CH2M HILL DOCUMENT RELEASE FORM

(1) Document Number:	RPP-19822	(2) Revision Number: 0-A	(3) Effective Date: 12/7/05
(4) Document Type:	☐ Digital Image ☒ Hard copy ☐ PDF ☐ Video	(a) Number of pages (including the DRF) or number of digital images	10
(5) Release Type	☐ New ☐ Cancel	☒ Page Change	☐ Complete Revision
(6) Document Title:	HANFORD DEFINED WASTE MODEL - REVISION 5.0		
(7) Change/Release Description:	Page change. Correct the reporting of the tank waste iodine-129 inventory predicted by the Hanford Defined Waste Model		
(8) Change Justification:	Rev. 0 of this document incorrectly reported the tank waste iodine-129 inventory predicted by the Hanford Defined Waste Model		
(9) Associated Structure, System, and Component (SSC) and Building Number:	(a) Structure Location: N/A	(c) Building Number: N/A	
	(b) System Designator: N/A	(d) Equipment ID Number (EIN): N/A	

(10) Impacted Documents:	(a) Document Type	(b) Document Number	(c) Document Revision

(11) Approvals:

(a) Author (Print/Sign): B. A. Higley B.A. Higley	Date: 11-2-05
(b) Responsible Manager (Print/Sign): M. W. Kirch M W Kirch	Date: 12/7/2005
(c) Reviewer (Optional, Print/Sign): D. E. Place D. E. Place	Date: 11/2/05
(d) Reviewer (Optional, Print/Sign):	Date:

(12) Distribution:

(a) Name	(b) MSIN	(a) Name	(b) MSIN
See distribution sheet			

Release Stamp

DATE: DEC 07 2005
STA: 4
HANFORD RELEASE
ID: 2

(13) Clearance	(a) Cleared for Public Release	(b) Restricted Information?	(c) Restriction Type:
	☑ Yes ☐ No	☐ Yes ☑ No	

(14) Clearance Review (Print/Sign): L. Fox Leann Fox Date: 12-7-05

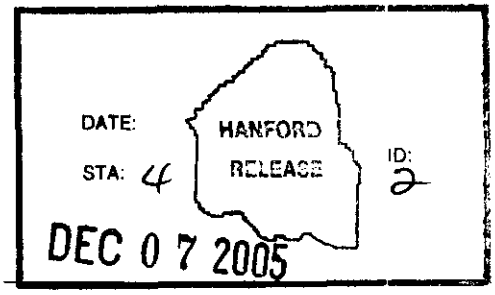
HANFORD DEFINED WASTE MODEL - REVISION 5.0

B. A. Higley, D. E. Place
CH2M HILL Hanford Group, Inc.
Richland, WA 99352
U.S. Department of Energy Contract DE-AC27-99RL14047

EDT/ECN: UC:
Cost Center: 7G410 Charge Code: 501011
B&R Code: Total Pages: 522

Key Words: Hanford Defined Waste Model, separations plants, tank waste, Best-Basis Inventory, T-Plant, B-Plant, REDOX, PUREX, sludge, saltcake, BBI, HDW

Abstract: Documents the changes made to the Hanford Defined Waste Model encompassed by Revision 5.0 including: updated ORIGNE2 fuel activity estimates, improved chemical process simulation, and correction of identified errors. The model is a spreadsheet-based engineering estimate of the chemical and radionuclide composition of the wastes contained in the single-shell and double-shell tanks; based process flowsheets, and reactor, separation plant and tank farm records.



Release Approval 12-7-05 Date Release Stamp

Approved For Public Release

Tank Farm Contractor (TFC)
RECORD OF REVISION

(1) Document Number: RPP-19822

Page 1

(2) Title: HANFORD DEFINED WASTE MODEL - REVISION 5.0

Change Control Record

(3) Revision	(4) Description of Change - Replace, Add, and Delete Pages	Authorized for Release	
		(5) Resp. Engr. (print/sign/date)	(6) Resp. Mgr. (print/sign/date)
0	Initial issue EDT-820524	B. A. Higley, 2-12-04	K. W. Kirch, 2-12-04
0-A RS	The tank waste iodine-129 inventory reported to be predicted by Rev 5 of the HDW Model was corrected.	B. A. Higley B A Higley 11/2/05	N. W. Kirch NW Kirch 12-7-2005

RPP-19822
Revision 0-A

HANFORD DEFINED WASTE MODEL – REVISION 5.0

B. A. Higley
D. E. Place
CH2M HILL Hanford Group, Inc.

R. A. Corbin
B. C. Simpson
Technical Resources International, Inc.

Date Published
November 2005

CH2MHILL
Hanford Group, Inc.

