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CHPRC-03592

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**DISTRIBUTION
PROJECT MANAGERS MEETING,
200 AREA GROUNDWATER and SOURCE OPERABLE UNITS
January 18, 2018**

DOE/RL

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EPA

Craig Cameron

A3-46

Ecology

Nina Menard

H0-57

CHPRC

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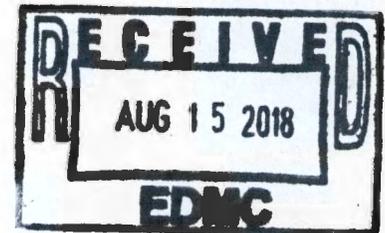
R3-50

Administrative Record (2)

H6-08

Correspondence Control

H7-08



200-IS-1
200-EA-1
200-SW-2
200-SW-1

200-OA-1
200-CW-1,3,5
200-BC-1
200-WA-1

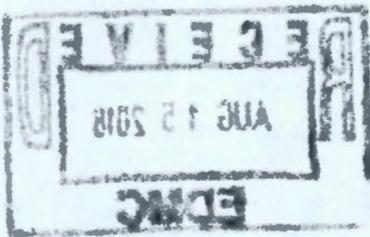
200-BP-5
200-PO-1
200-PW-1,3,6
200-UP-1

200-ZP-1

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200 AREA PROJECT MANAGERS MEETING

January 18, 2018

Minutes of the 200 Area Project Managers' Meeting of January 18, 2018 are attached. Minutes are comprised of the following:

| | |
|---------------|--|
| Attachment 1 | Agenda |
| Attachment 2 | Attendees Sign In Sheets |
| Attachment 3 | Signature Page |
| Attachment 4 | Milestones and Operations – November –December 2017 Data |
| Attachment 5 | Action Items List |
| Attachment 6 | TPA-CN-0800, Text Revised to add borehole ID numbers, delete cancelled boreholes, and delete obsolete reference to shallow soil sampling and analysis plan. |
| Attachment 7 | TPA-CN-0802, Text Revised to add borehole ID numbers, delete cancelled boreholes, and delete obsolete reference to shallow soil sampling and analysis plan. |
| Attachment 8 | TPA-CN-0804, Removal of seven structures (221BC, 221BD, 221BK, 222B, 225BA, 225BB, and 225BF) from the scope of DOE/RL- 2010-102 by elimination from Appendix A. |
| Attachment 9 | TPA-CN-0805, Addition of seven structures (221BC, 221BO, 221BK, 222B, 225BA, 225BB, and 225BF) to the scope of DOE/RL- 2010-33 through inclusion on the list in Table 1-1. |
| Attachment 10 | TPA-CN-0806, Add 4 wells to Table A-1 of DOE/RL-2016-13, Waste Management Plan for the 200-UP-1 Groundwater Operable Unit, Rev. 0 Drilling is planned for fiscal year 2018. |
| Attachment 11 | TPA-CN-0809, Added a new bullet to section 2.2.1, Perched Water Well Field Activities, which allows for the injection of potable water to develop extraction wells as needed to keep the wells working properly. |

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200 AREA PROJECT MANAGERS MEETING AGENDA January 18, 2018

- 200 West Pump & Treat Slides-Mark Byrnes
- Operational Status and Milestones by OU- November and December Data
 - Deep Vadose Zone
 - 200-IS-1 and 200-EA-1
 - 200-SW-2
 - 200-SW-1
 - 200-OA-1, 200-CW-1, 200-CW-3
 - 200-BC-1 and 200-WA-1
 - 200-BP-5 and 200-PO-1
 - M-015 Milestone Series
 - 200-PW-1/3/6 and 200-CW-5
 - 200-UP-1
 - 200-ZP-1
 - 200 Area Groundwater/200 West P&T Facility
 - M-016 Milestone Series
 - M-024 Milestone Series
 - 200 Area RCRA TSD Closures
 - Canyon Facilities
 - Waste Site Removal
 - Documents for the Administrative Record
- Action Items
- Approved TPA Change Notices
 - TPA-CN-0800 Text Revised to add borehole ID numbers, delete cancelled boreholes, and delete obsolete reference to shallow soil sampling and analysis plan.
 - TPA-CN-0802 Addition of 14 SE chromium plume monitoring wells and their associated sampling requirements
 - TPA-CN-0804 Removal of seven structures (221BC, 221BD, 221BK, 222B, 225BA, 225BB, and 225BF) from the scope of DOE/RL- 2010-102 by elimination from Appendix A.
 - TPA-CN-0805 Addition of seven structures (221BC, 221BO, 221BK, 222B, 225BA, 225BB, and 225BF) to the scope of DOE/RL-2010-33 through inclusion on the list in Table 1-1.
 - TPA-CN-0806 Add 4 wells to Table A-1 of DOE/RL-2016-13, Waste Management Plan for the 200-UP-1 Groundwater Operable Unit, Rev. 0 Drilling is planned for fiscal year 2018.
 - TPA-CN-0809 Added a new bullet to section 2.2.1, Perched Water Well Field Activities, which allows for the injection of potable water to develop extraction wells as needed to keep the wells working properly.

Closing Comments (all)

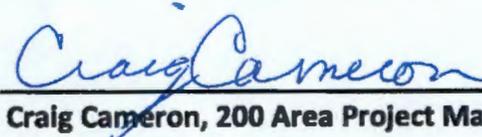
- Sign concurrence to meeting minutes if applicable
- The 2018 PMM will be held in 2420 Stevens from 3:00-4:00pm as follows:
 - January 18 Room 224
 - March 15 Room 308
 - May 17 Room 308
 - July 19 Room 308
 - September 20 Room 308
 - November 15 Room 308

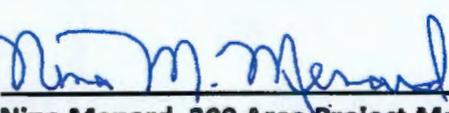
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Meeting Minutes Transmittal/Approval
Project Managers' Meeting
200 Area Groundwater and Source Operable Units
January 18, 2018

APPROVAL:  DATE: 1/18/2018
Michael Cline, 200 Area Unit Manager, DOE/RL

APPROVAL:  DATE: 1/18/2018
Al Farabee, 200 Area Project Manager, DOE/RL

APPROVAL:  DATE: 1/18/2018
Craig Cameron, 200 Area Project Manager, EPA

APPROVAL:  DATE: 1/18/18
Nina Menard, 200 Area Project Manager, Ecology

HFFACO Action Plan Section 4.1 requires signature of agreements and commitments made during the Project Manager Meeting. Approval of these minutes documents approval of agreements and commitments documented in Attachment 4 and 5 to these minutes. Approval does not apply to any other attachments, which are included in these minutes for informational purposes.

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200 AREA PROJECT MANAGERS' MEETING

Milestones and Operations – November - December 2017 Status by OU
January 18, 2018

200-DV-1 Ecology Lead (RL –Jim Hanson, CHPRC – Mark Byrnes)

- Drilling of 28 shallow boreholes to support the baseline risk assessment is scheduled to begin early January 2018.
- RL and EPA approved TPA-CN for the Waste Control Plan for the 200-DV-1 Operable Unit on December 19, 2017. This change notice adds 28 shallow boreholes and deletes 8 boreholes that were not drilled as a consequence of changing drilling methodology (e.g., no longer needing twin boreholes when implementing sonic continuous borehole drilling).
- Work continues on the preparation of a Treatability Test Evaluation Report that summarizes the results from historical treatability tests and will screen for other technologies that may require testing.

Regulatory Agency Comments:

Deep Vadose Zone Treatability Studies EPA Lead (RL –Jim Hanson, CHPRC – Dave St John)

- Continued field activities at the Uranium Reactive Gas Sequestration (URGS) Treatability Test site. The 90% design for the injection system was submitted to and reviewed by CHPRC technical staff. Field readiness for injection of the ammonia gas is underway. Injection is anticipated to begin late-January 2018.

Regulatory Agency Comments:

200-IS-1 Ecology Lead (RL- Doug Hildebrand, CHPRC – Bert Day)

- No work planned for FY2018.

M-015-112: Submit Draft B, 200-IS-1 OU Pipeline System Waste Sites RFI/CMS/RI/FS work plan to Ecology, including a schedule of completion dates for major tasks and deliverables, 11/30/2020.

- Status: on schedule.

Regulatory Agency Comments:

200-EA-1 Ecology Lead (RL- Doug Hildebrand and Ben Vannah, CHPRC – Bert Day)

- Updating work plan Chapter 3 (initial evaluations) based on RL's and Ecology's informal reviews.
- Updating work plan Appendix E (ARARs) based on RL's and Ecology's informal reviews.
- Updating work plan Chapters 5, 6, and 7 based on the comments received during the concurrent RL and Ecology review.
- Continued discussions regarding Ecology's informal comments related to the work plan Chapter 1 'principle' and Chapter 3 'parameter' text.

M-015-92A: Submit a RFI/CMS & RI/FS work plan for the 200-EA-1 OU (200 East Inner Area) to Ecology, 7/31/2018

- Status: on schedule.

Regulatory Agency Comments:

200-SW-2 Ecology Lead (RL- Doug Hildebrand, CHPRC – Bert Day)

- No actions planned in FY2018 due to funding.

M-015-93C: Initiate characterization field work for the 200-SW-2 Operable Unit landfills in accordance with the schedule in the approved RI/FS/RFI/CMS Work Plan.

- Status: at risk, not funded in FY2018.

Regulatory Agency Comments:

200-SW-1 Ecology Lead (RL- Doug Hildebrand)

- No work planned for FY2018.

Regulatory Agency Comments:

200-OA-1 (Outer Area), 200-CW-1, and 200-CW-3 EPA Lead (RL- Ben Vannah, CHPRC – Bert Day)

- No work planned for FY2018.

Regulatory Agency Comments:

200-BC-1 and 200-WA-1 EPA Lead (RL- Joe Axtell, CHPRC – Mike Hickey)

- Continued work to incorporate 200-DV-1 lessons learned into Revision 0, Remedial Investigation/Feasibility Study Work Plan for the 200-WA-1 and 200-BC-1 Operable Unit.
- Initiated Electrical Resistivity Tomography (ERT) computer simulation for three different areas around U Plant. These simulations will be used to determine how informative the ERT surface surveys will be to help locate the deeper boreholes around the cribs.

Regulatory Agency Comments:

200-BP-5 and 200-PO-1 Ecology Lead (RL – James Hanson, CHPRC – Curt Wittreich)

- Provided presentations to the regulators on November 14 and 16, 2017, regarding path forward alternatives to support an Interim ROD strategy for 200-BP-5 and 200-PO-1. The general consensus was to prepare a focused FS to support the Interim ROD. Completed a strawman IROD strategy for regulator review.
- Completed the Post Remedial Investigation Waste Control Plan and Removal Action Waste Management Plan (WCP/WMP) for the 200-BP-5 Groundwater Operable Unit.

M-015-21A: Submit 200-BP-5 and 200-PO-1 OU FS Report & PP(s) to Ecology, 6/30/2018.

- Status: Milestone is expected to be missed. Ecology comments on the RI were received August 3, 2017, which is two years later than planned. This delay impacts the scope of the FS and is not expected to be resolved in time to support a June 2018 delivery of the FS and PP(s). A draft change package is being prepared for Ecology review.

Regulatory Agency Comments:

200-PW-1/3/6 and CW-5 EPA Lead (RL- Robert Long, CHPRC – Mike Hickey)

- Nothing new to report.
- RL anticipates completing acquisition process in accordance with the RD/RA Work Plan.

Regulatory Agency Comments:

200-UP-1 EPA Lead (RL – Kate Amrhein, CHPRC – Curtis Wittreich, PNNL-D. Wellman [I-129])

- Completed TPA change notice to the 200-UP-1 performance monitoring plan (adds 14 monitoring wells and the respective sampling requirements).
- Completed TPA change notice to the 200-UP-1 waste management plan (adds 4 wells planned to be installed in FY2018).
- Completed well construction on the last of the eleven chromium characterization wells. The collection of quarterly groundwater samples continues for these wells.
- Completed procurement for drilling services to complete the last 5 of the 14 remedy performance monitoring wells in FY2018.

M-016-193: Complete the remedial design investigation of the SE chromium plume, including the installation of new wells and evaluation of the GW monitoring data and install monitoring wells needed for remedy performance monitoring as defined in the UP-1 RD/RA WP, 9/30/2018.

- Status: On schedule.

Regulatory Agency Comments:

200-ZP-1 EPA Lead (RL – Kate Amrhein, CHPRC – Mark Byrnes)

- Completed connection of two new injection wells to the 200 West P&T by mid-December 2017.
- Briefed EPA on the 3rd and 4th Quarter 2017 200 West P&T progress.
- Continued with major updates to Rev 0 200-ZP-1 RD/RAWP, Rev 5 200-ZP-1 O&M Plan, and Rev 2 200-ZP-1 Performance Monitoring Plan. These documents are being updated based upon the first four years of operation and anticipated treatment needs for the Central Plateau.

Regulatory Agency Comments:

200 Area Groundwater/200 West P&T Facility

- Treated 295.2 M gallons of water in **FY2018** as of the end of December, which included the removal of:
 - 25,398 kgs of nitrate
 - 574 kgs of carbon tetrachloride
 - 25 kgs of chromium
 - 39 kgs of uranium
 - 6.34 Ci of Tc-99

M-024 Well Installation Ecology Lead (RL-Kathy Higgins, CHPRC-Dave Capelle)

M-024-68: Complete construction of all wells listed for CY2017 and before identified in TPA Change Package M-024-14-01.

- Status: Completed 10/10/2016 (17-AMRP-0125). Due 12/31/2017.

Regulatory Agency Comments:

200 Area RCRA TSD Closures Ecology Lead (RL – Mostafa Kamal, CHPRC – Bert Day)

- Received Ecology's Option 2 (coordinated closure) annotated outline on December 7, 2017; initiated implementing outline on 216-A-36B.

Regulatory Agency Comments:

U Plant Canyon EPA Lead (RL – Robert Long, CHPRC – TBD)

- Nothing to report.

Regulatory Agency Comments:

Canyon Facilities EPA/Ecology Lead (RL – Robert Long, CHPRC –George Jackson)

- Finalizing Draft B B Plant EE/CA, REDOX SAP Appendices C-I, and REDOX AM; expect to submit to EPA/Ecology in January 2018.
- Finalizing comment resolution for REDOX RAWP .
- Finalizing comment resolution for Ecology comments on the Tier 2 B Plant RAWP.
- Revising Draft A 200 Area Tier 2 Miscellaneous Facilities RAWP, which will be resubmitted to DOE-RL during Q1 FY 2018.
- Submitted Draft A, PUREX EE/CA to Ecology with associated proposal letter; completed TPA M-085-082.
- Revising Tier 2 PUREX RAWP, which will be resubmitted to DOE-RL during Q2 FY 2018.

