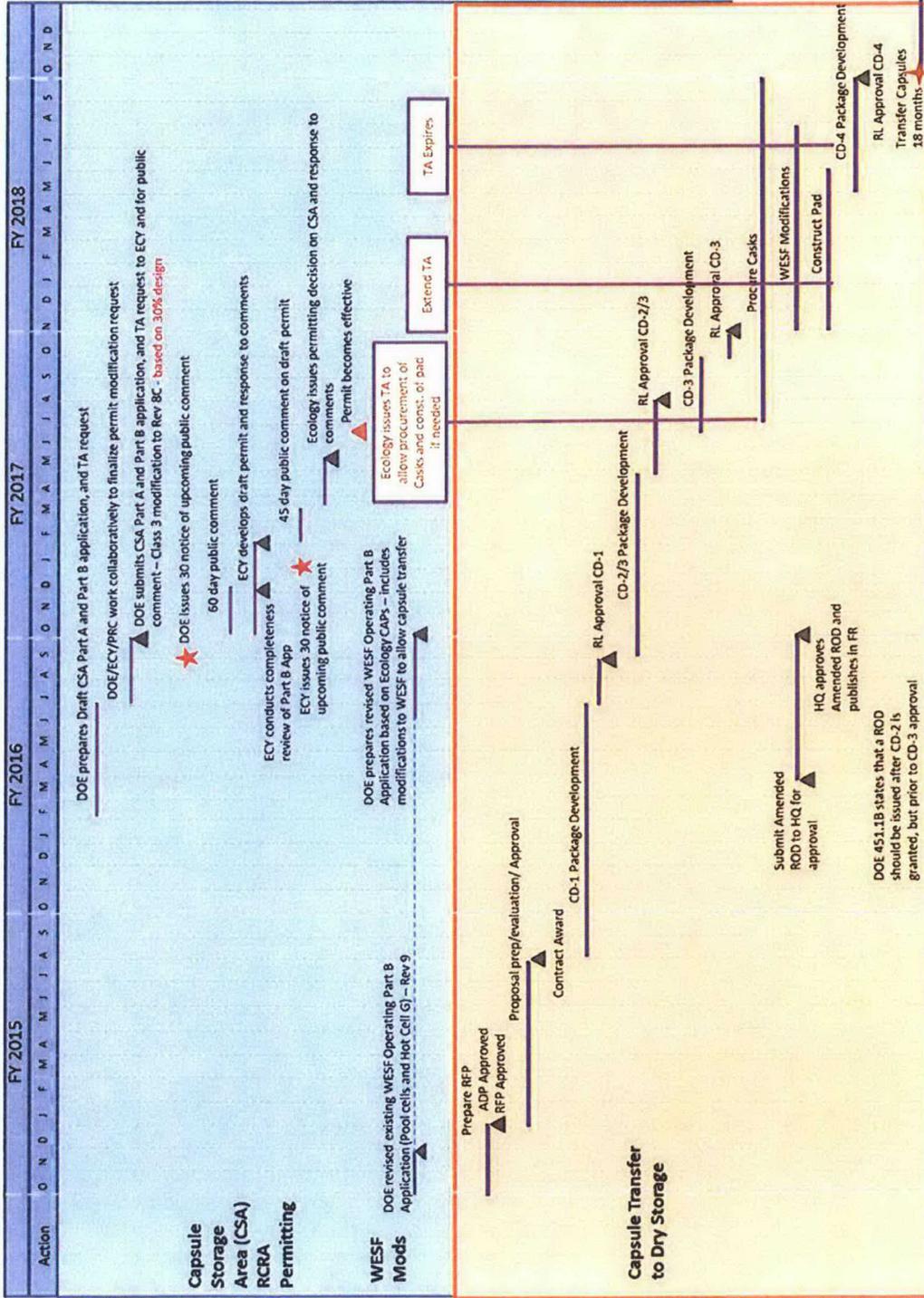
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Figure 2. Project W-135 Capsule Storage Area Dangerous Waste Permitting and Project Schedule



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Appendix A

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Air Permitting Strategy

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Terms

AOP	Air Operating Permit
BARCT	Best Available Radiological Control Technology
Ecology	Washington State Department of Ecology
NOCA	Notice of Construction Application
WDOH	Washington State Department of Health
WESF	Waste Encapsulation and Storage Facility

