1222536

Office of River Protection, State of Washington Department of Ecology
Tank Waste Retrieval Work Plan/Functions and Requirements Change Notice
(Per Hanford Federal Facility Agreement and Consent Order Section 9.3)

1. Document Title and Number: RPP-33116, Rev. 2, 241-C-110 Tanks Waste Retrieval Work Plan		
2. Minor Field Change: (Section 12.4 HFFACO Action Plan) ☐ Yes: (WRPS Signature Only – Attach signed form to Primary Document for record purposes) x No: Proceed to Box 3	**3.** Document Issue Date: 06/10/08 **4.** Document Modification Notice Date: 10/22/13	**5.** Notice Number: 2013-10
6. Do proposed changes require schedule changes? (Would this extend completion of retrieval beyond 12 months from date of initiation?) ☐ Yes x No	**7.** Do proposed changes include specific additions, deletions, or modification to scope and/or requirements which affect the overall intent of the plan? ☐ Yes x No	**8.** (Check only one box) ☐ Significant Modification (Check if the answer to question in either section 6 or 7 is "yes". Significant modifications require revision of the primary document.) Minor Modification x Requires modification of the document x Can be accomplished with Modification Notice.

9. Description and Justification of Change:

Change Description: A change is necessary to include updates that have been made in other TWRWPs. A full revision of RPP-33116, incorporating all approved modifications to revision 2 is planned.

Justifications:

- Pg v—added trademark note
- Section 4.1.2, pg 4-1 to 4-2– Deleted reference to outdated PNNL groundwater monitoring plan and reference and added current reference.
- Section 4.1.3, pg 4-5—Added footnote to Figure 4-2
- Section 4.2.1.1, pg 4-10—Added new hydroprobe procedure reference.
- Section 5.0, pg 5-1—Added specific HFFACO milestones.
- Section 9—Updated references

See the attached redline strikeout

RECEIVED
DEC 17 2013
EDMC

10. Impact of Change:

Provides necessary updates prior to revision.

11.

WMA-C

Office of River Protection, State of Washington Department of Ecology
Tank Waste Retrieval Work Plan/Functions and Requirements Change Notice
(Per Hanford Federal Facility Agreement and Consent Order Section 9.3)

Approvals		
Washington River Protection Solutions, LLC.	Office of River Protection	State of Wash. Dept. of Ecology
☐ Provisional Approval[2] Date	☐ Provisional Approval[2] Date	☐ Provisional Approval[2] Date
☑ Final Approval Date 11/21/13	☒ Final Approval Date 11/21/13	☒ Final Approval Date 11/21/13

Notes

1 - For use by Ecology to identify any additional information needed to make a decision regarding the request for modifications. In addition, Ecology will identify actions, if any, regarding the modification request that DOE may take pending Ecology's final decision

2 – Provisional approval allows DOE and it's contractors to take specific actions identified in section 11, prior to final approval of this modification.

LIST OF TERMS

Terms

High Pressure Water in the context of this document means any water supplied at a higher pressure than the raw water supply pressure.

Abbreviations, Acronyms, and Initialisms

ALARA	as low as reasonably achievable
BBI	best-basis inventory
BGS	below ground surface
CH2M HILL	CH2M HILL Hanford Group, Inc.
COPC	constituent of potential concern
DOE	U.S. Department of Energy
DST	double-shell tank
Ecology	Washington State Department of Ecology
EDE	effective dose equivalent
EPA	U.S. Environmental Protection Agency
HFFACO	*Hanford Federal Facility Agreement and Consent Order*
HI	hazard index
HIHTL	hose-in-hose transfer line
HRR™	high-resolution resistivity
IH	industrial hygiene
ILCR	incremental lifetime cancer risk
IQRPE	independent, qualified registered professional engineer
IRIS	Integrated Risk Information System
ITEM	Integrated Training Electronic Matrix
ITV	in-tank vehicle
k_d	distribution coefficient
LDM™	leak detection and monitoring
MRS	mobile retrieval system
NOC	notice of construction
ORP	U.S. Department of Energy, Office of River Protection
OWW	organic wash waste
PCB	polychlorinated biphenyls
PUREX	plutonium-uranium extraction
RAS	radionuclide assessment system

™ High-Resolution Resistivity (HRR) is a trademark of hydroGEOPHYSICS, Inc., Tucson, Arizona.
™ Leak Detection and Monitoring (LDM) is a trademark of hydroGEOPHYSICS, Inc., Tucson, Arizona

4 DESCRIPTION OF PLANNED LEAK DETECTION AND MONITORING TECHNOLOGIES

4.1 EXISTING TANK LEAK MONITORING

This section describes tank leak monitoring activities that have been historically performed or are currently being performed.