M-085-80A: Submit a DQO report to assess the structural integrity of the PUREX storage tunnels 1 and 2, 9/30/2017.

- Status: Complete.

M-085-82: Submit Approval Proposal(s) for Expedited Response Action(s) for Tier 1 & 2 Facilities in PUREX, 12/31/2017.

- Status: Complete.

Regulatory Agency Comments:

Waste Site Removal Ecology Lead (RL- Al Farabee, CHPRC – Darren Corriell)

- o Nothing to report.

M-016-250: Submit to Ecology for approval a three year rolling prioritized schedule consistent with site-wide clean-up priorities to implement waste site removal actions per Action Memoranda, 3/31/2016 and annually thereafter.

- o Status: On schedule M-016-250C, due 3/31/2018.

Regulatory Agency Comments:

Monthly Performance Report Assessment

The DOE project managers have not identified any significant issues with CHPRC's previous Monthly Performance Report to be addressed at this meeting.

Central Plateau Milestones due post 1/1/2018

| MS# | Title | Due Date |
|-------------------------|---|------------|
| Fiscal Year 2018 | | |
| M-016-250C | Submit to Ecology for approval a three year rolling prioritized schedule consistent with site-wide clean-up priorities to implement waste site removal actions per Action Memoranda (DOE/RL-2009-37, DOE/RL-2009-48, and DOE/RL-2009-86). | 3/31/2018 |
| M-024-58K | Initiate Discussions of Well Commitments | 6/1/2018 |
| M-015-21A | Submit BP-5/PO-1 FS/PP | 6/30/2018 |
| M-085-74 | Submit proposals for expedited response actions for one or more of the Tier 1 and Tier 2 facilities in the B Plant geographic area | 6/30/2018 |
| M-015-92A | Submit RFI/CMS & RI/FS Work Plan for 200-EA-1 Work Plan to Ecology | 7/31/2018 |
| M-024-69-T01 | Conclude discussions of well commitments initiated under M-024-58 | 8/1/2018 |
| M-015-93C | Initiate characterization field work for the 200-SW-2 OU | 9/30/2018 |
| M-016-255 | DOE shall complete the removal of all waste sites for FY2018 as identified in TPA Change Package M-16-16-01. | 9/30/2018 |
| Fiscal Year 2019 | | |
| M-024-69 | Complete construction of all wells listed for CY18 and before as listed in M-24-15-01 | 12/31/2018 |
| M-015-98 | Complete remedial investigation of U Plant related waste sites located in 200-WA-1 in accordance with the WA-1 RI/FS Work Plan | 6/30/2019 |
| M-085-70 | Submit RI/FS Work Plan for 200-CB-1 | 9/30/2019 |
| Fiscal Year 2020 | | |
| M-015-99 | Complete remedial investigation of PFP related waste sites located in 200-WA-1 in accordance with the 200-WA-1 and 200-BC-1 RI/FS Work Plan. | 12/31/2019 |
| M-024-71-T01 | Conclude discussions of well commitments initiated under M-024-58 | 8/1/2020 |
| M-085-72 | Submit RAWP to implement the approved Action Memorandum for 224-B | 9/30/2020 |

| | | |
|-------------------------------|--|------------|
| M-085-80 | Submit RI/FS Work Plan for 200-CP-1 | 9/30/2020 |
| M-085-100 | Submit a RAWP to implement the approved Action Memorandum for 224-T | 9/30/2020 |
| M-037-10 | Complete Unit-Specific closure requirements for six TSD units | 9/30/2020 |
| M-015-112 | Submit RFI/CMS & RI/FS Work Plan for 200-IS-1 Work Plan to Ecology | 11/30/2020 |
| Fiscal Year 2021 | | |
| M-016-86 | Complete remedial actions for 618-11 Burial Ground | 9/30/2021 |
| M-085-90 | Submit RI/FS Work Plan for 200-CR-1 | 9/30/2021 |
| M-015-84 | Complete RI of 200-WA-1 and 200-BC-1 Waste Sites in Accordance with RI/FS Work Plan | 12/31/2021 |
| Fiscal Year 2022 | | |
| M-037-13 | Complete unit-specific closure requirements for 241-CX Tank System | 9/30/2022 |
| Fiscal Year 2023 | | |
| M-015-92B | Submit RFI/CMS, RI/FS Study report and Proposed CAD/PP for 200-EA-1 | 11/30/2022 |
| M-015-93B | Submit RFI/CMS & RI/FS Study Report and proposed CAD/PP for 200-SW-2 OU | 1/31/2023 |
| M-015-92C | Submit RFI/CMS & RI/FS Study report and proposed CAD/PP for the 200-IS-1 OU to Ecology | 3/31/2023 |
| M-015-38B | Submit FS/PP for 200-CW-1, 200-CW-3 and 200-OA-1 OUs | 7/31/2023 |
| M-015-91B | Submit FS/PP for 200-BC-1 and 200-WA-1 OUs | 7/31/2023 |
| M-015-110B | Submit CMS & FS and Proposed CAD/PP for 200-DV-1 OU | 9/30/2023 |
| Fiscal Year 2024 | | |
| M-016-200A | Complete U Plant canyon demolition | 9/30/2024 |
| M-037-11 | Complete unit-specific closure requirements for 216-B-3 Main Pond System and 216-S-10 Pond and Ditch | 9/30/2024 |
| Fiscal Years 2025-2027 | | |
| M-085-76 | Initiate response actions for the B Plant geographic area | 9/30/2025 |
| M-085-84 | Initiate response actions for the PUREX geographic work | 9/30/2025 |
| M-085-01 | Submit change package to establish a date for major milestone M-085-00 | 6/30/2026 |
| M-016-200B | Complete U Plant barrier construction | 9/30/2027 |

Documents Submitted to the AR
November - December 2017

| Number | Title | Referencing Document |
|--------------------------|--|---------------------------------------|
| SGW-61439 Rev 0 | 200-BP-5 Spill Summary | N/A-Document to Regulators |
| ECF-200W-17-0206 Rev 0 | 200 W Area Pump & Treat Air Emissions Modeling CY2014 | N/A-Document to Regulators |
| RPP-ASMT-47140 | Tank 241-SX-110 Leak Assessment Report | SGW-60577 |
| SGW-59872 Rev 0 | Feed Stream Acceptance Criteria for 200W Pump and Treat | DOE/RL-2017-11, Rev. 0 |
| SGW-60655 Rev 0 | Surface Infiltration Evaluation Report for the 200 West Pump and Treat Facility | - |
| SGW-61013 Rev 0 | Cyanide Sampling at the 200 West Pump and Treat | 200-ZP-1 Annual Pump-and-Treat Report |
| ECF-200BP5-15-0009 Rev 0 | Evaluation of Plume Capture and Hydraulic Performance for B complex Vicinity Submodel for 200-BP-5 and 200-PO-1 Operable Units Feasibility Study Evaluation of Remedial Alternatives | DOE/RL-2017-64 |
| ECF-200BP5-16-0001 Rev 0 | 200-BP-5 Treatability Test Technical Support Capture Zone Analysis | DOE/RL-2017-11 |
| SGW-34011 Rev 0 | Data Quality Objectives Summary Report Supporting the 200-PO-1 Groundwater Operable Unit | 200-PO-1 SAP |
| ECFHanford-17-0009 Rev 1 | Calculation of Critical Means for Calendar Year 2017 RCRA Groundwater Monitoring | - |

Approved Change Notices

| Number | Title |
|---------------|---|
| TPA-CN-0800 | Text Revised to add borehole ID numbers, delete cancelled boreholes, and delete obsolete reference to shallow soil sampling and analysis plan. |
| TPA-CN-0802 | Addition of 14 SE chromium plume monitoring wells and their associated sampling requirements |
| TPA-CN-0804 | Removal of seven structures (221BC, 221BD, 221BK, 222B, 225BA, 225BB, and 225BF) from the scope of DOE/RL- 2010-102 by elimination from Appendix A. |
| TPA-CN-0805 | Addition of seven structures (221BC, 221BO, 221BK, 222B, 225BA, 225BB, and 225BF) to the scope of DOE/RL-2010-33 through inclusion on the list in Table 1-1. |
| TPA-CN-0806 | Add 4 wells to Table A-1 of DOE/RL-2016-13, Waste Management Plan for the 200-UP-1 Groundwater Operable Unit, Rev. 0 Dilling is planned for fiscal year 2018. |
| TPA-CN-0809 | Added a new bullet to section 2.2.1, Perched Water Well Field Activities, which allows for the injection of potable water to develop extraction wells as needed to keep the wells working properly. |

OPEN ACTION ITEM TRACKING

| Action # | Action/Subject | Assigned To | Owed To | Assigned Date | Original Due Date | Adjusted Due Date | Status |
|----------|---|---------------|-------------|---------------|-------------------|-------------------|-----------|
| 185 | Provide discussion of rehabilitation process for 200-ZP-1 injection wells | Marty Doombos | Ecology/EPA | 9/21/2017 | 11/16/2017 | | Completed |

TRI-PARTY AGREEMENT

| | | |
|--------------------------------------|-------------------------------|------------------------|
| Change Notice Number TPA-CN- 0800 | TPA CHANGE NOTICE FORM | Date: December 2017 |
|--------------------------------------|-------------------------------|------------------------|

| | |
|--|--|
| Document Number, Title, and Revision: DOE/RL-2012-20 Waste Control Plan for the 200-DV-1 Operable Unit, Rev. 0 | Date Document Last Issued: June 16, 2015 |
|--|--|

Approved Change Notices Against this Document:

| | |
|---------------------------|---------------------|
| Originator Mark E. Byrnes | Phone: 509 373-3996 |
|---------------------------|---------------------|

Description of Change:
Text revised to add borehole ID numbers, delete cancelled boreholes, and delete obsolete reference to shallow soil sampling and analysis plan.

M.W. Cline and D. Goswami agree that the proposed change
DOE **Lead Regulatory Agency**
modifies an approved workplan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, *Documentation and Records*, and not Chapter 12.0, *Changes to the Agreement*.

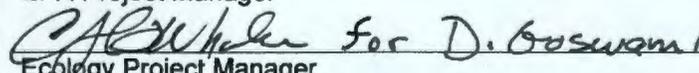
Text in first paragraph of Section 1, Purpose, modified to delete reference to a sampling and analysis plan that would be developed in the future to cover shallow soil sampling. That need has since been met by issuing Addendum 2 to DOE/RL-2011-104.

Table A-1 updated to delete boreholes that have been cancelled due to change in drilling method negating the need for logging/sampling pairs, remove "to be drilled" indicator from boreholes that have been drilled since release of Rev. 0, and add new boreholes deemed necessary since that time.

Delete
All deletions are indicated by ~~strikeout~~ and text that has been added is indicated by double underline.

Note: Include affected page number(s): 1, A-2, A-3, and A-4.

Justification and Impacts of Change:
These changes are merely an administrative update. A previous reference to a sampling and analysis plan that would be developed in the future is deleted because that sampling and analysis plan has been issued as addendum 2 to DOE/RL-2011-104. Additionally, the borehole list has been revised to correctly identify which previously planned boreholes have been drilled or cancelled since the last update of this document, and boreholes (shallow risk boreholes) now planned to be drilled in FY18 have been added.

| | | |
|--|--------------------|---|
| Approvals:  DOE Project Manager N/A | 12/19/2017 Date | <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved |
| EPA Project Manager | Date | <input type="checkbox"/> Approved <input type="checkbox"/> Disapproved |
|  Ecology Project Manager | 12/19/17 Date | <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved |

1 Purpose

This waste control plan establishes the requirements for management and disposal of investigation derived waste (IDW) generated at waste sites in the 200-DV-1 Operable Unit (OU). This is a remedial investigation conducted by the U.S. Department of Energy (DOE) under authority of the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA) and 40 CFR 300, "National Oil and Hazardous Substances Pollution Contingency Plan," and approved by the U.S. Environmental Protection Agency (EPA) and the Washington State Department of Ecology in accordance with the Tri-Party Agreement (Ecology et al., 1989, *Hanford Federal Facility Agreement and Consent Order*). This remedial investigation constitutes a CERCLA removal action conducted onsite and in accordance with CERCLA Sections 104, "Response Authorities," and 121, "Cleanup Standards," and, therefore, is not subject to permitting or procedural requirements of other environmental laws; however, it is required to meet the substantive standards of such laws that have been identified through the applicable or relevant and appropriate requirements process. Waste generated in this activity is onsite CERCLA waste and, therefore, can be disposed of at the Environmental Restoration Disposal Facility (ERDF). IDW will be generated at this OU in accordance with characterization activities specified in DOE/RL-2011-104, *Characterization Sampling and Analysis Plan for the 200-DV-1 Operable Unit*; and SGW-58569, Supplemental Sampling Instruction for Field Investigation of the B Complex Area in the 200-DV-1 Operable Unit; ~~and a sampling and analysis plan to be developed for shallow soil sampling.~~ IDW will be managed in accordance with this document and DOE/RL-2011-41, *Hanford Site Strategy for Management of Investigation Derived Waste*. Characterization activities completed for DOE/RL-2011-104 and SGW-58569 support implementation of DOE/RL-2011-102, *Remedial Investigation/Feasibility Study and RCRA Facility Investigation/Corrective Measures Study Work Plan for the 200-DV-1 Operable Unit*.

The 200-DV-1 OU is comprised of 43 waste sites and a zone of perched water that are located in three geographic areas proximal to the following single-shell tank waste management areas (WMAs):

- T Complex Area (near WMA T-TX-TY)
- S Complex Area (near WMA S-SX)
- B Complex Area (near WMA B-BX-BY)

Waste sites in the 200-DV-1 OU received either (1) process wastes including scavenged waste from the Uranium Recovery Project and the ferrocyanide processes at the 221/224-U Plant, (2) tank waste from the first- and second-cycle decontamination processes associated with the bismuth-phosphate process at B-Plant and T-Plant, or (3) fission product-rich wastes generated during the fuel-rod enrichment cycle that were released when the fuel elements were decladded or dissolved in corrosive solutions (sodium hydroxide or nitric acid). Most wastes were low-salt neutral/basic and usually contained higher levels of fission products and lower levels of transuranic and organic wastes than other process wastes at the Hanford Site. Generally speaking, contaminants of potential concern applicable to all waste sites include fission products, uranium, transuranic isotopes, metals, and anions. Additionally, selected organic constituents of potential concern for the BY Cribs and the 216-B-42, 216-T-18, 216-T-19, 216-S-9, 216-S-13, and 216-S-21 Waste Sites (kerosene and tributyl phosphate); 216-S-13 Waste Site (hexone and polychlorinated biphenyls); and 216-T-19 Waste Site (numerous volatile organics and polychlorinated biphenyls) were identified in DOE/RL-2011-104.

