

100 & 300 AREA UNIT MANAGERS MEETING (UMM) MARCH 19, 2020

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy
under Contract DE-AC06-08RL14788

CH2MHILL
Plateau Remediation Company

**P.O. Box 1600
Richland, Washington 99352**

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Date Published
April 2020

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APPROVED
By Sarah Harrison at 12:21 pm, Apr 28, 2020

Release Approval

Date

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DISTRIBUTION
100 & 300 AREA UNIT MANAGERS MEETING
March 19, 2020

FINAL MEETING MINUTES

Electronic Distribution to:

Meeting Attendees
Administrative Record
Correspondence Control

100/300 AREA UNIT MANAGERS MEETING
Attachments List
March 19, 2020

Minutes of the 100/300 Area Unit Managers Meeting of January 16, 2020 are attached. Minutes are comprised of the following:

Attachment 1	Agenda
Attachment 2	Attendees Sign-In Sheets
Attachment 3	Signature Approval Page
Attachment 4	Presentation – <i>Uranium Sequestration in the 300-FF-5 Operable Unit</i>
Attachment 5	100K Area Report
Attachment 6	300 Area Report
Attachment 7	Groundwater Summary by O.U.
Attachment 8	Documents to the AR, Approved TPA CNs
Attachment 9	100-OL-1 Orchard Lands
Attachment 10	Action Items

**100/300 AREA UNIT MANAGERS MEETING
AGENDA
March 19, 2019**

Presentation – *Uranium Sequestration in the 300-FF-5 Operable Unit* (Elyse Frohling)

100 Area River Corridor Soils and Sludge & K Basin Summary (Deborah Singleton/R. Quintero)

300 Area River Corridor Soils Summary (Lorna Dittmer/B. Vannah)

Groundwater Summary by O.U.

- 100-K Area Groundwater (Ellwood Glossbrenner)
- 100-BC Area Groundwater (Ellwood Glossbrenner)
- 100-N Area Groundwater (Steve Balone)
- 100-D/H Areas Groundwater (John Sands)
- 100-F Area Groundwater (Steve Balone)
- 300 Area Groundwater (John Sands)
- Summary of Hanford Sampling Program
- Documents for the Administrative Record and Approved TPA Change Notices

100-OL-1 – Orchard Lands (Johns Sands)

Action Items

Closing Comments

- Sign concurrence to “Groundwater Summary by O.U.” and “Action Item List” if applicable

All future UMM meetings will be held in 2420 Stevens Room 308 from 1:00-2:30pm as follows:

2020

- March 19
- May 21
- July 16
- September 17
- November 19

**100/300 Area Unit Managers Status Meeting
March 19, 2020**

PRINTED NAME	ORGANIZATION	O.U. ROLE	TELEPHONE
Elise Frohling	CHPRC-TGAP	300-ff-5	509-373-3338
Bill Fought	CHPRC	100-N	376-3139
John Sarks	DOE	DK / 300/04	372-2282
Laura O'Mara	CHPRC	Admin	373-9763
Dave St John	CHPRC	via Microsoft Teams	
Brian Stetter	DOE	via Microsoft Teams	
Dib Goswami	DOE	via Microsoft Teams	
Theresa Bergman	CHPRC	via Microsoft Teams	
Kim Welsch	ECY	via Microsoft Teams	
Shelley Cimon	ODOH	via Microsoft Teams	
Steve Balone	DOE	via Microsoft Teams	
Ellwood Glossbrenner	DOE	via Microsoft Teams	
Ben Simes	EPA	via Microsoft Teams	
Alicia Boyd	ECY	via Microsoft Teams	
Ben Vannah	DOE	via Microsoft Teams	
Manny Lopez-Lopez	DOE	via Microsoft Teams	
Matt St Germaine	CHPRC	via Microsoft Teams	
Laura Beulow	EPA	via Microsoft Teams	
Brian Johnson	ECY	via Microsoft Teams	

**100/300 Area Unit Managers Meeting
Meeting Minutes Approval
March 19, 2020**

APPROVAL: Mark S. French Digitally signed by Mark S. French
Date: 2020.04.14 14:38:06 -07'00' DATE: 4/14/2020
River Corridor Project Manager, DOE/RL

APPROVAL: Michael W. Cline Digitally signed by
Michael W. Cline
Date: 2020.04.14
13:15:57 -07'00' DATE: 4/14/2020
Groundwater Project Manager, DOE/RL

APPROVAL:  Digitally signed by Welsch, Kim
(ECY)
Date: 2020.04.14 14:44:48 -07'00' DATE: 4/14/2020
Environmental Restoration Acting Project Manager, Ecology

APPROVAL: LAURA BUELOW Digitally signed by LAURA BUELOW
Date: 2020.04.15 12:40:50 -07'00' DATE: 4/14/2020
100 Area Project Manager, EPA

HFFACO Action Plan Section 4.1 requires signature of agreements and commitments made during the Project Manager Meeting. Approval of these minutes documents agreements and commitments identified in the attached "Groundwater Summary by O.U." and the "Action Item List". Approval does not apply to the minutes themselves or to any other attachments.



THE HANFORD SITE

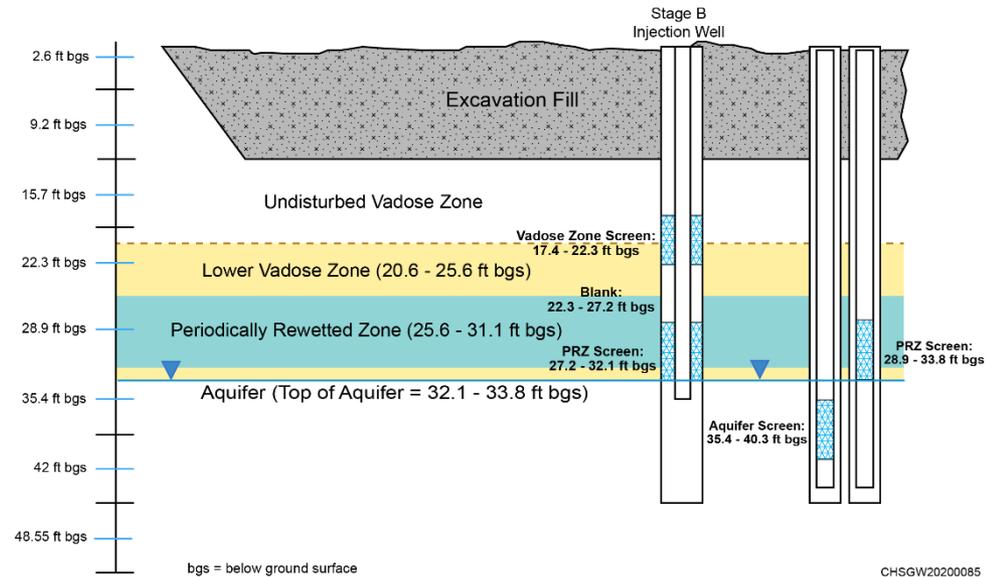
Uranium Sequestration in the 300-FF-5 Operable Unit

John Sands
300 Area Soil and Groundwater Engineer
U.S. Department of Energy
Richland Operations Office

March 19, 2020

Stage B Uranium Sequestration Design Objectives

1. Sequester uranium through phosphate mineral precipitation and coatings
 - a. Deliver polyphosphate injection solution to Stage B Enhanced Attenuation Area (EAA)
 - b. Injections targeted the lower vadose zone (LVZ) and periodically rewetted zone (PRZ)
2. Determine short-term effect to uranium concentrations in groundwater: monitored uranium concentrations and phosphate distribution in groundwater
3. Determine the changes in uranium leachability through laboratory analysis: performed soil leach tests and laboratory analyses at Pacific Northwest National Laboratory (PNNL) 6 months after treatment



Stage B injection and monitoring well design in the lower vadose zone and aquifer

Stage B Uranium Sequestration Performance Monitoring

- Real-time Electrical Resistivity Tomography (ERT) monitoring installed at 18 wells
- Downhole monitoring of groundwater chemistry with data loggers installed at 24 wells

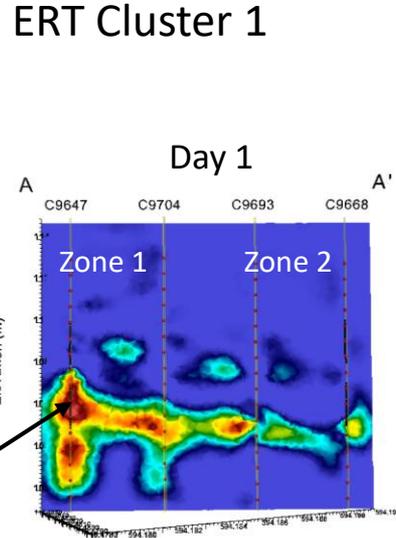
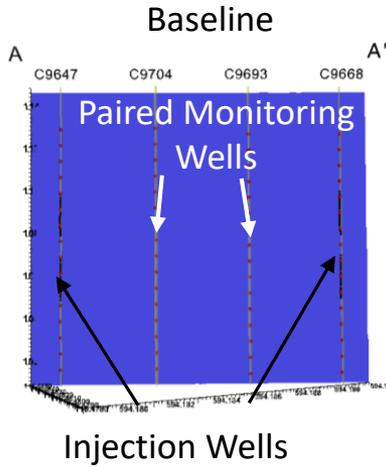


ERT installation for Stage B wells

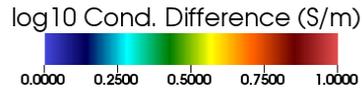


Data logger installation for Stage B wells

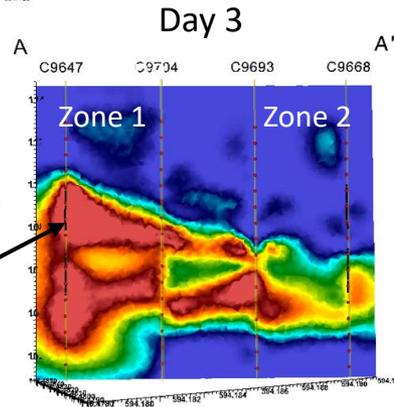
Stage B Uranium Sequestration Performance Monitoring (cont.)



