DISTRIBUTION
100 & 300 AREA UNIT MANAGERS MEETING
September 17, 2020

FINAL MEETING MINUTES

Electronic Distribution to:

Meeting Attendees
Administrative Record
Correspondence Control

100/300 AREA UNIT MANAGERS MEETING
Attachments List
September 17, 2020

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

Attachment 1	**Agenda**
Attachment 2	**Attendees Sign-In Sheets**
Attachment 3	**Signature Approval Page**
Attachment 4	**MSA - Annual Institutional Controls Assessment (2020) Presentation**
Attachment 5	**PNNL Water Discharges – 300 Presentation**
Attachment 6	**300 Area Institutional Controls – PNNL Input**
Attachment 7	**100K Area Report**
Attachment 8	**300 Area Report**
Attachment 9	**Groundwater Summary by O.U.**
Attachment 10	**Documents to the AR, Approved TPA CNs**
Attachment 11	**100-OL-1 Orchard Lands**
Attachment 12	**Action Items**

100/300 AREA UNIT MANAGERS MEETING
AGENDA
September 17, 2019

MSA - Annual Institutional Controls Assessment (2020) Presentation (Deanna Rohlfing)

PNNL Water Discharges – 300 Presentation (Dan Edwards)

300 Area Institutional Controls – PNNL Input (Dan Edwards)

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)
- Documents for the Administrative Record and Approved TPA Change Notices

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

Summary of Hanford Sampling Program

Action Items

Closing Comments

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

100/300 Area Unit Managers Status Meeting
September 17, 2020
Joined via Microsoft Teams

PRINTED NAME	ORGANIZATION	TELEPHONE
Alicia Boyd	ECY	372-7934
Ben Cowin	MSA	372-0116
Ben Simes	EPA	202-564-0527
Ben Vannah	DOE	376-9623
Bill Faught	CHPRC	376-3139
Craig Cameron	EPA	376-8665
Dan Edwards	PNNL	371-7284
Deanna Rohlfing	MSA	376-3313
Deborah Singleton	CHPRC	373-7689
Dib Goswami	ECY	372-7902
Ellwood Glossbrenner	DOE	376-5828
Garrett Day	ECY	372-7883
Greg Berlin	MSA	373-7665
Jack Bell		
Jason Hulstrom	CHPRC	373-9575
John Sands	DOE	372-2282
Joy Shoemake	MSA	376-3953
Julie Johanson	CHPRC	373-6031
Kathy Higgins	DOE	376-3658
Kelly Whitley	CHPRC	373-4929
Kim Welsch	ECY	372-7882
Laura Buelow	EPA	376-5466
Laura O'Mara	CHPRC	373-9763
Len Habel	CHPRC	376-6592
Lynne Hood	EPA	376-8631
Marissa Merker	NEZPERCE	
Matt St Germaine	CHPRC	376-8068
Mike Cline	DOE	376-6070
Randal Fox	CHPRC	373-6024
Roger Quintero	DOE	373-0421
Scott Davis	MSA	376-8757

100/300 Area Unit Managers Status Meeting
September 17, 2020
Joined via Microsoft Teams

PRINTED NAME	ORGANIZATION	TELEPHONE
Shannan Hardziej	DOH	946-0703
Shelley Cimon	ODOE	541-240-0161
Stephanie Brasher	MSA	373-6230
Steve Balone	DOE	376-0236
Theresa Bergman	CHPRC	376-1669

100/300 Area Unit Managers Meeting
Meeting Minutes Approval
September 17, 2020

Mark S. French Digitally signed by Mark S. French Date: 2020.10.15 16:43:36 -07'00'

APPROVAL: _____ **DATE:** _____

River Corridor Project Manager, DOE/RL

Michael W. Cline Digitally signed by Michael W. Cline Date: 2020.09.24 12:40:18 -07'00'

APPROVAL: _____ **DATE:** _____

Groundwater Project Manager, DOE/RL

Digitally signed by Welsch, Kim (ECY) Date: 2020.10.15 09:53:43 -07'00'

APPROVAL: _____ **DATE:** _____

Environmental Restoration Acting Project Manager, Ecology

Buelow, Laura Digitally signed by Buelow, Laura Date: 2020.10.15 11:43:36 -07'00'

APPROVAL: _____ **DATE:** _____

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.

CHPRC-2003813
ATTACHMENT 4

LTS

BRIDGE TO THE FUTURE

MSA - ANNUAL INSTITUTIONAL CONTROLS ASSESSMENT (2020)

Background

Institutional Controls

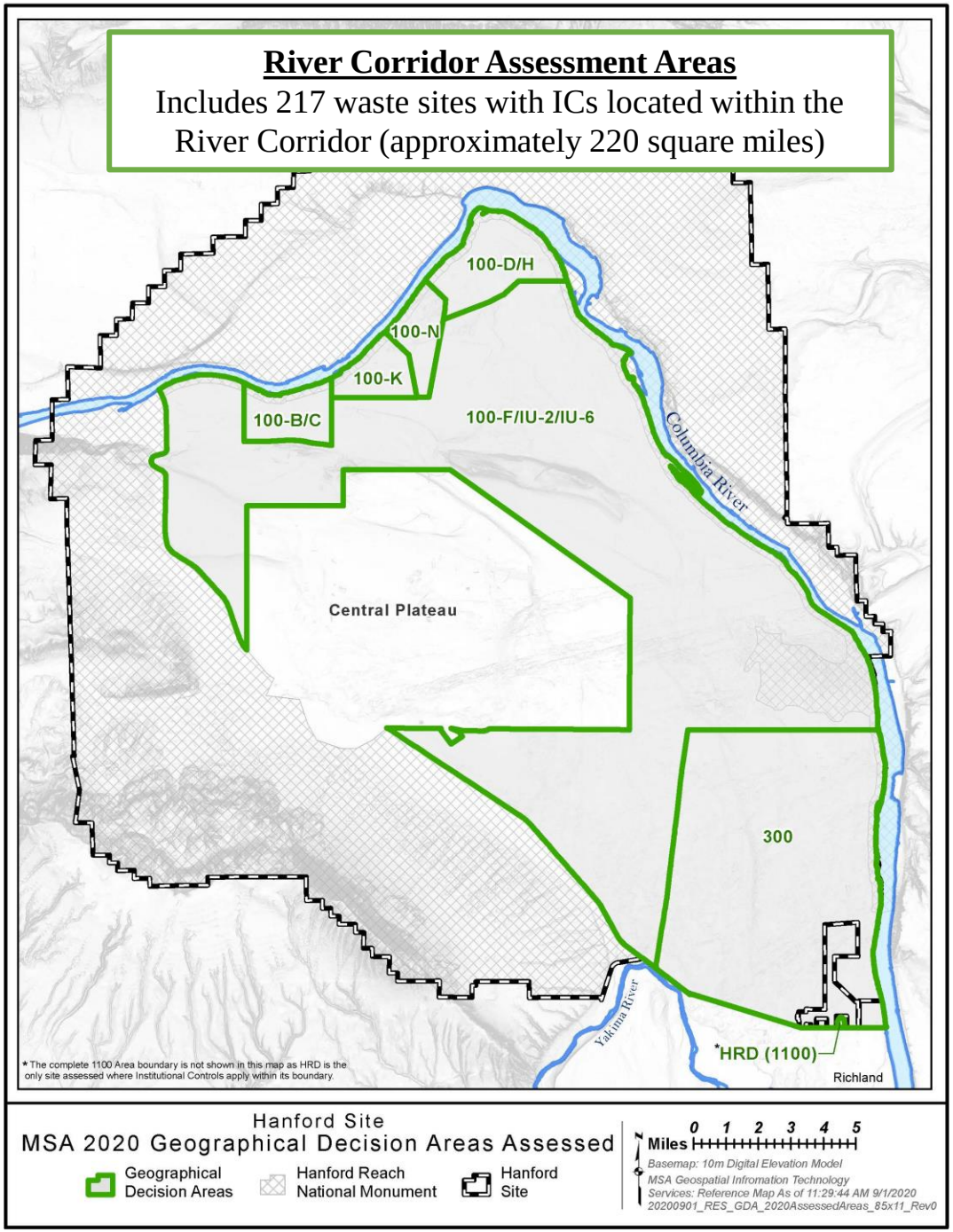
- Defined in CERCLA and RCRA decision documents
  - Consolidated in ***Sitewide Institutional Controls Plan For Hanford CERCLA Response Actions and RCRA Corrective Actions***, DOE/RL-2001-41, Rev. 9 (IC Plan)
    - Rev. 9 published in early 2019 to incorporate 100-D/H ROD
    - IC Plan requires annual assessment of ICs

FY 2020 Assessment in a Deep Zone IC Boundary within the 100F Reactor Area.

MSA 2020 Annual Assessment

- 217 waste sites assessed for compliance with IC requirements using graded approach
  - Systematic field walk-downs, reviews of aerial imagery, and vehicle surveys (depending on the size of the site and the type of topography)
- Reviewed for applicable, specific IC requirements listed in decision documents
- MSA publishes an Annual Sitewide IC Assessment Report each fall

CHPRC-2003813
ATTACHMENT 4



Institutional Control Categories & Types

Access Controls

- Warning Notices (i.e., signs)
- Entry Restrictions
- Fencing

Land-Use Management

- Land-use and real property controls
- Site Evaluations and Site Excavation Permits
- Enhanced Recharge restrictions
- Irrigation Control

Warning signs in Spanish and English along Columbia River near the 300 Area.

2020 Assessment of Institutional Controls

Access Controls – 300 Area Management Assessment

- Continuous improvement of access control IC:
  - Reduce complacency and footprint of outdated and unnecessary signage around 300 Area Perimeter Fence
  - Completed assessment of 143 signs around the fence perimeter
  - 30 different sign types:
    - Notice to Visitors, No Trespassing, Prohibited Articles, Notice to Visitors, Radiologically Controlled Areas, Keep Out, etc.

Signage assessed around the 300 Area Perimeter Fence.

Decisions Made for the 143 Signs

- 81 = No Changes (57%)
- 52 = Removed (36%)
- 10 = Replaced (7%)

2020 Assessment of Institutional Controls

Access Controls - Warning Notices (cont'd)

- Hazardous Area warning signs required by decision documents are in place (5 repaired/replaced in 2020)
- Approximately 100 "No Trespassing" signs along road perimeters were found to be damaged or illegible due to general weathering or fire
  - Signs fabricated, installation pending

Access Controls - Entry Restrictions

- Active badging program and barricades are in place to control unauthorized entry
- Damaged fences were observed in 7 locations
  - Repairs have been completed in FY 2020

Sign near east entrance of the 100-D area repaired this fiscal year.

2020 Assessment of Institutional Controls

Land-Use Management

- No changes in land-use designations (e.g., industrial use) occurred in FY 2020 as confirmed by Land Management SMEs.
- LTS reviewed 24 Site Evaluations in FY 2020 to ensure land-use ICs are maintained
- LTS approval is mandatory on Site Excavation Permits:
  - ≥146 excavation permit applications were evaluated in FY 2020 for IC compliance
- No substantial disturbances or natural subsidence/erosion found on waste sites with ICs

Site assessed in the 300 Area limited to land-use designation for industrial use only. No non-industrial uses were observed during this year's assessments.