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A1 Introduction

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2 A two-phased permitting approach is being utilized for air permitting. In the initial phase, the existing K-3
3 filters will be decoupled from the Waste Encapsulation and Storage Facility (WESF) stack after
4 installation of a new K-3 filter and exhaust stack. This will create two new emission units and modify the
5 existing emission unit. The pool cells, operating gallery, service gallery, and truck port will continue to be
6 ventilated through the K-1 filters and existing stack. The existing stack will comply with requirements for
7 the instrumentation and monitoring equipment and sample point qualification as outlined in a Notice of
8 Construction Application (NOCA) for radioactive air emissions. The hot cell(s) and canyon exhaust
9 effluent will exhaust through the new K-3N filters and stack. The stack design, including lighting, will
10 comply with requirements for the instrumentation and monitoring equipment and sample point
11 qualification based on the unabated potential to emit for the canyon and hot cell(s) radiological inventory
12 in place at the start of the project. The initial phase NOCA will be submitted to the Washington State
13 Department of Health (WDOH). The NOCA will address Best Available Radiological Control
14 Technology (BARCT), as outlined in WAC 246-247, "Radiation Protection—Air Emissions,"
15 Appendix B, "BARCT Compliance Demonstration." The BARCT demonstration also includes a
16 compliance matrix, separate from NOCA, to document the substantive ASME AG-1, *Code on Nuclear
17 Air and Gas Treatment*, standards identified in WAC 246-247.

18 In the second phase, the new K-3N exhaust stack is expected to transition to a minor stack (less than
19 0.1 mrem/year unabated potential to emit) designation upon completion of Project W-130. The K-3N
20 stack design, including lighting, will comply with requirements for instrumentation and monitoring
21 equipment and sample point qualification needed as a result of that stack designation. The K-1 stack is
22 expected to be removed from the license because the ventilated air space contains sealed sources
23 (cesium/strontium capsules), which are exempt from *Washington Administrative Code* permitting
24 requirements. This is considered to be a significant Air Operating Permit (AOP) modification.
25 This modification will be initiated with submission of a second NOCA to WDOH and the Washington
26 State Department of Ecology (Ecology). Once the NOCA is approved by WDOH, Ecology will conduct a
27 public comment period, incorporate comments, and issue a revision to the AOP. Once the AOP has been
28 updated, changes proposed by the WDOH-approved NOCA may be implemented.

29 For radioactive air licensing, the proposed action is categorically exempt from the requirements of
30 RCW 43.21C, "State Environmental Policy," according to WAC 197-11-845, "SEPA Rules,"
31 "Department of Social and Health Services," covering most WDOH actions and consistent with the
32 exemption of actions on air operating permits provided by RCW 43.21C.0381.

A2 References

- 33
34 ASME AG-1-2012, 2013, *Code on Nuclear Air and Gas Treatment*, American Society of Mechanical
35 Engineers, New York, New York. Available at:
36 www.techstreet.com/products/preview/1857409.
- 37 RCW 43.21C, "State Environmental Policy," *Revised Code of Washington*, Olympia, Washington.
38 Available at: <http://apps.leg.wa.gov/RCW/default.aspx?cite=43.21C>.
- 39 WAC 197-11-845, "SEPA Rules," "Department of Social and Health Services," *Washington
40 Administrative Code*, Council on Environmental Quality, Olympia, Washington. Available at:
41 <http://apps.leg.wa.gov/WAC/default.aspx?cite=197-11>.
- 42 WAC 246-247, "Radiation Protection—Air Emissions," *Washington Administrative Code*, Olympia,
43 Washington. Available at: <http://apps.leg.wa.gov/WAC/default.aspx?cite=246-247>.

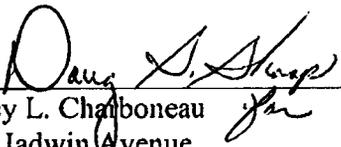
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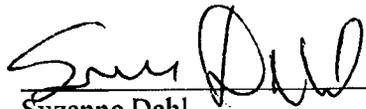
**Waste Encapsulation and Storage Facility and Capsule Storage Area Permitting Plan
Concurrence**

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