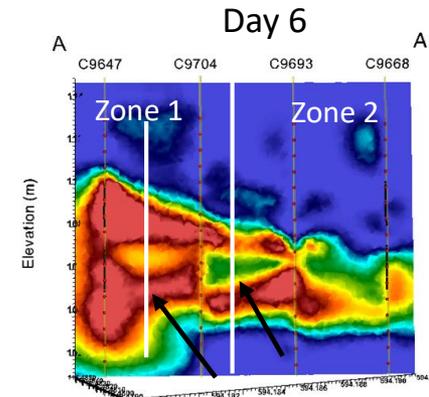
Injection into the PRZ first



Injection into the LVZ next



Stage B site map

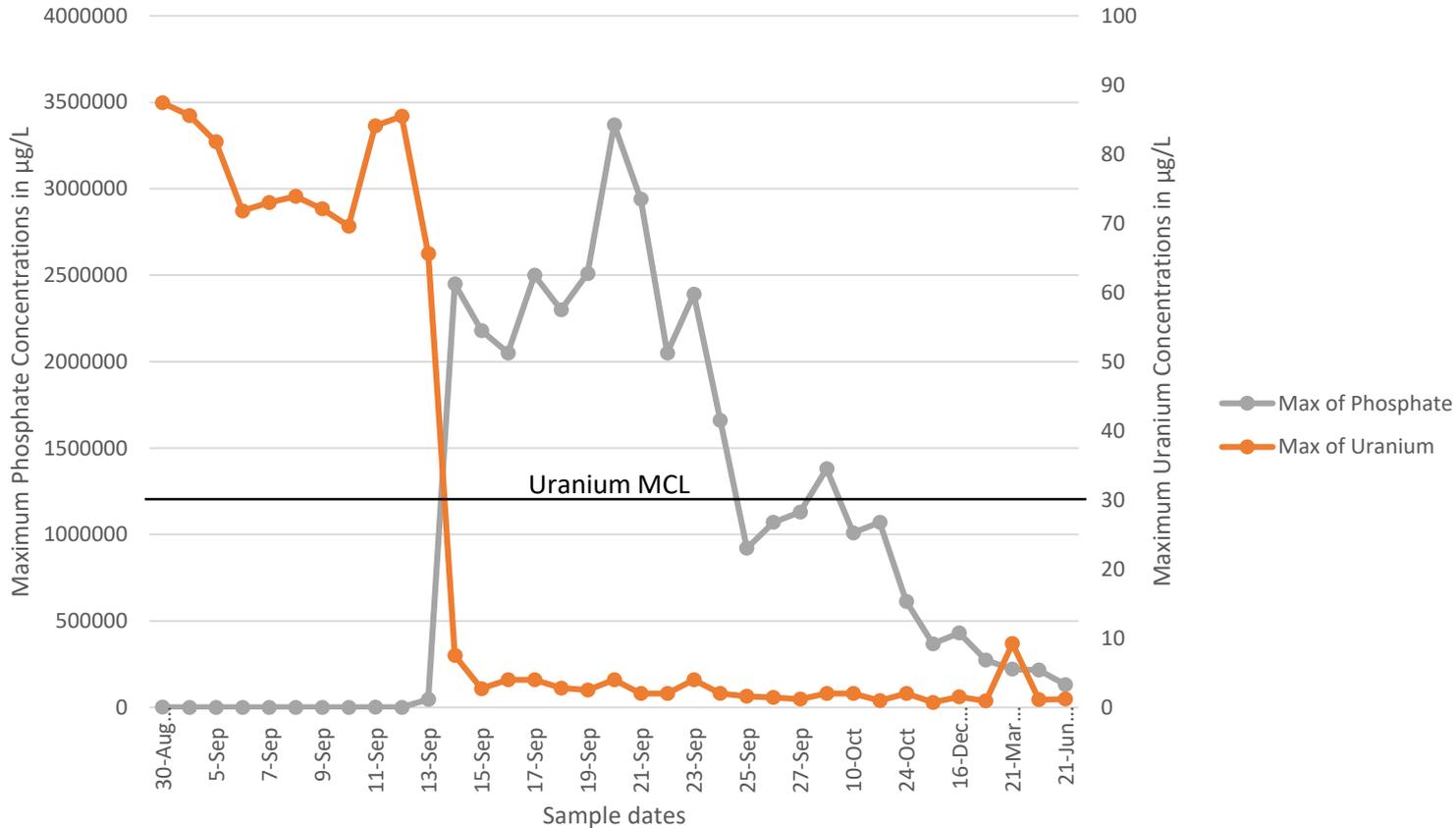


Injections in Zone 2 commenced

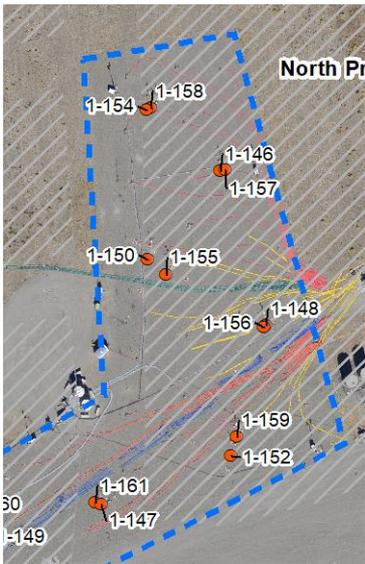
Six months after injections, post-treatment boreholes were drilled to sample treated soils

Stage B Uranium Sequestration Performance Monitoring (cont.)

Stage B Groundwater Monitoring at Aquifer Well 399-1-156

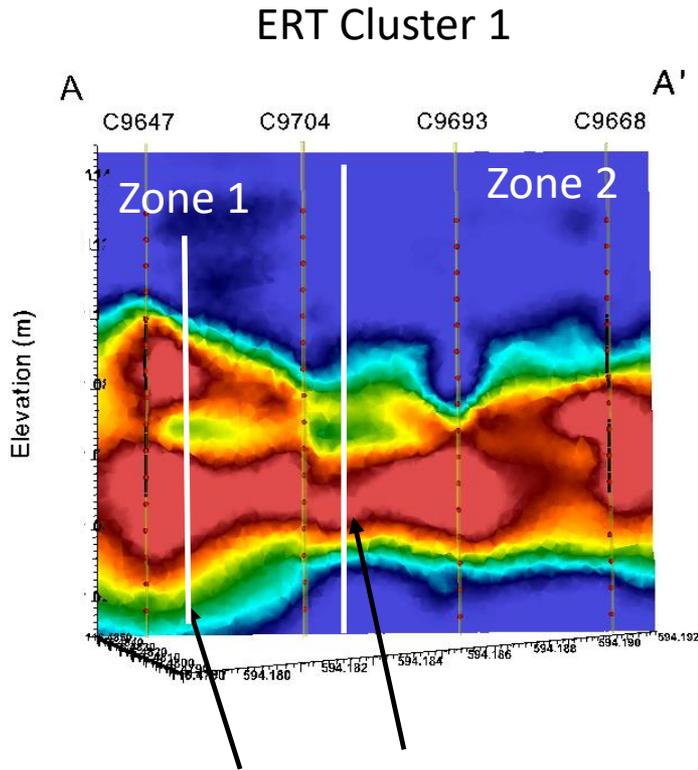


Stage B groundwater monitoring well trend chart for uranium and phosphate concentrations reported from sampling

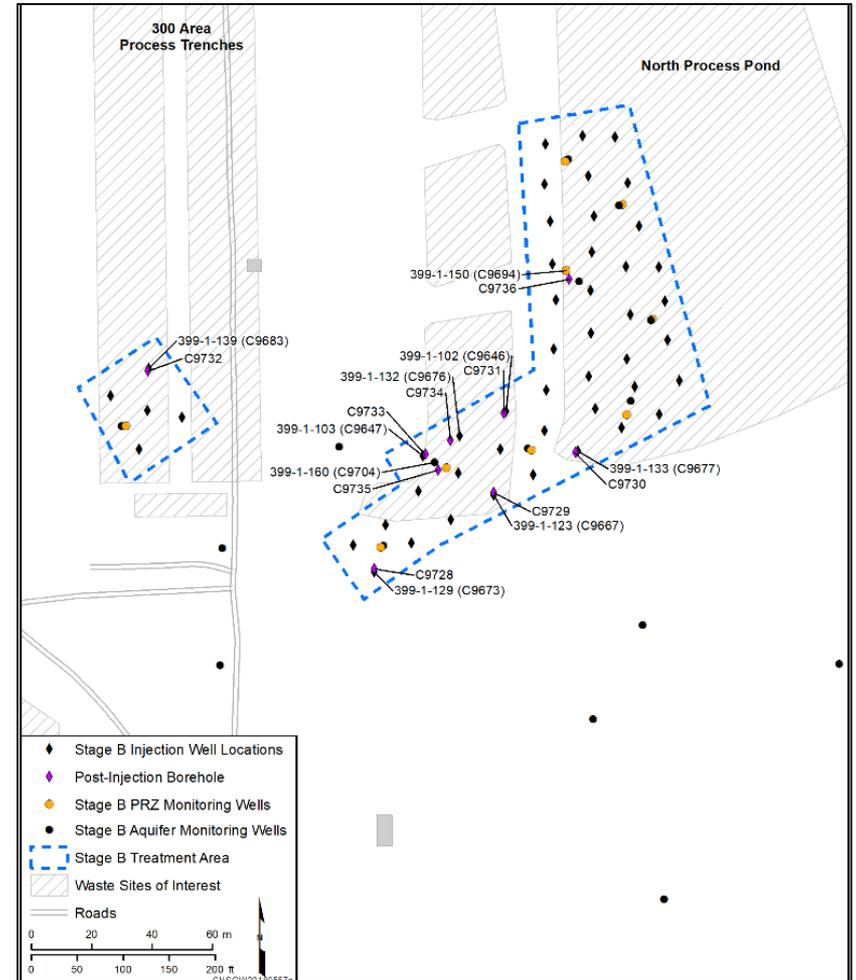


Map of well location in the 300-FF-5 operable unit Stage B area

Stage B Uranium Sequestration Performance Monitoring (cont.)



Six months after injections finished, post-treatment boreholes are drilled to sample treated soils



Stage B map of injection and monitoring wells and nine new post-injection boreholes

Stage B Uranium Sequestration Performance Evaluation

Leached uranium in pre- and post-injection boreholes		
Pre-/Post-injection well ID, depth (feet)	Pre-Injection % leached (µg/g)	Post-Injection % leached (µg/g)
C9673/C9728, 27.5	6%	0.9%
C9673/C9728, 30	47%	0.6%
C9677/C9730, 22.5	49%	34%
C9683/C9732, 22.5	21%	6%
C9646/C9731, 22.5	55%	4%
C9646/C9731, 27.5	18%	2%
C9647/C9733, 22.5	11%	2%
C9647/C9733, 27.5	15%	2%
C9667/C9729, 25	34%	16%
C9667/C9729, 30	3%	6% (low PO ₄)*
*Low phosphate delivery to soils		

- Increased phosphate decreases uranium leaching
- Uranium extractions had an average of 63 percent less mobile uranium after phosphate treatment

- All sampling and analyses have been completed for the Stage B EAA of uranium sequestration
- PNNL and contractors INTERA and CHPRC will continue to evaluate the data
- Modeling efforts for the uranium contamination in the aquifer were completed in January 2020
- Final reporting for the Stage B EAA will be completed in September 2020 and presented in the Enhanced Attenuation Uranium Sequestration Completion Report

1. Implemented 300-FF-5 operable unit Enhanced Attenuation Area remedy using phosphate treatment in 2018
2. Remedy implementation at Stage B was successful
3. Remedy successfully sequestered and immobilized uranium at the 300-FF-5 Stage B area
4. Biannual long term monitoring at wells upgradient and downgradient of Stage B area to continue to monitor remedy performance and evaluation

100K Area Report
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TPA Milestone M-016-173, *Select K Basin sludge treatment and packaging technology and propose new interim sludge treatment and packaging milestones.*

- (9/30/22) – On Schedule - Moved to RL-13 (200 West Area)

RL-0041 100K Closure Project

TPA Milestone M-016-143, *Complete the interim response actions for 100 K Area within the perimeter boundary and to the Columbia River for Phase 2 actions. Phase 2 is defined in the 100 K Area RD/RA Work Plans.*

- (9/30/24) – At Risk – New date proposed in Change Number M-16-19-05 as part of the submittal to satisfy TPA Milestone M-093-28 on December 18, 2019. Change not accepted by EPA, new date will be negotiated later.