2020 Assessment of Institutional Controls

Land-Use Management Cont'd

- MSA assessed 36 waste sites in the 300 Area Industrial Complex with the enhanced recharge IC:
  - Maintain and look for ways to improve drainage systems and barriers in place (e.g., asphalt barriers) to support the enhanced recharge IC
    - Repaired asphalt around 325 Building to control stormwater runoff away from waste sites
    - Roads at 324 Building are regularly assessed, but will not be repaired due to ongoing D&D activities.
    - LTS facilitates regular 300 Area Hanford Contractor Interface meetings with Interface Management
  - LTS works with 300 Area Hanford contractors to minimize impact of discharges from drinking water pipeline flushing / fire-hydrant tests
    - Revised MSA's and CHPRC Planned Water Discharge Review Forms to include LTS as reviewer

Western and northern portion of the repaved roads adjacent to the 325 Building.

2020 Assessment of Institutional Controls

Groundwater-Use Management

- Wells to be drilled at Hanford are reviewed through the Site Excavation Permit Application process

Barriers – Engineered Controls

- Controls are in place to maintain the integrity of cap at the Horn Rapids Landfill

Information Controls – Notifications

- 9 reportable trespassing incidents on Hanford (October 2019 – August 2020)

All ICs in areas managed by LTS were observed to be in-place in 2020

LTS
BRIDGE TO THE FUTURE

Mule Deer Observed Near 100-D

Bald Eagle Observed Near 100-N

Red-tailed Hawk Observed in 100-IU-2

Bull Elk Observed Near 100-H

Pacific Northwest
NATIONAL LABORATORY

PNNL Water Discharges – 300A

DAN EDWARDS

100/300 Area Unit Managers Meeting

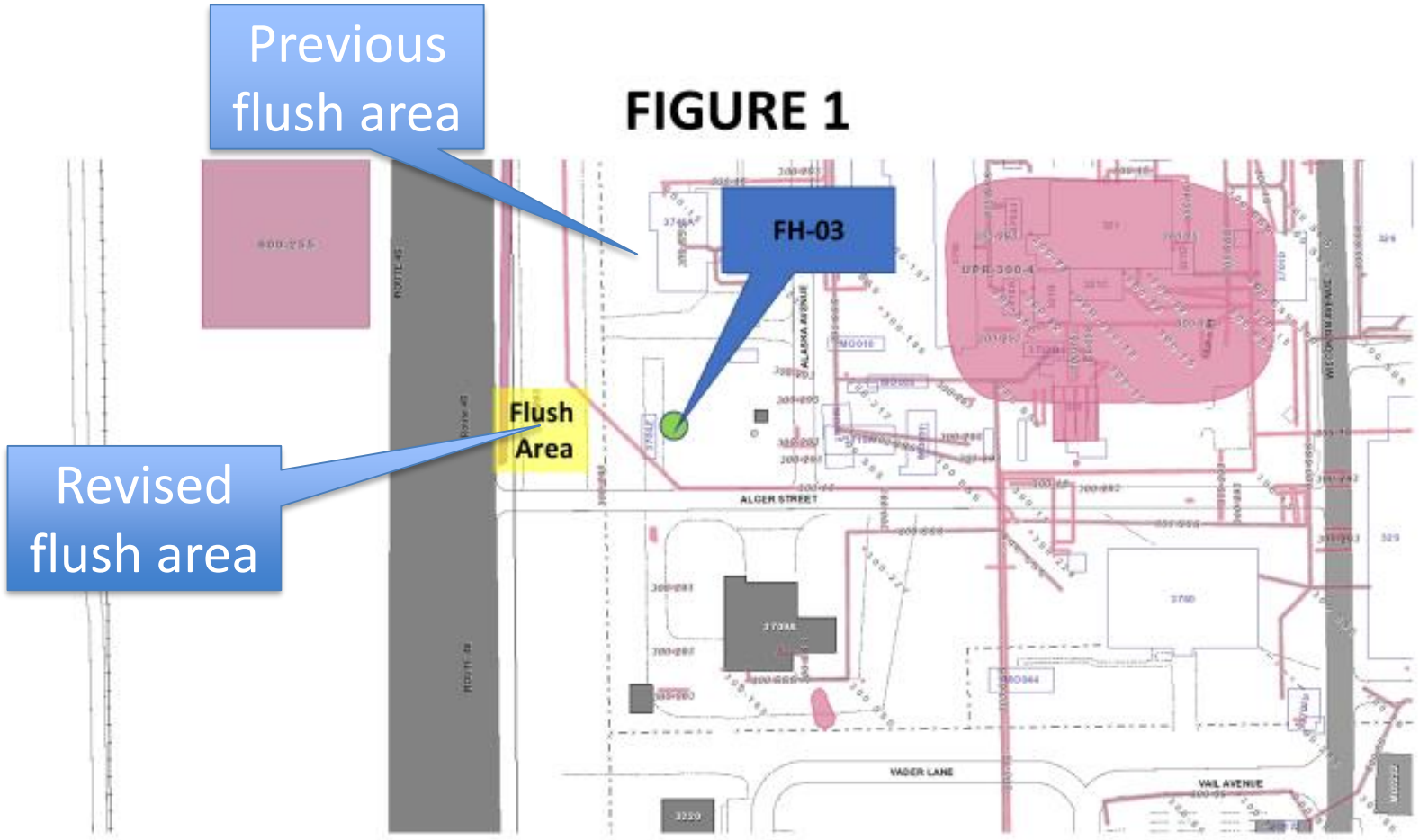
Flushing of Drinking Water Lines

- Continued flushing of 300A drinking water lines in FY20 to maintain chlorine levels for operational 300A facilities.
- Flushing on average ~2-3 times per week (less in winter), same hydrants and flow volumes as reported in 2019.
- Discharge locations coordinated with MSA IC and CHPRC groundwater programs.

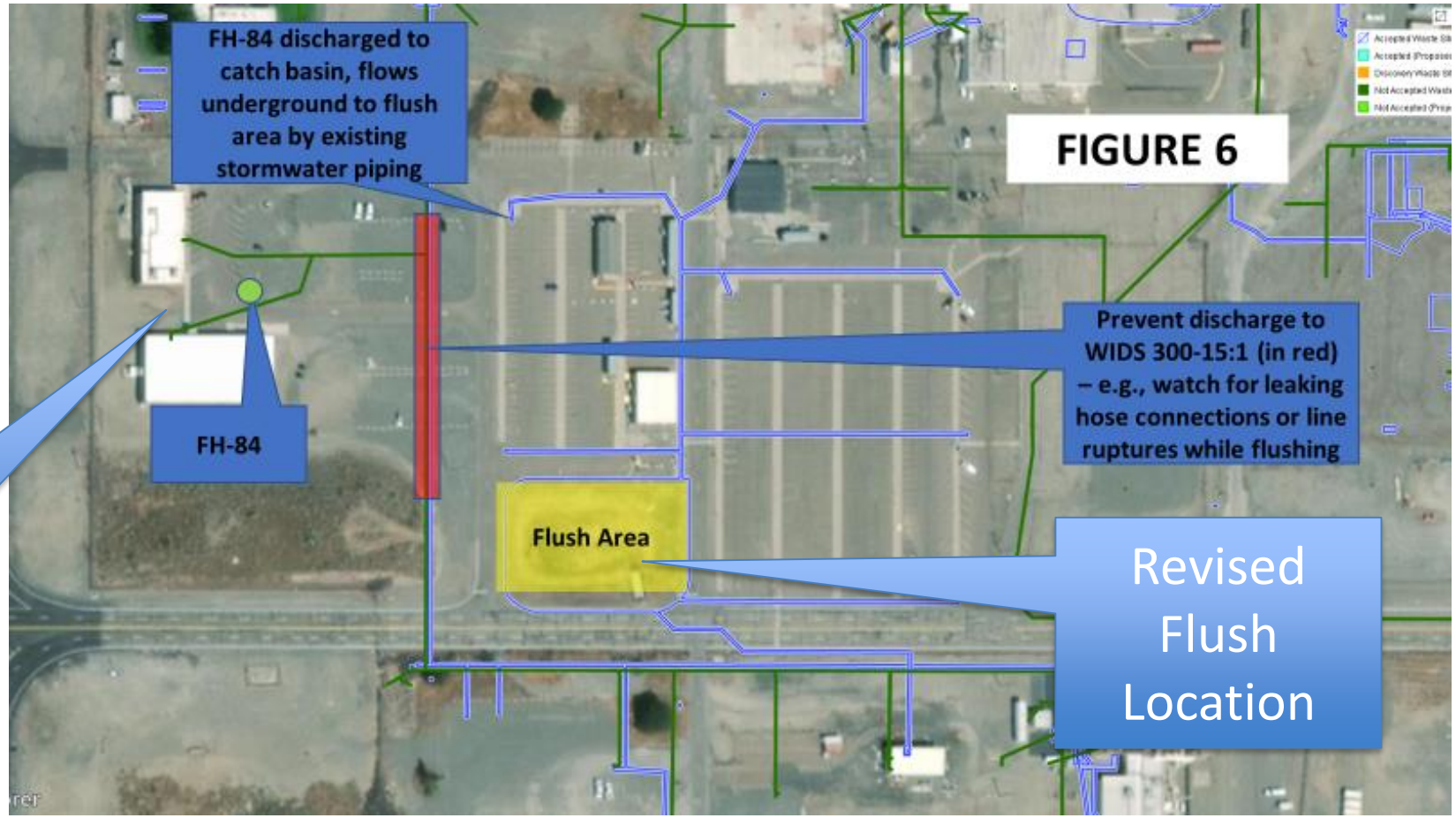
300A Drinking Water Line Flushing - PNNL

Hydrant Number / Location	Max Flow (GPM)	Max Duration (min)	Discharge Area (sqft)	WIDS Sites Near Potentially Affected Area
FH-03	500	60	7000	300-15:3, 300-15:1
FH-48	500	60	10000	300-214:2, 300 RLWS:3, 300-265, 300-15:3
FH-65/66	500	60	18000	300-15:1, 300-269
FH-73	500	60	35000	300-15:1
FH-77/78	500	60	55000	300-15:1 *Only for FH-78
FH-84	500	60	11000	300-86; 300-15:1 (where hose will cross)
FH-86	500	60	60000	N/A
MO-262, 263, 265	500	60	22000	N/A

Revised flush location – Hydrant 3



Revised Flush Location – Hydrant 84



Repair of Hydrant #52 – unintentional discharge

- Repair work on 9/17/2019.
- Isolation error and thrust block failure while cutting line to repair hydrant.
- 500gpm for ~10-15 minutes, estimated 6,000 gallons released.
- Water infiltrated to the west of hydrant location and toward Cypress Street (north).
- MSA IC personnel evaluated same day, no impacts to 300A IC's.

