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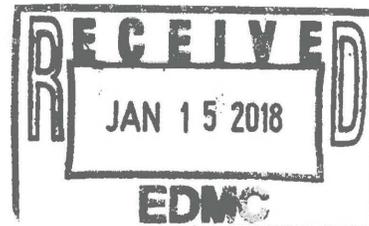
OFFICE OF RIVER PROTECTION

P.O. Box 450, MSIN H6-60
Richland, Washington 99352

NOV 28 2017

17-TF-0110

Ms. Alexandra K. Smith, Program Manager
Nuclear Waste Program
Washington State
Department of Ecology
3100 Port of Benton Blvd.
Richland, Washington 99354



Ms. Smith:

THE U.S. DEPARTMENT OF ENERGY, OFFICE OF RIVER PROTECTION
TRANSMITTAL OF RPP-RPT-60387, *TANK 241-AY-102 MONTHLY MONITORING REPORT
SEPTEMBER 2017*, REV. 00, IN RESPONSE TO SECTION II.B.13 OF THE 241-AY-102
SETTLEMENT AGREEMENT

Reference: Pollution Control Hearings Board, State of Washington, 241-AY-102 Settlement
Agreement, PCHB No. 14-041c, signed and submitted September 29, 2014,
effective October 2, 2014.

The purpose of this letter is to transmit the Tank 241-AY-102 Monthly Monitoring Report for
September 2017 to the Washington State Department of Ecology.

The 241-AY-102 Settlement Agreement (Reference) signed by the parties and submitted
to the Pollution Control Hearings Board (Board), became effective upon issuance of the
Board's Order dismissing the appeal. The Settlement Agreement requires a number of
documents and actions regarding Tank 241-AY-102, including the following provision in
Section II.B.13:

Monthly: Provide written reports to Ecology on all Tank 241-AY-102 annulus
inspection and monitoring results conducted according to the Monitoring Plan
(provided under requirement B.7 above) and the SY Settlement Agreement. These
documents shall include reporting on annulus ventilation performance and status,
images of the annulus, CAM readings, ENRAF readings, CAM and ENRAF
calibration results, sample analysis results, waste heat monitoring results,
including any interpretations and conclusions based on the results.

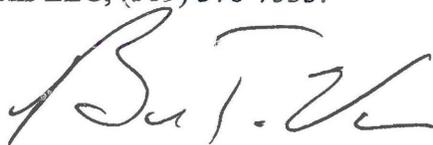
Ms. Alexandra K. Smith
17-TF-0110

-2-

If you have any questions, please contact Glyn D. Trenchard, Assistant Manager for Tank Farms Project, Office of River Protection, (509) 373-4016, or Jessica A. Joyner, Environmental Protection, Washington River Protection Solutions LLC, (509) 376-7533.



Mark A. Lindholm,
President and Project Manager
Washington River Protection Solutions LLC



Brian T. Vance, Manager
Office of River Protection

TF:RLE

Attachment

cc w/attach:

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R.M. Allen, WRPS
R.D. Cantwell, WRPS
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R.E. Gregory, WRPS
S.P. Guillot, WRPS
J.A. Joyner, WRPS
D.L. Klages, WRPS
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R.B. McPherson, WRPS
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M.F. Tavelli, WRPS
Administrative Record
Environmental Portal, LMSI
WRPS Correspondence Control

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S. Hudson, HAB
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R. Jim, YN

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C. Cress, AGO
K.T. Wood, AGO
D.B. Bartus, EPA
D.A. Faulk, EPA
S.S. Lowe, Ecology
J.J. Lyon, Ecology
J.W. Mathey, Ecology
N.M. Menard, Ecology
J.B. Price, Ecology
C.L. Whalen, Ecology
K.J. Wold, Ecology
K. Niles, ODOE