Soil Remediation and Waste Site Closure

- Contractor continued soil remediation in February with over 450 cans of soil sent to ERDF from the following waste sites:
 - Waste Site 116-KE-2

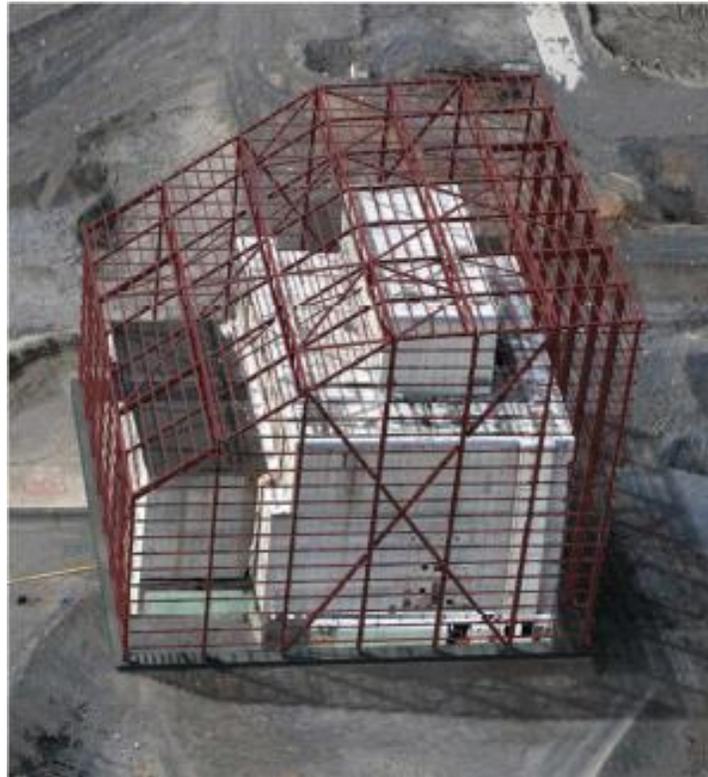
Ancillary Facility Deactivation and Demolition (D&D)

- Continued demolition preparations for 165KE
- Contined demolition of the 166KE Fuel Storage Bunker
 - West day tank demolition is complete
 - West bulk Storage tank demolition is complete

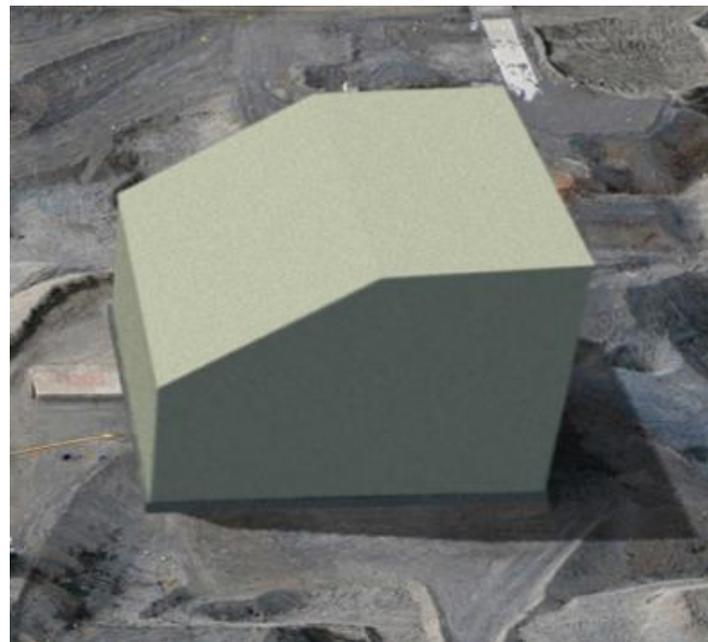


*166KE demolition underway
(165KE Power Control Building in Background)*

100K Area Report
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105-K East Reactor Interim Safe Storage (ISS)



Conceptual Design of the 105-K East Safe Storage Enclosure

- The architecture engineering (AE) design approved and released to support fabrication.
- The statement of work is being routed for approval to obtain bids for SSE Construction.

100K Area Report
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Regulator Comment: It was not signed by EPA by the end of the 14-day TPA requirement, therefore it is considered disapproved.

TPA Milestone M-093-27, Complete 105-KE and 105-KW Reactor Interim Safe Storage in Accordance with the Removal Action Work Plan.

- (9/30/24) - At Risk – TPA Change package M-93-19-01 was not accepted by EPA, and a new change package is being developed.

TPA Milestone M-016-00C, Complete all response actions for the 100 K Area

- (9/30/24) - At Risk – New date proposed in Change Number M-16-19-05 as part of the submittal to satisfy TPA Milestone M-093-28 on December 30, 2019. Change not accepted by EPA, new date will be negotiated later.

TPA Milestone M-016-181, complete deactivation, demolition and removal of 105-KW Fuel Storage Basin

- (9/30/23) – On Schedule
- DOE/RL-2010-52, *Remedial Design and Remedial Action Work Plan for the K Basins Interim Remedial Action: 105-K West Basin Deactivation (Revision 1)*, and DD-63014, *105-KW Basin Deactivation Air Monitoring Plan* were submitted to DOE.
- Basin deactivation work continues in the 105KW Basin. Activities include the following:
 - Clearing the footprint in the K West Basin West Bay for installation of the Vertical Pipe Casing (VPC) System continues.
 - Relocation, inventorying and dose rating below-water debris.
 - Preparing to perform bulk removal of hanging pole tools. (West Bay)
 - Preparing to inspect and characterize the Integrated Water Treatment System settler tanks.
 - Preparing to sample the Skimmer System sand filter media.



West Bay



Center Bay



East Bay

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- Columbia Energy and Environmental Services continues fabrication of Vertical Pipe (VPC) System.



VPC Base and Debris Washing Station



VPC Debris Base and Center Sections

TPA Milestone M-016-186, Initiate soil remediation under the 105-KW Fuel Storage Basin.

- (12/31/23) – On Schedule.

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300 Area ROD Scope

TPA Milestone M-016-85A, *Complete remote excavation of the 300-296 waste site in accordance with an approved RD/RA Work Plan, (9/30/2021)* – On Schedule

Performing the following activities in preparation for remote excavation of the highly contaminated soil beneath the 324 Building B-Cell, and grout in place in the adjacent hot cells (A, C, D) for disposal.

324 Building Equipment Installation:

- N/A

Equipment Procurement & Fabrication:

- Continued design and fabrication of equipment:
 - B-Cell 10T Crane
 - Universal cutting tool
 - Cell dams
 - Water delivery system for the Airlock
 - Concrete box for soil waste bins
 - Modified shielded lids and frames (sets at AVS being inspected)
 - Self-leveling lifting device
 - Modified Airlock Rail



B-Cell 10T Crane

324 Activities:

- N/A

Structural Modifications:

- Temporary north shoring excavation (supports stabilizing soil below B-Cell door):
 - Completed the gutter re-route on the north side of the 324 Building (2/4/2020)

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- Held HRB for Installation of North Shoring Wall to support structural modification at 324 (2/19/2020)

Mockup:

- Completed cell dam test frame install at MASF (2/3/2020)
- Completed preparations for installing Room 18 Mockup at the 324 Mockup building (3/3/2020)
- Continued REA and equipment training



Cell Dam Test Frame at MASF

Cell Cleanout:

- N/A

Resumption Activities:

- The draft root cause evaluation report was completed in late February
- The associated draft Corrective Action Plan (CAP) incorporates the recommendations from the independent RadCon review and Jacobs corporate assessment
- The draft root cause report and CAP are in CHPRC Sr. Management review and approval.
- Corrective actions already underway:
 - Development and implementation of advanced radiological training specific to 324 radiological conditions, including simulated hands-on practical demonstrations
 - Modifying the 324 Mockup facility for use in the hands-on advanced radiological training
 - Project reorganization including infusion of additional seasoned nuclear facility and health & safety management
 - Updating project baseline documents to reflect more rigorous controls and instituting formal change control process

**300 Area Report
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Decontamination Activity during Advanced Rad Training

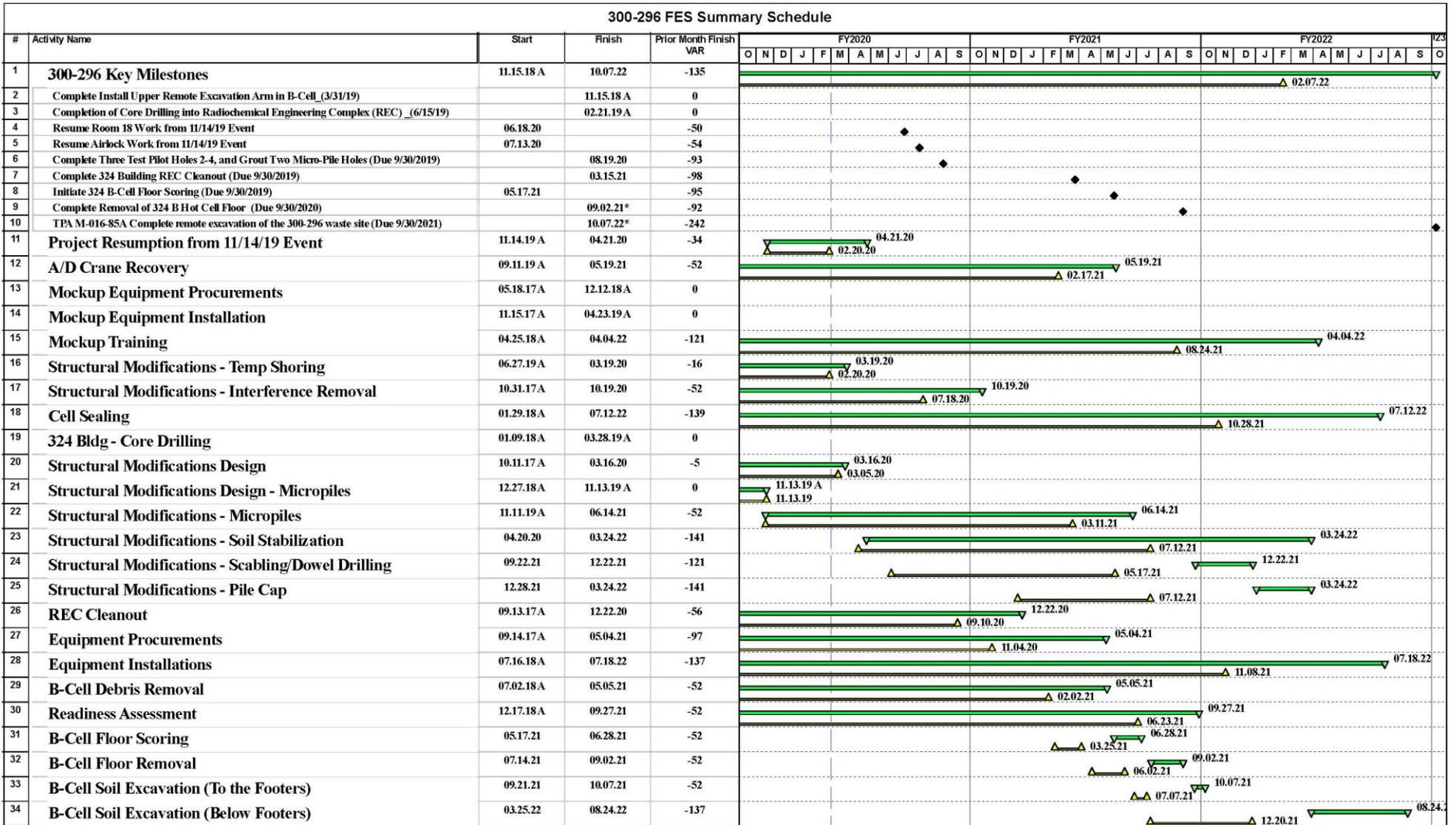
Upcoming Activities:

- N/A

TPA Milestone M-016-85, Complete Remedial Actions for 300-296 and Disposition for 324 Bldg. and Ancillary Bldgs. (9/30/2025) – On Schedule

Milestone Description: *Complete remedial actions for 300-296 waste site in accordance with RD/RA Work Plan for 300-FF-2 Soils (DOE/RL-2014-13-ADD1) and disposition for the 324 Building and Ancillary Buildings in accordance with the Removal Action Work Plan (DOE/RL-2004-77). Completion of facility disposition is defined as the completion of deactivation, decontamination, decommissioning, and demolition in accordance with the removal action work plan.*

300 Area Report 300 Area Unit Manager Meeting March 19, 2020



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Data Date: 02.23.20
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▲ Prior Month
◆ Milestone
▼ Summary

No Date on Our Schedule is More Important Than Your SAFETY

100/300 Area Unit Managers Meeting
Groundwater Summary by OU (January – February 2020 Data)
March 19, 2020
100-K Area Groundwater Operable Unit

EPA Lead (RL – E. Glossbrenner, CHPRC – E. Feist, J. Hulstrom)

- CERCLA Process Implementation:
 - The Draft Rev. 0 Remedial Investigation was provided to EPA in January 2020. CHPRC has addressed EPA comments and has provided the dispositions to EPA for review.
 - A meeting was held with RL and EPA on February 25, 2020 to discuss the review process for the KR-4 Remedial Investigation (RI) Draft Rev 0 and the KR-4 Feasibility Study (FS) Draft B. The outcome was that EPA will review the RI, Draft Rev.0 and will recommend approval of the RI occur after EPA has reviewed the FS Draft B.
 - On February 25, 2020, CHPRC provided RL with a copy of the KR-4 Feasibility Study, Draft B incorporating RL comments for review. After RL review, it will be transmit EPA.
- Monitoring & Reporting:
 - The KW Soil Flushing Treatability Test, which began on May 28, 2019 at the former 183.1KW Headhouse chemical storage tank farm, continued during the months of January and February. As of February 29, 2020, about 58 million gallons of water has been discharged to the soil column through the infiltration gallery. Figure KR-1 shows the Cr(VI) results between September 17, 2019 through February 29, 2020 in key wells.
 - The 100-K well drilling activities continued through February 2020. All three new wells have been constructed, however well development hasn't been conducted at wells 199-K-239 and 199-K-240. At well 199-K-238, well development was completed on February 12, 2020.
- Remedial Actions & System Modifications:
 - Figures KR-2 through KR-4 present the monthly volume of groundwater treated and mass of hexavalent chromium removed through February 2020. The total mass removed for KW continues to be elevated as a result of the KW Soil Flushing Treatability test.
 - Figure KR-5 illustrates the monthly average pumping rates for operating extraction wells across the 100-KR-4 system.
 - The volume of groundwater treated and mass of Cr(VI) removed for the 100-K P&T systems (KX, KR-4, and KW) during January and February 2020 are:

Month	Gallons Treated (millions)	Hexavalent Chromium Removed (kg)
January	66	2.8
February	60	2.7

**100/300 Area Unit Managers Meeting
Groundwater Summary by OU (January – February 2020 Data)
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- FY 2020 (October through February 2020) P&T performance to date:

P&T System	Treated (mgal)	Removed (kg)
KR4	62	0.4
KW	64	7.1
KX	192	10.2
Total	318	17.7

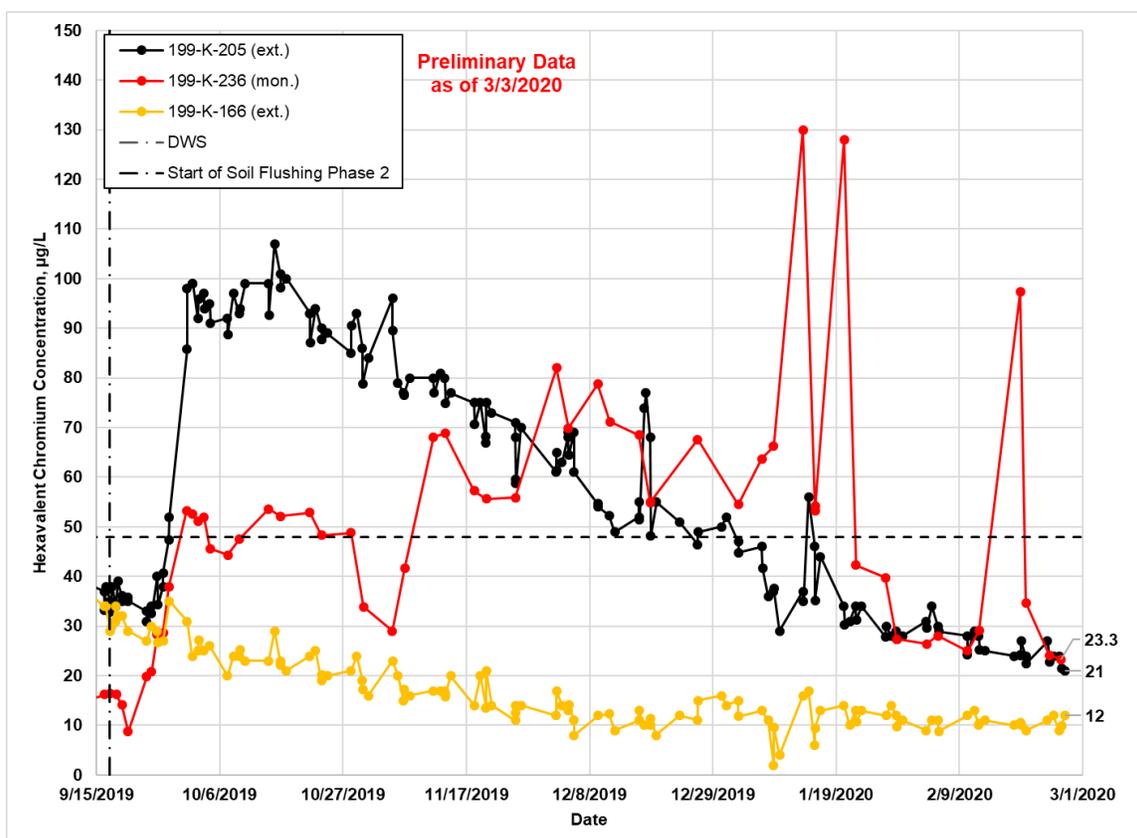


Figure KR-1. Observed Cr(VI) Concentration after September 17, 2019

100/300 Area Unit Managers Meeting
Groundwater Summary by OU (January – February 2020 Data)
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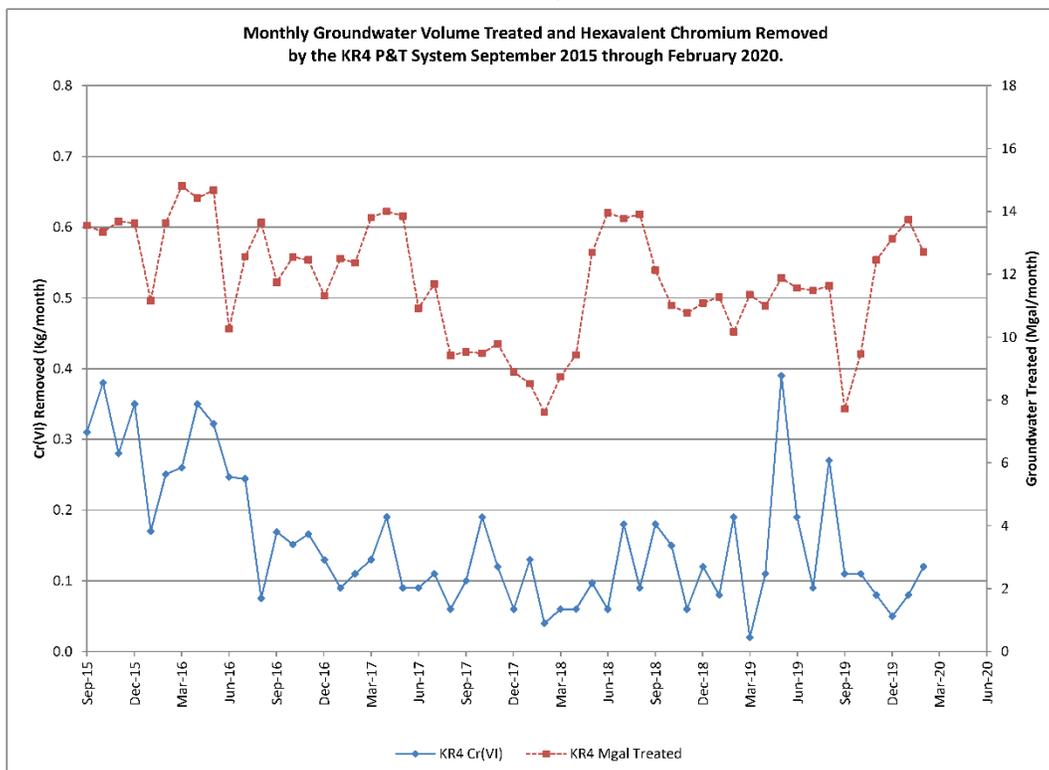