Pacific Northwest
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300 Area Institutional Controls - PNNL Input

September 17, 2019

DL Edwards

Pacific Northwest
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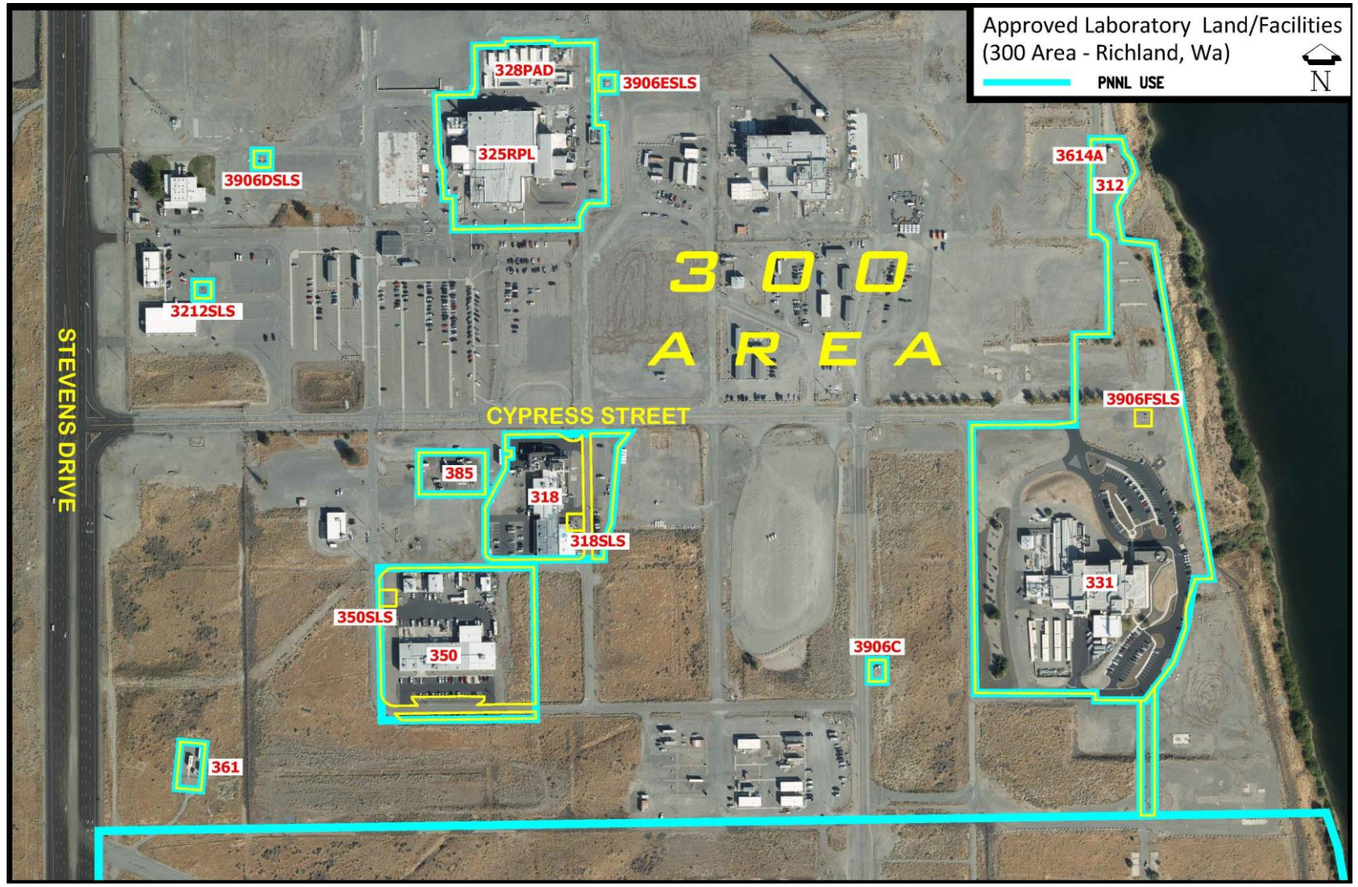
PNNL 300Area Operations

- Research and Facility Operations for RPL/325, 331, 318, 385, 312, 361, 3614A, 3906C, and 350.
- Operate the 300Area sanitary sewer (City of Richland) and 300Area drinking water treatment (385) and supply system.



Pacific Northwest NATIONAL LABORATORY

Institutional Controls – PNNL

- Entry restrictions – badging and facility postings, adhere to MSA postings/barricades/notices.
- 300Area excavations performed under the Hanford Excavation Permit process:
  - 2 fire hydrant replacements, roof stairwell addition at 318, RPL/325 fire riser 1 and 2 replacement
  - RPL stormwater drainage re-route, coordinated with LTS on flow path to mitigate IC impacts.
- Groundwater from 399-4-12 is periodically used (during interruption of service in river water from 312) as a backup source for the 331 fish laboratory.
- Discharges to ground (>2K gallons) are routed through CHPRC and LTS for approval.
  - Line flushing to maintain drinking water to 300Area facilities/residents.
  - Walkdowns of events with LTS, revisions to drainage areas

100K Area Report
100/300 Area Unit Manager Meeting
September 17, 2020

RL-0041 100K Closure Project – *(Manny Lopez-Lopez, Deborah Singleton)*

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 – Dates will be evaluated after contract transition.

Soil Remediation and Waste Site Closure:

- Overburden removal at 100-K-60:1 continued and is expected to complete in September.
- Upcoming remediation activities include:
  - 100-K-79:7
  - 100-K-47:1

Ancillary Facility Deactivation and Demolition (D&D):

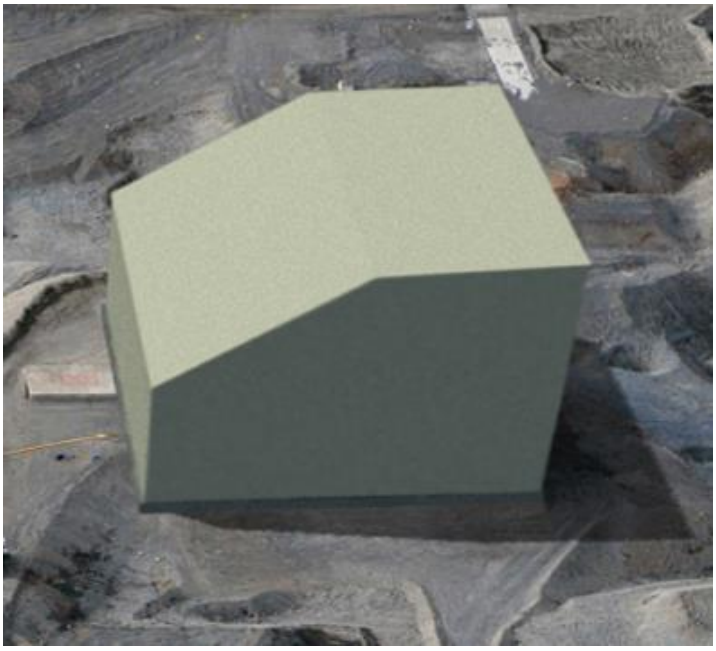
- Completed demolition preparations for 165KE
- Contined demolition of the 166KE Fuel Storage Bunker
  - West day tank demolition is complete
  - West bulk Storage tank demolition is complete
  - East day tank demolition is underway
  - East bulk storage tank is underway.

166KE demolition underway

(165KE Power Control Building in Background)

100K Area Report
100/300 Area Unit Manager Meeting
September 17, 2020

105-K East Reactor Interim Safe Storage (ISS)



Conceptual Design of the 105-K East Safe Storage Enclosure

100K Area Report
100/300 Area Unit Manager Meeting
September 17, 2020

- Only a single bid was received for the construction of the 105-K East Safe Storage Enclosure. Bid was evaluated and it was determined that the procurement should be separated into two pieces.
- The RFP for the soil remediation and foundation work is expected to be released for bid in Mid-September.

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-93-20-02 was approved 6/10/2020 and adds three target dates – milestone completion date will be evaluated after contract transition.

TPA Target Date M-093-27-T01, *Initiate earthwork for construction of the 105-KE Safe Storage Enclosure.*

- **(9/30/2021)** – On Schedule - This target date will be satisfied by initiating the earthwork in support of the 105KE Reactor Safe Storage Enclosure construction. Earthwork includes excavating and stockpiling clean soil or packaging contaminated soil from existing terrain around the 105KE Reactor Building to prepare the area for installation of the engineered fill pad.

TPA Target Date M-093-27-T02, *Complete preparation of the 105-KW Reactor Building for Interim Safe Storage by removing liquids and accessible hazardous and controlled materials in accordance with the Removal Action Work Plan.*

- **(DATE – TBD)** - This target date will be satisfied by removing liquids and accessible hazardous and controlled materials from the deactivated and decommissioned portions of the 105KW Reactor Building. Asbestos that is deemed stable and outside the Surveillance and Maintenance tour path, primarily at heights or asbestos cement wall/ceiling panels, will remain in place during the interim safe storage period.

TPA Target Date M-093-27-T03, *Initiate earthwork for construction of the 105-KW Safe Storage Enclosure.*

- **(DATE – TBD) -** This target date will be satisfied by initiating the earthwork in support of the 105KW Reactor Safe Storage Enclosure construction. Earthwork includes excavating and preparing the area around the 105KW Reactor Building for installation of the engineered fill pad.

TPA Milestone M-016-00C, *Complete all response actions for the 100 K Area*
(**9/30/24**) - At Risk – Date will be evaluated after contract transition.

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

- (**9/30/23**) – At Risk – Date will be evaluated after contract transition.
- 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 approved by EPA in July and are expected to make it through the clearance process and be returned to CHPRC in September.

100K Area Report
100/300 Area Unit Manager Meeting
September 17, 2020

- Basin deactivation work is slowing starting to resume following the COVI-19 stop work. Planning and preparation activities continue to support restart of work. These activities include the following:
  - Preparations for Garnet Filter Media Retrieval (GFMR) Operations Acceptance Testing and Readiness Review.
  - Preparations to remove equipment to clear the footprint in the K West Basin West Bay for installation of the Vertical Pipe Casings (VPC).
  - Planning and preparations for final inventorying and dose rating remaining below-water debris.
  - Preparations to perform bulk removal of hanging pole tools. (West Bay).
  - Preparations for size reducing and sampling terminated material.
  - Preparations to inspect and characterize the Integrated Water Treatment System settler tanks.
  - Preparations to sample the Skimmer System sand filer media.
  - Planning in support systems deactivation, grouting, and dewatering in the basin.
- Completed fabrication of the Vertical Pipe Casing components to support segregation of debris in the 105KW Basin. These items are expected to ship to CHPRC by the end of September.


Testing of the Hydraulic Power Units and Tipping assembly

- Equipment and Mockup to support VPC Auger Testing in Conroe, Texas are complete and will support testing which is tentatively schedule to begin in later September/Early October.

100K Area Report
100/300 Area Unit Manager Meeting
September 17, 2020


Auger bit fabrication has completed and the tool is in Texas!


Vertical Pipe Casing Ready for Testing Activities!