ATTACHMENT

17-TF-0110

TANK 241-AY-102 September 2017

MONTHLY MONITORING REPORT

DOCUMENT RELEASE AND CHANGE FORM				Release Stamp
Prepared For the U.S. Department of Energy, Assistant Secretary for Environmental Management By Washington River Protection Solutions, LLC., PO Box 850, Richland, WA 99352 Contractor For U.S. Department of Energy, Office of River Protection, under Contract DE-AC27-08RV14800 TRADEMARK DISCLAIMER: Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States government or any agency thereof or its contractors or subcontractors. Printed in the United States of America.				<div style="border: 2px solid red; padding: 10px; width: fit-content; margin: auto;"> <p style="color: red; font-weight: bold; font-size: 1.2em;">DATE:</p> <p style="color: red; font-weight: bold; font-size: 1.5em;">Nov 15, 2017</p> <div style="border: 1px solid red; padding: 5px; display: inline-block; margin-top: 10px;"> <p style="color: red; font-weight: bold; font-size: 0.8em;">HANFORD RELEASE</p> </div> </div>
1. Doc No: RPP-RPT-60435 Rev. 00				
2. Title: Tank 241-AY-102 Monthly Monitoring Report September 2017				
3. Project Number: <input type="checkbox"/> N/A T1P97		4. Design Verification Required: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
5. USQ Number: <input checked="" type="checkbox"/> N/A RPP-27195		6. PrHA Number Rev. <input checked="" type="checkbox"/> N/A		
Clearance Review Restriction Type: public				
7. Approvals				
Title	Name	Signature	Date	
Clearance Review	RAYMER, JULIA R	RAYMER, JULIA R	11/15/2017	
Document Control Approval	PORTER, MARY	PORTER, MARY	11/15/2017	
Originator	KLAGES, DEANNA L	KLAGES, DEANNA L	11/13/2017	
Responsible Manager	JOYNER, JESSICA A	JOYNER, JESSICA A	11/14/2017	
8. Description of Change and Justification				
Initial Release				
9. TBDs or Holds <input checked="" type="checkbox"/> N/A				
10. Related Structures, Systems, and Components				
a. Related Building/Facilities <input type="checkbox"/> N/A	b. Related Systems <input type="checkbox"/> N/A	c. Related Equipment ID Nos. (EIN) <input type="checkbox"/> N/A		
241-AY 241-AY-102 241-AY-102A	241-TMAC 241-VT 241-VTA 241-VTP 241-WST 241-WSTA	AY102-WSTA-CAM-102 AY102-WSTA-LDT-151 AY102-WSTA-LDT-152 AY102-WSTA-LDT-153 AY102-WST-LIT-101		
11. Impacted Documents – Engineering <input checked="" type="checkbox"/> N/A				
Document Number	Rev.	Title		
12. Impacted Documents (Outside SPF):				
N/A				
13. Related Documents <input type="checkbox"/> N/A				
Document Number	Rev.	Title		
RPP-PLAN-60074	05	TANK 241-AY-102 Monitoring Plan		
RPP-PLAN-60610	02	Tank 241-AY-102 Contingency Plan - Operations Phase		
RPP-RPT-60344	00	Tank 241-AY-102 Monthly Monitoring Report July 2017		
14. Distribution				
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CHERRY, STEVE	GENERAL COUNSEL			
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VOOGD, JEFFRY A	BASE OPS ENV COMPLIANCE			

INFORMATION CLEARANCE REVIEW AND RELEASE APPROVAL

Part I: Background Information

Title: Tank 241-AY-102 Monthly Monitoring Report September 2017	Information Category: <input type="checkbox"/> Abstract <input type="checkbox"/> Journal Article <input type="checkbox"/> Summary <input type="checkbox"/> Internet <input type="checkbox"/> Visual Aid <input type="checkbox"/> Software <input type="checkbox"/> Full Paper <input checked="" type="checkbox"/> Report <input type="checkbox"/> Other
Publish to OSTI? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Trademark/Copyright "Right to Use" Information or Permission Documentation	Yes NA <input type="checkbox"/> <input checked="" type="checkbox"/>
Document Number: RPP-RPT-60435 Revision 00	Date: November 2017
Author: Klages, Deanna L	

Part II: External/Public Presentation Information

Conference Name:	
Sponsoring Organization(s): Environmental Protection	
Date of Conference:	Conference Location:
Will Material be Handed Out? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Will Information be Published? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(If Yes, attach copy of Conference format instructions/guidance.)</i>

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Document Release Criteria in TFC-ENG-DESIGN-C-25 completed? (Attach checklist)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If product contains pictures, safety review completed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Part IV: WRPS Internal Review

Function	Organization	Date	Print Name/Signature/Date
Subject Matter Expert	WRPS		Klages, Deanna L Approved via att. IDMS data file.
Responsible Manager	WRPS		Joyner, Jessica A Approved via att. IDMS data file.
Other:			

Part V: IRM Clearance Services Review

Description	Yes	No	Print Name/Signature														
Document Contains Classified Information?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If Answer is "Yes," ADC Approval Required _____ Print Name/Signature/Date														
Document Contains Information Restricted by DOE Operational Security Guidelines?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Reviewer Signature: _____ Print Name/Signature/Date														
Document is Subject to Release Restrictions? <i>If the answer is "Yes," please mark category at right and describe limitation or responsible organization below:</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Document contains: <table style="width: 100%; margin-top: 5px;"> <tr> <td><input type="checkbox"/> Applied Technology</td> <td><input type="checkbox"/> Protected CRADA</td> </tr> <tr> <td><input type="checkbox"/> Personal/Private</td> <td><input type="checkbox"/> Export Controlled</td> </tr> <tr> <td><input type="checkbox"/> Proprietary</td> <td><input type="checkbox"/> Procurement – Sensitive</td> </tr> <tr> <td><input type="checkbox"/> Patentable Info.</td> <td><input type="checkbox"/> OOU</td> </tr> <tr> <td><input type="checkbox"/> Predecisional Info.</td> <td><input type="checkbox"/> UCNi</td> </tr> <tr> <td><input type="checkbox"/> Restricted by Operational Security Guidelines</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Other (Specify)</td> <td></td> </tr> </table>	<input type="checkbox"/> Applied Technology	<input type="checkbox"/> Protected CRADA	<input type="checkbox"/> Personal/Private	<input type="checkbox"/> Export Controlled	<input type="checkbox"/> Proprietary	<input type="checkbox"/> Procurement – Sensitive	<input type="checkbox"/> Patentable Info.	<input type="checkbox"/> OOU	<input type="checkbox"/> Predecisional Info.	<input type="checkbox"/> UCNi	<input type="checkbox"/> Restricted by Operational Security Guidelines		<input type="checkbox"/> Other (Specify)	
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<input type="checkbox"/> Restricted by Operational Security Guidelines																	
<input type="checkbox"/> Other (Specify)																	
Additional Comments from Information Clearance Specialist Review?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Information Clearance Specialist Approval <div style="border: 1px solid black; padding: 2px; display: inline-block; text-align: center;"> APPROVED <small>By Julia Raymer at 9:19 am, Nov 13, 2017</small> </div> _____ 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

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	Yes	N/A	
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WRPS Office of Chief Counsel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Approved via att. IDMS data file.
DOE – ORP Public Affairs/Communications	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Marshall, Richard Approved via att. IDMS data file.
Other: ORP SME	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Eakins, Reggie L Approved via att. IDMS data file.
Other: ORP General Counsel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Silberstein, Mark D Approved via att. IDMS data file.