Prepared for the U.S. Department of Energy
Office of River Protection

Contract # DE-AC27-99RL14047, Modification M030

Approved for Public Release; Further Dissemination Unlimited

Table ES-1. Change in HDW Model Predicted Tank Waste Radionuclide Inventories (All values are reported as of January 1, 2001). (3 Sheets)

Radionuclide	HDW Model Rev. 4.0 (Ci)	HDW Model Rev. 5.0 (Ci)	Change in Estimated Tank Waste Inventory (Percent)	Primary Reason for Change
^{3}H	4.83E+04	9.52E+03	-80%	Modeling of process losses
^{14}C	4.80E+03	8.51E+02	-82%	Modeling of process losses
^{59}Ni	9.34E+02	1.32E+03	+41%	Corrected material balance error
^{63}Ni	8.73E+04	1.26E+05	+44%	Corrected material balance error
^{60}Co	4.90E+03	1.60E+04	+226%	Postulated 1 ppm ^{59}Co fuel impurity. See Section 7.1
^{79}Se	7.73E+02	7.70E+01	-90%	Half-life change
^{90}Sr	5.21E+07	5.04E+07	-3%	---
^{90}Y	5.21E+07	5.04E+07	-3%	---
^{93}Zr	3.63E+03	4.64E+03	+28%	Corrected material balance error
^{93m}Nb	2.97E+03	3.66E+03	+23%	Corrected material balance error
^{99}Tc	3.26E+04	2.51E+04	-23%	Modeling of process losses
^{106}Ru	8.48E+02	1.06E+03	+24%	Corrected material balance error and half-life change
^{113m}Cd	1.21E+04	5.72E+03	-53%	Fission product yield change
^{125}Sb	3.61E+04	1.90E+04	-47%	Fission product yield change
^{126}Sn	1.19E+03	3.21E+02	-73%	Half-life change
^{129}I	6.30E+01	3.85E+01	-39%	Fission product yield change and modeling of process losses
^{134}Cs	8.39E+03	8.40E+03	0%	---
^{137}Cs	4.01E+07	3.92E+07	-2%	---
^{137m}Ba	3.79E+07	3.70E+07	-2%	---
^{151}Sm	2.61E+06	3.22E+06	+23%	Corrected material balance error
^{152}Eu	1.03E+03	1.07E+03	+3%	---
^{154}Eu	8.38E+04	9.17E+04	+9%	---
^{155}Eu	5.13E+04	5.12E+04	0%	---
^{226}Ra	6.29E-02	9.14E-03	-85%	Stopped in-growth at date of U separation

Table 6-1. Change in HDW Model Predicted Tank Waste Radionuclide Inventories (All values are reported as of January 1, 2001). (3 Sheets)

Radionuclide	HDW Model Rev. 4.0 (Ci)	HDW Model Rev. 5.0 (Ci)	Change in Estimated Tank Waste Inventory (Percent)	Primary Reason for Change
^{3}H	4.83E+04	9.52E+03	-80%	Modeling of process losses
^{14}C	4.80E+03	8.51E+02	-82%	Modeling of process losses
^{59}Ni	9.34E+02	1.32E+03	+41%	Corrected material balance error
^{63}Ni	8.73E+04	1.26E+05	+44%	Corrected material balance error
^{60}Co	4.90E+03	1.60E+04	+226%	Postulated 1 ppm ^{59}Co fuel impurity. See Section 7.1
^{79}Se	7.73E+02	7.70E+01	-90%	Half-life change
^{90}Sr	5.21E+07	5.04E+07	-3%	---
^{90}Y	5.21E+07	5.04E+07	-3%	---
^{93}Zr	3.63E+03	4.64E+03	+28%	Corrected material balance error
^{93m}Nb	2.97E+03	3.66E+03	+23%	Corrected material balance error
^{99}Tc	3.26E+04	2.51E+04	-23%	Modeling of process losses
^{106}Ru	8.48E+02	1.06E+03	+24%	Corrected material balance error and half-life change
^{113m}Cd	1.21E+04	5.72E+03	-53%	Fission product yield change
^{125}Sb	3.61E+04	1.90E+04	-47%	Fission product yield change
^{126}Sn	1.19E+03	3.21E+02	-73%	Half-life change
^{129}I	6.30E+01	3.85E+01	-39%	Fission product yield change and modeling of process losses
^{134}Cs	8.39E+03	8.40E+03	0%	---
^{137}Cs	4.01E+07	3.92E+07	-2%	---
^{137m}Ba	3.79E+07	3.70E+07	-2%	---
^{151}Sm	2.61E+06	3.22E+06	+23%	Corrected material balance error
^{152}Eu	1.03E+03	1.07E+03	+3%	---
^{154}Eu	8.38E+04	9.17E+04	+9%	---
^{155}Eu	5.13E+04	5.12E+04	0%	---
^{226}Ra	6.29E-02	9.14E-03	-85%	Stopped in-growth at date of U separation