1.1 Waste Generation Activity

Numerous activities are planned for further characterization of contamination in the 200-DV-1 OU waste sites. The scope of characterization work identified in DOE/RL-2011-104 and SGW-58569 that is likely

Table A-1. 200-DV-1 Operable Unit Well List

| Hanford Well Name | Hanford Well Identification Number |
|-------------------|------------------------------------|
| 299-W10-81 | A7171 |
| 299-W10-56 | A7146 |
| 299-W10-57 | A7147 |
| 299-W10-58 | A7148 |
| 299-W10-64 | A7154 |
| 299-W10-65 | A7155 |
| 299-W10-75 | A7165 |
| 299-W10-76 | A7166 |
| C3874 | C3874 |
| 299-W11-70 | A7312 |
| N/A [±] | C8705 |
| N/A [±] | C8706 |
| N/A [±] | C8707 |
| N/A [±] | C8708 |
| N/A [±] | C8709 |
| N/A [±] | C8710 |
| N/A [±] | C8711 |
| N/A [±] | C9487 |
| N/A [±] | C9488 |
| N/A [±] | C9489 |
| N/A [±] | C9490 |
| N/A [±] | C9491 |
| N/A [±] | C9492 |
| N/A [±] | C9493 |
| N/A [±] | C9494 |
| N/A [±] | C9495 |
| N/A [±] | C9496 |
| N/A [±] | C9497 |
| N/A [±] | C9498 |
| N/A [±] | C9499 |
| N/A [±] | C9501 |
| N/A [±] | C9502 |
| N/A [±] | C9503 |

Table A-1. 200-DV-1 Operable Unit Well List

| Hanford Well Name | Hanford Well Identification Number |
|-------------------|------------------------------------|
| N/A* | C9504 |
| N/A* | C9505 |
| N/A* | C9506 |
| N/A* | C9507 |
| N/A* | C9508 |
| N/A* | C9509 |
| N/A* | C9510 |
| N/A* | C9511 |
| N/A* | C9512 |
| N/A* | C9513 |
| N/A* | C9514 |
| <u>N/A</u> | <u>C9548</u> |
| <u>N/A</u> | <u>C9549</u> |
| <u>N/A</u> | <u>C9550</u> |
| <u>N/A</u> | <u>C9551</u> |
| <u>N/A</u> | <u>C9552</u> |
| <u>N/A</u> | <u>C9554</u> |
| <u>N/A</u> | <u>C9555</u> |
| <u>N/A*</u> | <u>C9839</u> |
| <u>N/A*</u> | <u>C9840</u> |
| <u>N/A*</u> | <u>C9841</u> |
| <u>N/A*</u> | <u>C9842</u> |
| <u>N/A*</u> | <u>C9843</u> |
| <u>N/A*</u> | <u>C9844</u> |
| <u>N/A*</u> | <u>C9845</u> |
| <u>N/A*</u> | <u>C9846</u> |
| <u>N/A*</u> | <u>C9847</u> |
| <u>N/A*</u> | <u>C9848</u> |
| <u>N/A*</u> | <u>C9849</u> |
| <u>N/A*</u> | <u>C9850</u> |
| <u>N/A*</u> | <u>C9851</u> |
| <u>N/A*</u> | <u>C9852</u> |
| <u>N/A*</u> | <u>C9853</u> |

Table A-1. 200-DV-1 Operable Unit Well List

| Hanford Well Name | Hanford Well Identification Number |
|-------------------|------------------------------------|
| <u>N/A*</u> | <u>C9854</u> |
| <u>N/A*</u> | <u>C9855</u> |
| <u>N/A*</u> | <u>C9856</u> |
| <u>N/A*</u> | <u>C9857</u> |
| <u>N/A*</u> | <u>C9858</u> |
| <u>N/A*</u> | <u>C9859</u> |
| <u>N/A*</u> | <u>C9860</u> |
| <u>N/A*</u> | <u>C9861</u> |
| <u>N/A*</u> | <u>C9862</u> |
| <u>N/A*</u> | <u>C9863</u> |
| <u>N/A*</u> | <u>C9864</u> |
| <u>N/A*</u> | <u>C9865</u> |
| <u>N/A*</u> | <u>C9866</u> |

* to be drilled

N/A = not applicable

TRI-PARTY AGREEMENT

| | | |
|---|------------------------|---|
| Change Notice Number TPA-CN- 0802 | TPA CHANGE NOTICE FORM | Date: 11/7/2017 |
| Document Number, Title, and Revision: DOE/RL-2015-14, Performance Monitoring Plan for the 200-UP-1 Groundwater Operable Unit Remedial Action, Rev. 0 | | Date Document Last Issued: August 2015 |
| Approved Change Notices Against this Document: N/A | | |
| Originator: R. M. Carter | | Phone: 509-373-4273 |

Description of Change:
Addition of 14 SE chromium plume monitoring wells and their associated sampling requirements.

M.W. Cline and E. Laija agree that the proposed change
DOE **Lead Regulatory Agency**
modifies an approved workplan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, *Documentation and Records*, and not Chapter 12.0, *Changes to the Agreement*.

Changes include the following:

- Tables 3-1 and B-9, Well name and sampling frequency for COC and COPC's added to the tables for wells: 699-25-55, 699-25-70, 699-27-68, 699-28-52A, 699-29-55, 699-30-63, 699-30-70, 699-31-50, 699-31-53B, 699-32-59, 699-32-64, 699-34-51, 699-36-63B, and 699-30-73.
- Figures 3-1 and B-5, Wells 699-25-55, 699-25-70, 699-27-68, 699-28-52A, 699-29-55, 699-30-63, 699-30-70, 699-31-50, 699-31-53B, 699-32-59, 699-32-64, 699-34-51, 699-36-63B and 699-30-73 added to the figures. Well 699-30-73 is currently being drilled.
- Figures 3-2 and B-6, Wells 699-32-64 and 699-36-63B added to the figures.
- Figures 3-3 and B-4, Wells 699-32-64 and 699-36-63B added to the figures.
- Figures 3-5 and B-8, Wells 699-32-64 and 699-36-63B added to the figures.

Added text is shown in double underline. Deleted text is shown in ~~single line strike through~~.

Note: Include affected page number(s): pgs. 3-5 to 3-9 and 3-11; Appendix B-37 to B-41 and B-43

Justification and Impacts of Change:

The wells identified above are being added to DOE/RL-2015-14, *Performance Monitoring Plan for the 200-UP-1 Groundwater Operable Unit Remedial Action*, because additional monitoring data are needed to support implementation of the 200-UP-1 Operable Unit remedial action.

Approvals:

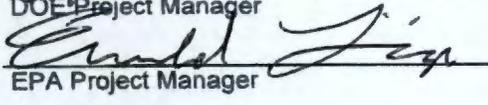
| | | |
|--|---------------------------|---|
|  DOE Project Manager | <u>12/5/2017</u> Date | <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved |
|  EPA Project Manager | <u>12/11/2017</u> Date | <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved |
| <u>N/A</u> Ecology Project Manager | _____ Date | <input type="checkbox"/> Approved <input type="checkbox"/> Disapproved |

Table 3-1. 200-UP-1 OU COC and COPC Monitoring Well Networks and Sampling Frequency

| Well | Contaminants of Concern | | | | | | Contaminants of Potential Concern | | | | |
|-------------------------------|---------------------------------|------------|----------|---------------|----------|----------|-----------------------------------|------------|-------------------|-----------------|--------------|
| | Chromium (Total and Hexavalent) | Iodine-129 | Nitrate | Technetium-99 | Tritium | Uranium | 1,4-Dioxane | Chloroform | Tetrachloroethene | Trichloroethene | Strontium-90 |
| 299-W22-88 | — | T | — | — | A | — | — | — | — | — | — |
| 299-W22-94 | A | — | A | A | — | — | — | — | — | — | — |
| 299-W22-95 | A | — | A | A | — | — | — | — | — | — | — |
| 299-W22-96 | A | T | A | A | A | — | — | — | — | — | — |
| 299-W23-19 | A | T | A | A | A | — | — | — | — | — | — |
| 299-W23-20 | A | — | A | A | — | — | — | — | — | — | — |
| 299-W23-21 | A | — | A | A | A | T | — | — | — | — | — |
| 299-W23-4 | — | — | A | — | A | A | — | — | — | — | — |
| 299-W26-13 | A | — | — | — | — | — | — | — | — | — | — |
| 299-W26-14 | T | — | — | — | — | — | — | — | — | — | — |
| <u>699-25-55^d</u> | <u>T</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-25-70^d</u> | <u>T</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-27-68^e</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-28-52A^d</u> | <u>T</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-29-55^e</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-30-63^e</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| 699-30-66 ^b | A | — | — | — | — | — | — | — | — | — | — |
| <u>699-30-70^e</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-31-50^e</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-31-53B^e</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-32-59^e</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-32-64^e</u> | <u>A</u> | <u>T</u> | <u>A</u> | <u>≡</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-34-51^e</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| 699-32-70B | T | — | — | — | A | — | — | — | — | — | — |
| 699-32-72A | — | T | — | — | A | — | — | — | — | — | — |

Table 3-1. 200-UP-1 OU COC and COPC Monitoring Well Networks and Sampling Frequency

| Well | Contaminants of Concern | | | | | | Contaminants of Potential Concern | | | | |
|---|---------------------------------|------------|----------|---------------|----------|----------|-----------------------------------|------------|-------------------|-----------------|--------------|
| | Chromium (Total and Hexavalent) | Iodine-129 | Nitrate | Technetium-99 | Tritium | Uranium | 1,4-Dioxane | Chloroform | Tetrachloroethene | Trichloroethene | Strontium-90 |
| 699-32-62 | A | — | — | — | T | — | — | — | — | — | — |
| 699-32-76 | T | — | — | — | — | — | — | — | — | — | — |
| 699-33-56 | A | — | — | — | — | — | — | — | — | — | — |
| 699-33-74 | — | T | — | T | A | — | — | — | — | — | — |
| 699-34-61 | A | — | — | — | A | — | — | — | — | — | — |
| 699-34-72 | T | T | T | T | A | — | A | — | — | — | — |
| 699-35-66A | T | A | T | — | A | — | — | — | — | — | — |
| 699-35-70 (dry, 299-W21-3) ^a | — | T | — | — | A | — | — | — | — | — | — |
| 699-35-78A | — | — | — | — | T | — | — | — | — | — | — |
| 699-36-61A | T | — | — | — | A | — | — | — | — | — | — |
| <u>699-36-63B</u> | <u>Δ</u> | <u>Δ</u> | <u>Δ</u> | <u>≡</u> | <u>Δ</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| 699-36-66B | — | A | A | — | A | — | — | — | — | — | — |
| 699-36-70A | — | T | T | — | A | — | — | — | — | — | — |
| 699-36-70B | — | T | A | — | B | — | — | — | — | — | — |
| 699-37-66 | — | A | A | — | A | — | — | — | — | — | — |
| 699-38-61 | — | — | T | — | A | — | — | — | — | — | — |
| 699-38-65 | — | A | A | — | A | — | — | — | — | — | — |
| 699-38-68A | — | A | A | — | B | T | — | — | — | — | — |
| 699-38-70 (dry, 299-W19-116) ^a | — | A | A | — | — | A | — | — | — | — | — |
| 699-38-70B ^b | — | — | T | — | — | — | — | A | A | A | — |
| 699-38-70C ^b | — | A | A | — | — | — | — | A | A | A | — |
| 699-40-62 | — | — | A | — | T | — | — | — | — | — | — |
| 699-40-65 | — | — | A | — | — | — | — | — | — | — | — |
| <u>699-30-73^c</u> | <u>Δ</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |

Table 3-1. 200-UP-1 OU COC and COPC Monitoring Well Networks and Sampling Frequency

| Well | Contaminants of Concern | | | | | | Contaminants of Potential Concern | | | | |
|------------------------|---------------------------------|------------|---------|---------------|---------|---------|-----------------------------------|------------|-------------------|-----------------|--------------|
| | Chromium (Total and Hexavalent) | Iodine-129 | Nitrate | Technetium-99 | Tritium | Uranium | 1,4-Dioxane | Chloroform | Tetrachloroethene | Trichloroethene | Strontium-90 |
| 699-29-66 ^d | A | — | — | — | — | — | — | — | — | — | — |
| 699-30-57 ^e | A | — | — | — | — | — | — | — | — | — | + |
| 699-31-68 ^e | A | — | — | — | — | — | — | — | — | — | — |

- A = annual
- B = biennial
- S = semiannual
- T = triennial

a. Well currently yields insufficient water for sampling (dry) or is nearly dry and will be replaced. Replacement well name in parentheses. Replacement well will be sampled quarterly for the first year, then on sample schedule shown in the table thereafter.

b. Well screened in the deeper portion of unconfined aquifer.

c. Replacement well number not yet assigned.

d. ~~Southeast chromium plume characterization well, not yet installed.~~ Well sampled annually through FY2018 and triennially thereafter.

e. Well sampled quarterly through FY2018 and annually thereafter.