Prior to beginning retrieval operations, single-shell tanks are in waste storage mode. The requirements for leak detection while in waste storage mode are provided in OSD-T-151-00031, *Operating Specifications for Tank Farm Leak Detection and Single-Shell Tank Intrusion Detection.* When retrieval operations are ready to commence for C-110 the tank enters retrieval mode as described in 4.2.

4.1.1 Drywell Monitoring

Identify the number and location of drywells near the subject tank. Identify ongoing routine drywell monitoring activities. (configuration, depth, frequency of and methodology for sampling)

Seven drywells are spaced around tank C-110 between 5 and 19 ft from the edge of the tank (Figure 4-1). The seven drywells include 30-10-01, 30-10-02, 30-07-11, 30-07-10, 30-00-09, 30-10-09, and 30-10-11. Six of these seven drywells are 100 ft deep with drywell 30-00-09 being 58 ft deep.

For tanks in waste storage mode there is no routine drywell logging performed.

4.1.2 Groundwater Monitoring

Identify the number and location of groundwater monitoring wells associated with the Waste Management Areas (WMA). Summarize current groundwater monitoring activities.

Groundwater monitoring at WMA C was begun in 1990 using four RCRA groundwater monitoring wells constructed in 1989 (299-E27-12, 299-27-13, 299-E27-14, and 299-E27-15). ~~The groundwater beneath the C tank farm has been monitored since 2001 in accordance with the RCRA groundwater monitoring plan established in 2001 (PNNL-13024, *RCRA Groundwater Monitoring Plan for Single Shell Tank Waste Management Area C at the Hanford Site*). Figure 4-2 provides a plan view of the C tank farm and the surrounding RCRA groundwater monitoring wells. There are nine groundwater monitoring wells surrounding the C tank farm (four new wells were constructed in 2003). Since June 2002, groundwater sampling for the groundwater wells 299-E-27-7, 299-E-27-12, 299-E-27-13, 299-E-27-14, and 299-E-27-15 has been performed on a quarterly basis (PNNL-13024, ICN-1). Since December 2003, new groundwater monitoring wells 299-E-27-4, 299-E-27-21, 299-E-27-22, and 299-E-27-23 have also~~ Additional monitoring wells have added since 1989. A current list of the WMA C groundwater monitoring wells can be found in DOE/RL-2009-77. The wells are sampled

quarterly ~~been sampled on a quarterly basis.~~to meet prior agreements made with Ecology. Quarterly samples are analyzed at a minimum for anions, cyanide, inductively coupled plasma metals, gross beta, ^{99}Tc, and total uranium, and a low-level gamma scan is performed. Sampling is conducted in accordance with DOE/RL-2009-77 and DOE/RL-2001-49.

The quarterly groundwater monitoring that is currently performed is adequate for the purpose of supplementary data collection during waste retrieval. Ecology is provided quarterly groundwater monitoring sample results in the quarterly and annual groundwater monitoring reports. These reports are issued by the groundwater project.

If a leak is detected during retrieval, groundwater monitoring frequency will be reevaluated in accordance with the regulatory requirements in WAC 173-303, "Dangerous Waste Regulations."

4.1.2.1 Use of Groundwater Monitoring for Retrieval Process Control.

(1) Evaluate the use of appropriately located existing groundwater monitoring wells for retrieval process control.

Based on the limitations of flow transport calculations and the time required for a retrieval leak to show up in groundwater samples, groundwater monitoring data will not be used for retrieval process control, but is available, for background reference information only, through the site groundwater monitoring program.

4.1.2.2 Groundwater Sampling Prior to and Following Retrieval.

(2) Ensure that appropriately located existing groundwater monitoring wells will be sampled within a two month period prior to and following the retrieval (quarterly sampling satisfies this requirement).