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

- (**12/31/23**) – At Risk. – Date will be evaluated after contract transition.

300 Area River Corridor Soils Summary
300 Area Unit Manager Meeting
September 17, 2020

300 Area ROD Scope – *(Ben Vannah)*

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**) – At Risk

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.

COVID-19 Impacts

- Until July, the project was limited to maintaining mission-critical operations at 324
- Limits to the number of workers allowed at 324 impacted on-site training of workers
- Supply chain impacts limited PPE availability and restricted activities in contamination areas
- Modifying trailers and common areas to enforce social distancing

Corrective Action Progress

- The stop work is still in effect.
  - Ancipate resuming general CA/HCA cleanup activities in the first quarter of FY21.
- Modification of the 324 Mockup facility for use in hands-on advanced radiological training.
- Advanced RadWorker Training team reported back to site 7/20/2020

300 Area River Corridor Soils Summary
300 Area Unit Manager Meeting
September 17, 2020

Significant Accomplishments

- Successfully completed Factory Acceptance Test of the cell dams for the hot cells
- The self-leveling device for waste box loadout is ready for delivery
- Equipment procurement/fabrication for B Cell cleanout continues:
  - Universal cutting tool
  - Water delivery system for the airlock
  - Modified airlock rail
  - Waste bins and waste containers for the 324 Building
  - B Cell 10-ton crane

A Cell lower Dam being lifted into the test frame as part of the Factory Acceptance Test.

A Cell Mid Dam placed on top of the Lower Dam in the test stand at Hi Line Fabricating as part of the Factory Acceptance Test.

Phased Approach to Work under COVID-19 Safety Protocols

- Phase 0 and 1 activities were primarily min safe operations and "paperwork"
- Entered COVID Phase 2 operations on August 31. Will not enter phase 3 until a COVID vaccine is available.

Phase 2 – Low Risk Work	Phase 3a – Moderate Risk Work	Phase 3b – High Risk Work
-Hands-on Advanced RadWorker training	-Perform 324 CA/HCA facility modifications (cell sealing, waste load out)	-Resume normal operations

300 Area River Corridor Soils Summary
300 Area Unit Manager Meeting
September 17, 2020

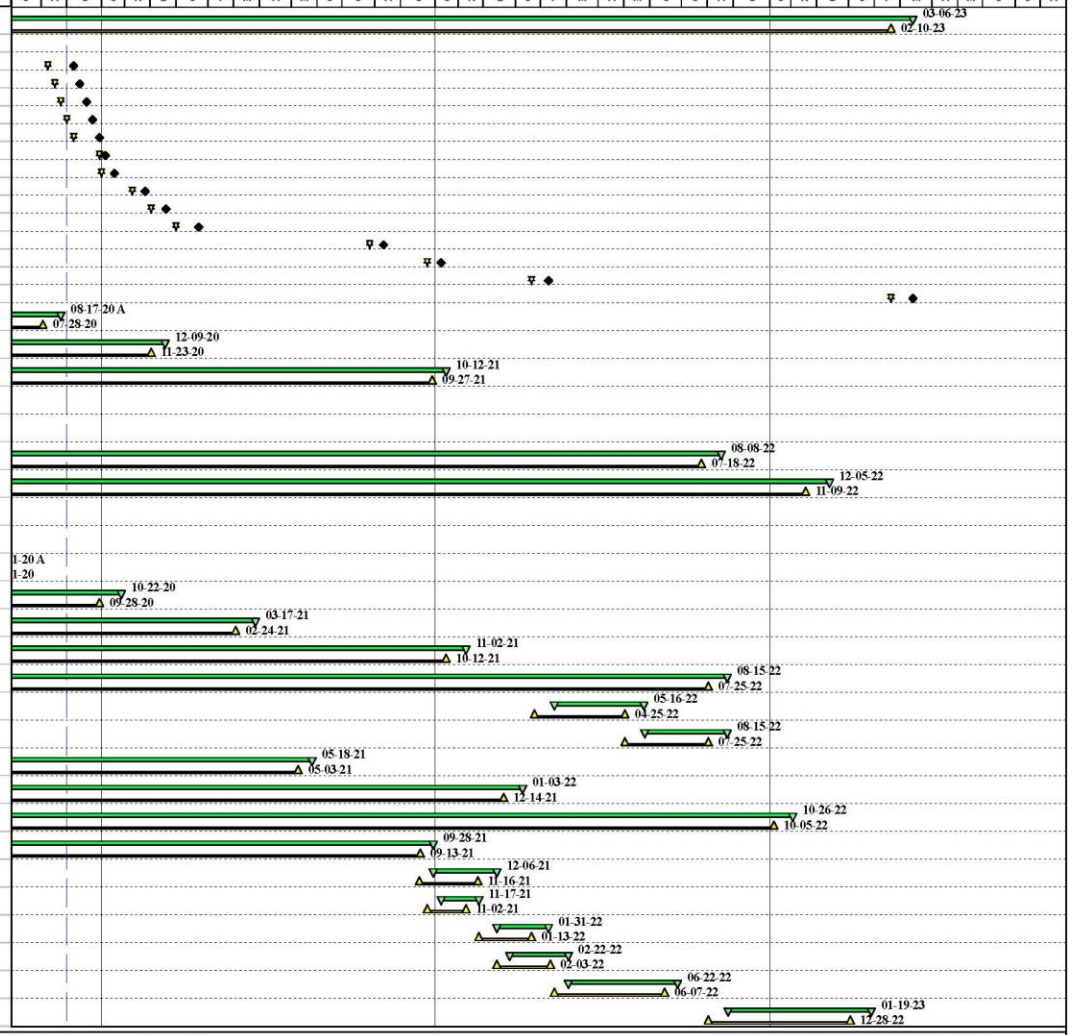
TPA Milestone M-016-85, *Complete Remedial Actions for 300-296 and Disposition for 324 Bldg. and Ancillary Bldgs.* (**9/30/2025**) – On Schedule

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 River Corridor Soils Summary
300 Area Unit Manager Meeting
September 17, 2020

300-296 FES Summary Schedule_Fiscal August Month End

#	Activity Name	Start	Finish	Prior Month Finish VAR
1	**300-296 Key Milestones**	06-02-20 A	03-06-23	-24
2	COVID 19 Phase 1 - Start Return to Work/Remobilization	06-02-20 A		0
3	COVID 19_Phase 2a - Start Low Risk Work	08-31-20		-28
4	COVID 19_Phase 2b - Start Low Risk Work	09-07-20		-28
5	COVID 19_Phase 2c - Start Low Risk Work	09-14-20		-28
6	COVID 19_Phase 2d - Start Low Risk Work	09-21-20		-28
7	COVID 19_Phase 3a - Start Moderate Risk Work	09-28-20		-28
8	COVID 19_Phase 3b - Start High Risk Work	10-05-20		-7
9	Resume General CA/HCA Work_11/14/19 Event	10-15-20		-14
10	Resume Room 18 Work_11/14/19 Event	11-17-20		-14
11	Resume Airlock Work_11/14/19 Event	12-10-20		-16
12	Complete Three Test Pilot Holes 2-4, and Grout Two Micro-Pile Holes (Due 9/30/2019)		01-14-21	-24
13	Complete 324 Building REC Cleanout		08-04-21	-15
14	Initiate 324 B-Cell Floor Scoring	10-07-21		-15
15	Complete Removal of 324 B Hot Cell Floor (Due 9/30/2020)		01-31-22	-18
16	TPA M-016-85A Complete remote excavation of the 300-296 waste site (Due 9/30/2021)		03-06-23*	-24
17	**COVID 19 Work Dealy**	03-24-20 A	08-17-20 A	-10
18	**Project Resumption from 11/14/19 Event**	01-27-20 A	12-09-20	-8
19	**A/D Crane Recovery**	09-11-19 A	10-12-21	-9
20	**Mockup Equipment Procurements**	05-18-17 A	12-12-18 A	0
21	**Mockup Equipment Installation**	11-15-17 A	04-23-19 A	0
22	**Mockup Training**	04-25-18 A	08-08-22	-12
23	**Cell Sealing**	01-29-18 A	12-05-22	-12
24	**Core Drilling**	01-09-18 A	03-28-19 A	0
25	**Structural Modifications Design - Micropiles**	12-27-18 A	11-13-19 A	0
26	**Structural Modifications Design**	10-11-17 A	05-21-20 A	0
27	**Structural Modifications - Temp Shoring**	06-27-19 A	10-22-20	-15
28	**Structural Modifications - Interference Removal**	10-31-17 A	03-17-21	-12
29	**Structural Modifications - Micropiles**	11-11-19 A	11-02-21	-12
30	**Structural Modifications - Soil Stabilization**	10-01-19 A	08-15-22	-12
31	**Structural Modifications - Scabling/Dowel Drilling**	02-07-22	05-16-22	-12
32	**Structural Modifications - Pile Cap**	05-17-22	08-15-22	-12
33	**REC Cleanout**	09-13-17 A	05-18-21	-9
34	**Equipment Procurements**	09-14-17 A	01-03-22	-9
35	**Equipment Installations**	07-16-18 A	10-26-22	-12
36	**B-Cell Debris Removal**	07-02-18 A	09-28-21	-9
37	**Readiness Assessment - Phase One**	09-28-21	12-06-21	-9
38	**B-Cell Floor Scoring**	10-07-21	11-17-21	-9
39	**B-Cell Floor Removal**	12-07-21	01-31-22	-9
40	**Readiness Assessment - Phase Two**	12-21-21	02-22-22	-9
41	**B-Cell Soil Excavation (To the Footers)**	02-23-22	06-22-22	-9
42	**B-Cell Soil Excavation (Below Footers)**	08-16-22	01-19-23	-12



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Prior Month
Summary
Prior Month Milestone
Milestone

No Date on Our Schedule is More Important Than Your SAFETY

Groundwater Summary by OU (July - August 2020 Data)
100/300 Area Unit Managers Meeting
September 17, 2020