Figure KR-2. Monthly Cr(VI) Removed and Groundwater Volume Treated by KR4 P&T September 2015 through February 2020

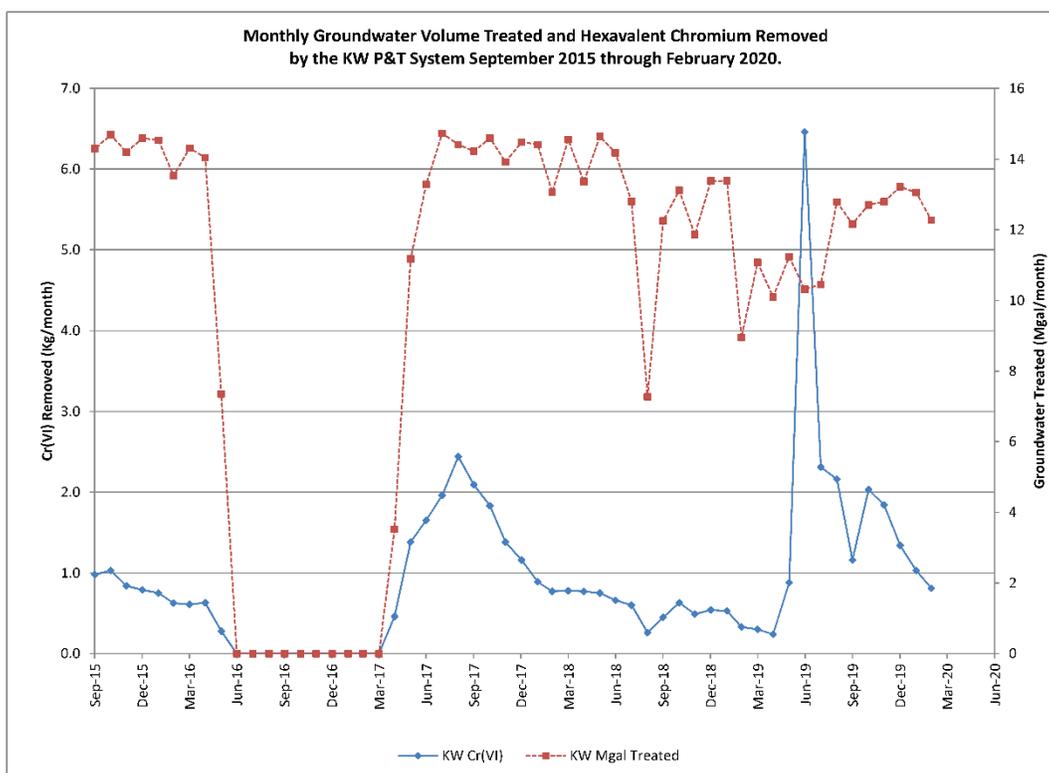


Figure KR-3. Monthly Cr(VI) Removed and Groundwater Volume Treated by KW P&T September 2015 through February 2020

**100/300 Area Unit Managers Meeting
Groundwater Summary by OU (January – February 2020 Data)
March 19, 2020**

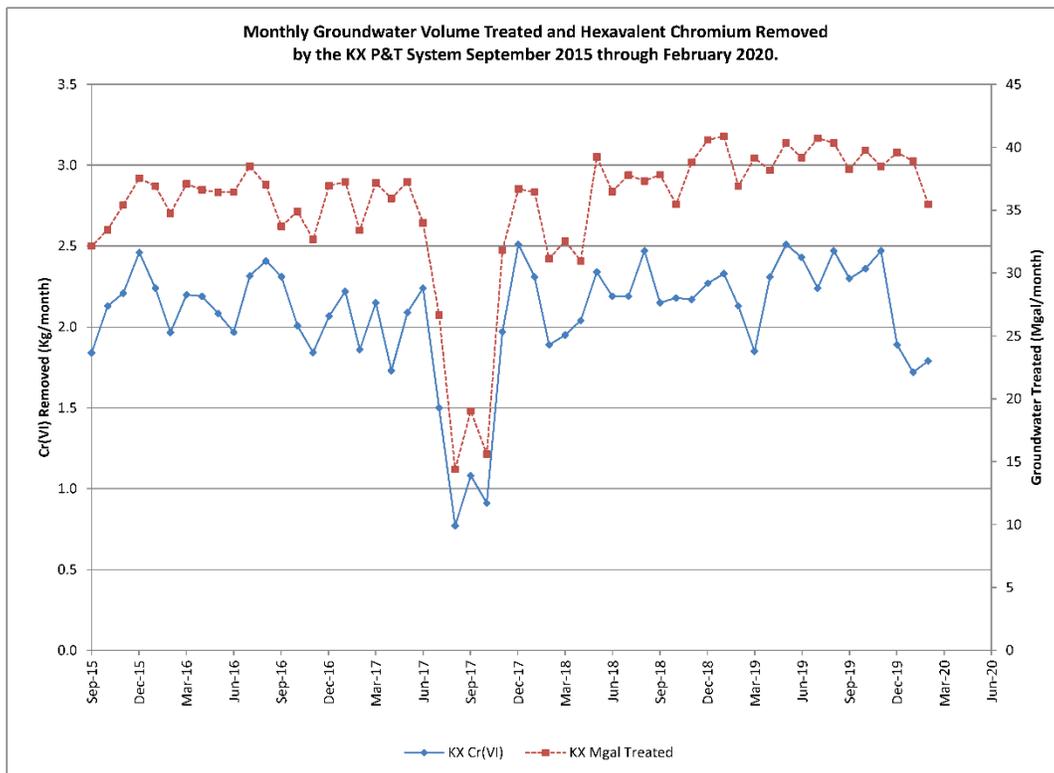


Figure KR-4. Monthly Cr(VI) removed and groundwater volume treated by KX P&T September 2015 through February 2020

**100/300 Area Unit Managers Meeting
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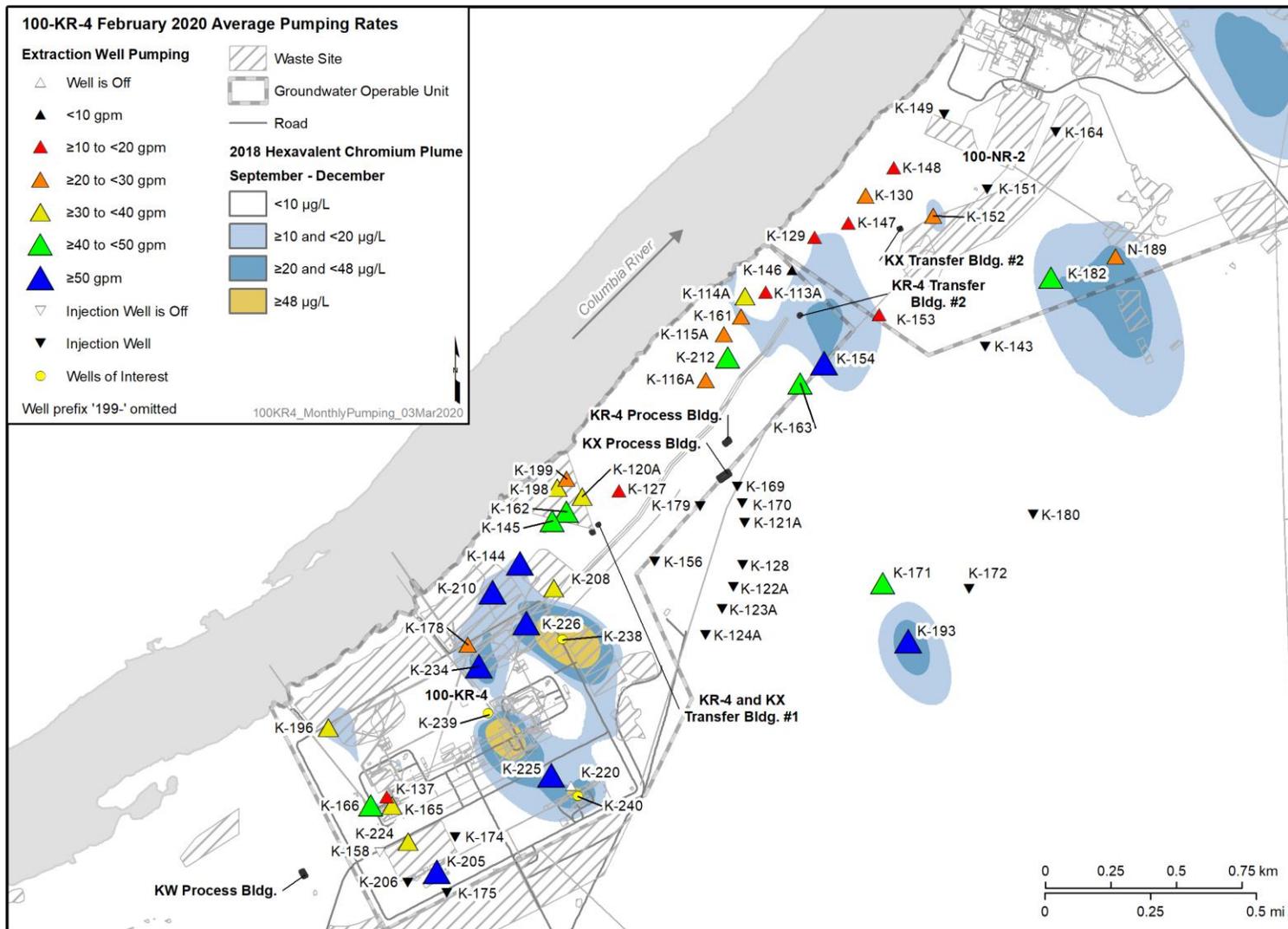


Figure KR-5. February 2020 Average Pumping Rates for the 100-KR-4 P&T System

Regulatory Agency Comments: None

100/300 Area Unit Managers Meeting
Groundwater Summary by OU (January – February 2020 Data)
March 19, 2020
100-BC Area Groundwater Operable Unit

EPA Lead (RL – E. Glossbrenner, CHPRC – R. Evans, M. Hartman)

- CERCLA Process Implementation:
 - Review of the Draft Record of Decision was initiated by EPA’s legal/policy organizations on January 23, 2020.
 - Preparation of the responsiveness summary addressing public comments on the Proposed Plan continues.
- Monitoring & Reporting:
 - The only well scheduled for sampling in January or February, 199-B4-14, was sampled as scheduled. Cr(VI) was on trend at 9.7 µg/L. The next scheduled sampling event for 100-BC-5 is in June (5 wells).