~~PNNL-13024, ICN-1, requires q~~Quarterly groundwater sampling is performed for the C-farm groundwater monitoring wells. In accordance with 04-TPD-083 – letter, it was agreed to in writing by ORP, Ecology, and the tank farm contractor that quarterly groundwater sampling satisfies the TWRWP outline requirement C.1.b.(2) (this wording is in italics at the start of Section 4.1.2) to take groundwater samples within a 2-month period prior to and following retrieval.

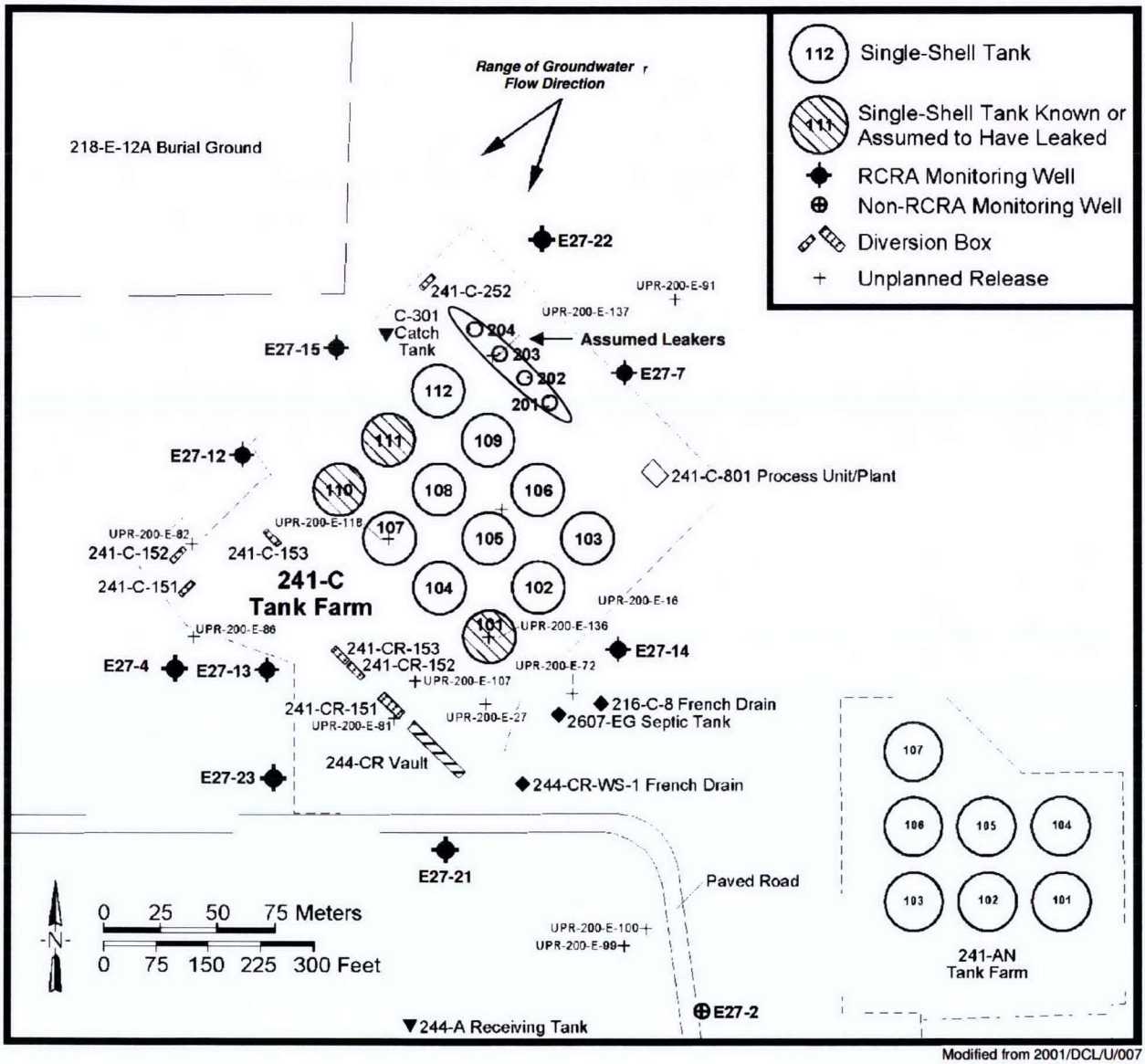
4.1.3 Existing Tank Level Monitoring Equipment and Activities

Identify existing level measurement instrumentation in the subject tank and receiver tank. Identify ongoing tank level monitoring activities.