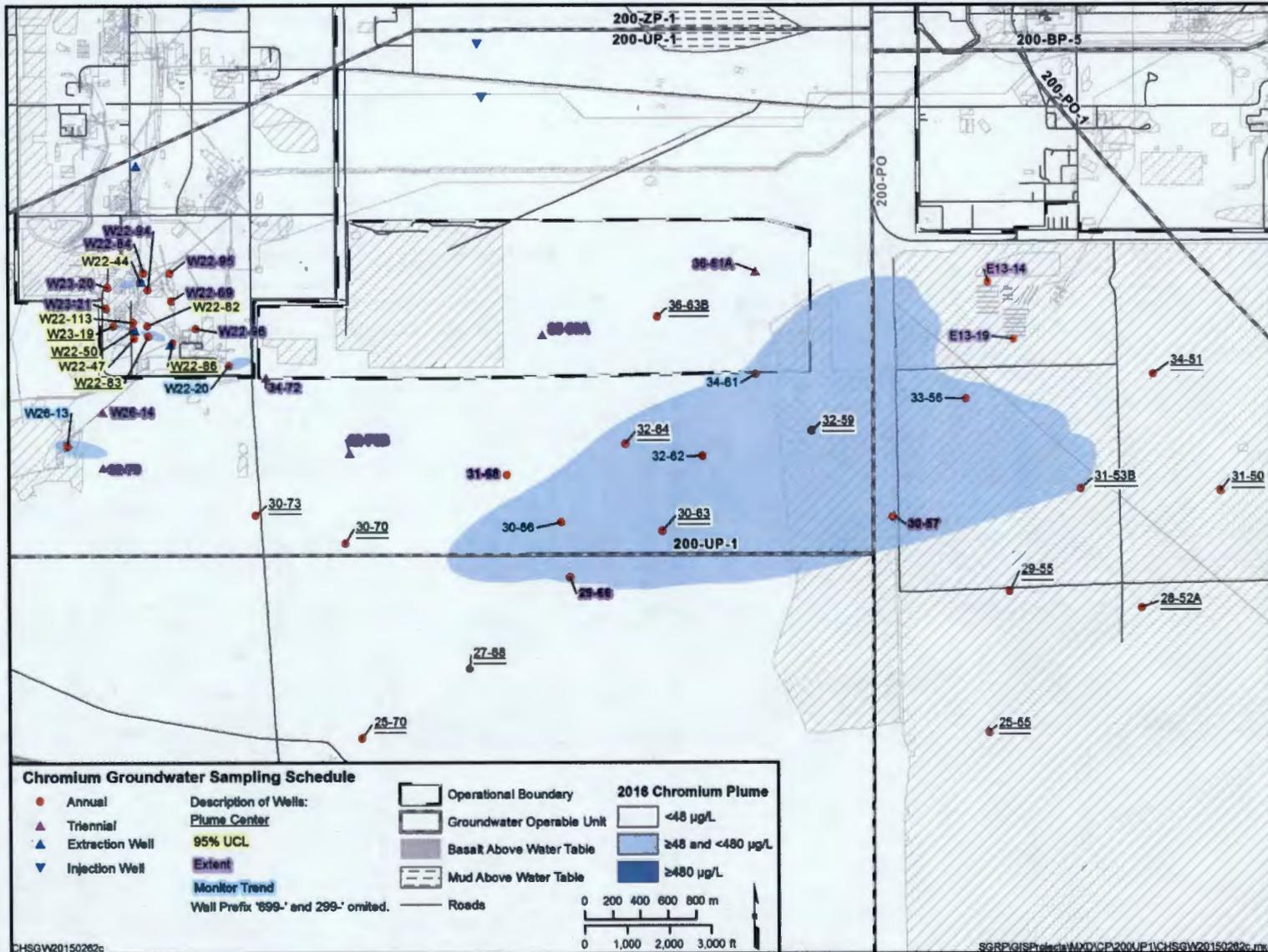


Figure 3-1. Contaminant-Specific Monitoring Well Network (Chromium)

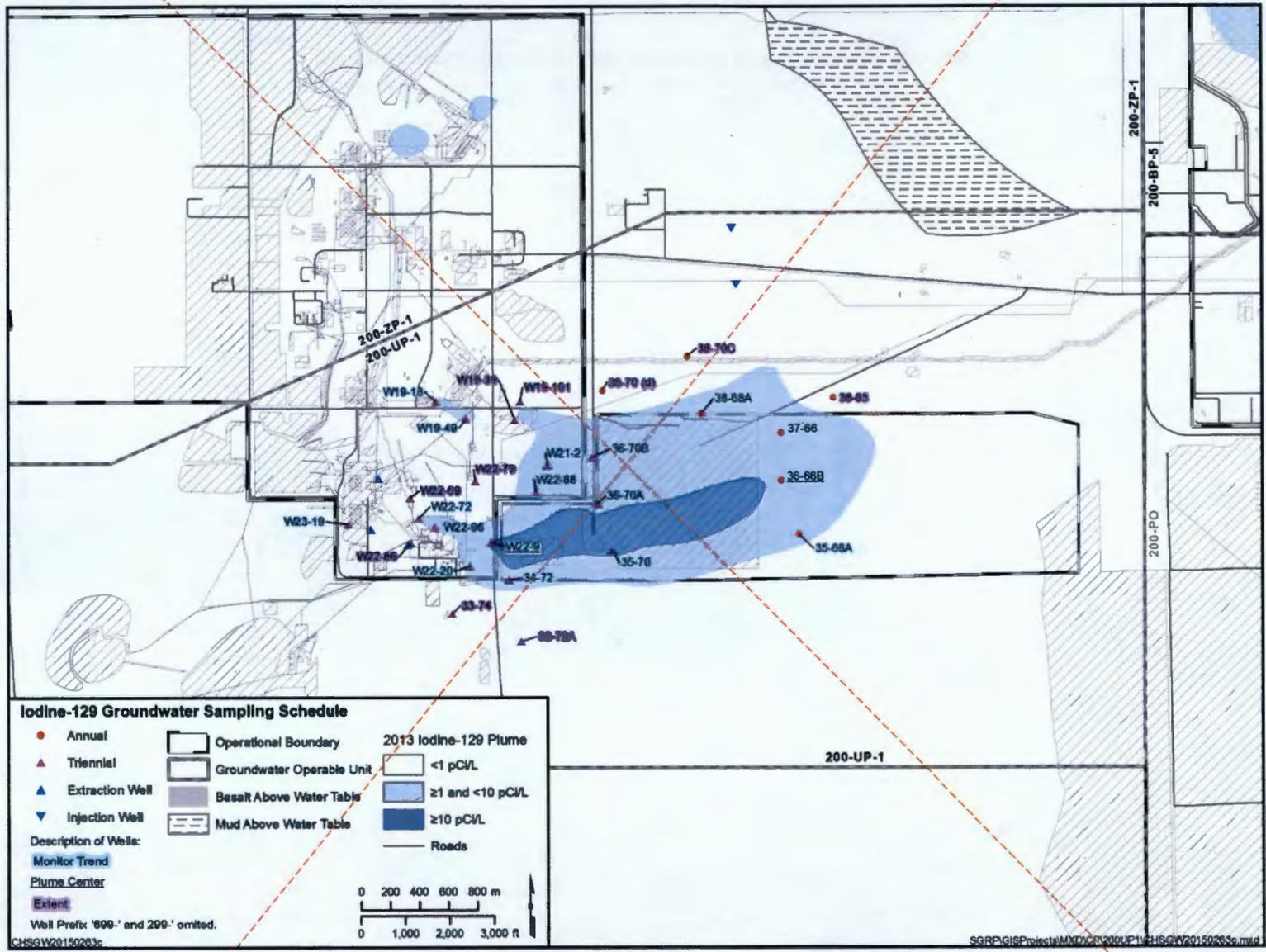


Figure 3-2. Contaminant-Specific Monitoring Well Network (Iodine-129)

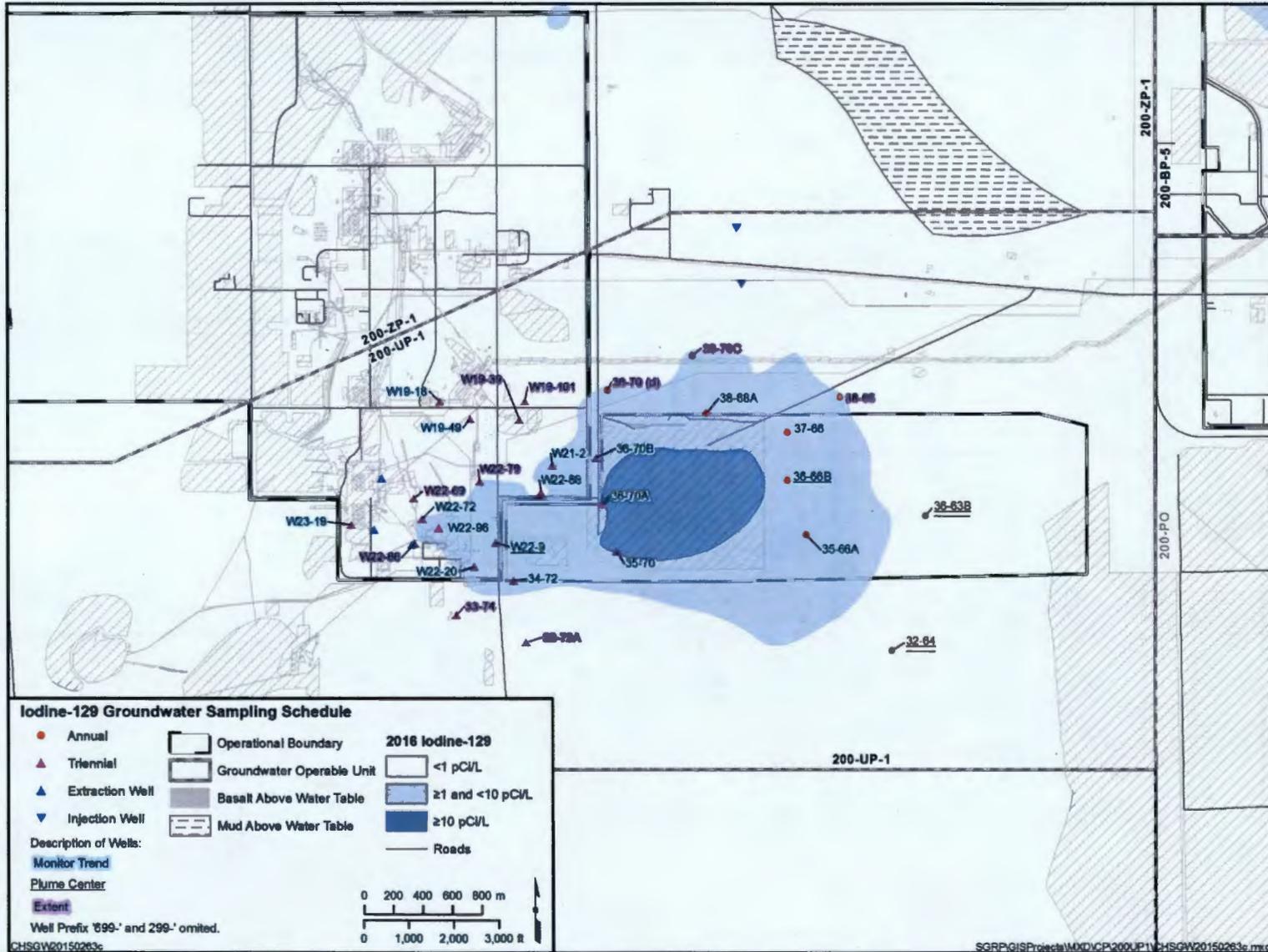


Figure 3-2. Contaminant-Specific Monitoring Well Network (Iodine-129)

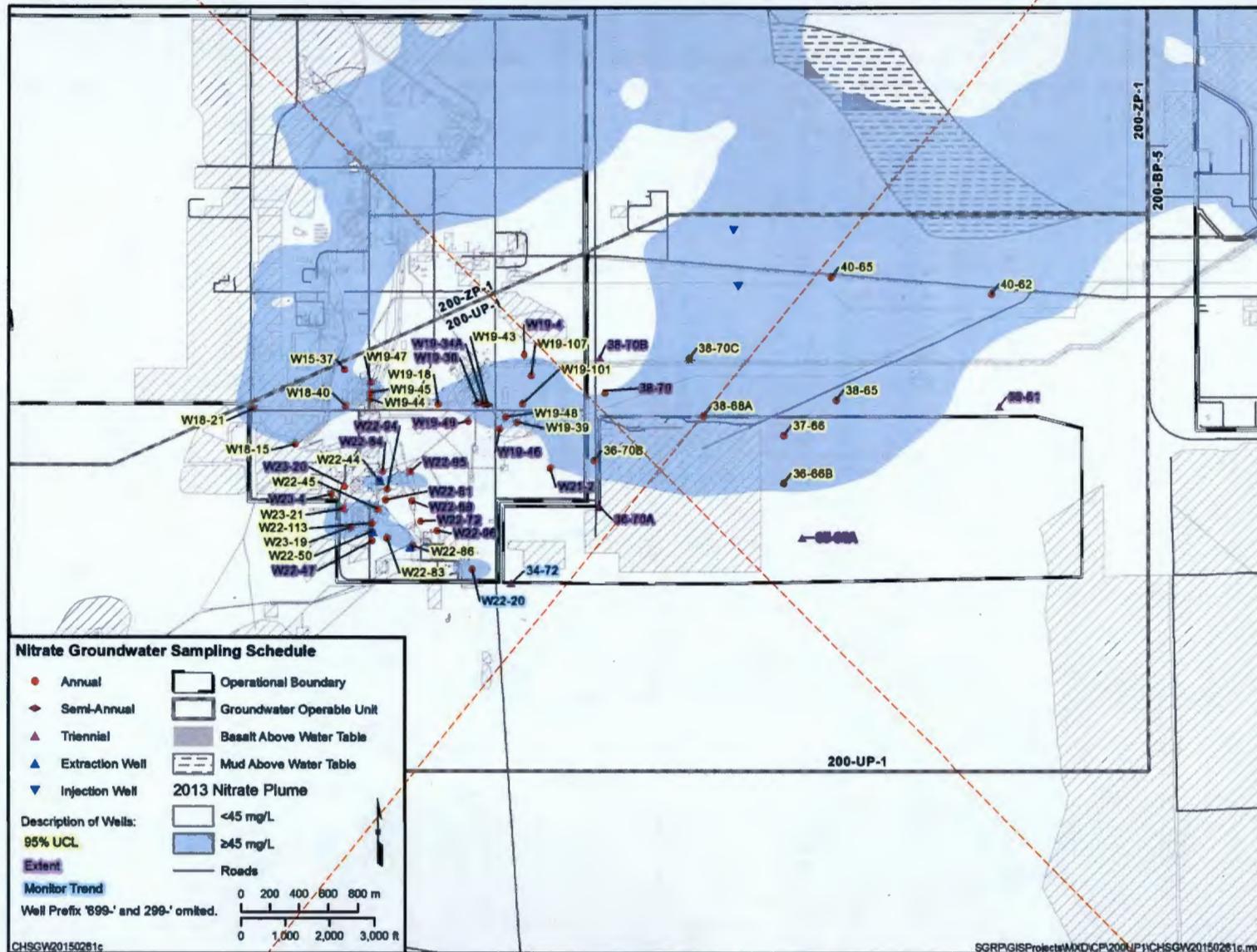


Figure 3-3. Contaminant-Specific Monitoring Well Network (Nitrate)