Comments Required for WRPS-Indicate Purpose of Document:

September 2017 Monthly Monitoring Report submittal for Tank 241-AY-102 Settlement Agreement Section II.B.13 (PCHB No. 14-041c)

APPROVED
By Julia Raymer at 9:28 am, Nov 13, 2017

**Approved for Public Release;
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RPP-RPT-60435, Rev. 00

Tank 241-AY-102 Monthly Monitoring Report September 2017

Deanna L. Klages

Richland, WA 99352
U.S. Department of Energy Contract DE-AC27-08RV14800

EDT/ECN:	N/A	UC:	N/A
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Key Words: Tank, monthly monitoring report, AY-102, Settlement Agreement PCHB No. 14-041c

Abstract: September 2017 Monthly Monitoring Report submittal for Tank 241-AY-102 Settlement Agreement Section II.B.13 (PCHB No. 14-041c)

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APPROVED
By Julia Raymer at 4:22 pm, Nov 15, 2017

Release Approval

Date



Release Stamp

Approved For Public Release

RPP-RPT-60435, Rev. 00

EXECUTIVE SUMMARY

Monthly monitoring reports are generated for Tank 241-AY-102 pursuant to Section II.B.13 of the Settlement Agreement in *Washington River Protection Solutions and U.S. Department of Energy, Office of River Protection v. State of Washington, Department of Ecology* PCHB No. 14-041c, effective on October 2, 2014.

Tank 241-AY-102 tank waste retrieval was shut down on April 30, 2016, so that an additional retrieval technology could be installed. AY-102 retrieval using extended reach sluicers was completed in February 2017.

Environmental Notifications that related to Tank 241-AY-102 operations during the month of September 2017 are detailed in Section 6.0.

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ABBREVIATIONS AND ACRONYMS

AY-102	Tank 241-AY-102
CAM	continuous air monitor
Enraf	Enraf-Nonius Series 854
Ecology	Washington State Department of Ecology
Settlement Agreement	<i>Settlement Agreement and Stipulated Order of Dismissal</i>
TOC	Tank Operations Contractor

1.0 INTRODUCTION

1.1 PURPOSE

The September 2017 monthly monitoring report for Tank 241-AY-102 (AY-102) is submitted pursuant to Section II.B.13 of the Settlement Agreement in *Washington River Protection Solutions and U.S. Department of Energy, Office of River Protection v. State of Washington, Department of Ecology* (Ecology) PCHB No. 14-041c, effective on October 2, 2014. This provision states as follows:

Monthly: Provide written reports to Ecology on all Tank 241-AY-102 annulus inspection and monitoring results conducted according to the Monitoring Plan (provided under requirement B.7 above) and the SY Settlement Agreement. These documents shall include reporting on annulus ventilation performance and status, images of the annulus, CAM readings, ENRAF readings, CAM and ENRAF calibration results, sample analysis results, waste heat monitoring results, including any interpretations and conclusions based on the results.

The September 2017 monthly monitoring report contained herein, applies only to AY-102. This report for September 2017 covers the time period from September 1 through 30, 2017.

1.2 SUMMARY

As described in RPP-PLAN-60074, "Tank 241-AY-102 Monitoring Plan," this document provides the results of visual and video annulus inspections, primary and annulus ventilation performance and status, continuous air monitor (CAM) readings, Enraf¹ readings, CAM and Enraf calibration results, leak detection pit pH and liquid level results, waste temperature monitoring results, and including any interpretations and conclusions based on the results. Monitoring activities during tank pumping operations, as detailed in RPP-PLAN-60074, are also provided in this document. A summary of the visual and video annulus inspections is in Section 2.0, monitoring readings, calibration, and ventilation performance are in Section 3.0, estimate of annulus material volume is in Section 4.0, leak detection pit monitoring is in Section 5.0, and tank pumping operations equipment status is in Section 6.0.

2.0 ANNULUS VISUAL AND VIDEO INSPECTIONS

Visual and video inspections of the AY-102 annulus for the September 2017 reporting period are summarized below.

Sections II.B.12.a and b of the Settlement Agreement state:

- a. *Every two months: Conduct video inspections of the entire annulus or at least 95 percent of the annulus space.*

¹Enraf 854 XTG is a registered trademark of Enraf B.V., Delft, Netherlands.

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- b. *Every two weeks: Conduct video inspections of all currently known waste accumulations in the Tank AY-102 annulus and, as they are discovered, all newly discovered waste accumulations.*

The September 2017 monthly monitoring report includes the results for the video inspections performed every two weeks during September 2017 and the results for the video inspections performed every two months for the August 2017 – September 2017 inspection period.

On June 16, 2016, letter 16-NWP-123, “Department of Ecology Response to Letter 16-TF-0064, Proposed Update to *Tank 241-AY-102 Monitoring Plan, Rev. 4, RPP-PLAN-60074,*” (A.K. Smith, 2016), approved changes to the every two weeks video inspection sites. Operations have transitioned to monitoring only Riser 87 every two weeks. Riser 77 and Riser 83 are now being monitored every two months.