Tank C-110 currently has an operable Enraf level gauge installed on riser 4. Tank AN-106 currently has the same type of level gauge installed on its riser 4. Tank AN-106 annulus has leak detection devices installed such as conductivity gauges, Enraf level gauges or similar instruments for detection of leaks from the primary tank liner.

The waste level in C-110, while in storage mode, is monitored for intrusion only on a quarterly basis (OSD-T-151-00031, *Operating Specifications for Tank Farm Leak Detection and Single-Shell Tank Intrusion Detection*). The basis for in-tank leak detection and intrusion monitoring is

Figure 4-2. Waste Management Area C and Regulated Structures.*^



* Adapted from Figure B.18 in PNNL-14548, Hanford Site Groundwater Monitoring for Fiscal Year 2003.
^The most current list of groundwater monitoring wells can be found in DOE/RL-2009-77

category) may still require the use of the high rate logging system that is part of the SGLS, but it is possible that a high rate detector can be developed for the RMS. Development of the RMS is complete but as of mid 2012 it is not yet available for deployment. It is anticipated that the RMS will have a measurement range from background up to 100,000 pCi/g ^{137}Cs and 0 to 25 vol% moisture content.

The SGLS logging system was used to establish baseline conditions in 1995-2000. This logging system is based on a liquid nitrogen cooled high purity germanium detector, which provides excellent gamma energy resolution for identification and quantification of individual radionuclides from background levels (method detection limit about 0.1 pCi/g ^{137}Cs under typical conditions) up to about 10,000 pCi/g ^{137}Cs. A high rate detector with internal and external shields is available to extend the measurement range to about 10^9 pCi/g ^{137}Cs.

The SGLS truck can also be used to operate a neutron moisture logging system, which measures in situ vadose zone moisture over the range of 0 to about 25 vol% moisture content. The neutron moisture logging system uses a similar source-detector relationship as the handheld moisture gauge.

It takes about one shift of operation to obtain moisture logging data from all the drywells around a tank with the hand-held moisture probe. It takes about one shift of operation to obtain RAS data from one drywell.

The handheld moisture gauge will be deployed by qualified personnel in accordance with TO-320-022, *Operate Model 503DR M1 HP-2 or M1 HP-3 Hydroprobe Neutron Moisture ~~Detection~~Gauge* or TO-320-060, *Operate Model 503DR M1 HP-4 Hydroprobe Neutron Moisture Gauge*.

The logging systems will be deployed by qualified personnel in accordance with the applicable procedures for that equipment.

The results from drywell monitoring, as well as a summary and analysis of this monitoring, including tools used, calibration, boreholes logged, depth of logging, frequency, logging rate, and data analysis will be submitted to Ecology within the retrieval data report in accordance with Appendix I of the HFFACO.

4.2.1.2 Leak Detection Using SST Liquid Level Measurement. SST level measurement data are normally limited during periods when active retrieval operations are not being performed due to the strategy of minimizing liquid in the tank. In addition, because of the dished bottoms of the tanks and the location of the level instrumentation near the side in the C-100 series SSTs, waste levels cannot be measured below approximately 12,000 gal. However, should conditions exist where a continuous liquid surface measurement is available (e.g., a pump fail prior to removing as much liquid as practical from the tank and replacement of the pump cannot occur immediately) this measurement could provide an additional means of leak detection superior to either drywell monitoring or HRR. SST Liquid level measurement can be used for leak detection during waste retrieval under the following conditions:

a. The tank level gauge must be an Enraf level gauge of the type normally used in tank farms

5 REGULATORY REQUIREMENTS IN SUPPORT OF RETRIEVAL OPERATIONS

Summaries of documents (training plans, contingency plans, emergency response plans, reporting, record keeping, inspection summaries, etc.) as required for waste retrieval by WAC 173-303.