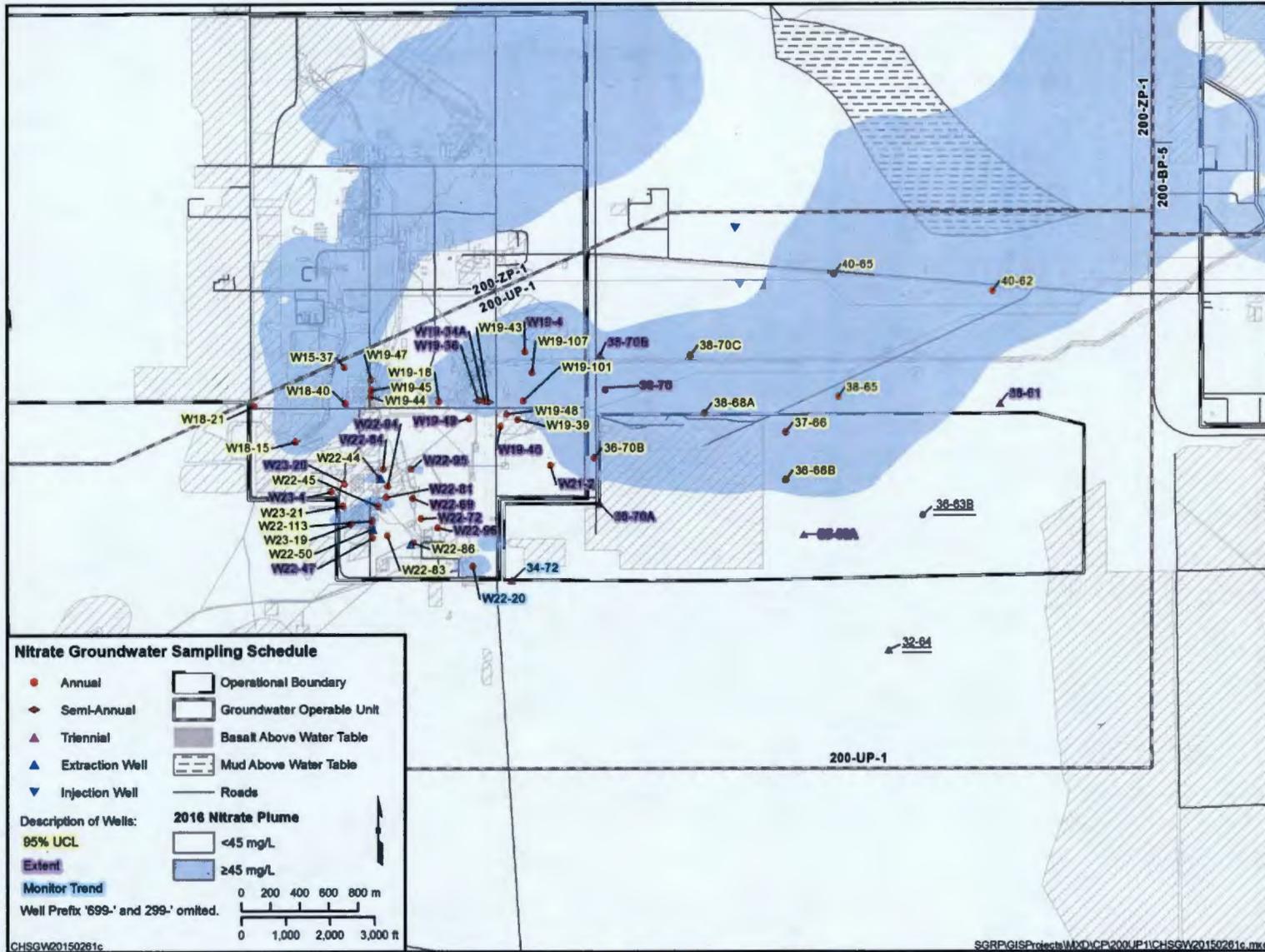


Figure 3-3. Contaminant-Specific Monitoring Well Network (Nitrate)

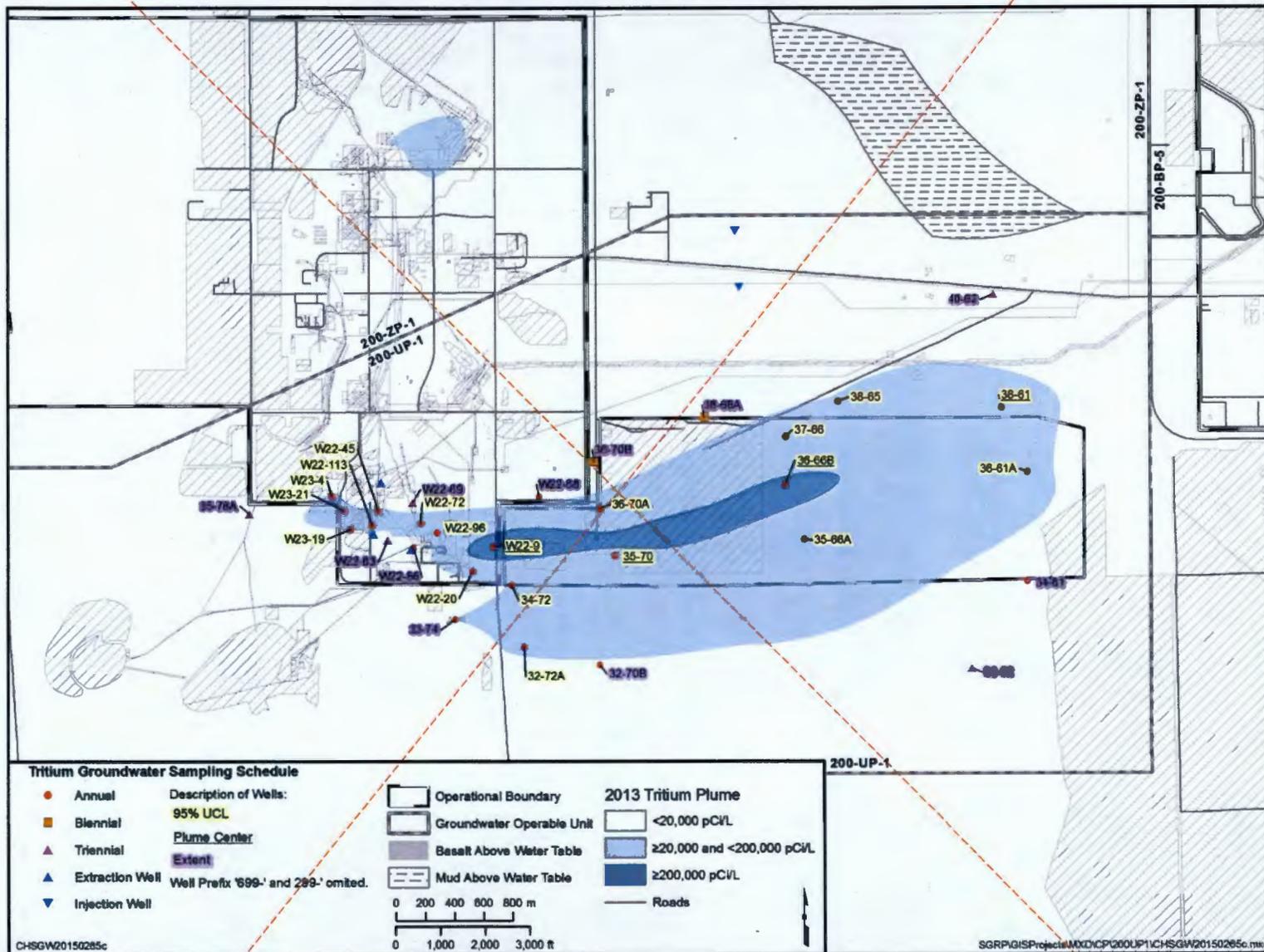


Figure 3-5. Contaminant-Specific Monitoring Well Network (Tritium)

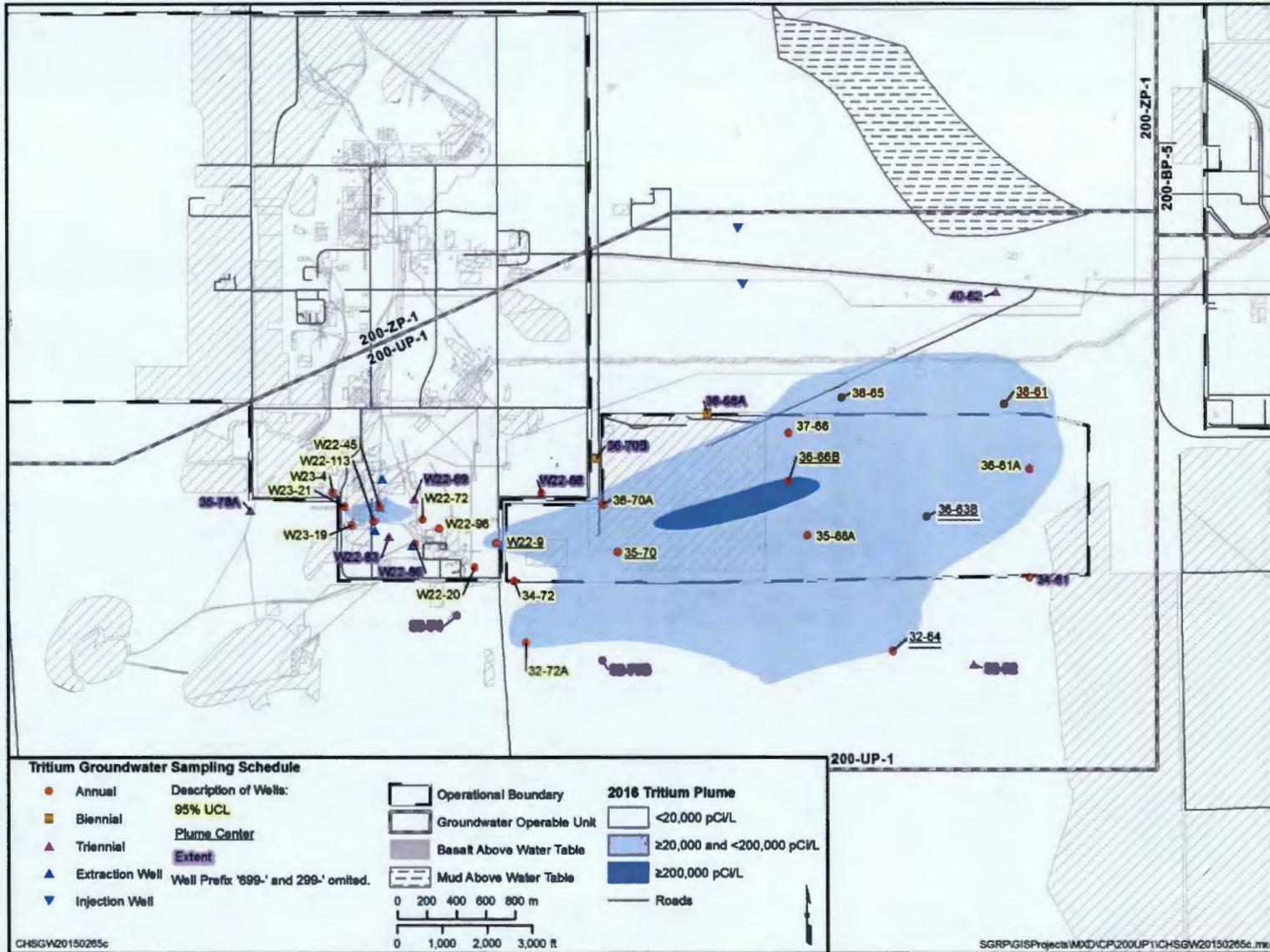


Figure 3-5. Contaminant-Specific Monitoring Well Network (Tritium)

Table B-9. Sampling and Analysis Schedule for the 200-UP-1 OU

| Well | Contaminants of Concern | | | | | | Contaminants of Potential Concern | | | | |
|-------------------------------|---------------------------------|------------|----------|---------------|----------|----------|-----------------------------------|------------|-------------------|-----------------|--------------|
| | Chromium (Total and Hexavalent) | Iodine-129 | Nitrate | Technetium-99 | Tritium | Uranium | 1,4-Dioxane | Chloroform | Tetrachloroethene | Trichloroethene | Strontium-90 |
| 299-W23-20 | A | — | A | A | — | — | — | — | — | — | — |
| 299-W23-21 | A | — | A | A | A | T | — | — | — | — | — |
| 299-W23-4 | — | — | A | — | A | A | — | — | — | — | — |
| 299-W26-13 | A | — | — | — | — | — | — | — | — | — | — |
| 299-W26-14 | T | — | — | — | — | — | — | — | — | — | — |
| <u>699-25-55^d</u> | <u>T</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-25-70^d</u> | <u>T</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-27-68^c</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-28-52A^d</u> | <u>T</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-29-55^c</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-30-63^c</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| 699-30-66 ^b | A | — | — | — | — | — | — | — | — | — | — |
| <u>699-30-70^c</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-31-50^c</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-31-53B^c</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-32-59^c</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-32-64^c</u> | <u>A</u> | <u>T</u> | <u>A</u> | <u>≡</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| <u>699-34-51^c</u> | <u>A</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> | <u>≡</u> |
| 699-32-70B | T | — | — | — | A | — | — | — | — | — | — |
| 699-32-72A | — | T | — | — | A | — | — | — | — | — | — |
| 699-32-62 | A | — | — | — | T | — | — | — | — | — | — |
| 699-32-76 | T | — | — | — | — | — | — | — | — | — | — |
| 699-33-56 | A | — | — | — | — | — | — | — | — | — | — |
| 699-33-74 | — | T | — | T | A | — | — | — | — | — | — |