100-K Area Groundwater Operable Unit

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

- CERCLA Process Implementation:
  - A Teams meeting was held with RL on July 8, 2020 to present the fiscal year 2021 remedial process optimization actitivites identified for the 100-KR-4 OU. A follow-up Teams meeting was held August 19, 2020 to present the same material to EPA.
  - CHPRC received RL and EPA comments on the Soil Flushing Treatability Test Report, DOE/RL-2019-77, on July 15, 2020.
  - A Teams meeting was held on July 21, 2020 with members of RL and EPA to establish the data quality objectives and the principle study questions associated with a Parent Rebound Study SAP planned for the 100-KR-4 OU. This Parent SAP will act as the main body of information with site specific sampling requirments included in rebound study SAP addendums. The presentation discussed during the meeting and the meeting notes are included in SGW-65230-VA.
  - Provided the Technical Impracticability documentation for strontium-90 (DOE/RL-2018-43, Draft D) to RL for submittal to EPA for review on August 4, 2020.
  - Completed comment resolution with EPA on the 100-KR-4 waste management plan (DOE/RL-97-01, Rev. 7) on August 18, 2020. The document will be finalized but will not be issued until the 100-HR-3 Remedial Design/Remedial Action Work Plan (RD/RAWP) is complete.
  - EPA requested a review extension until September 25, 2020 on the Draft B 100-KR-4 Feasibility Study (DOE/RL 2018-22).
- Monitoring & Reporting:
  - Groundwater samples were collected from key monitoring wells that supported the KW Soil Flushing Treatability test between July 27 and August 5, 2020. Figure KR-1 shows observed Cr(VI) concentration have dropped below the interim action remediation target of 20 µg/L as well as at or below the AWQS of 10 µg/L. However, based on the available information and the lack of data due to COVID (the period of time shortly after we shut the infiltration gallery off on March 10, 2020), it is unclear whether soil flushing has depleted the secondary source at the 183.1KW Headhouse. As of September 2, 2020 RL and EPA concurred with restarting the KW infiltration gallery.
  - During the month of August, 72 wells and aquifer tubes were scheduled for routine groundwater sampling. As of August 31, 2020, 52 of those locations have been successfully sampled. The remaining 20 will likely be completed during the month September.
- Remedial Actions & System Modifications:
  - Figures KR-2 through KR-4 present the monthly volume of groundwater treated and mass of hexavalent chromium removed through August 2020.
  - Figure KR-5 illustrates the monthly average pumping rates for operating extraction wells across the 100-KR-4 system. KX extraction wells 199-K-153 and 199-K-210 will require well maintenance. KX extraction wells 199-K-148 and 199-K-161 were both returned to service at the end of August.
  - The volume of groundwater treated and mass of Cr(VI) removed for the 100-K P&T systems (KX, KR-4, and KW) during July and August 2020 are:

Month	Gallons Treated (millions)	Hexavalent Chromium Removed (kg)
July	59	1.1
August	58	1.8

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

P&T System	Treated (mgal)	Removed (kg)
KR4	139	1.4
KW	140	10.0
KX	388	20.3
Total	667	31.7

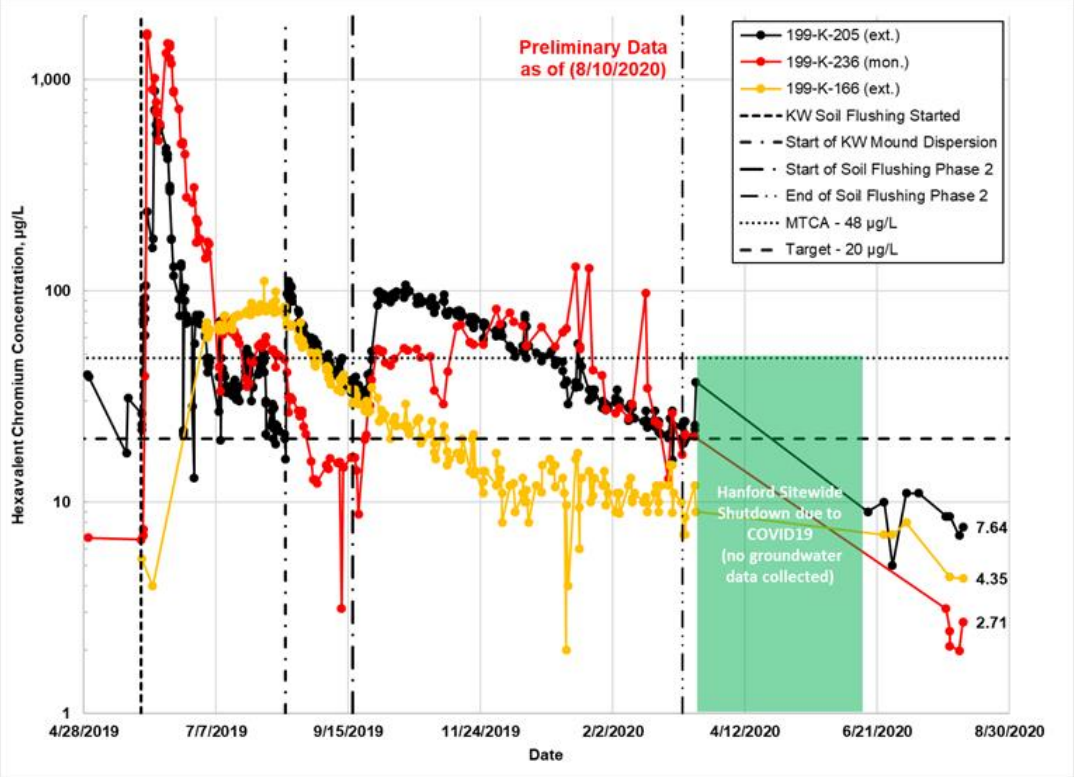

Figure KR-1. Cr(VI) Concentrations in Key KW Soil Flushing Observation Wells

Groundwater Summary by OU (July - August 2020 Data)
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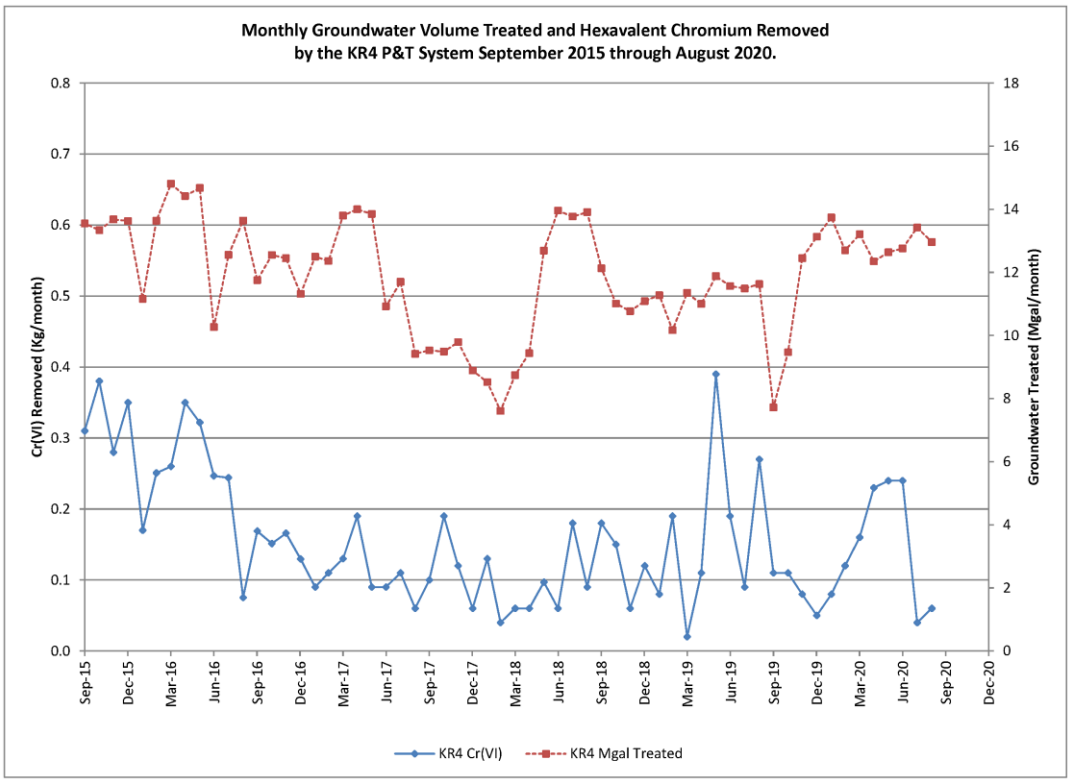

Figure KR-2. Monthly Cr(VI) Removed and Groundwater Volume Treated by KR4 P&T September 2015 through August 2020

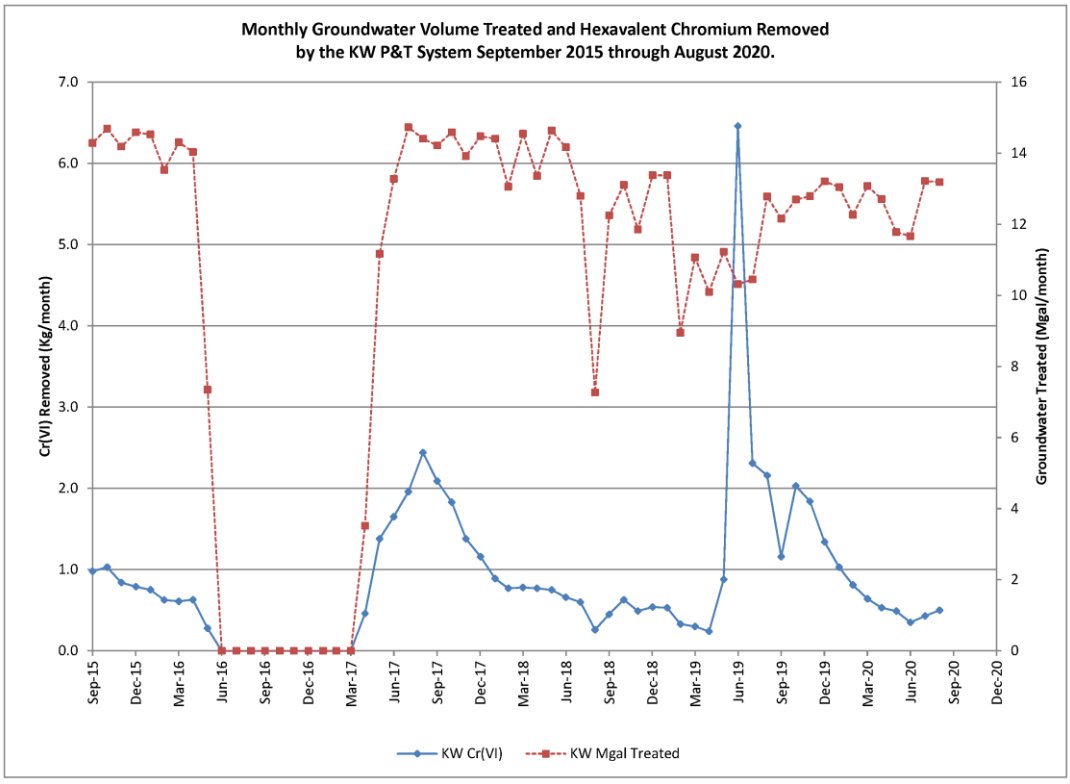

Figure KR-3. Monthly Cr(VI) Removed and Groundwater Volume Treated by KW P&T

Groundwater Summary by OU (July - August 2020 Data)
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September 2015 through August 2020