Retrieval of waste from the C-Farm SSTs will be performed under the requirements of the the Decree, the *Atomic Energy Act of 1954*, and RCRA, RCW 70.105, "Hazardous Waste Management Act" and their implementing regulations. The SSTs do not provide secondary containment and are not compliant with RCRA and RCW 70.105 interim facility standards of Subpart J of 40 CFR 265. The SSTs are currently authorized to continue operations under RCW 70.105 pending closure in accordance with WAC 173-303-610, "Closure and Post-Closure," under the authority of HFFACO Milestones M-45-~~00~~83, and M-045-85.~~"Complete Closure of all Single Shell Tanks Farms." Except as otherwise modified by HFFACO Milestone M-45-00,~~ DOE conducts day-to-day operations of the SSTs in accordance with the interim facility standards established in WAC-173-303-400(3), "Interim Status Facility Standards." WAC 173-303-400(3) incorporates by reference the interim status performance standards set forth by the EPA in 40 CFR 265. Additionally, the SSTs are governed by federal regulations promulgated under the authority of the *Atomic Energy Act of 1954* and various DOE directives incorporated into the contract between ORP and the tank farm contractor (DE-AC27-0RV-14800). These requirements are implemented through operating plans and procedures by the tank farm contractor.

Interim status facility standards in WAC 173-303-400(3)(a) incorporate by reference the interim status standards set forth by EPA in 40 CFR 265 Subpart J for tank systems. Elements of the interim status standards relevant to the WRS along with the WRS features and/or operating plans and procedures are summarized in Table 5-1.

If required, approval to retrieve waste that could contain polychlorinated biphenyls (PCBs) from tank C-110 using supernate from the receiver DST and transfer the resulting slurry to the receiver DST will be obtained from EPA before initiating waste retrieval operations. The DST supernate is classified as PCB remediation waste in accordance with Ecology et al. (2000), *Framework Agreement for Management of Polychlorinated Biphenyls (PCBs) in Hanford Tank Waste*. Because the DST supernate is classified as PCB remediation waste, the retrieval of waste from SSTs when using DST supernate requires a Risk-Based Disposal Approval, approved by EPA, pursuant to the *Toxic Substances Control Act of 1976*.

Those components of the aboveground system using DST supernate to transfer SST waste to the receiving DST will be handled consistently with the current method of addressing polychlorinated biphenyl (PCB) waste in the DST system.

The ventilation system(s) used during waste retrieval operations are designed to pass air through the tank, thereby reducing condensation and fog within the tank. The ventilation systems required by Washington State Department of Health include a heater, prefilter, demister, two high-efficiency particulate air filters and test sections, exhaust fan, and stack. Details of the

DOE, 2003, *Dangerous Waste Permit Application—Single-Shell Tank System*, Rev. 8, U.S. Department of Energy, Washington, D.C.

DOE O 435.1, 2001, *Radioactive Waste Management*, U.S. Department of Energy, Washington, D.C.

DOE/ORP-2000-24, 2001, *Hanford Immobilized Low-Activity Waste Performance Assessment: 2001 Version*, Rev. 0, U.S. Department of Energy, Office of River Protection, Richland, Washington.

DOE/ORP-2003-02, 2003, *Inventory and Source Term Data Package*, Rev. 0, U.S. Department of Energy, Office of River Protection, Richland, Washington.

DOE/ORP-2003-11, 2003, *Preliminary Performance Assessment for Waste Management Area C at the Hanford Site, Washington*, Rev. 0, CH2M HILL Hanford Group, Inc., Richland, Washington.

DOE/ORP-2005-01, 2005, *Initial Single-Shell Tank System Performance Assessment for the Hanford Site*, U.S. Department of Energy, Office of River Protection, Richland, Washington.

DOE/RL-91-45, 1995, *Hanford Site Risk Assessment Methodology*, Rev. 3, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-97-69, 1998, *Hanford Immobilized Low-Activity Tank Waste Performance Assessment*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2001-49, *Groundwater Sampling and Analysis Plan for the 200-BP-5 Operable Unit*, Latest Revision, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-2009-77, *Groundwater Quality Assessment Plan for the Single-Shell Tank Waste Management Area C*, Latest Revision, U.S. Department of Energy, Richland Operations, Office, Richland, Washington.

Ecology, EPA, and DOE, 1989, *Hanford Federal Facility Agreement and Consent Order*, as amended, Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy, Olympia, Washington.

Ecology, EPA, and DOE, 2000, *Framework Agreement for Management of Polychlorinated Biphenyls (PCBs) in Hanford Tank Waste*, Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy, Olympia, Washington.