Table B-9. Sampling and Analysis Schedule for the 200-UP-1 OU

| Well | Contaminants of Concern | | | | | | Contaminants of Potential Concern | | | | |
|---|---------------------------------|------------|----------|---------------|----------|----------|-----------------------------------|------------|-------------------|-----------------|--------------|
| | Chromium (Total and Hexavalent) | Iodine-129 | Nitrate | Technetium-99 | Tritium | Uranium | 1,4-Dioxane | Chloroform | Tetrachloroethene | Trichloroethene | Strontium-90 |
| 699-34-61 | A | — | — | — | A | — | — | — | — | — | — |
| 699-34-72 | T | T | T | T | A | — | A | — | — | — | — |
| 699-35-66A | T | A | T | — | A | — | — | — | — | — | — |
| 699-35-70 (dry, 299-W21-3) ^a | — | T | — | — | A | — | — | — | — | — | — |
| 699-35-78A | — | — | — | — | T | — | — | — | — | — | — |
| 699-36-61A | T | — | — | — | A | — | — | — | — | — | — |
| <u>699-36-63B</u> | <u>A</u> | <u>A</u> | <u>A</u> | <u>—</u> | <u>A</u> | <u>—</u> | <u>—</u> | <u>—</u> | <u>—</u> | <u>—</u> | <u>—</u> |
| 699-36-66B | — | A | A | — | A | — | — | — | — | — | — |
| 699-36-70A | — | T | T | — | A | — | — | — | — | — | — |
| 699-36-70B | — | T | A | — | B | — | — | — | — | — | — |
| 699-37-66 | — | A | A | — | A | — | — | — | — | — | — |
| 699-38-61 | — | — | T | — | A | — | — | — | — | — | — |
| 699-38-65 | — | A | A | — | A | — | — | — | — | — | — |
| 699-38-68A | — | A | A | — | B | T | — | — | — | — | — |
| 699-38-70 (dry, 299-W19-116) ^a | — | A | A | — | — | A | — | — | — | — | — |
| 699-38-70B ^b | — | — | T | — | — | — | — | A | A | A | — |
| 699-38-70C ^b | — | A | A | — | — | — | — | A | A | A | — |
| 699-40-62 | — | — | A | — | T | — | — | — | — | — | — |
| 699-40-65 | — | — | A | — | — | — | — | — | — | — | — |
| <u>699-30-73^c</u> | <u>A</u> | <u>—</u> | <u>—</u> | <u>—</u> | <u>—</u> | <u>—</u> | <u>—</u> | <u>—</u> | <u>—</u> | <u>—</u> | <u>—</u> |
| 699-29-66 ^d | A | — | — | — | — | — | — | — | — | — | — |
| 699-30-57 ^e | A | — | — | — | — | — | — | — | — | — | — |
| 699-31-68 ^e | A | — | — | — | — | — | — | — | — | — | — |

Table B-9. Sampling and Analysis Schedule for the 200-UP-1 OU

| Well | Contaminants of Concern | | | | | | Contaminants of Potential Concern | | | | |
|------|---------------------------------|------------|---------|---------------|---------|---------|-----------------------------------|------------|-------------------|-----------------|--------------|
| | Chromium (Total and Hexavalent) | Iodine-129 | Nitrate | Technetium-99 | Tritium | Uranium | 1,4-Dioxane | Chloroform | Tetrachloroethene | Trichloroethene | Strontium-90 |

- A = annual
- B = biennial
- S = semiannual
- T = triennial

a. Well currently yields insufficient water for sampling (dry) or is nearly dry and will be replaced. Replacement well name in parentheses. Replacement well will be sampled quarterly for the first year, then on sample schedule shown in the table thereafter.

b. Well screened in the deeper portion of unconfined aquifer.

c. Replacement well number not yet assigned.

d. ~~Southeast chromium plume characterization well, not yet installed.~~ Well sampled annually through FY2018 and triennially thereafter.

e. Well sampled quarterly through FY2018 and annually thereafter.