Figure 1 provides riser locations and inspection frequencies. Dates of inspection are provided in Table 1. Pictures of the video inspections performed in August 2017 – September 2017 are provided in Figures 2 through 9.

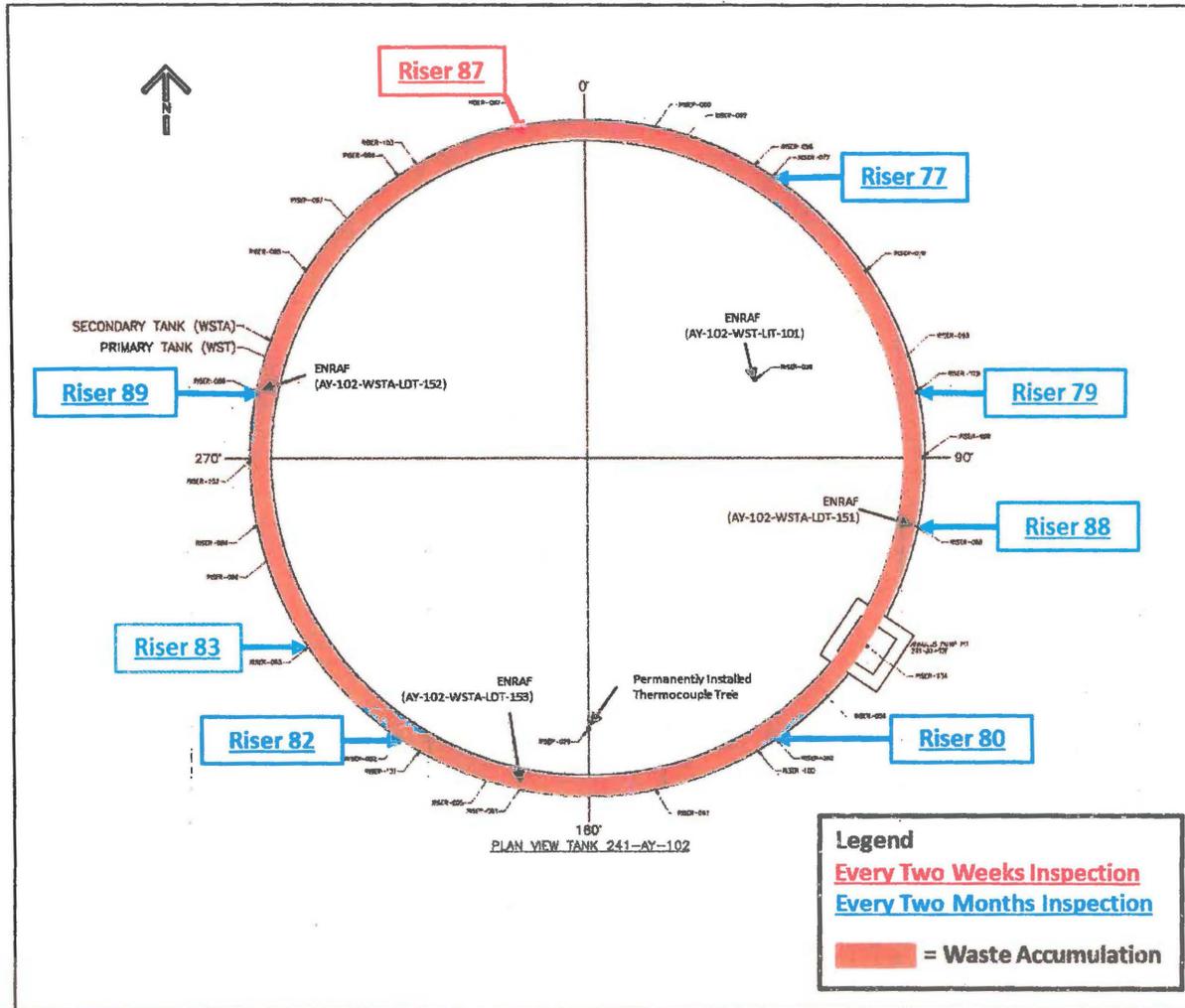
As stated in RPP-PLAN-60610, “Tank 241-AY-102 Contingency Plan – Operations Phase,” three conditions indicating a potential worsening leak rate from the primary tank will be observable through video inspections. The three conditions are evaluated during each video inspection and results are provided in Table 1.

Table 1. Visual Inspection Evaluation of Conditions Indicating a Potential Worsening Leak Rate from the Primary Tank

Condition	Inspection #1 September 5, 2017	Inspection #2 September 18, 2017
Video Evidence of a Change in Condition within the Viewable Ventilation Channels	Ventilation channels were not visible during the video inspection.	Ventilation channels were not visible during the video inspection.
Video Evidence of Significant Waste Accumulation Rate Increase ¹	The average annulus Enraf measurement was 10.24 inches. Slow decrease in level noted due to evaporation and refractory absorption.	The average annulus Enraf measurement was 10.27 inches. Slow decrease in level noted due to evaporation and refractory absorption.
Video Evidence of “Active Flow”	Ventilation channels were not visible during the video inspection. Waste now flows readily through the tank bottom to the annulus.	Ventilation channels were not visible during the video inspection. Waste now flows readily through the tank bottom to the annulus.