EPA-402-R-99-001, 1999, *Cancer Risk Coefficients for Environmental Exposure to Radionuclides*, Federal Guidance Report Number 13, U.S. Environmental Protection Agency, Washington, D.C.

HNF-SD-WM-OCD-015, *Tank Farm Waste Transfer Compatibility Program*, Latest Revision, Washington River Protection Solutions, LLC., Richland, Washington.

HNF-SD-WM-TI-707, 2004, *Exposure Scenarios and Unit Dose Factors for the Hanford Tank Waste Performance Assessment*, Rev. 4, CH2M HILL Hanford Group, Inc., Richland, Washington.

HNF-SD-WM-TSR-006, *Tank Farms Technical Safety Requirements*, Latest Revision, Washington River Protections Solutions, LLC, Richland, Washington.

M-045-09-01 (M-045-86), 2010, Federal Facility Agreement and Consent Order Change Control Form, U. S. Department of Energy, Office of River Protection, Richland Washington

OSD-T-151-00007, *Operating Specifications for the Double-Shell Storage Tanks*, Latest Revision, Washington River Protection Solutions, LLC, Richland, Washington.

OSD-T-151-00013, *Operating Specifications for Single-Shell Waste Storage Tanks*, Latest Revision, Washington River Protection Solutions, LLC, Richland, Washington.

OSD-T-151-00031, *Operating Specifications for Tank Farm Leak Detection and Single-Shell Tank Intrusion Detection*, Latest Revision, Washington River Protection Solutions, LLC, Richland, Washington.

OSWER 9938.4-03, 1994, *Waste Analysis at Facilities that Generate, Treat, Store, and Dispose of Hazardous Waste*, U.S. Environmental Protection Agency, Washington, D.C.

PNNL-13024, 2001, *RCRA Groundwater Monitoring Plan for Single-Shell Tank Waste Management Area C at the Hanford Site*, Pacific Northwest National Laboratory, Richland, Washington.

~~PNNL-13024, ICN-1 2002, *RCRA Groundwater Monitoring Plan for Single-Shell Tank Waste Management Area C at the Hanford Site*, Pacific Northwest National Laboratory, Richland, Washington.~~

PNNL-14548, 2004, *Hanford Site Groundwater Monitoring for Fiscal Year 2003*, Pacific Northwest National Laboratory, Richland, Washington.

PNNL-16349, *Quarterly RCRA Groundwater Monitoring Data for Period July through September 2006,* Pacific Northwest National Laboratory, Richland, Washington.

RCW 70.105, "Hazardous Waste Management Act," *Revised Code of Washington*, as amended.

Resource Conservation and Recovery Act of 1976, Public Law 94 580, 90 Stat. 2795, 42 USC 901 et seq.

Revised Code of Washington, Chapter 70.105 RCW, "Hazardous waste management."

RPP-5842, 2000, *Time Deployment Study for Annulus Pumping*, Rev. 0, CH2M HILL Hanford Group, Inc., Richland, Washington.

RPP-20949, 2006, *Data Quality Objectives For The Evaluation Of Tank Chemical Emissions For Industrial Hygiene Technical Basis*, Rev. 2, CH2M HILL Hanford Group, Inc., Richland, Washington.

RPP-21895, 2008, *241-C-103, and 241-C-109 Tanks Waste Retrieval Work Plan*, Rev. 3C, CH2M HILL Hanford Group, Inc., Richland, Washington.

RPP-22393, 2008, *241-C-102, 241-C-104, 241-C-107, 241-C-108, and 241-C-112 Tanks Waste Retrieval Work Plan*, Rev. 3D, CH2M HILL Hanford Group, Inc., Richland, Washington.

RPP-22491, *Industrial Hygiene Vapor Technical Basis*, Latest Revision, Washington River Protection Solutions, LLC, Richland, Washington.

RPP-22521, 2008, *Tanks C-101, C-105, C-110, and C-111 Long-Term Human Health Risk Calculations to Support Tank Waste Retrieval Work Plan*, Rev. 3, CH2M HILL Hanford Group, Inc., Richland, Washington.

RPP-23403, 2009, *Single-Shell Tank Component Closure Data Quality Objectives*, Rev. 4, Washington River Protection Solutions, LLC, Richland, Washington.