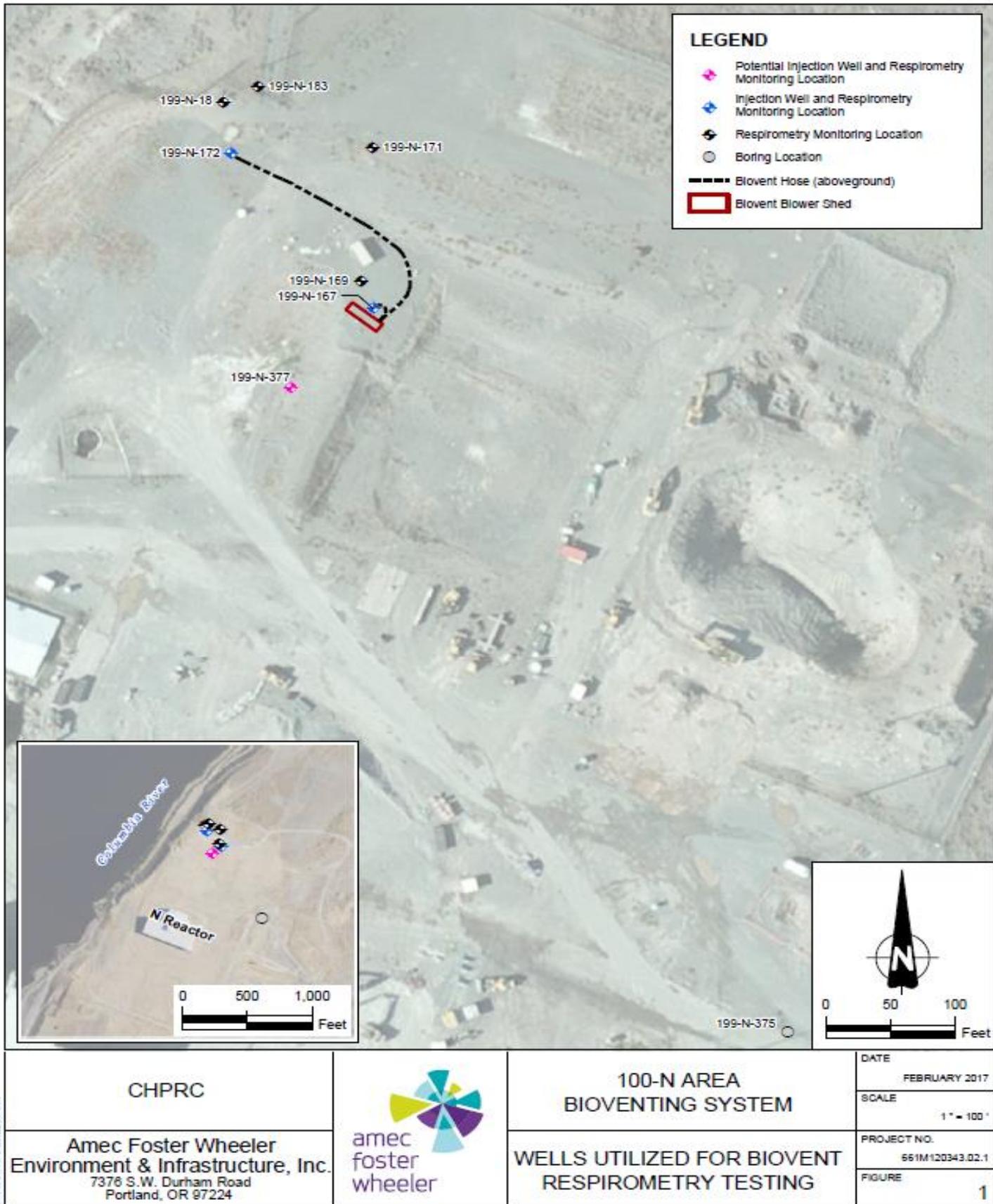
Regulatory Agency Comments: None

100-N Area Operable Unit

Ecology Lead (RL – S. Balone, CHPRC – B. Faught, A. Lee)

- CERCLA Process Implementation
 - A TPA CN (-0887) is undergoing Ecology review for the 100-NR-2 RD/RAWP (DOE/RL-2001-27) which reflects changes in the PRB injection schedule. A draft of the TPA CN was provided to Ecology on June 28, 2018 revising the schedule for issuance of the 100-N RI/FS and ROD. The draft TPA CN was submitted to RL and the regulators on March 19, 2020.
 - The Draft B, 100-N RI/FS Report was transmitted on November 18, 2019 to Ecology. The review period was extended by Ecology from March 3, 2020 through April 9, 2020. A meeting was held on March 11, 2020 to discuss occurrences where the recommended UCL in the risk assessment exceeds the maximum observation.
- Remedial Actions:
 - A test report is being prepared to document the results of the low river respirometry test completed on November 19, 2019.
 - DOE/RL-2019-24, *Sampling and Analysis Plan for Bioventing Confirmation Sampling Boreholes*, was issued on January 22, 2020. RL transmitted the document to Ecology on February 25, 2020. The SAP provides for collection of characterization soil samples to evaluate the effectiveness of the bioventing system for remediating deep vadose zone TPH contamination.
- Product Recovery:
 - The sorbent sponge assemblies in wells 199-N-18 and 199-N-183 were changed out on February 13, 2020 with a total of 260 grams of product removed.
 - Pictures of water samples collected from TPH monitoring wells in November 2019 indicate continued presence of TPH contamination in the wells (Figures NR-1 through NR-5).

100/300 Area Unit Managers Meeting
Groundwater Summary by OU (January – February 2020 Data)
March 19, 2020



DRAWN BY: TM CHECKED BY: JKH

Figure NR-1

100/300 Area Unit Managers Meeting
Groundwater Summary by OU (January – February 2020 Data)
March 19, 2020

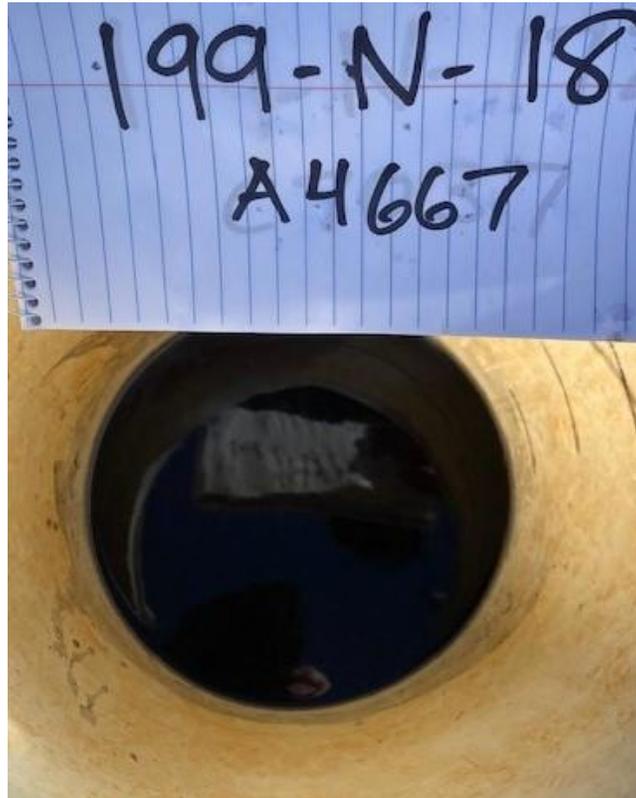


Figure NR-2. Black in color, Strong odor, Oil Sheen Present

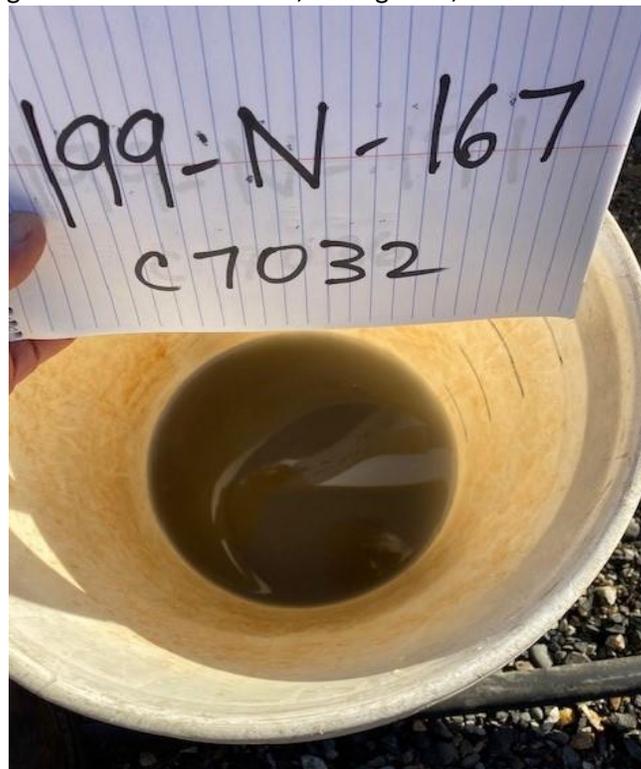


Figure NR-3. Black in color, Oil Sheen Present

100/300 Area Unit Managers Meeting
Groundwater Summary by OU (January – February 2020 Data)
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Figure NR-4. Slightly brown water/bubbles and oily sheen, Diesel odor

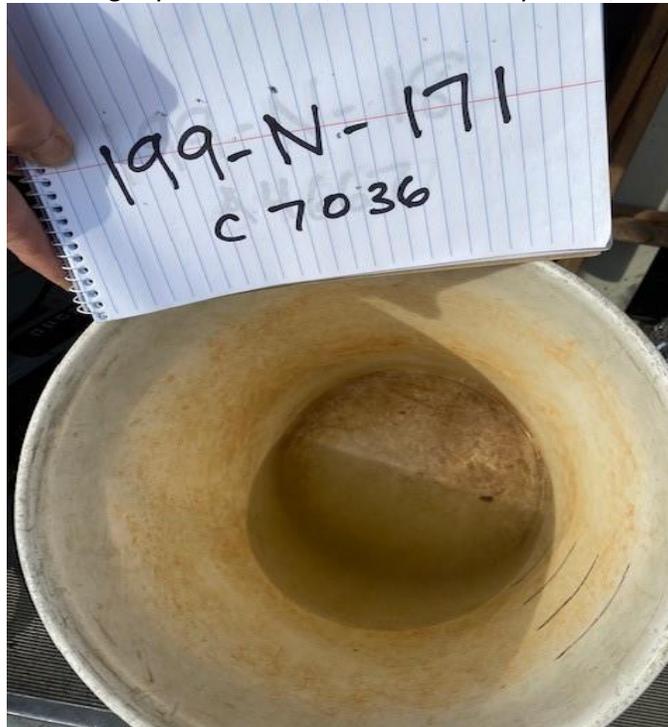


Figure NR-5. Grey in color, Strong diesel odor, Oil sheen present

100/300 Area Unit Managers Meeting
Groundwater Summary by OU (January – February 2020 Data)
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- Monitoring and Reporting:
 - The next comprehensive sampling round of the 100-N groundwater monitoring wells and aquifer tubes is scheduled for June 2020.