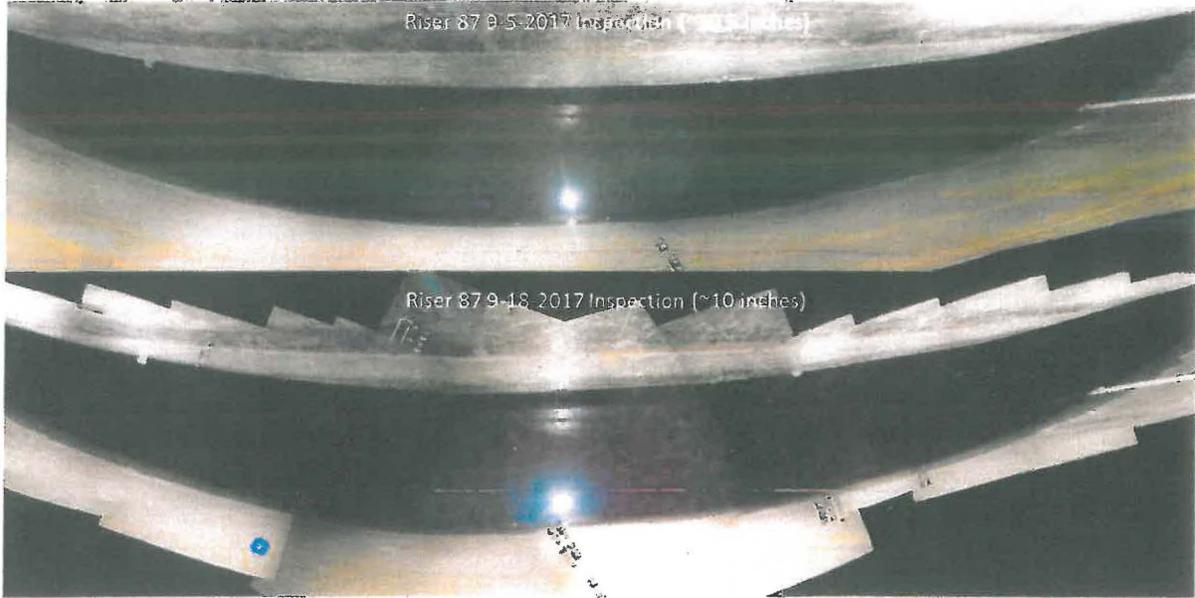
¹ A significant leak rate increase would constitute an order of magnitude volume change between inspection reports, based on video surveillance.

Figure 1. AY-102 Dome Penetration Diagram Showing Inspection Locations



3

**Figure 2. Waste Accumulation Monitoring through Riser 87
(Comparison between 9/5/2017 and 9/18/2017)**



**Figure 3. General Condition of the Annulus Floor on 8/7/2017 from Riser 77
Looking Left (A) and Looking Right (B)**

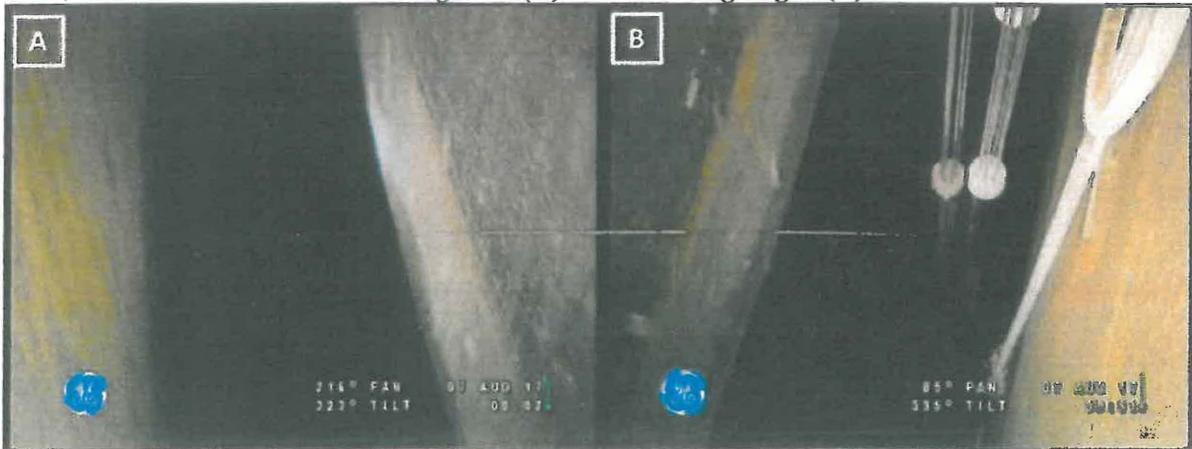


Figure 4. General Condition of the Annulus Floor on 8/7/2017 from Riser 79 Looking Left (A) and Looking Right (B)



Figure 5. General Condition of the Annulus Floor on 8/21/2017 from Riser 80

Riser 80 was inspected on 8/21/2017. Footage was unable to be recovered from the video recorder. Discussion between engineering and the camera operator occurred to document to condition observed during the inspection. The condition of the annulus was similar to Risers 88 and 89 that were also inspected on that day, and similar to the inspection through Riser 80 on 6/27/2017.