RPP-27869, *Building Emergency Plan for Tank Farms*, Latest Revision Washington River Protection Solutions, LLC, Richland, Washington.

RPP-29002, 2012, *Double-Shell Tank Waste Analysis Plan*, Rev 1, Washington River Protection Solutions, LLC, Richland, Washington.

RPP-32477, *High Resolution Resistivity Leak Detection Data Processing and Evaluation Methods and Requirements*, Latest Revision, Washington River Protection Solutions, LLC, Richland, Washington.

RPP-50910, 2011, *Single-Shell Tank Waste Retrieval Limit of Technology Definition for Modified Sluicing*, Rev. 0, Washington River Protection Solutions, LLC., Richland, Washington.

RPP-PLAN-23827, 2010, *Sampling and Analysis Plan for Single-Shell Tanks Component Closure*, Rev. 2, Washington River Protection Solutions, LLC., Richland, Washington.

RPP-PLAN-48868, 2012, *Single-Shell Tank 241-C-110 Hard Heel Retrieval Method Selection*, Rev. 2, Washington River Protection Solutions, LLC., Richland, Washington.

RPP-RPT-33060, 2007, *Retrieval Data Report for Single-Shell Tank 241-C-103*, Rev. 0, CH2M HILL Hanford Group, Inc., Richland, Washington.

RPP-ENV-33418, 2008, *Hanford C-Farm Leak Assessments Report; Tanks 241-C-101 and 241-C-110*, Rev 1, CH2M HILL Hanford Group, Inc., Richland, Washington.

TFC-ENG-CHEM-D-42, *Tank Leak Assessment Process*, Latest Revision, Washington River Protection Solutions, LLC., Richland, Washington.

TFC-ENG-CHEM-P-47, *Single-Shell Tank Retrieval Completion Evaluation*, Latest Revision, Washington River Protection Solutions, LLC, Richland, Washington.

TFC-ENG-STD-26, 2004, *Dilution and Flushing Requirements*, Rev. A, CH2M HILL Hanford Group, Inc., Richland, Washington.

TFC-ESHQ-ENV_FS-C-01, *Environmental Notification*, Latest Revision, Washington River Protection Solutions, LLC., Richland, Washington.

TFC-ESHQ-ENV-STD-03, *Air-Quality – Radioactive Emissions*, Latest Revision, CH2M HILL Hanford Group, Inc., Richland, Washington.

TFC-ESHQ-ENV-PP-C-11, *Independent Qualified Registered Professional Engineer Assessment Process*, Latest Revision, Washington River Protection Solutions, LLC., Richland, Washington.

TFC-ESHQ-ENV-STD-04, 2004, *Air Quality Program – Non-Radioactive Emissions*, Rev. A, CH2M HILL Hanford Group, Inc., Richland, Washington.

TFC-OPS-MAINT-C-01, *Tank Farm Contractor Work Control*, Latest Revision, Washington River Protection Solutions, LLC, Richland, Washington.

TFC-OPS-OPER-C-24, *Occurrence Reporting and Processing of Operations Information*, Latest Revision, Washington Protection Solutions, LLC., Richland, Washington.

TFC-OPS-WM-C-10, *Contaminated Equipment Management Practices*, Latest Revision, CH2M HILL Hanford Group, Inc., Richland, Washington.

TFC-PLN-07, *Dangerous Waste Training Plan*, Latest Revision, Washington River Protection Solutions, LLC, Richland, Washington.

TFC-PLN-34, *Industrial Hygiene Exposure Assessment Strategy*, Latest Revision, Washington River Protection Solutions, LLC., Richland, Washington.

TO-320-022, , *Operate Model 503DR M1 HP-2 or M1 HP-3 Hydroprobe Neutron Moisture Detection*, Latest Revision, Washington River Protection Solutions., Richland, Washington.

TO-320-060, *Operate Model 503DR M1 HP-4 Hydroprobe Neutron Moisture Gauge*, Latest Revision, Washington River Protection Solutions, LLC, Richland, Washington.

Toxic Substances Control Act of 1976, 15 USC 2601, et seq.

WAC 173-303, "Dangerous Waste Regulations," *Washington Administrative Code*, as amended.

WAC 173-400, "General Regulation for Air Pollution Sources," *Washington Administrative Code*, as amended.