Regulatory Agency Comments: None

100-D/H Areas Groundwater Operable Unit

Ecology Lead (RL – J. Sands, CHPRC –R. Evans, T. Hammond)

- CERCLA Process Implementation:
 - RL Legal's concern that Sampling and Analysis Plans (SAP) are considered secondary documents per the Tri-Party Agreement and cannot be incorporated into the RD/RAWP was resolved on January 13, 2020, by their legal's agreement that the SAP can be incorporated into the RD/RAWP.
 - Provided Ecology with proposed resolutions to address their final comments on the Draft A RD/RAWP on January 23, 2020.
 - Initiated FY-2020 drilling campaign to install eight monitoring wells and one extraction well into the Ringold Upper Mud on February 5, 2020.
 - Provided a presentation to RL and Ecology on February 26, 2020, that summarized results of an evaluation that concluded a group of metals detected in groundwater were below action-levels and could accordingly be deleted from further sampling.
 - Conducted a data quality objective (DQO) planning session with RL and Ecology on February 27, 2020, to support development of the groundwater monitoring sampling and analysis plan.
- Monitoring & Reporting:
 - Well drilling activities for this fiscal year began on February 5, 2020, at well 199-H3-31, located near the 183-H solar evaporation basin. Drilling of well 199-H4-94 located to the northwest of the 105-H Reactor Building began on February 26, 2020.
- Remedial Actions & System Modifications:
 - The volume of groundwater treated and mass of Cr(VI) removed from the 100-HR-3 P&T systems during January and February are:

Month	Gallons Treated (in millions)	Hexavalent Chromium Removed (kg)
January	55	4.8
February	50	4.2

- FY 2020 (October through February 2020) P&T performance to date:

P&T System	Treated (mgal)	Removed (kg)
DX	150	8.3
HX	112	16.8
Total	262	25.1

- Figure HR-1 illustrates the monthly average pumping rates for operating extraction wells across the 100-HR-3 system.
- Summaries of the monthly Cr(VI) removed and groundwater volume treated at DX and HX P&T systems are shown in Figures HR-2 and HR-3, respectively.

**100/300 Area Unit Managers Meeting
Groundwater Summary by OU (January – February 2020 Data)
March 19, 2020**

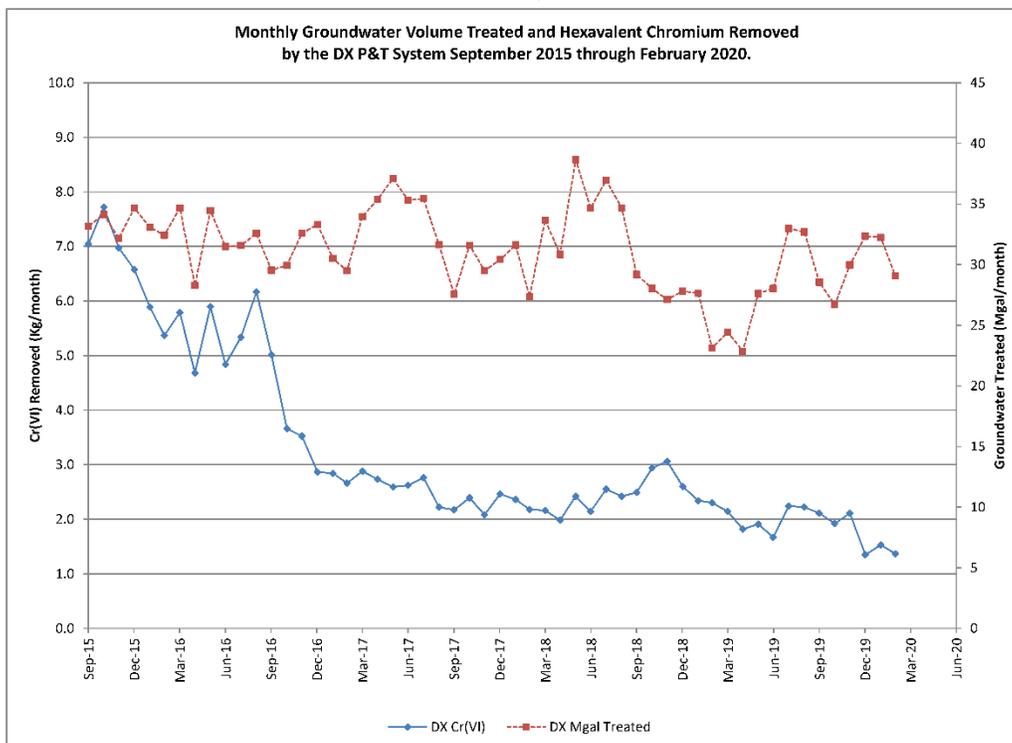


Figure HR-2. Monthly Cr(VI) Removed and Groundwater Volume Treated by DX P&T, September 2015 through February 2020

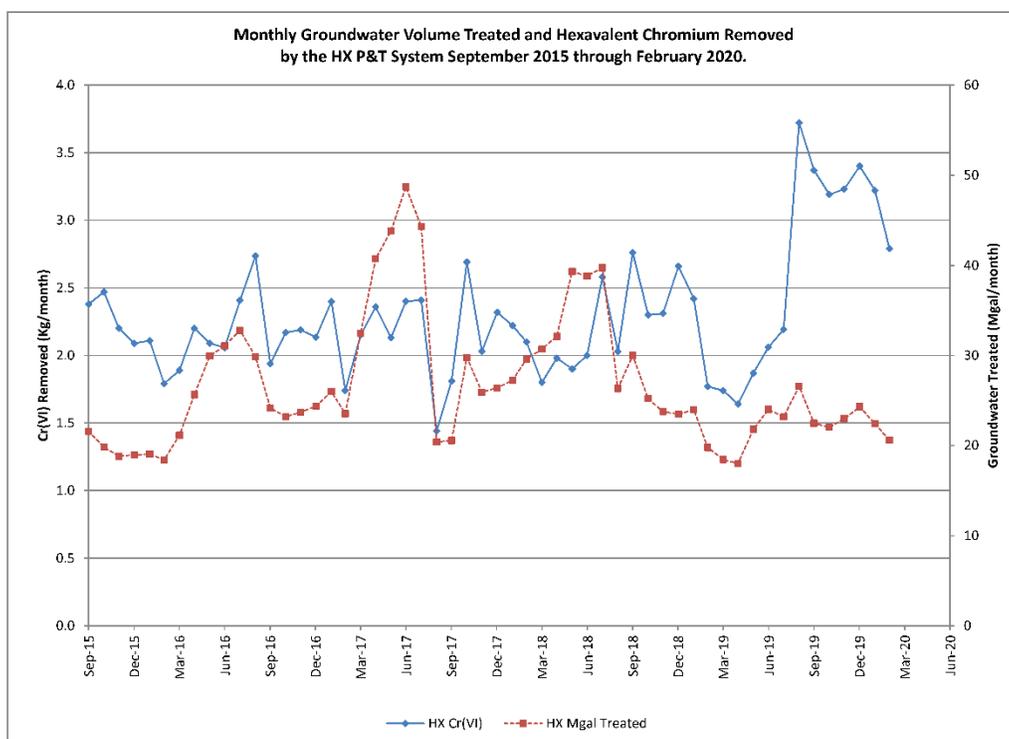


Figure HR-3. Monthly Cr(VI) Removed and Groundwater Volume Treated by HX P&T, September 2015 through February 2020

Regulatory Agency Comments: None

100/300 Area Unit Managers Meeting
Groundwater Summary by OU (January – February 2020 Data)
March 19, 2020
300 Area Groundwater Operable Unit

EPA Lead (RL – J. Sands, CHPRC – D. St. John, V. Rohay, E. Frohling, S. Bendana)

- CERCLA Process Implementation:
 - Nothing new to report.
- Remedial Actions:
 - PNNL-29650, *Evaluation of the Change in Uranium Mobility in Sediments from the Hanford 300-FF-5 Stage B Polyphosphate Field Injection*, was issued in February 2020.
- Monitoring & Reporting:

300 Area Industrial Complex

- The next CERCLA sampling event for long-term monitoring wells is scheduled for March 2020.
- The next AEA sampling event is scheduled for March 2020.
- The second quarterly sampling event was initiated in January 2020 for the groundwater monitoring wells (399-4-16 and 399-4-15) downgradient of the 324 Building. Similar to October 2019 sampling event, the only radionuclide detected in January 2020 was metallic uranium, which is expected based on the existing uranium groundwater inventory and groundwater plume(s). The other radionuclides detected in the samples were Am-241, Pu-238, Pu-239/240, Cs-137, Co-60, and Sr-90. The next samples are scheduled for April 2020.
- The next CERCLA sampling event for uranium fate and transport model calibration is scheduled for June 2020.

618-10 Burial Ground/316-4 Crib

- The second quarterly sampling event was initiated at new well 699-S6-E3B, which is the replacement for decommissioned well 699-S6-E4L at the 618-10 Burial Ground. The uranium concentration exceeded the cleanup level (30 µg/L) at well 699-S6-E3B only, where the concentration (42 µg/L) was comparable to the two most recent (December 2014 and March 2015) concentrations (36 and 28 µg/L respectively) measured in well 699-S6-E4L. The next CERCLA sampling event is scheduled for May 2020.
- The next AEA sampling event at 618-10/316-4 wells is scheduled for May 2020.

618-11 Burial Ground

- The next CERCLA sampling event is scheduled for October 2021.
- Both of the AEA wells scheduled for sampling in February 2020 were sampled as scheduled. The next AEA sampling event is scheduled for October 2020.