Figure 6. General Condition of the Annulus Floor on 9/5/2017 from Riser 82 Looking Left (A) and Looking Right (B)

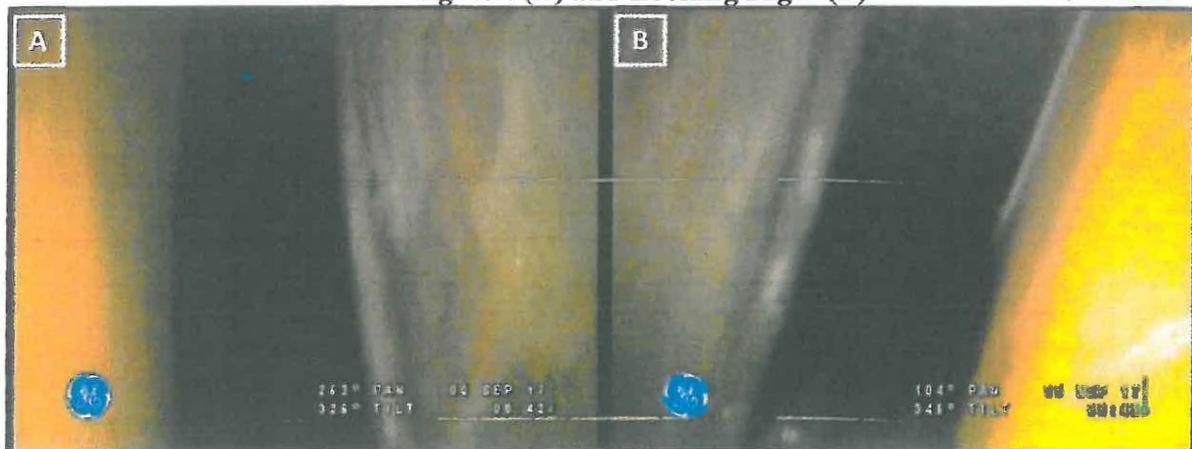


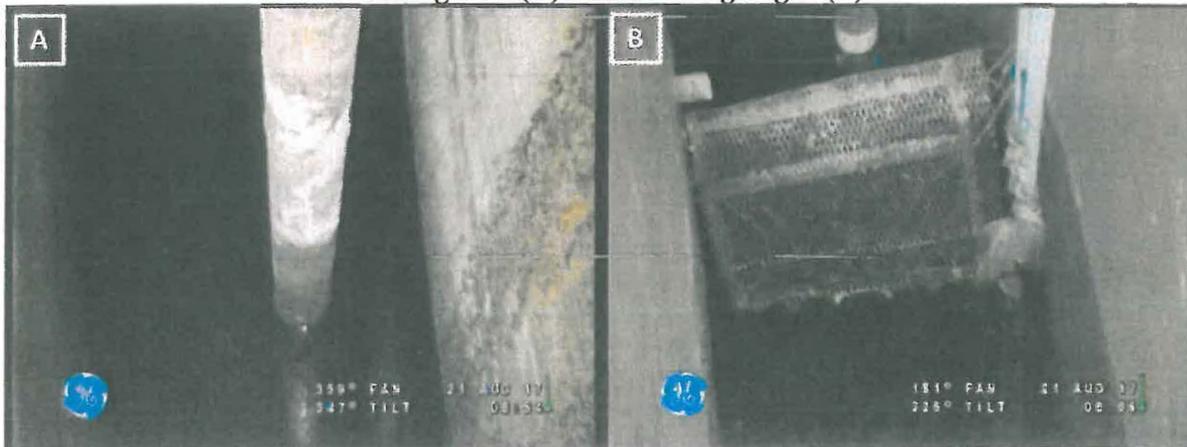
Figure 7. General Condition of the Annulus Floor on 9/5/2017 from Riser 83 Looking Left (A) and Looking Right (B)



Figure 8. General Condition of the Annulus Floor on 8/21/2017 from Riser 88 Looking Left (A) and Looking Right (B)



Figure 9. General Condition of the Annulus Floor on 8/21/2017 from Riser 89 Looking Left (A) and Looking Right (B)



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3.0 MONITORING

Table 2 provides AY-102 annulus and primary ventilation performance and status, CAM readings, Enraf readings, CAM and Enraf calibration results, waste heat monitoring results, and interpretations and conclusions based on the monitoring results for September 2017.