RPP-19822 Rev. 0-A

CH2M HILL SPREADSHEET VERIFICATION AND RELEASE FORM

1. SVF 1055 Rev. 0

1a. No. Pages: 4

2. **Spreadsheet Owner, Organization, MSIN, & Phone No.:** B. A. Higley, Flowsheet and Process Models, R2-12, 376-5694

3. **Spreadsheet File Name and Version No.:** Compare HDW Rev 45_397CHG Rev 1.xls

4. **Function and Purpose of Spreadsheet:** The purpose of this spreadsheet is to calculate the tank waste radionuclide inventory predicted by the Hanford Defined Waste Model Revision 5, and to compare with the radionuclide inventory predicted by Revision 4 of the Hanford Defined Waste Model.

5. **Spreadsheet Category:** ☐ Critical Spreadsheet ☑ Non-Critical Spreadsheet ☐ Multiple-Use Spreadsheet

6. **Associated Document(s):** RPP-19822 Rev. 0A **6a. Attachments:** 3

7. **Scope of Verification:** ☑ Input Data ☑ Formulas ☐ Changes Only ☐ Macros/Add-ins ☐ Other

8. **Scope Description:** Complete review.

9. **Verification Checklist:**

		Yes	No	NA
a.	All unique formulas in spreadsheet have been checked that they correctly perform their intended function.	☑	☐	☐
b.	Non-unique formulas have been reviewed to confirm that they have been correctly copied.	☑	☐	☐
c.	All values are correctly labeled with units.	☑	☐	☐
d.	Formulas were checked for dimensional consistency.	☑	☐	☐
e.	Spreadsheet contains no hidden pages or formulas/data on hidden ranges/pages have been verified.	☑	☐	☐
f.	Links to external workbooks have been verified.	☐	☐	☑
g.	Input data used in the spreadsheet are appropriate and have been checked against their original source.	☑	☐	☐
h.	Spreadsheet has been reviewed for common errors. See TFC-ENG-DESIGN-C-32, Attachment C for guidance.	☑	☐	☐
i.	Assumptions in the spreadsheet are reasonable and supportable.	☑	☐	☐
j.	Macros contained in the spreadsheet have been verified for correct operation.	☐	☐	☑
k.	Add-in software is commercially available software, suitable for its intended purpose, and is a production version of the software (e.g. not be a "beta" or test version).	☐	☐	☑
l.	Spreadsheet contains a documentation sheet with spreadsheet purpose, methodology, assumptions, and reference to current SVF No.	☑	☐	☐
m.	A change log is included for multiple-use or revised single-use spreadsheets and all changes in the log have been verified.	☐	☐	☑
n.	If the spreadsheet is a critical spreadsheet, a published spreadsheet description document has been produced that provides a description of the spreadsheet purpose, assumptions, methodology.	☐	☐	☑
o.	Spreadsheet has been protected against inadvertent change per TFC-ENG-DESIGN-C-32, Section 4.6.3.	☑	☐	☐
p.	All errors identified during verification have been corrected and the spreadsheet is suitable for its intended purpose.	☑	☐	☐

10. **Comments:** (Explanation for any items marked "No" must be provided)

None.

11. Approvals/Clearance:	Printed Name:	Signature:	Date:
Spreadsheet Owner:	B. A. Higley	B. A. Higley	10/31/05
Spreadsheet Verifier:	D. E. Place	D. E. Place	10/31/05
Owner's Manager:	N. W. Kirch	N. W. Kirch	11/2/05
LCCB Approval (if required):			
Clearance Review:	L. Fox		

Release Stamp: DATE: NOV 0 2 2005 STA: 4 HANFORD RELEASE ID: 2

Cleared for Public Release? ☑ Yes ☐ No — L. FOX Leann Fox 11-2-05.