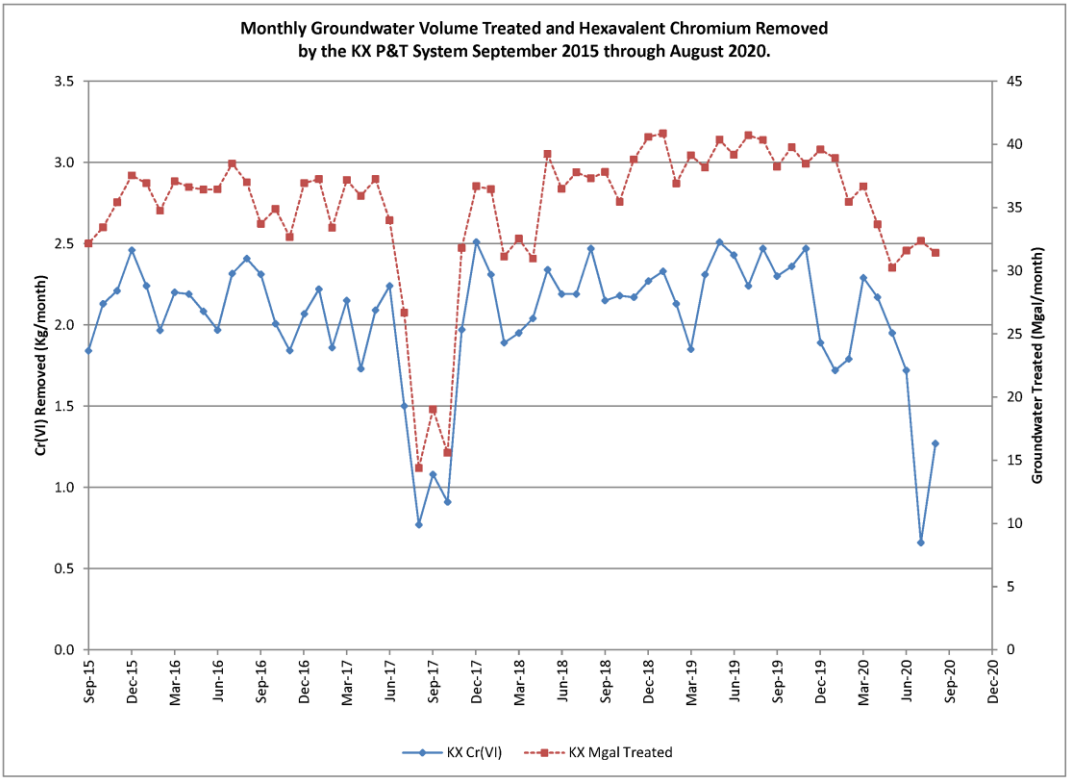

Figure KR-4. Monthly Cr(VI) removed and groundwater volume treated by KX P&T September 2015 through August 2020

Groundwater Summary by OU (July - August 2020 Data)
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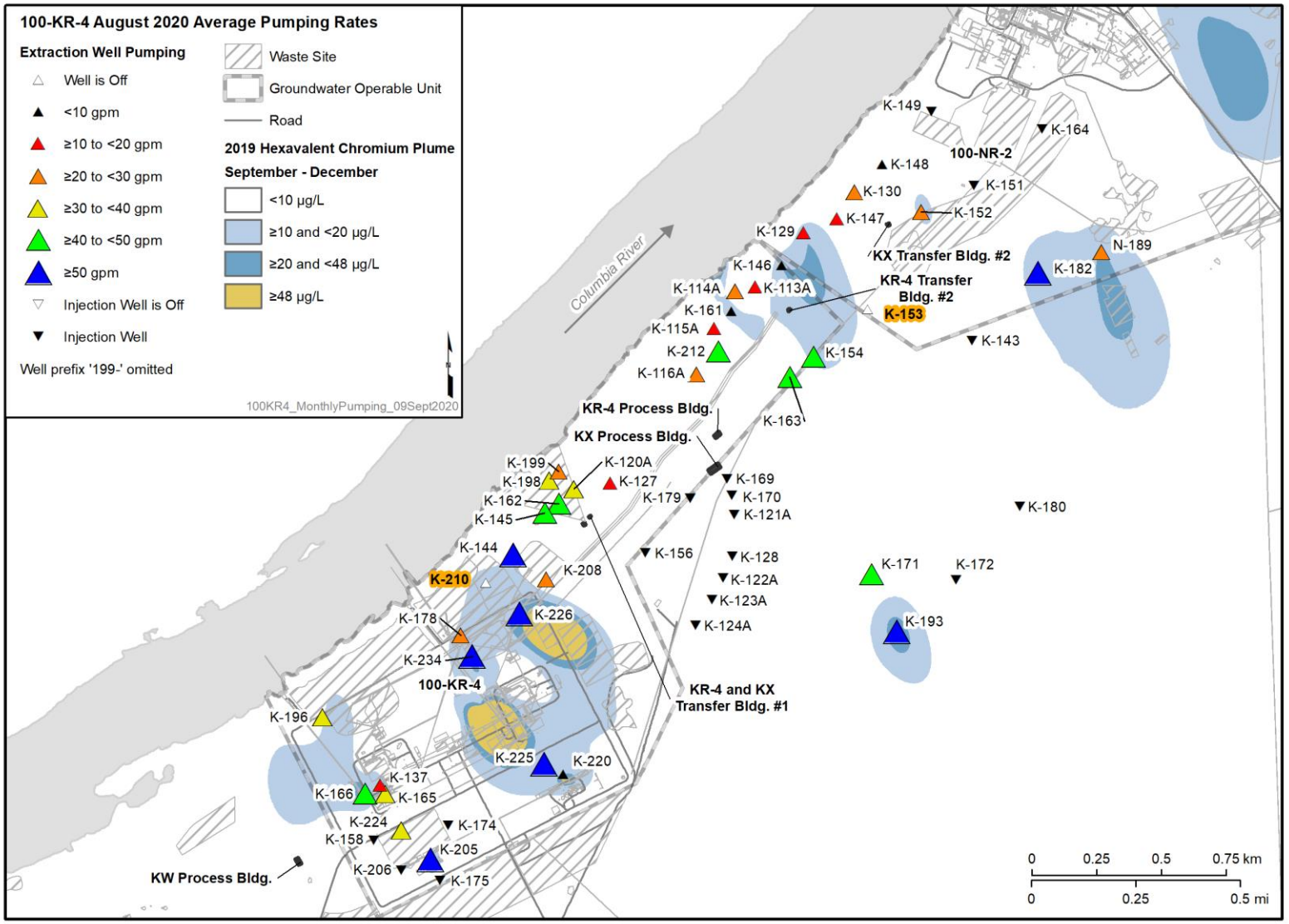

Figure KR-5. August 2020 Average Pumping Rates for the 100-KR-4 P&T System

<u>Regulatory Agency Comments:</u> None

Groundwater Summary by OU (July - August 2020 Data)
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100-BC Area Groundwater Operable Unit

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

- CERCLA Process Implementation:
  - Preparation of the responsiveness summary addressing public comments on the Proposed Plan continues.
- Monitoring & Reporting:
  - Nothing to report. The June sampling event (5 wells) and water level measurements were cancelled due to COVID work restrictions.
  - Aquifer tubes are scheduled for sampling in September
  - Grounwater sampling of the entire 100-BC-5 network is scheduled for October.

Regulatory Agency Comments: None

100-N Area Operable Unit

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

- CERCLA Process Implementation
  - TPA CN-0821 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.
  - Ecology review comments to the Draft B, 100-N RI/FS Report were received on July 9, 2020. The comment resolution process is currently ongoing. RL has provided 4 comment response packages to Ecology for review/concurrence through January 29, 2021 to address about 50% of the comments received. Ecology has concurred with the majority of the responses and identified ones that require further discussion.
  - All comments to TPA CN-0887 to the 100-NR-2 RD/RAWP (DOE/RL-2001-27) were addressed on August 25,2020 and the TPA CN was approved on September 3, 2020. The TPA CN identifies proposed changes to better align the sample frequencies to the monitoring needs and reflect the four TSD units that were removed from the Hanford Site RCRA permit in 2018.
- Remedial Actions:
  - A technical memorandum was prepared for the bioremediation and monitoring activities performed at the UPR-100-N-17 waste site in 2018 and 2019 and document the results of the low river respirometry test completed on November 19, 2019. The technical memorandum is in the document clearance process.
  - DOE/RL-2019-24, *Sampling and Analysis Plan for Bioventing Confirmation Sampling Boreholes*, was issued on January 22, 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. Drilling of the boreholes is planned for the first quarter of FY-21 (funding dependent) when the water table is low, exposing more of the deep vadose zone in the periodically rewetted zone.
- Product Recovery:
  - No changeout of the sorbent sponge assemblies in wells 199-N-18 and 199-N-183 have occurred since March due to the COVID-19 fieldwork delay. Sponge change out is scheduled for September.
- Monitoring and Reporting:
  - The next comprehensive sampling round of the 100-N groundwater monitoring wells and aquifer tubes is scheduled for September 2020.

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Regulatory Agency Comments: None

100-D/H Areas Groundwater Operable Unit

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

- CERCLA Process Implementation:
  - Response to Ecology's comments on the Draft A RD/RAWP continues. The comment resolution period was extended to September 30, 2020.
  - In response the Regulators concern regarding purgewater management, RL provided a memo (draft) to the Regulators on August 31, 2020, and in it described the logic to support a non-significant change to the affected OUs RODs is an acceptable means to identify the MSUs as on-site disposal locations for purgewater. The Regulators were accordingly asked to review and consider this proposed solution.
  - Provided a presentation to RL on July 8, 2020, that summarized the Remedial Process Optimization plan for FY2021. The discussion included plans for well realignments to optimize the Pump & Treat network and installation of wells in both the unconfined and Ringold Upper Mud aquifers.
  - Initiated response to RL's comments on the Decisional Draft Groundwater Monitoring Sampling & Analysis Plan on August 20, 2020. This SAP will replace the interim monitoring SAP and is scheduled for implementation early next year.
  - Completed resolution of RL's comments on the FY2021 Well Drilling SAP addendum on August 26, 2020. The SAP was forwarded to Ecology for review on August 27, 2020.
- Monitoring & Reporting:
  - Completed drilling and construction of three wells in July and August. Due to COVID-19 restrictions, six out of nine wells planned for the FY 2020 drilling campaign will be completed by September 30, 2020. The remaining three wells are scheduled for completion in fall 2020.
  - Due to COVID-19 restrictions, groundwater sampling events that were scheduled for the July/August time frame were delayed. This impacted 71 wells that were scheduled for routine groundwater monitoring. July/August sampling began in August. The next planned event is for November.
- Remedial Actions & System Modifications:
  - The volume of groundwater treated and mass of Cr(VI) removed from the 100-HR-3 P&T systems during July and August are:

Month	Gallons Treated (in millions)	Hexavalent Chromium Removed (kg)
July	37	2.5
August	56	3.6

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

P&T System	Treated (mgal)	Removed (kg)
DX	309	17
HX	268	34

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Total	577	51

- 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.