Table 2. Summary of September 2017 Monitoring and Calibration for AY-102

Description	Data Source	Instrument(s)	Calibration Results	In Service Dates ²	Interpretations and Conclusions
Primary Tank Surface Level	TMACS	Enraf (Riser 39) AY102-WST-LIT-101	Last: 11/30/16 Next: 10/26/17 Note 1.	9/1-30/17	Level Readings for September ranged between 7.09" and 7.11". The primary surface level was 7.11" on 9/30/17.
Annulus Surface Level	TMACS	Enraf (Riser 88) AY102-WSTA-LDT-151	Last: 9/28/17 Next: 8/24/18 Note 1.	9/1-30/17	Level Readings for September ranged between 10.36" and 10.35". The annulus level was 10.35" on 9/30/17.
		Enraf (Riser 89) AY102-WSTA-LDT-152	Last: 9/7/17 Next: 8/4/18 Note 1.	9/1-30/17	Level Readings for September ranged between 10.12" and 10.07". The annulus level was 10.07" on 9/30/17.
		Enraf (Riser 91) AY102-WSTA-LDT-153	Last: Out of Service on 8/27/17 Next: Scheduled to be back in service on 11/22/17 Note 2.	Out of Service	Annulus Leak Detector AY102-WSTA-LDT-153 was declared out of service on 8/27/2017 due to a loss of electrical power to the ENRAF because of a power outage. The unit is to be placed back in service by 11/22/2017.
Primary Tank Waste Temperatures Note 3.	MCS	Thermocouples at 4" height TE-047 (ALC) TE-074—R 70 TC1 TE-073—R 72 TC1 TE-071—R 40 TC1 TE-062—R 41 TC1 TE-065—R 42 TC1 TE-068—R 43 TC1	Note 1.	9/1-30/17	Average Solid/Sludge Temperature change for September 2017 was -1.13°F (from 79.90 to 78.77°F). The temperatures do not exceed the DST waste temperatures as documented in HNF-IP-1266.
Annulus Leak Detection (CAM)	SACS	Continuous Air Monitor (CAM) AY102-WSTA-CAM-102	Last: 9/3/15 Next: On demand	Not in service.	No readings. CAM was not operated during the month of September. The annulus exhaust is now routed through the AY/AZ primary exhaust. Annulus air no longer is routed past the annulus CAM air inlet.
Description		Percent Operated²	Interpretations and Conclusions		
Primary Tank Ventilation		91%	Dates of Operation: 9/1-30/17 Note 4.		
Annulus Tank Ventilation		0%	Dates of Operation: Not in service. Note 5.		

¹Supplemental manual readings taken by calibrated M&TE.

²Equipment is inspected daily in order to maintain operability, including days when equipment is not in service.

³Temperature monitoring is a Technical Safety Requirement Administrative Control Key Element to ensure that waste temperatures do not increase to temperatures greater than that assumed in the Tank Farms DST Time to Lower Flammability Limit analysis.

⁴Availability affected by outages for inspections, calibrations, and maintenance.

⁵The annulus exhaust is now routed through the AY/AZ primary exhauster.

4.0 ESTIMATE OF ANNULUS MATERIAL VOLUME

The previous monthly reporting period, August 1 through 31, 2017, estimated approximately 3860 gallons of waste in the annulus at the end of the month. The total estimated material volume in the annulus at the end of the current monthly reporting period, September 1 through 30, 2017, is approximately 3820 gallons as defined in Table 3. Figure 10 shows the total estimated annulus material volume over the last twelve reporting months.

During September 2017, the amount of waste in the annulus remained relatively stagnant as primary tank retrieval has been completed. No annulus pump out events occurred, but a slow level decline is observable and attributed to evaporation and refractory absorption behavior. Annulus level behavior for the month of September 2017 is provided in Figure 11.

Table 3. AY-102 Annulus Enraf Measurements and Estimated Material Volume

Annulus ENRAF Measurements ^a	9/1/2017	Inspection #1	Inspection #2	9/30/2017
		9/5/2017	9/18/2017	
Riser 88 (Inches)	10.36	10.33	10.43	10.33
Riser 89 (Inches)	10.12	10.10	10.11	10.06
Riser 91 (Inches)	10.30	10.29	Unavailable	Unavailable
Average Measurement (Inches)	10.26	10.24	10.27	10.20
Estimated Annulus Volume (Gallons)	3860	3850	3860	3820

^aAnnulus Enraf Measurements are obtained from the Surveillance Data Display System.