Restricted Use? ☐ Yes ☑ No

Restriction Type: N/A

When completed, submit the original hard copy signed SVF form together with a protected electronic copy of the spreadsheet (in *.xls or *.xlt format) to the Document Control Service Center for records retention and release. See Form Instructions for how to transmit spreadsheet electronic file.

BBI SPREADSHEET CHECKLIST

A. **Name of Spreadsheet Owner:** B. A. Higley

B. **Spreadsheet File Number:** 1055

C. **File Name of Spreadsheet:** Compare HDW Rev 45_397CHG Rev 1.xls

D. **Location of Spreadsheet (share drive, personal computer, data system):** StdInv share drive

E. **Brief Description of Function and Purpose of Spreadsheet:** The purpose of this spreadsheet is to calculate the tank waste radionuclide inventory predicted by the Hanford Defined Waste Model Revision 5, and to compare with the radionuclide inventory predicted by Revision 4 of the Hanford Defined Waste Model.

F. **Assumptions Important to Spreadsheet Function if Applicable:** None

G. **Method Used to Perform Verification and Verification Documentation:** Electronic and visual comparison of input data. Inspection of cell formulas. Use of this checklist.

H. **Verification Method Documentation:**

Confirm Input Data:

Verify new or modified data.

NA 1. Verify volume of saltwell liquor pumped against the SST Engineering monthly reports.

NA 2. Verify other transfer volumes against the TWINS Tank Transfer Report.

NA 3. Verify tank volumes against PCSACS waste level measurements.

NA 4. Verify solid phase volumes against tape readings, sludge level measurement data sheets or other appropriate source documentation (such as the HDW model or retained gas documents).

NA 5. Electronically download concentration data from BBI Calculation Detail Reports, Means and Confidence Interval Reports or the Best Basis Inventory Maintenance tool and compare to the original spreadsheet data with logical comparison functions or visually if the data can be laid side by side. Alternately, a manual comparison can be made to a hardcopy document, checking at least 10% of the data. Check all data if errors are found.

General Spreadsheet Checking:

Verify unique equations that have been added since the last review.

1. Verify that data are appropriately referenced and the units labeled.

2. Verify that all radionuclides are decayed to the same common date (usually 1/1/94 or 1/1/01).

NA 3. Verify that mass spectrometry results for radionuclides have been converted to uCi/g or uCi/mL.

4. Carefully check the parentheses in one instance of any added equations to assure that the calculation order will give the desired result.

5. For any unusual equation, perform a dimensional analysis to assure that unwanted units cancel and the final result has the proper units. Note that percentages (wt% and vol%) actually have implied units (for example wt% centrifuged solids = g centrifuged solids/g total sample and vol% settled solids = mL settled solids/mL total sample).

Spreadsheet File Number 1055

NA 6. Verify that VLOOKUP or HLOOKUP ranges are fixed ("$" signs before both the columns and rows). Otherwise the lookup range will "walk" as the equation is copied to adjacent cells.

7. Verify that all cells in the concentration vector worksheet are correctly referenced to the final estimates in the other worksheets. This verification can be accomplished by visually comparison of copied, logical functions comparing the data cells, using the Excel auditing features or scrolling through cell references if analytes are listed in the same order in both the source and the concentration vector worksheets.

8. Remove extraneous data/calculations or obsolete information that do not support the purpose of the spreadsheet.

Spreadsheet Checks for Liquid Waste Transfers:

NA 1. Verify that the sum of the uranium isotopes converted to a mass basis is within 1% of the U_{Total} concentration, that the ^{238}Pu activity is between 1 and 10% of the $^{239/240}Pu$ radioactivity, that the wt% ^{240}Pu is between 1 and 8 wt% of the total Pu, that the ^{235}U concentration is < 1 wt% of the total uranium and that the ^{238}U is between 99 and 100 wt% of the total uranium.

NA 2. Verify one instance of any new equations added to the spreadsheet. Use the spreadsheet auditing functions to verify proper cell references. Also, confirm that the last instance of this equation in the spreadsheet is identical to the first usage in the added cells.

NA 3. Look at the trend of analyte concentrations with time. Can abrupt changes be assigned to new transfer or composition data?