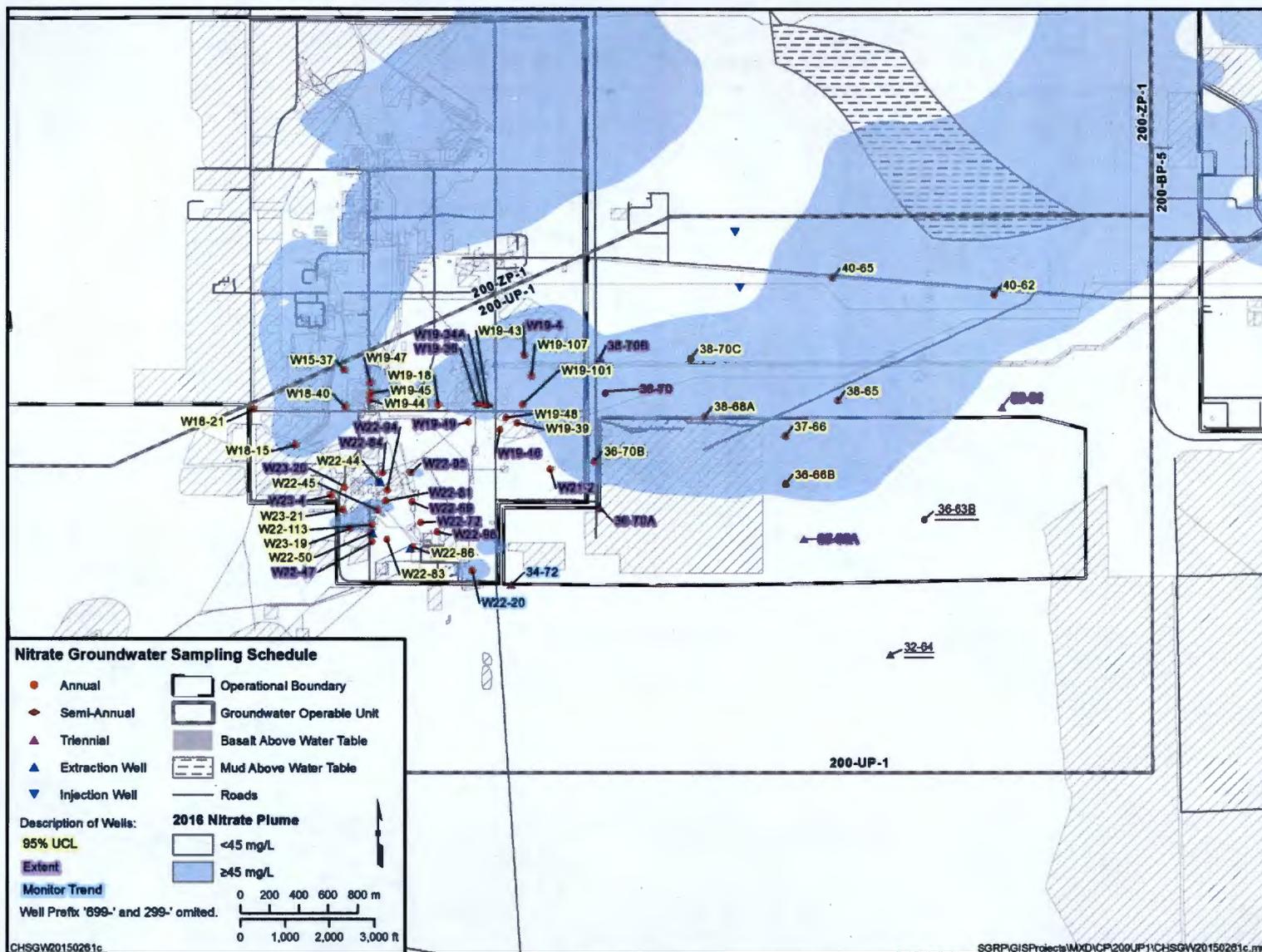


Figure B-4. Monitoring Locations for Nitrate

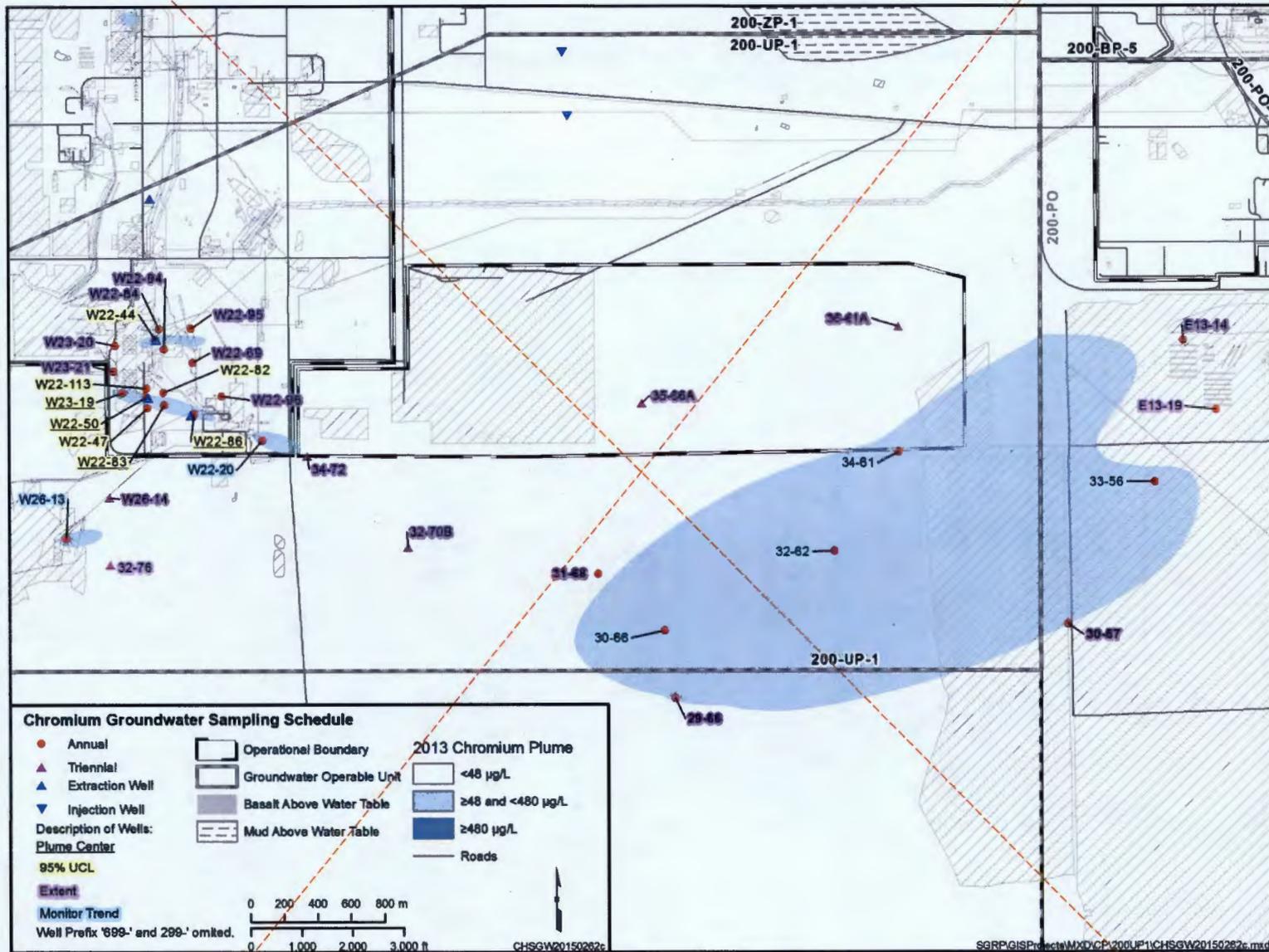


Figure B-5. Monitoring Locations for Chromium

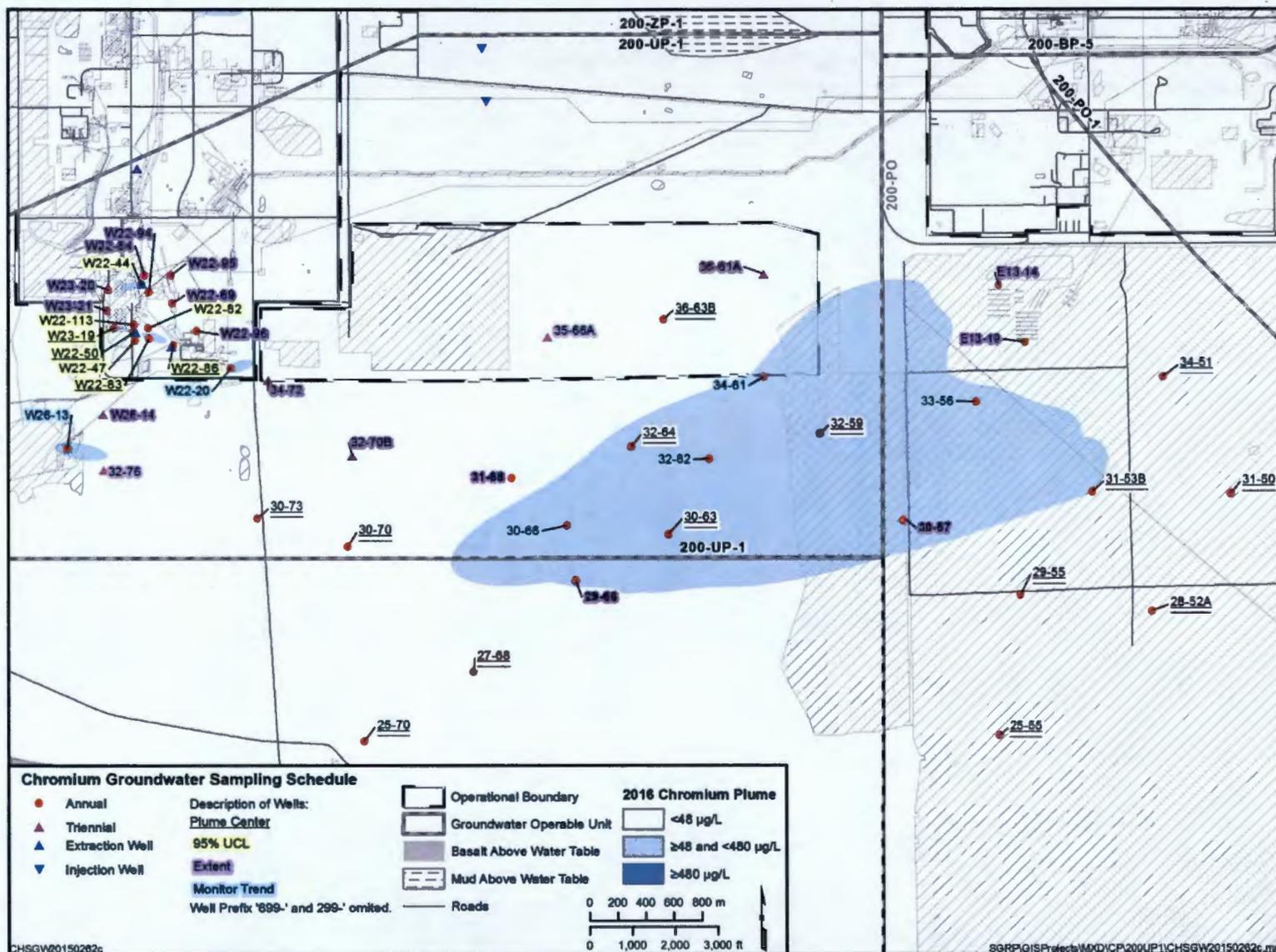


Figure B-5. Monitoring Locations for Chromium

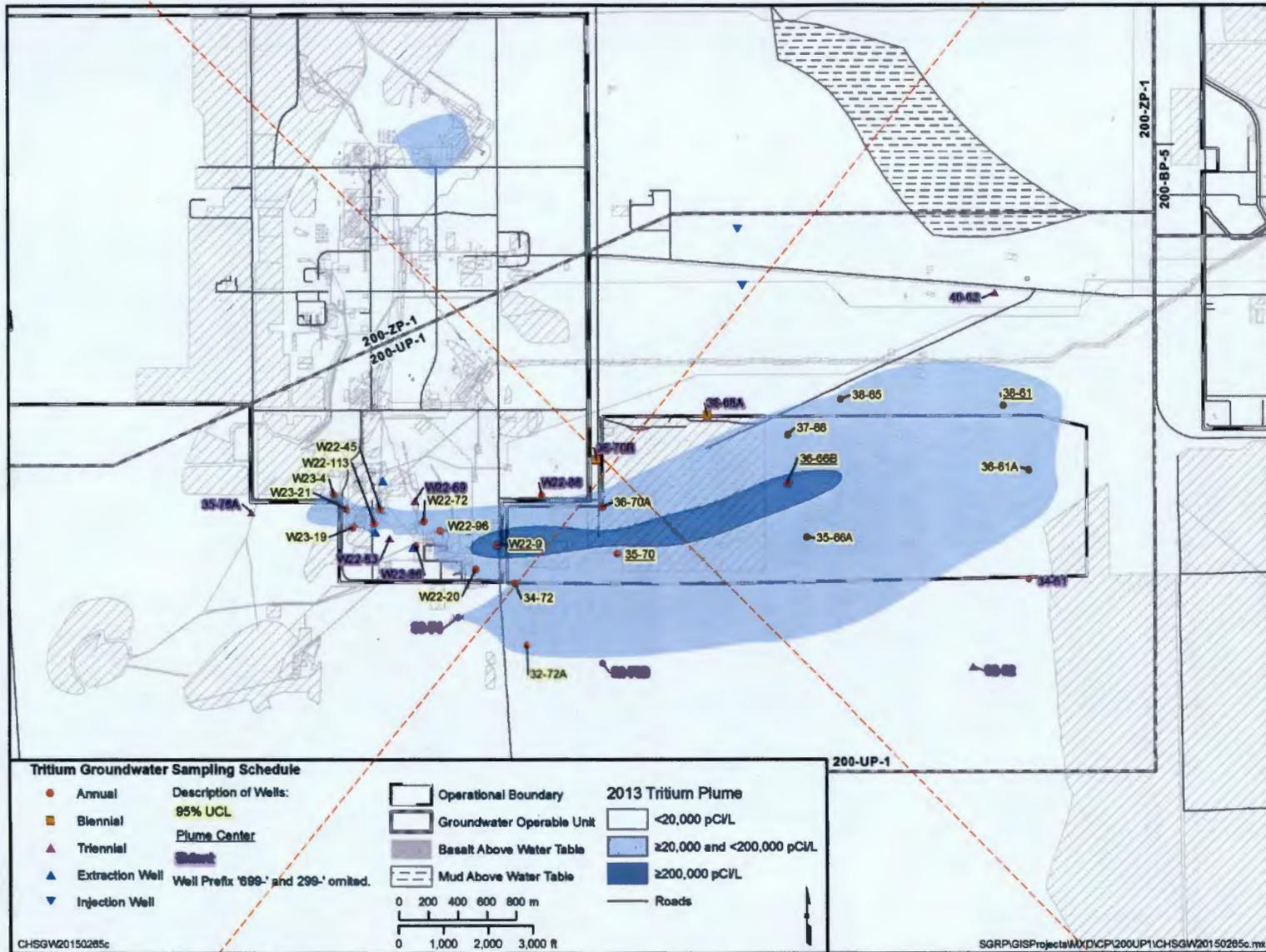


Figure B-8. Monitoring Locations for Tritium

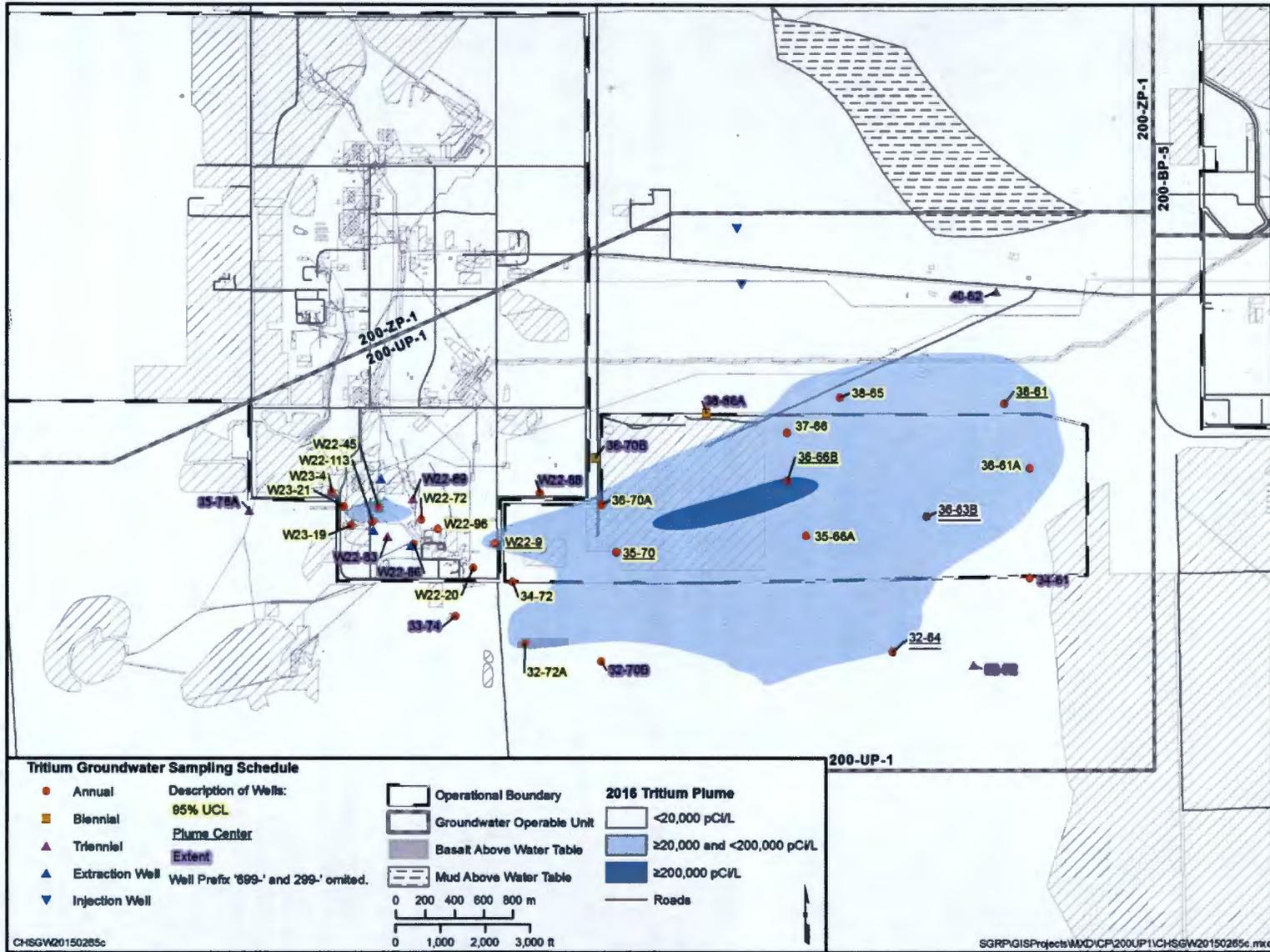


Figure B-8. Monitoring Locations for Tritium

TRI-PARTY AGREEMENT

| | | |
|--|------------------------|---|
| Change Notice Number TPA-CN- 0804 | TPA CHANGE NOTICE FORM | Date: 12/7/17 |
| Document Number, Title, and Revision: DOE/RL-2010-102, Rev 0., <i>Action Memorandum for Decontamination, Deactivation, Decommissioning, and Demolition (D4) Activities for 200 East Tier 2 Buildings/Structures</i> | | Date Document Last Issued: February 2011 |
| Approved Change Notices Against this Document: TPA-CN-0722, -0750, -0787 | | |
| Originator: W.E. Toebe | | Phone: 372-2359 |

Description of Change:

Removal of seven structures (221BC, 221BD, 221BK, 222B, 225BA, 225BB, and 225BF) from the scope of DOE/RL-2010-102 by elimination from Appendix A.

 O.A. Farabee and S.N. Schleif agree that the proposed change
DOE **Lead Regulatory Agency**
 modifies an approved workplan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, *Documentation and Records*, and not Chapter 12.0, *Changes to the Agreement*.
 Pages in Appendix A are changed to remove seven structures (221BC, 221BD, 221BK, 222B, 225BA, 225BB, and 225BF). Changes are denoted by ~~strikeout~~ for the removed text.

Note: Include affected page number(s): A-1, A-4, A-7, A-8, A-9

Justification and Impacts of Change:

In accordance with the Action Memorandum (DOE/RL-2010-102, Rev 0, Section 1), DOE may delete buildings/structures from the scope of the action by first obtaining concurrence from the lead regulatory agency and then placing documentation in the Administrative Record for DOE/RL-2010-102 identifying the building or structure and explaining why it is being deleted from the removal action scope.

- 221BC is a concrete structure that was used as a change room for canyon entry.
- 221BD is a prefabricated metal structure that was used for laundry storage.
- 221BK is a metal structure currently used to house canyon ventilation instrumentation.
- 222B is a concrete structure used as a laboratory and converted to an office building in the 1960's.
- 225BA is a concrete structure that is currently used to house WESF exhaust filters.
- 225BB is a concrete structure that was used to filter WESF exhaust that has been flooded with grout.
- 225BF is a prefabricated metal structure that is currently used to house WESF air drying equipment.

The structures have not been used for radiological or chemical processing and contamination known to be previously in it has been removed. The structures are suitable for routine demolition methods.

The structures are being deleted from the scope of DOE/RL-2010-102 and added to the existing central plateau CERCLA documentation (DOE/RL-2010-22 and DOE/RL-2010-33), to account for their current lower complexity status. Appendix J of the Tri-Party Agreement Action Plan will be revised to address the change.

Approvals:

| | | |
|--------------------------------|--------------------|---|
| DOE Project Manager N/A | 12-08-2017 Date | <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved |
| EPA Project Manager | Date 12/11/17 | <input type="checkbox"/> Approved <input type="checkbox"/> Disapproved |
| Ecology Project Manager | Date 12/11/17 | <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved |

A Building/Structure List

Table A-1 lists those 200 East Area Tier 2 buildings/structures in the scope of this non-time-critical removal action.

Table A-1. 200 East Area Tier 2 Building/Structure List

| Building/Structure ID | Building/Structure Title | Estimated Waste Quantity (tons) |
|------------------------------|--|--|
| 203A | Acid Pump House | 9,778 |
| 206A | Vacuum Acid Fractionator Building | 4,148 |
| 209E | Critical Mass Laboratory (including the 296P031 Stack) | 12,581 |
| 211A | Chemical Makeup Tank Farm & Pumphouse | 940 |
| 212A | Fission Product Loadout Station | 2,918 |
| 212B | Fission Product Loadout, Cask Transfer Building | 25,244 |
| 213A | Fission Product Load-in Station | 1,792 |
| 215C | Gas Preparation Building | 250 |
| 216A | Valve Control Facility | 18 |
| 221BB | Process Steam and Condensate Building | 878 |
| 221BC | SWP Change House | 464 |
| 221BD | Laundry Storage Building | 1,365 |
| 221BF | Air Dryer Building | 144 |
| 221BK | B Plant Canyon Exhaust Instrumentation Building | 2,988 |
| 222B | Office Building/Laboratory | 4,929 |
| 225BA | K1 Filter Pit Encapsulation Facility | 386 |
| 225BB | K3 Filter Pit Encapsulation Facility | 39 |
| 225BF | WESF Tanker Loadout Station | 331 |
| 225E | TEDF Pump Station 2 | 1,583 |
| 241C801 | Cesium Loadout Facility | 3,478 |
| 241CR271 | Cold Chemical Makeup Building | 2,986 |
| 241CX40 | Grout Removal Building | 413 |
| 242B | Radioactive Particle Research Laboratory | 3,708 |
| 242BL | Cask Loading Building | 1,400 |
| 252AB | Electrical Substation | 3,425 |
| 252AC | Electrical Substation | 126 |

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212A Fission Product Loadout Station. The 212A Fission Product Loadout Station was used for delivering or withdrawing liquid radioactive waste to or from the PUREX Plant. The 212A Building is located along the south wall of the 202A Building and is constructed of metal. A roll-up door for entry of trucks transporting casks or tank trailers is located in the west end of the building. This metal building is approximately 59 m² (640 ft²).

212B Fission Product Loadout, Cask Transfer Building. The 212B Fission Product Loadout, Cask Transfer Building was used for loading and unloading fission products from shielded transfer casks. The building is a sheet-metal-covered, steel-frame structure, 23 m (76 ft) long by 15 m (49 ft) wide, and 11 m (35 ft) at the highest point. The building includes a truck lock, a cask handling and surveillance room, and an underground operating gallery and cell, and attached laundry storage and change rooms. This building is approximately 512 m² (5,221 ft²).

213A Fission Product Load-In Station. The 213A Fission Product Load-In Station is a corrugated steel building that was used for loading liquid waste for transport from shipping casks to the PUREX Plant. The 213A Building was also used for temporary storage of contaminated dry waste. This building is 48 m² (521 ft²).

216A Valve Control Facility. The 216A Valve Control Facility is located near the 202A Building and includes an above-ground reinforced-concrete stair access and underground reinforced-concrete sample and valving pit. Two underground steel tanks are also associated with this facility. The calculation includes the volumes of the two steel tanks. The bottom of the lowest tank is 8 m (26 ft) below grade. This building is approximately 41 m² (440 ft²).

221BB Process and Steam Condensate Building. The 221BB Process and Steam Condensate Building is located on the south side of the 221B Building between the R-13 and R-15 stairwells. The 221BB Building consists of a below-grade concrete vault (referred to as the condensate pit) and an above-grade metal building.

The condensate pit is constructed of poured concrete and has a length of 5.28 m (17 ft), a maximum width of 1.83 m (6 ft), and a depth of 2.59 m (8.5 ft). On top of the pit is a steel-frame construction building with metal sides and roof. The building is approximately 2.15 m from the south exterior wall of the 221B Building. The metal building is approximately 7 m (22 ft) long by 7.7 m (25 ft) wide. The 7.7 m (25 ft) wall is parallel to the south exterior wall of the 221B Building.