Figure 10. Total Annulus Material Volume

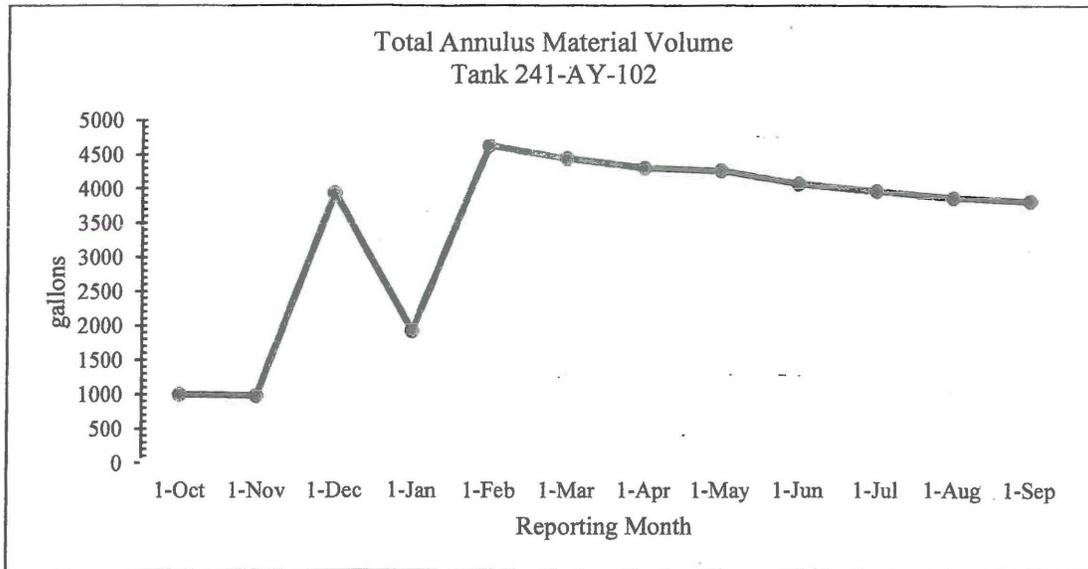
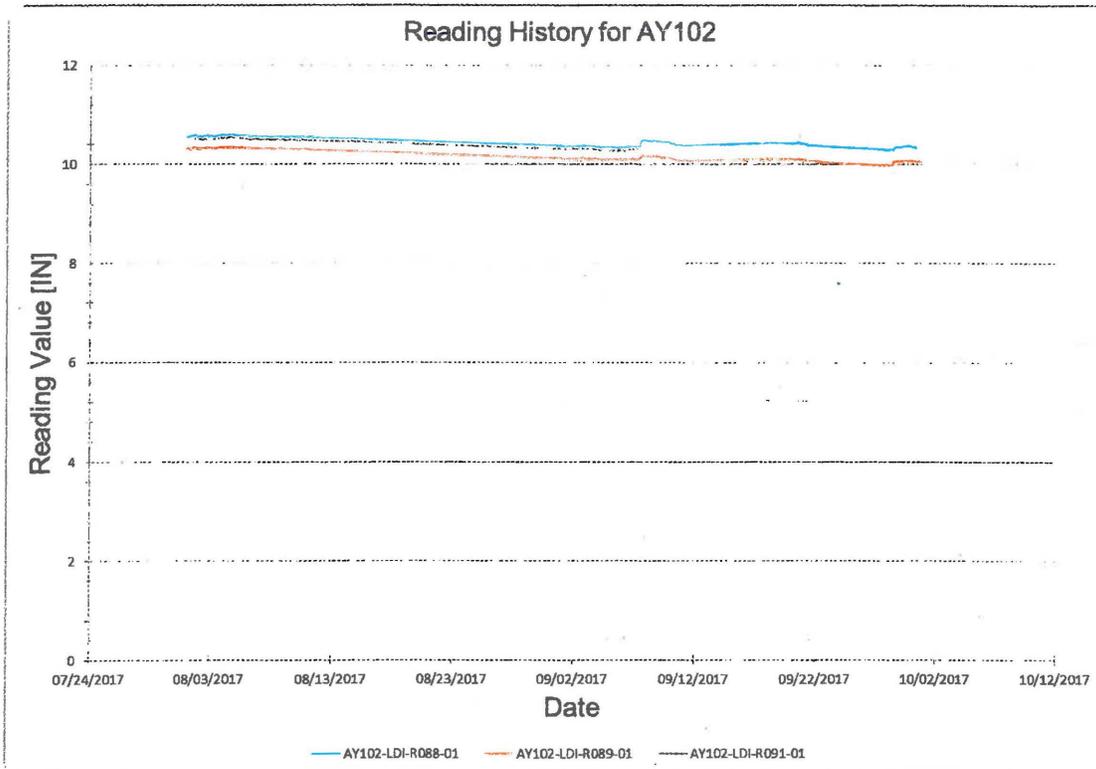


Figure 11. AY-102 Annulus Enraf Liquid Level Readings August - September 2017



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5.0 LEAK DETECTION PIT PH AND LIQUID LEVEL RESULTS

The AY-102 leak detection pit pH is taken at least monthly and the AY-102 leak detection pit liquid level is taken at least weekly. Results of the first and last readings of the month are given in Table 4.

Table 4. Leak Detection Pit pH and Liquid Level Readings for September 2017

Monitoring	Date	Reading	Interpretations and Conclusions
pH	9-5-2017	5.0	pH is within acceptable range.
Liquid Level	9-5-2017	6.30 in.	Liquid level is within acceptable range. Leak detection pit level readings are obtained weekly using the DRUCK® pressure measuring device using the weight factor dip tubes.
	9-25-2017	6.35 in.	

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6.0 TANK PUMPING OPERATIONS

Table 5 provides the environmental notifications announcing the changes in equipment status in September of 2017. In service dates for all monitoring equipment is provided in Table 2.

Table 5. Tank Pumping Operations Environmental Notifications

Environmental Notification*	Date	Equipment Status
TOC-ENV-NOT-2017-4415	9/25/2017	Annulus Leak Detector AY102-WSTA-LDT-153 was declared out of service on 8/27/2017 at 0715 hours due to a loss of electrical power to the ENRAF because of a power outage. The power outage is over and a work order is being generated to replace the plummet and conduct work/calibration of equipment on the ENRAF. The unit is to be placed back in service by 11/22/2017.

*Waste retrieval was completed in February 2017.

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7.0 REFERENCES

- HNF-IP-1266, "Tank Farm Operations Administrative Controls," as amended, Washington River Protection Solutions, LLC, Richland, Washington.
- RPP-PLAN-60610, 2016, "Tank 241-AY-102 Contingency Plan – Operations Phase," Rev. 02, U.S. Department of Energy, Office of River Protection, Washington River Protection Solutions, Richland, Washington.
- RPP-PLAN-60074, 2016, "Tank 241-AY-102 Monitoring Plan," Rev. 05, U.S. Department of Energy, Office of River Protection, Washington River Protection Solutions, Richland, Washington.
- Smith, A.K., 2016, "Department of Ecology Response to Letter 16-TF-0064, Proposed Update to *Tank 241-AY-102 Monitoring Plan*, Rev. 4, RPP-PLAN-60074," (letter 16-NWP-123 to Lindholm, M.A. and K.W. Smith, U.S. Department of Energy, Office of River Protection, and Washington River Protection Solutions, LLC, June 16, 2016), State of Washington, Department of Ecology, Richland, Washington.