NA 4. Verify that the wt% water and density equations include the contribution of added water (both equations are different than the mass balance equation for the analyte concentrations). Compare the wt% water and density trends to the sum of the chemical analytes (total chemical or mass concentration). The density should move in the same direction, whereas the wt% water should move in the opposite direction.

NA 5. Verify that concentration calculations are discontinued when data for individual analytes are not available for all input streams.

Spreadsheet Checks for Reconstitution of Centrifuged Solid and Liquid Data:

NA 1. Verify that the equations for calculating the wt% centrifuged solids are correct.

NA 2. Verify the first unique instance of the reconstitution equation.

$C_{settled\ solids}$ = wt% Centrifuged solids * $C_{centrifuged\ solid}$ +
(100%-wt% Centrifuged solids) *C_{liquid} /Density of liquid

In particular, note that only the second term in the above equation requires a density correction.

Spreadsheet Review Closeout:

1. Make any required changes in the spreadsheet (reviewer) and flag the changes with color highlighting. The reviewer will also electronically record the review in the properties section of the workbook (Reviewed by: Name and Date)

2. Marked changes have been reviewed and resolved (author).

Spreadsheet File Number 1055

BAHB. Remove error-highlighting, lock all cells, password protect the workbook and transfer a copy to the TIR directory of the StdInv shared drive (author). Each individual will utilize a single password for BBI spreadsheet work and will make this password available to the Manager of Data Development and Interpretation. The author will retain a copy of the spreadsheet, which is to be transferred if job assignments change.

I. Approvals:

Owner: B. A. Higley B. A. Higley 10/31/05

Verifier: D. E. Place D. E. Place 10/31/05

Notes:

BAHW Documentation worksheet: Minor editorial changes.

PAPW Comparison worksheet: Added column for inventory units. Added comment to Cell B12 to explain correction of ^{90}Y inventory.

BAHW Rev. 5 tank inv worksheet: Added units columns (two locations). Corrected equation in Cell B0178 - no change in resulting value. All input data was OK.

BAHW Cribs & Leaks worksheet: All OK.

BAHW Rev. 4 Decay worksheet: Input inventories from HDW Rev. 4 were verified - all OK.

DISTRIBUTION SHEET

To	From	Page 1 of 2
Distribution	Flowsheet and Process Models	Date 11-2-05
Project Title/Work Order: RPP-19822, Rev. 0-A, HANFORD DEFINED WASTE MODEL - REVISION 5.0		EDT No. N/A
		ECN No. N/A

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
CH2M HILL Hanford Group, Inc.					
J. N. Appel	R2-12	X			
D. L. Banning	R2-12	X			
W. B. Barton	S7-70	X			
K. D. Boomer	H6-19	X			
P. J. Certa	R2-12	X			
J. G. Field	H6-62	X			
T. G. Goetz	R1-82	X			
J. M. Grigsby	S7-90	X			
B. A. Higley	R2-12	X			
M. E. Johnson	H6-19	X			
N. W. Kirch	R2-58	X			
M. A. Knight	S5-08	X			
S. D. Kozlowski	R1-82	X			
J. G. Kristofzski	H6-03	X			
S. M. Mackay	R2-58	X			
F. M. Mann	E6-35	X			
A. K. Naiknimbalker	R2-12	X			
D. M. Nguyen	R2-12	X			
D. L. Parker	H6-03	X			
D. E. Place	R2-12	X			
J. H. Rasmussen	R2-12	X			
L. M. Sasaki	S7-90	X			
D. J. Washenfelder	R2-58	X			
TCSRC	R1-10	X			
Fluor Federal Services					
R. J. Puigh	E6-17	X			

A-6000-135 (10/97)

DISTRIBUTION SHEET

To	From	Page 2 of 2
Distribution	Flowsheet and Process Models	Date 11-2-05
Project Title/Work Order		EDT No. N/A
RPP-19822, Rev. 0-A, HANFORD DEFINED WASTE MODEL - REVISION 5.0		ECN No. N/A

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
DOE Office of River Protection					
R. A. Gilbert	H6-60	X			
W. Liou	H6-60	X			
R. W. Lober	H6-60	X			
C. S. Louie	H6-60	X			
Pacific Northwest National Laboratory					
C. T. Kincaid	K9-33	X			
Technical Resources International, Inc.					
R. A. Corbin	B1-41	X			
B. C. Simpson	B1-41	X			

A-6000-135 (10/97)