Groundwater Summary by OU (July - August 2020 Data)
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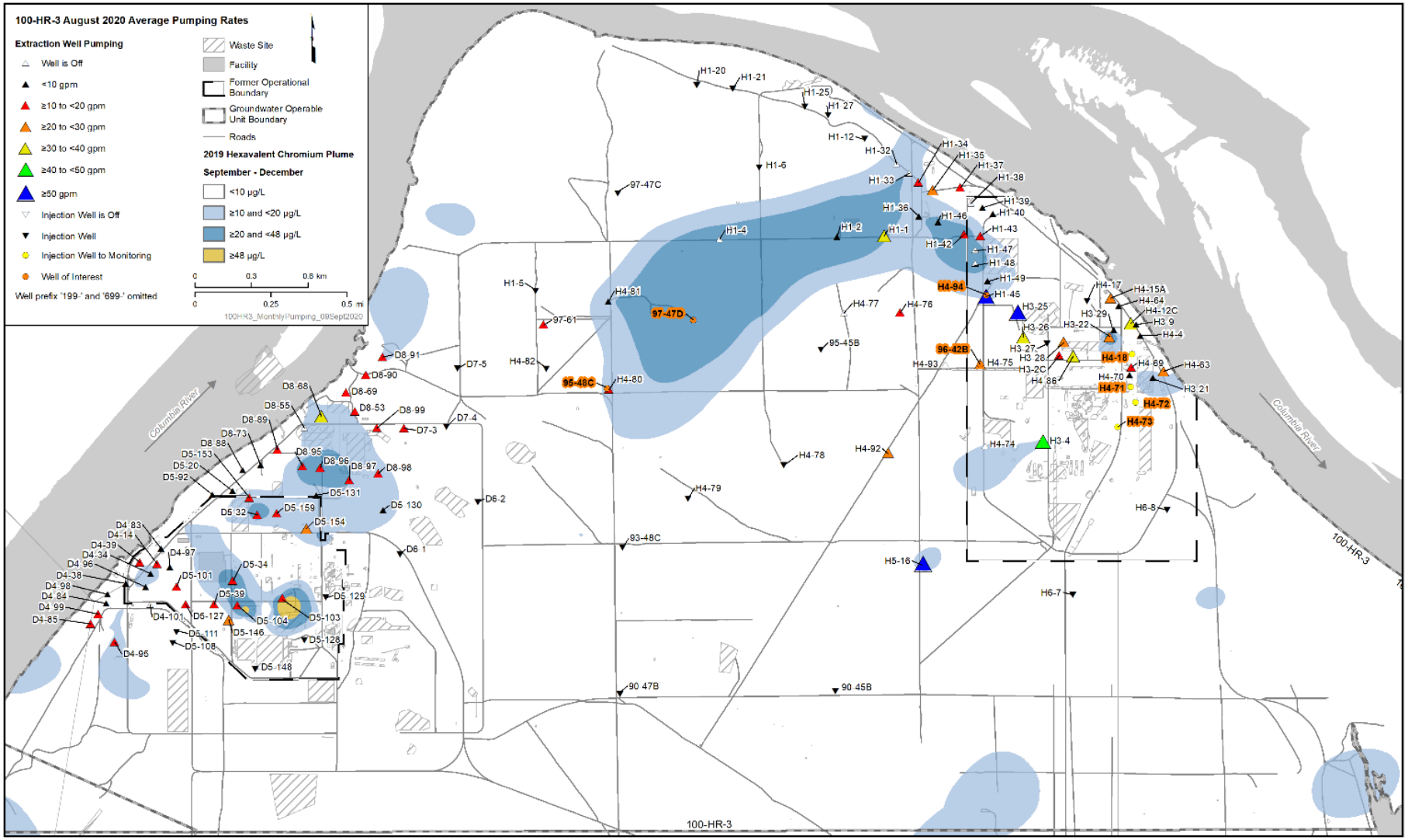

Figure HR-1. August 2020 Average Pumping Rates for the 100-HR-3 P&T System

Groundwater Summary by OU (July - August 2020 Data)
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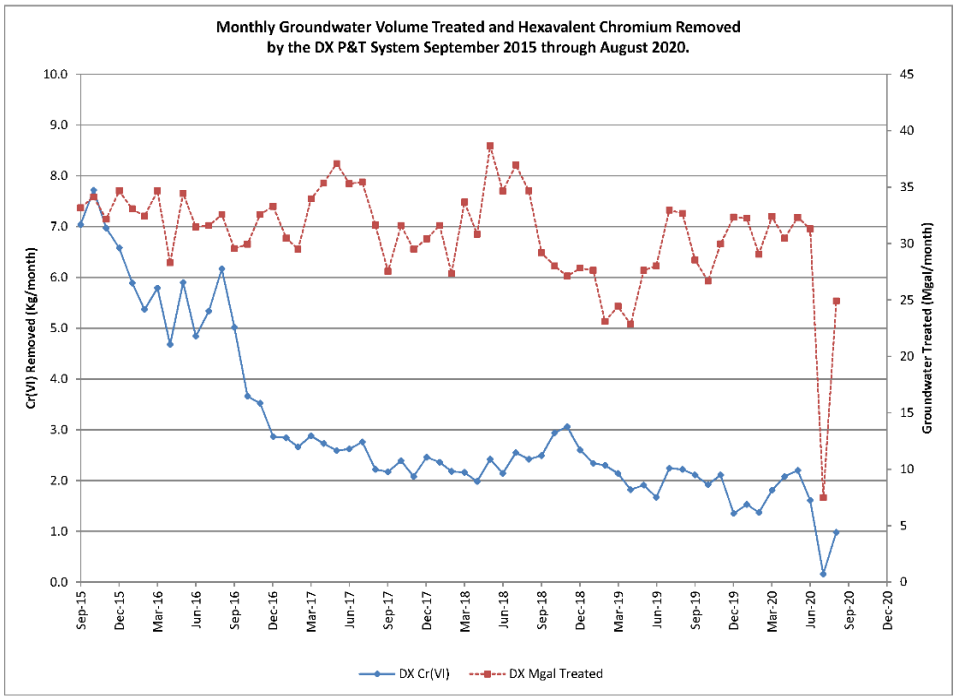

Figure HR-2. Monthly Cr(VI) Removed and Groundwater Volume Treated by DX P&T September 2015 through August 2020

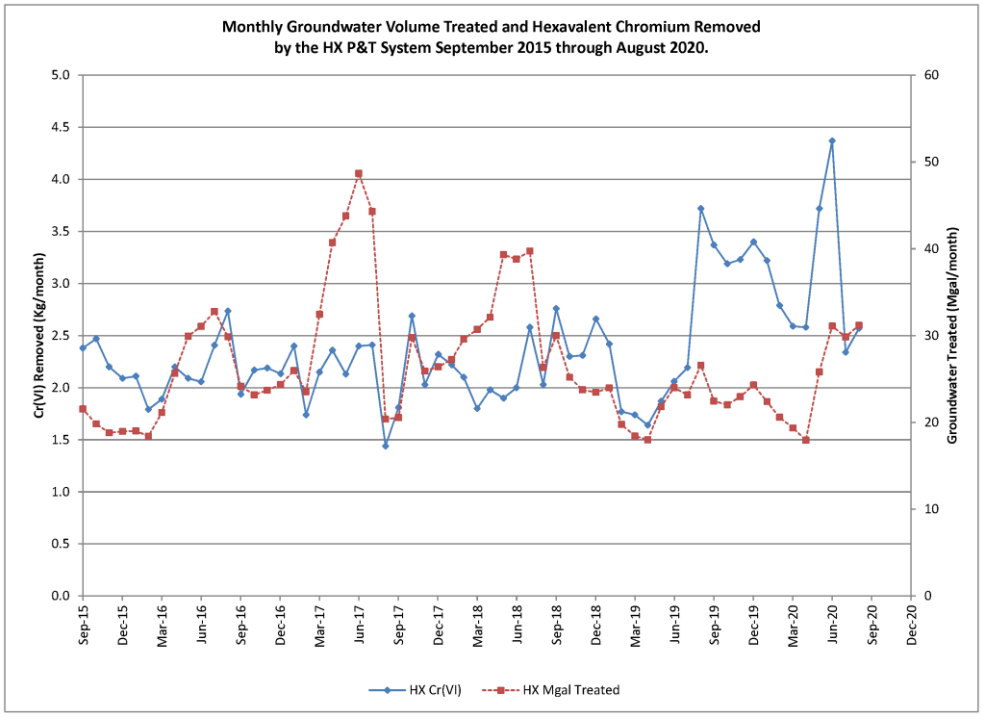

Figure HR-3. Monthly Cr(VI) Removed and Groundwater Volume Treated by HX P&T September 2015 through August 2020

<u>Regulatory Agency Comments:</u> None

Groundwater Summary by OU (July - August 2020 Data)
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100-F Area Groundwater Operable Unit

EPA Lead (RL – S. Balone, CHRPC – R. Evans, M. Hartman)

- CERCLA Process Implementation:
  - Nothing new to report.
- Monitoring & Reporting:
  - The sampling event (17 wells) and water levels scheduled for June were cancelled due to COVID work restrictions.
  - The 13 wells scheduled for sampling in August were all sampled successfully. Data have not yet been received from the lab.
  - Aquifer tubes and wells are scheduled for sampling in October.
  - Preliminary work has commenced on a performance monitoring evaluation report, which will document results of MNA for the first five years of the remedy. The report is expected to be completed by the end of FY 2021.
  - Data from the 100-FR-3 "Phase 2 wells" (installed in 2019) have been incorporated into the revised 100 Area geoframework model.

Regulatory Agency Comments: **None**

300 Area Groundwater Operable Unit

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

- CERCLA Process Implementation:
  - Responses to DOE review comments were completed and approved on August 31, 2020 for SGW-63113, *300-FF-5 Operable Unit Enhanced Attenuation Uranium Sequestration Completion Report*. The report was transmitted for final editing and clearance review on September 2, 2020.
  - Clearance review was completed and approved on September 1, 2020 for SGW-64679, *300-FF-5 Operable Unit Remedial Action Performance Evaluation for 2019*
- Remedial Actions:
  - Nothing new to report
- Monitoring & Reporting:

300 Area Industrial Complex

  - One of the 11 wells scheduled for CERCLA monitoring in June was sampled as scheduled, and seven of the 11 wells were sampled in August. The other 3 wells were not sampled in June due to the COVID-19 fieldwork delay. The next CERCLA sampling event for long-term monitoring wells is scheduled for December 2020.
  - The two wells scheduled for sampling in July were sampled in August due to the COVID-19 fieldwork delay. The next AEA sampling event is scheduled for September 2020.
  - The two wells, 399-4-16 and 399-4-15, downgradient of the 324 Building were sampled in August for the July sampling event due to the COVID-19 fieldwork delay.. The next sampling event at these wells is scheduled for October 2020.
  - Twenty-eight wells in the 300 Area Industrial Complex were scheduled for monitoring in June to support calibration of the fate and transport model. Three of the 28 wells were sampled in June, and seven of the 28 wells were sampled in August. The other 18 wells were not sampled due to the COVID-19 fieldwork delay. The next sampling event at these wells is scheduled for December.
  - Thirteen wells in the Stage B area are being monitored quarterly for one year to support calibration of the fate and transport model (per TPA-CN-0883). Two of the 13 wells were sampled as scheduled in June, and 3 were sampled in August. The other 8 wells were not sampled in June due to the COVID-19 fieldwork delay. The next sampling event at these wells is scheduled for September 2020.
  - Eleven wells are being sampled quarterly for one year to support evaluation of the elevated uranium concentrations observed at well 399-6-3 (per TPA-CN-0883). The sampling events for these wells in June were canceled due to the

Groundwater Summary by OU (July - August 2020 Data)
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COVID-19 fieldwork delay. The next sampling event at these wells is scheduled for September 2020.