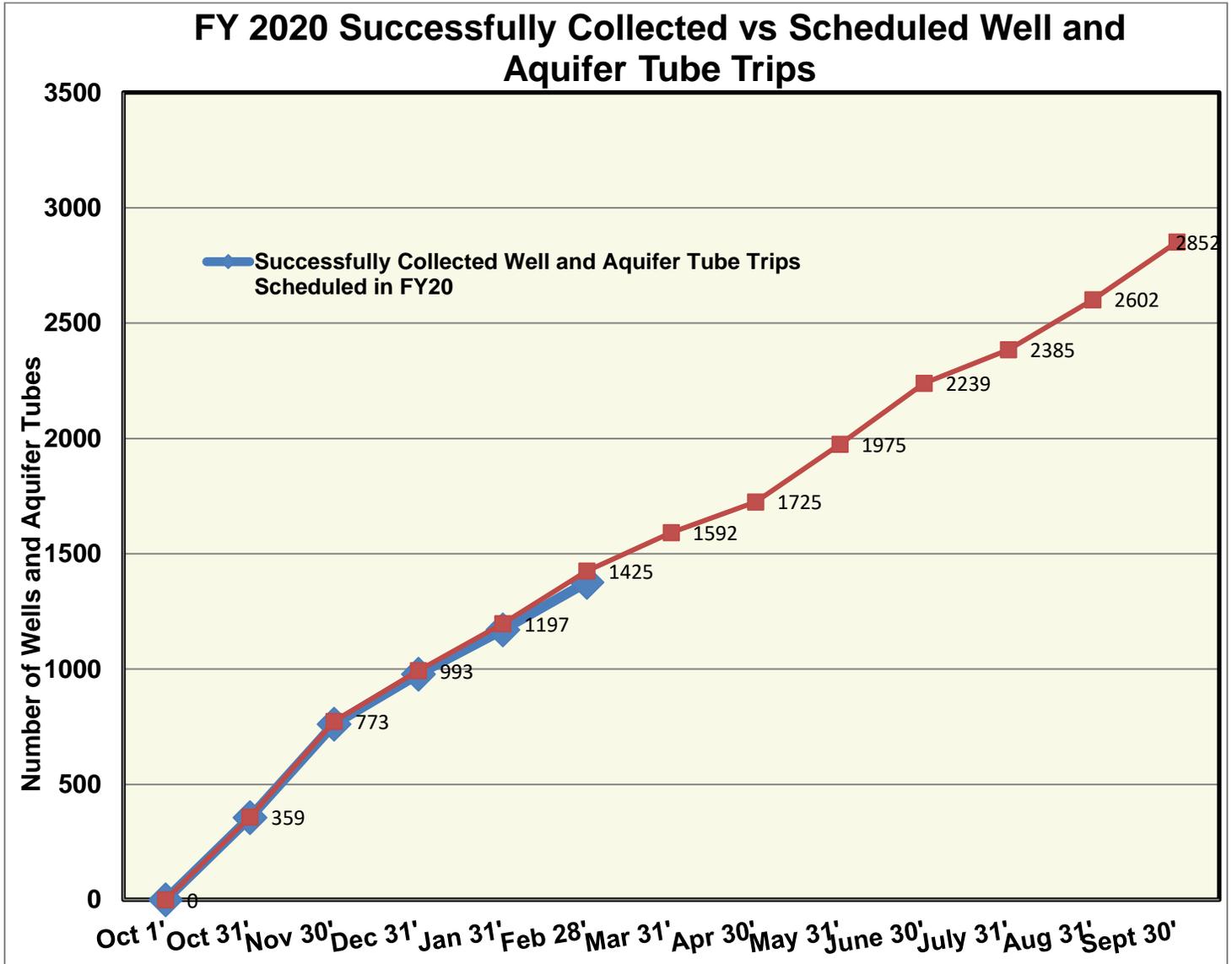
300 Area Process Trenches (316-5) RCRA Monitoring

- Nothing new to report. The next RCRA sampling event is scheduled for June 2020.

Regulatory Agency Comments: None

100/300 Area Unit Managers Meeting
Groundwater Summary by OU (January – February 2020 Data)
March 19, 2020

Hanford Annual Groundwater Sampling Program Performance
Results for Samples Completed versus Sample Scheduled



**100/300 Area Unit Managers Meeting
Groundwater Summary by OU (January – February 2020 Data)
March 19, 2020**

Documents Submitted to the AR

Document Number	Document Title	Referencing Document
ECF-Hanford-18-0058_R1	Practical Quantitation Limits for Groundwater Environmental Samples	Annual Reports
SGW-60778_R0	300-FF-5 Operable Unit Stage B Uranium Sequestration System Installation Report	SGW-63113_R0
DOE/RL-2019-24_R0	Sampling and Analysis Plan for Bioventing Confirmation Sampling Boreholes	Secondary Document
UNI-3880	UNC Nuclear Industries Reactor and Fuels Production Facilities 1985 Effluent Release Report, UNC Nuclear Industries, Richland, Washington	SGW-64254_R0
ECF-100HR3-19-0105_R0	Ion Balance Calculations for Groundwater at the 100-HR-3 Operable Unit	SGW-64254_R0
SGW-64284_R0	100-K Area Continuing Hexavalent Chromium Sources	N/A
ECF-HANFORD-19-0091_R0	Hydraulic Gradient and Average Linear Velocity Calculations - Quarter 1 Calendar Year 2019	SGW-38817
ECF-HANFORD-19-0114_R0	Preparation of the March 2019 Hanford Site Water Table Map	SGW-38818
SGW-63802_R0	Hanford Site RCRA Groundwater Quarterly Report for January through March 2019	N/A
ECF-HANFORD-20-0007	Calculation of Critical Means for Calendar Year 2020 RCRA Groundwater Monitoring	Annual P&T Reports
ECF-300FF5-20-0001_R0	Calculation of Upper Confidence Limits for RCRA Monitoring at the 300 Area Process Trenches to Support the July - December 2019 Semiannual Report	TPA Document

Approved Change Notices

Number	Title
TPA-CN-0874	DOE/RL-2014-44-ADD2, Remedial Design Report Remedial Action Work Plan Addendum for the 100-F/IU Groundwater
TPA-CN-1100	DOE/RL-2013-3-ADD12, 100-HR-3 Groundwater Operable Unit Well Installation Sampling And Analysis Plan, Addendum 12: Wells 199-D11-1, 699-98-50, 699-95-48B, 699-96-428, 199-H4-94, and 199-H3-14, Rev. 0

The DOE Project Managers have identified no outstanding issues with the preceding month's Environmental Performance Report for this scope.

**100-OL-1 Operable Unit Report
100/300 Area Unit Manager Meeting
March 19, 2020**

100-OL-1 OU Scope

• **Interim Milestone M-015-97**, Change Number M-15-19-01, Lead Regulatory Agency: Ecology

- Submit to Ecology the 100-OL-1 Operable Unit Feasibility Study Report, Draft A.
- Due Date: 08/30/2020.

• **Background**

100-OL-1 OU covers 4,995 acres across the River Corridor, incorporating lands where former orchards used lead arsenate pesticide (Figure 1). Lead arsenate was the standard pesticide for controlling codling moths in many fruit trees from the 1890s through 1988. Some waste sites in the 100 Area contain relatively high lead and arsenic concentrations near the soil surface. 100-OL-1 OU was divided into 133 decision units (DUs) for the evaluation of lead and arsenic in the surface soils using a portable x-ray fluorescence (XRF) analyzer. The Remedial Investigation found:

- There are 83 DUs (3,056 acres) that need no further action because the nature and extent of lead and arsenic soil concentrations in the DUs do not meet or exceed any criteria of the “3 part rule” (WAC 173-340-740(7)) for human health or ecological screening levels.
- There are 9 DUs (362 acres) that do not meet or exceed any criteria of the “3 part rule” for the human health screening levels, but exceed ecological screening levels.
- There are 41 DUs (1,578 acres) that meet or exceed some criteria of the “3 part rule” for the human health screening levels.

• **Status**

On-going comment resolution of *Remedial Investigation for the 100-OL-1 Operable Unit Hanford Orchard Lands* (DOE/RL-2016-54, Draft A). Comments from Ecology were received in May 2018. All comments are either dispositioned or have a path is set for disposition.

The ecological risk assessment completion will delay the completion of the FS Report due on August 30, 2020. A TPA Change Notice is in preparation to request an extension.

100-OL-1 Operable Unit Report
100/300 Area Unit Manager Meeting
March 19, 2020

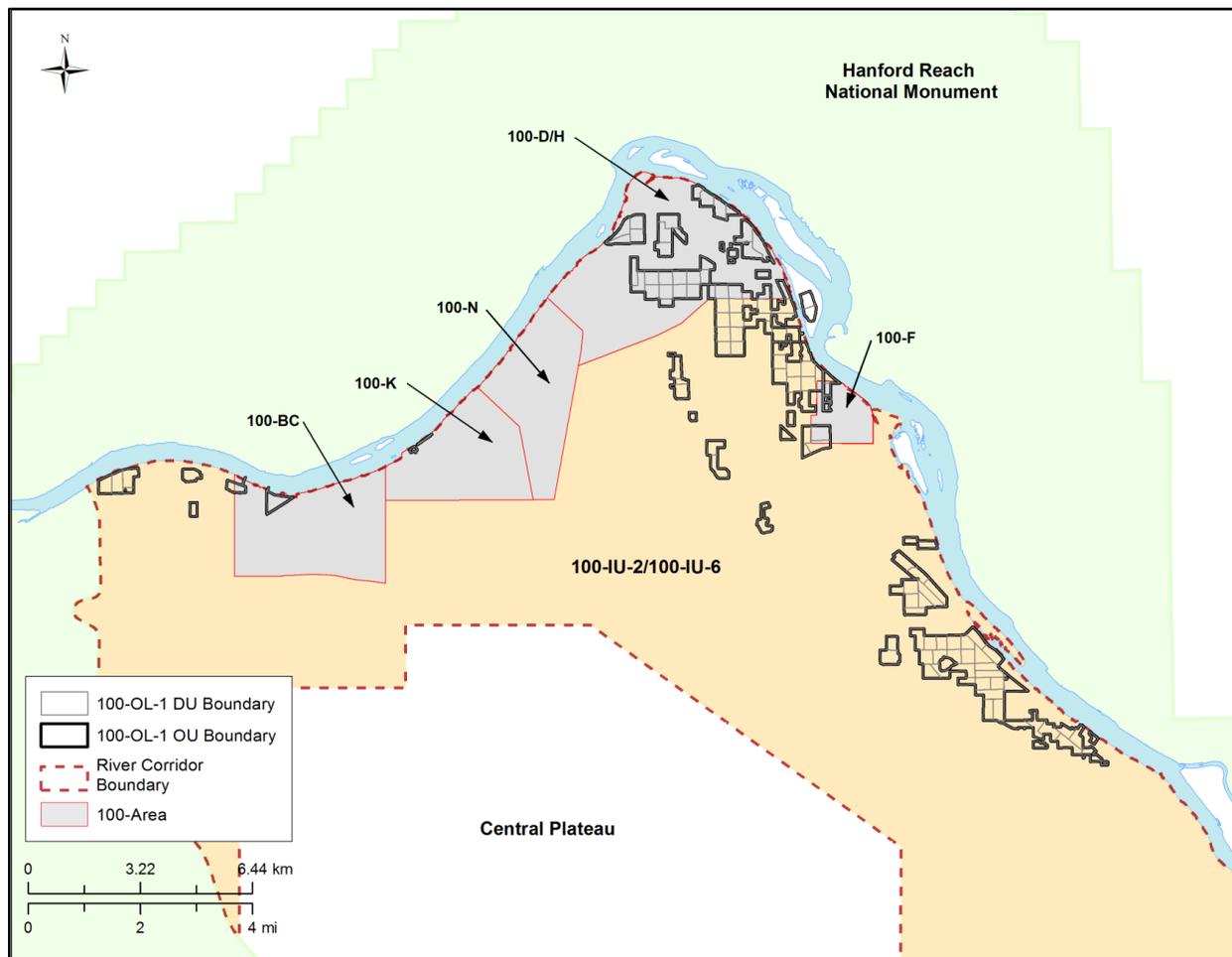


Figure 1. The 100-OL-1 OU and Associated Decision Units across the Hanford Site River Corridor

100/300 Area UMM
Action Items List
March 19, 2020

CHPRC-2001412
ATTACHMENT 10

Open (O)/ Closed (X)	Action No.	Co.	Actionee	Project	Action Description	Status