INFORMATION CLEARANCE REVIEW AND RELEASE APPROVAL

Part I: Background Information

Title: Hanford Defined Waste Model - Revision5.0

Information Category:
☐ Abstract ☐ Journal Article ☐ Summary
☐ Internet ☐ Visual Aid ☐ Software
☐ Full Paper ☐ Report ☒ Other WMA C Closure WIR Reference

Publish to OSTI? ☐ Yes ☒ No

Trademark/Copyright "Right to Use" Information or Permission Documentation	Yes ☐	NA ☒

Document Number: RPP-19822 Revision 0-A Date: December 2005

Author: Darling, David (Dave) B

Part II: External/Public Presentation Information

Conference Name:

Sponsoring Organization(s): Rebecca Blackwell

Date of Conference: Conference Location:

Will Material be Handed Out? ☐ Yes ☒ No Will Information be Published? ☐ Yes ☒ No *(If Yes, attach copy of Conference format instructions/guidance.)*

Part III: WRPS Document Originator Checklist

Description	*Yes*	*N/A*	*Print/Sign/Date*
Information Product meets requirements in TFC-BSM-AD-C-01?	☐	☒	
Document Release Criteria in TFC-ENG-DESIGN-C-25 completed? (Attach checklist)	☐	☒	
If product contains pictures, safety review completed?	☐	☒	

Part IV: WRPS Internal Review

Function	*Organization*	*Date*	*Print Name/Signature/Date*
Subject Matter Expert	WRPS	12/17/2024	Darling, David (Dave) B Approved - IDMS data file att.
Responsible Manager	WRPS	12/16/2024	Levitt, Marc T Approved - IDMS data file att.
Other:			

Part V: IRM Clearance Services Review

Description	*Yes*	*No*	*Print Name/Signature*
Document Contains Classified Information?	☐	☒	If Answer is "Yes," ADC Approval Required Print Name/Signature/Date
Document Contains Information Restricted by DOE Operational Security Guidelines?	☐	☒	Reviewer Signature: Print Name/Signature/Date
Document is Subject to Release Restrictions? *If the answer is "Yes," please mark category at right and describe limitation or responsible organization below:*	☐	☒	Document contains: ☐ Applied Technology ☐ Protected CRADA ☐ Personal/Private ☐ Export Controlled ☐ Proprietary ☐ Procurement – Sensitive ☐ Patentable Info. ☐ OUO ☐ Predecisional Info. ☐ UCNI ☐ Restricted by Operational Security Guidelines ☐ Other (Specify)
Additional Comments from Information Clearance Specialist Review?	☐	☒	Information Clearance Specialist Approval APPROVED By Sarah Harrison at 2:33 pm, Jan 06, 2025 Print Name/Signature/Date

When IRM Clearance Review is Complete – Return to WRPS Originator for Final Signature Routing (Part VI)

INFORMATION CLEARANCE REVIEW AND RELEASE APPROVAL

Part VI: Final Review and Approvals

Description	Approved for Release		Print Name/Signature	
	Yes	N/A		
WRPS External Affairs	☒	☐	Kraemer, Kristin M	Approved - IDMS data file att.
WRPS Office of Chief Counsel	☒	☐	Kneese, Kyle C	Approved - IDMS data file att.
DOE – ORP Public Affairs/Communications	☒	☐	Dawson, Edward M	Approved - IDMS data file att.
Other: DOE SME	☒	☐	Millikin, Emily J	Approved - IDMS data file att.
Other:	☐	☐		

Comments Required for WRPS-Indicate Purpose of Document:

Document is reference in Final WMA C Closure WIR and will be submitted to Hanford Administrative Record to be available to the public.

APPROVED
By Sarah Harrison at 2:33 pm, Jan 06, 2025

Approved for Public Release;
Further Dissemination Unlimited

Information Release Station

Was/Is Information Product Approved for Release? ☒ Yes ☐ No

If Yes, what is the Level of Releaser? ☒ Public/Unrestricted ☐ Other (Specify) _____

Date Information Product Stamped/Marked for Release: 01/06/2025

Was/Is Information Product Transferred to OSTI? ☐ **Yes** ☒ **No**

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    Revision 5.0, Revision 0A, submitted by Dave Darling for public release. This document is
    referenced in Final WMA C Closure WIR and will be submitted to Hanford Administrative Record to
    be available to the public.</comments>
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  <task name="Milestone 2" id="62" date-done="20250106T0708"> </task>
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