618-10 Burial Ground/316-4 Crib

- The 5 wells scheduled for CERCLA sampling in May 2020 were not sampled as scheduled due to the COVID-19 fieldwork delay, and the May sampling event has been cancelled. The 5 wells were sampled as scheduled in August of 2020. The next sampling event is scheduled for November 2020.
- The 1 well scheduled for AEA sampling in May 2020 was not sampled as scheduled due to the COVID-19 fieldwork delay, and the May sampling event has been cancelled. The next sampling event is scheduled for November.

618-11 Burial Ground

- The next CERCLA sampling event is scheduled for October 2021.
- The next AEA sampling event is scheduled for October 2020.

300 Area Process Trenches (316-5) RCRA Monitoring

- The 8 RCRA wells were sampled as scheduled in June. The next RCRA sampling event is scheduled for September 2020.

Regulatory Agency Comments: **None**

Groundwater Summary by OU (July - August 2020 Data)
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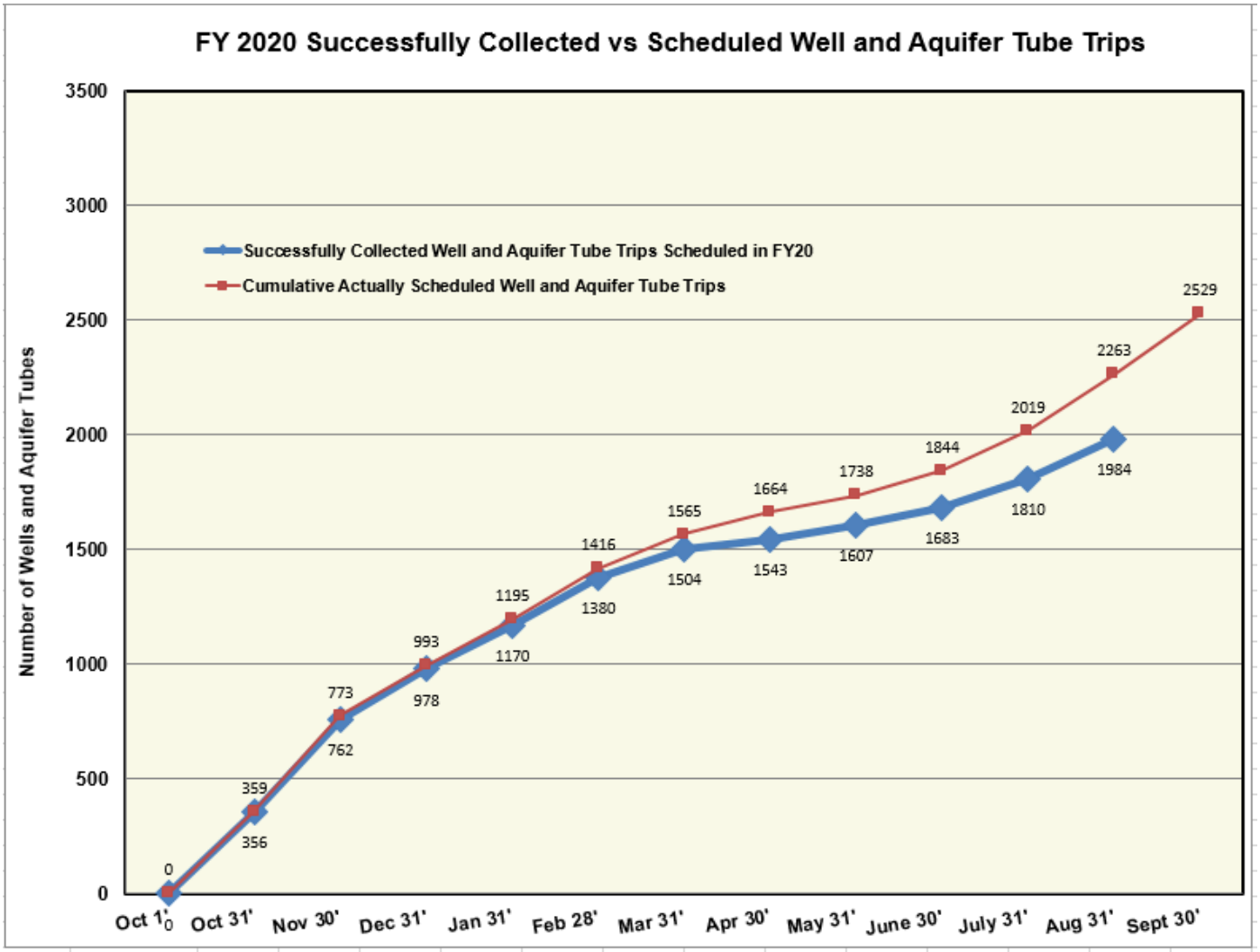
Hanford Annual Groundwater Sampling Program Performance
Results for Samples Completed versus Sample Scheduled



Groundwater Summary by OU (July - August 2020 Data)
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Documents Submitted to the AR

Document Number	Document Title	Referencing Document
ECF-300FF5-20-0053_R0	Calculation of Concentration Trends, Means, and Confidence Limits for Cis 1,2-Dichloroethene, Gross Alpha, Nitrate, Trichloroethene, Tritium, and Uranium in the 300-FF-5 Operable Unit Through CY 2019	SGW-64679_R0
DOE/RL_2019-66	Hanford Site Groundwater Monitoring Report for 2019	TPA Document
DOE/RL-2019-67_R0	Calendar Year 2019 Annual Summary Report for the 100-HR-3 and 100-KR-4 Pump and Treat Operations, and 100-NR-2 Groundwater Remediation	TPA Document

Approved Change Notices

Number	**Title**
N/A	N/A

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
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100-OL-1 OU Scope - *(John Sands, PNNL)*

Interim Milestone M-015-20-06, Lead Regulatory Agency: Ecology

- Submit to Ecology the 100-OL-1 Operable Unit Feasibility Study Report, Draft A.
    - Due date: 08/31/21, extended from 1/15/2020 to allow for completion of the ecological risk assessment and Remedial Investigation Report to support the Feasibility Study Report.

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.

100-OL-1 Operable Unit Report
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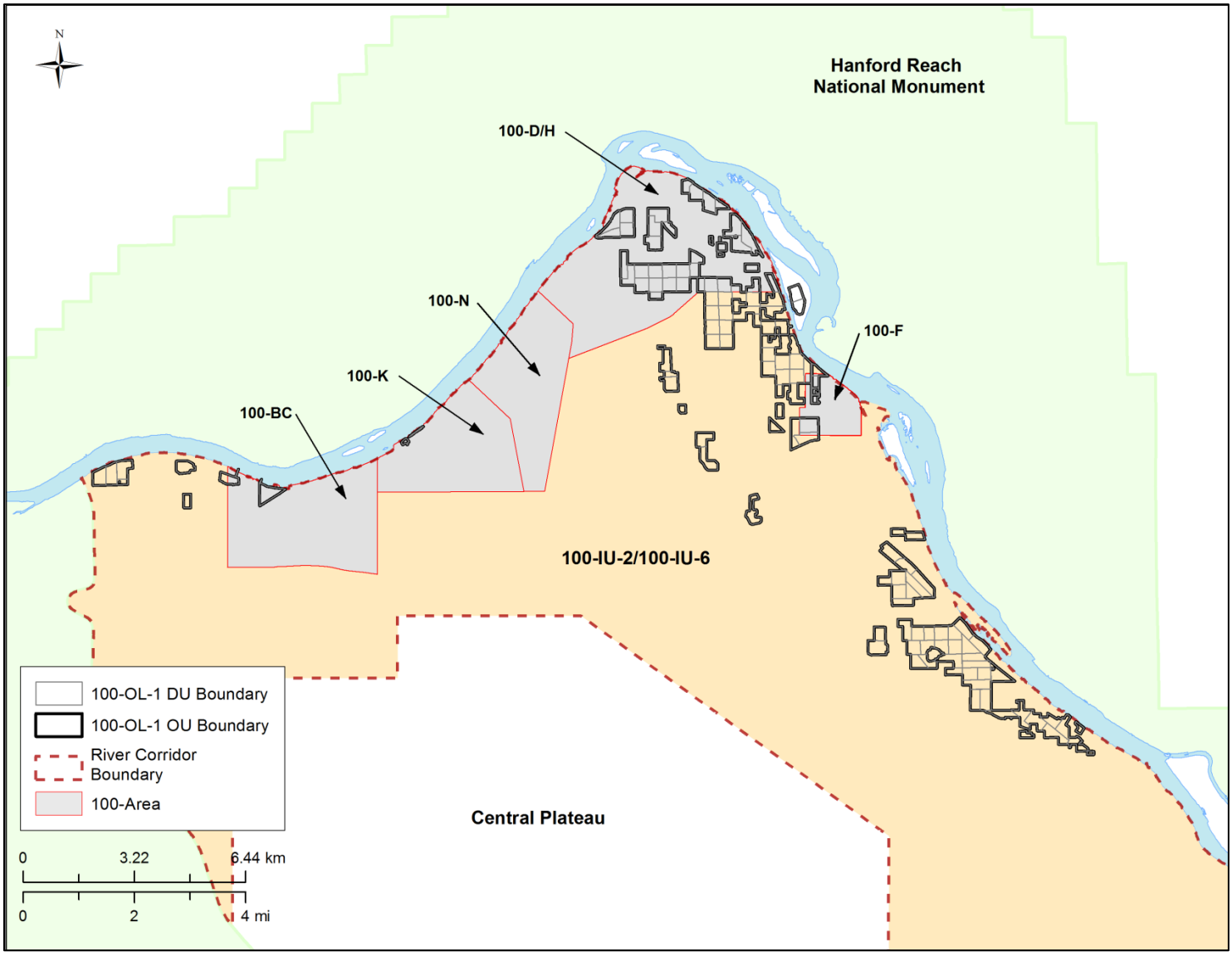

Figure 1. The 100-OL-1 OU and Associated Decision Units across the Hanford Site River Corridor

Open (O)/ Closed (X)	Action No.	Co.	Actionee	Project	Action Description	Status
O	187		Randal Fox	CHPRC	Define notifications process to alert regulators when events cause remedial systems to be out of service. Examples include fire, power outages and unusual events that cause shut downs	Ongoing
O	188		Bill Faught	CHPRC	Show cancelled or delayed well sampling trips on future UMMs. Use tables as before for planned, successful and failed trips with reasons.	Ongoing
O	189		Bill Faught	CHPRC	Add well sampling priority for CERCLA as regular agenda item on monthly OU status meetings with ECY and EPA.	Ongoing
O	189		Bill Faught	CHPRC	Add note to operations performance graphics for P&T systems to indicate why the months performance was off trend.	Ongoing