~~221BC Special Work Permit (SWP) Change House. The 221BC SWP Change House is a reinforced-concrete block building associated with the B Plant Complex. The building has a one-ton monorail crane along the west side. This building is approximately 70 m² (756 ft²).~~

221BF Process Condensate Effluent Discharge Facility. The 221BF Process Effluent Discharge Facility is located in the southwest portion of the B Plant Complex. The 221BF Process Condensate Effluent Discharge Facility is a below-grade concrete vault. The vault is divided into a sample room, a monitor room, and a tank room.

The overall dimensions of the vault are 11 m (36 ft) long by 11 m (36 ft) wide by 8.2 m (27 ft) deep. An above-grade stair building is 4.5 m (15 ft) long by 1.68 m (5.5 ft) wide and 2.4 m (7.87 ft) high. The stair building is of steel frame and sheet metal construction.

~~222B Laboratory. The 222B Laboratory, located directly southeast of the 222B Building, was used from 1945 until 1952 for laboratory analysis in support of the B Plant Bismuth Phosphate Fuel Processing. Various small-scale experiments were performed inside the facility. This facility disposed of liquid waste to the 216-B-6 Reverse Well and the 216-B-10A Crib. This building is approximately 694 m² (7,474 ft²).~~

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291B Exhaust Fan Control House and Sand Filter. The 291B Building consists of air filter systems, ventilation equipment, and an exhaust stack. It is located east of the 222B Building and south of the 221B Building. The retired 291B HEPA filters are located in underground vaults in the 291B area, which is located approximately 46 to 61 m (150 to 200 ft) south of the east end of the 221B Canyon. The vaults are reinforced concrete, with steel filter frames inside. The vaults are covered by approximately 1 m (3.1 ft) of soil and gravel and are bermed with soil and gravel on three sides. The east end has a vacant vault (F vault) east of and adjacent to the last in-service filter (E filter). The A, B, C, D, and E filters were equipped with multiple banks of HEPA filters, and some filters were also equipped with one or more banks of pre-filters. The filters and vaults have been isolated and abandoned in place.

The equipment contained within this complex is used to collect and filter air from the 221B Building before discharging it to the exhaust stack. Radioactive contaminants were present in the exhaust air as a result of various dissolving steps during the fuel processing. This building is approximately 30 m² (330 ft²).

291BH Instrument Building, E Filter. The 291BH Instrument Building is an above-ground concrete shear wall building associated with the B Plant Canyon ventilation system. This building is 2.3 m² (25 ft²).

292AA PR Stack Sample House. The 292AA PR Stack Sample House is a small steel building containing instrumentation associated with the plutonium recovery stack at the PUREX Plant. This building is approximately 11 m² (117 ft²).

292AB PUREX Gases Effluent Monitoring Building. The 292AB PUREX Gases Effluent Monitoring Building is a steel-braced frame building containing monitoring instrumentation associated with the PUREX Plant ventilation system. The 292AB Building is a 10.7 m (35 ft) by 6.1 m (20 ft) by 7.6 m (25 ft) two-story metal building. The second floor is constructed on metal grate, with a metal plate over approximately 80 percent of the floor area. The building is an enclosure for stack sampling equipment. This building is approximately 142 m² (1,531 ft²).

293A Off Gas Treatment Facility. The 293A Off Gas Treatment Facility is a concrete building containing off gas scrubber equipment for treating PUREX Plant off gases. The building is approximately 83 m² (899 ft²).

295AA Steam Condensate Discharge (SCD) Sample and Pumpout Station. The 295AA SCD Sample and Pumpout Station is a small steel building that supported PUREX Plant operations. This building was originally designated as 216Z9D in 200 West, at the Plutonium Finishing Plant. The building was salvaged in 1983 and installed as 295AA at PUREX in 1985. This building is approximately 8 m² (85 ft²).

Typical Light Steel Frame Building. These buildings are pre-engineered and/or prefabricated with transverse rigid frames, and are usually one story. The roof and walls consist of insulated steel roof and wall panels. The frames are designed often with tapered beam and column sections built up of light plates. The frames are built in segments and assembled in the field with bolted or welded joints. Interior walls are usually metal studs, and gypsum wallboard partitions. Buildings that fall into this generic category include the following:

- ~~221BD Laundry Storage Building. The 221BD Laundry Storage Building is part of the B Plant Complex and is approximately 56 m² (608 ft²).~~
- ~~221BK B Plant Canyon Ventilation Instrument Building. The 221BK B Plant Canyon Ventilation Instrument Building is associated with the B Plant Canyon ventilation system and is approximately~~

DOE/RL-2010-102, REV. 0

~~114 m² (1,230 ft²). The B Plant Canyon exhaust system is monitored and controlled from a programmable logic controller located in the 221BK Building.~~

- ~~225BF Air Dryer Building. The 225BF Air Dryer Building is associated with the WESF ventilation system and is approximately 12 m² (128 ft²).~~
- 242BL Cask Loading Building. The 242BL Cask Loading Building was built in 1963 to facilitate the transfer of radioactive materials to and from the 242B Facility. The building is a typical steel light frame structure associated with the 241B Tank Farm and is approximately 45 m² (480 ft²).
- 2707AR Sludge Vault Change House. The 2707AR Sludge Vault Change House is associated with the PUREX Facility and is approximately 61 m² (659 ft²).
- 2711A Air Compressor Building. The 2711A Air Compressor Building is associated with the PUREX Facility and is approximately 37 m² (400 ft²).
- 291BC "A and B" Filters Building. The 291BC "A and B" Filters Building is associated with the B Plant Canyon ventilation system and is 84 m² (901 ft²).
- 291BD "C" Filter and Instrument Building. The 291BD Filter and Instrument Building is associated with the B Plant Canyon ventilation system and is 12 m² (137 ft²).
- 291BF "D" Filter. The 291BF "D" Filter Building is a typical steel light frame structure associated with the B Plant Canyon ventilation system, and includes the fourth filter vault and supporting instrument building. This building is 6 m² (64 ft²).
- 291BG "D" Filter Instrument Building. The 291BG "D" Filter Building is a typical steel light frame structure associated with the B Plant Canyon ventilation system. This building includes the compressor building, fifth filter vault, and supporting instrument building. This building is 11 m² (126 ft²).
- 291AD Filter Pit and Stack. The 291AD Filter Pit and Stack is associated with the PUREX Facility and is approximately 16 m² (173 ft²).
- 291BB Instrument Building, "A and B" Filters. The 291BB Instrument Building is associated with the B Plant Canyon ventilation system and is approximately 13 m² (144 ft²).
- 291BJ B Plant Instrument Building, "F" Filter. The 291BJ B Plant Instrument Building is a typical steel light frame structure associated with the B Plant Canyon ventilation system and is approximately 13 m² (144 ft²).
- 291BK Instrument Building, "E and F" Filters. The 291BK Instrument Building is associated with the B Plant Canyon exhaust system pressure monitoring. This building is approximately 9.29 m² (100 ft²).
- 291AH Ammonia Off Gas (AOG) Sample Station. The 291AH AOG Sample Station is associated with the PUREX Plant process ventilation system. This building is approximately 6 m² (64 ft²).

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- 294A Off Gas Treatment and Monitoring Station. The 294A Off Gas Treatment and Monitoring Station is a small steel building associated with the PUREX Plant process ventilation system. This building is approximately 9 m² (96 ft²).
- 295A Ammonia Scrubber Discharge (ASD) Sample Station. The 295A ASD Sample Station contains instrumentation for monitoring of ASD effluent associated with PUREX Plant process operations. This building is approximately 9 m² (96 ft²).
- 295AB Process Distillate Discharge (PDD) Sample Station. The 295AB POD Sample Station is a small steel building that supported PUREX Plant operations. This building is approximately 18m² (192 ft²).
- 295AC Chemical Sewer Line (CSL) Sample Station. The 295AC CSL Sample Station is a small steel building that contains instrumentation associated with the PUREX Plant chemical sewer system. This building is approximately 9 m² (96 ft²).
- 295AD Sanitary Water Line (SWL) Sample Station. The 295AD SWL Sample Station is a small steel building that contains instrumentation associated with the PUREX Plant sanitary water system. This building is approximately 13 m² (144 ft²).

Typical Light Wood Frame Building. These buildings are generally wood, light frame structures containing repetitive framing by wood joists on wood studs. Loads are light and spans are small. Exterior walls are usually sheathed with plank siding, stucco, plywood, gypsum board, particle board, or fiberboard. Interior partitions are sheathed with plaster or gypsum board. Roofing is asphalt shingles, composition or built-up roofing system. Buildings that fall into this generic category include the following:

- 291AB Exhaust Air Sampler House. The 291AB Exhaust Air Sampler House is associated with the PUREX Plant ventilation system and is approximately 4 m² (46 ft²).
- 291AC Exhaust Air Sampler House. The 291AC Exhaust Air Sampler House is associated with the PUREX Plant ventilation system and is approximately 4 m² (46 ft²).

Typical Reinforced Structure. These structures are typically cast-in-place concrete beams or columns, and could include below-grade construction or basements. These buildings/structures normally have exterior walls that exceed 0.3048 m (12 in.) in thickness, and are heavily reinforced on minimal centerline spacing. Interior walls will vary depending on bearing and nonbearing requirements. Floor and roof framing system consists of cast-in-place concrete slabs with concrete beams, one-way joists, two-way waffle joists, or flat slabs. Buildings that fall into this generic category include the following:

- ~~225BA K1 Filter Pit Encapsulation Facility. The 225BA K1 Filter Pit Encapsulation Facility is associated with the WESF ventilation system and is approximately 59 m² (638 ft²).~~
- ~~225BB K3 Filter Pit Encapsulation Facility. The 225BB K3 Filter Pit Encapsulation Facility is associated with the WESF ventilation system and is approximately 121 m² (1,302 ft²).~~
- 291BA Exhaust Air Sample House. The 291BA Exhaust Air Sampler House is associated with the B Plant Canyon ventilation system and is approximately 4 m² (48 ft²).

TRI-PARTY AGREEMENT

| | | |
|---|------------------------|--|
| Change Notice Number TPA-CN- 0805 | TPA CHANGE NOTICE FORM | Date: 12/7/17 |
| Document Number, Title, and Revision: DOE/RL-2010-33, Rev 0., <i>Removal Action Work Plan for Central Plateau Decommissioning Activities</i> | | Date Document Last Issued: April 2010 |
| Approved Change Notices Against this Document: TPA-CN-372, -421, -483, -537, -613, -673, -635, -723, and -0788 | | |
| Originator: W.E. Toebe | | Phone: 372-2359 |

Description of Change:
Addition of seven structures (221BC, 221BD, 221BK, 222B, 225BA, 225BB, and 225BF) to the scope of DOE/RL-2010-33 through inclusion on the list in Table 1-1.

 O.A. Farabee and C.E. Cameron /S.N. Schleif agree that the proposed change
DOE **Lead Regulatory Agency**
 modifies an approved workplan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, *Documentation and Records*, and not Chapter 12.0, *Changes to the Agreement*.
 Table 1-1 is modified to add seven structures.
 Text modifications are denoted by double underline for additional text.

Note: Include affected page number(s): 1-5

Justification and Impacts of Change:
In accordance with the Action Memorandum (DOE/RL-2010-22, Rev 0, Section 1), DOE may add buildings/structures with similar characteristics, contaminants, and complexity, to the scope of the action by adding them to the list of buildings/structures in DOE/RL-2010-33, Table 1-1 after obtaining concurrence from Ecology and EPA.

221BC is a concrete structure that was used as a change room for canyon entry. 221BD is a prefabricated metal structure that was used for laundry storage. 221BK is a metal structure currently used to house canyon ventilation instrumentation. 222B is a concrete structure used as a laboratory and converted to an office building in the 1960's. 225BA is a concrete structure that is currently used to house WESF exhaust filters. 225BB is a concrete structure that was used to filter WESF exhaust that has been flooded with grout. 225BF is a prefabricated metal structure that is currently used to house WESF air drying equipment.

The structures meet the criteria for addition to DOE/RL-2010-33 based on the following:

- The structures have not been used for radiological or chemical processing, but could have some incidental contamination based on proximity;
- The structures are suitable for routine decommissioning and/or demolition methods;
- The structures are not addressed by another approved CERCLA decision document or RCRA closure plan for which implementation would eliminate the release or threat of release of hazardous substances to the environment.

Approvals:

| | | |
|----------------------------|------------|---|
| _____ for A.O. FARABEE | 12-08-2017 | <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved |
| DOE Project Manager | Date | |
| _____ Craig Cameron | 12/12/17 | <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved |
| EPA Project Manager | Date | |
| _____ Stephen Schief | 12/11/17 | <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved |
| Ecology Project Manager | Date | |

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Table 1-1. Building / Structure List and Locations

| Building/Structure Designation | Area | ERDF Approximate Waste Quantity (ton) |
|--------------------------------|-------------|---------------------------------------|
| MO280 | 600 | 740 |
| MO292 | 600 | 740 |
| MO315 | 600 | 50 |
| MO667 | 600 | 20 |
| 2025EA | 200E | 700 |
| 2025EC71 | 200E | 10 |
| 207BA | 200E | 10 |
| 209EA | 200E | 410 |
| 2101HV | 200E | 1,200 |
| 2101M | 200E | 12,900 |
| 2103HV | 200E | 30 |
| 2105HV | 200E | 200 |
| 210A | 200E | 70 |
| 210E | 200E | 10 |
| 211B | 200E | 380 |
| 211BA | 200E | 80 |
| 211BA151 | 200E | 10 |
| 211BB | 200E | 10 |
| 2125E | 200E | 100 |
| 214A | 200E | 80 |
| 217A | 200E | 80 |
| 217B | 200E | 40 |
| 218B | 200E | 10 |
| 219B | 200E | 10 |
| 221A | 200E | 70 |
| 221BA | 200E | 10 |
| <u>221BC</u> | <u>200E</u> | <u>464</u> |
| <u>221BD</u> | <u>200E</u> | <u>1,365</u> |
| 221BG | 200E | 10 |
| <u>221BK</u> | <u>200E</u> | <u>2,988</u> |
| <u>222B</u> | <u>200E</u> | <u>4,929</u> |
| 2220E | 200E | 170 |
| 2230E | 200E | 120 |
| 2237E | 200E | 60 |
| 2258E | 200E | 10 |
| 225B-BA | 200E | 50 |

Table 1-1. Building / Structure List and Locations

| Building/Structure Designation | Area | ERDF Approximate Waste Quantity (ton) |
|--------------------------------|-------------|---------------------------------------|
| <u>225BA</u> | <u>200E</u> | <u>386</u> |
| <u>225BB</u> | <u>200E</u> | <u>39</u> |
| 225BC | 200E | 80 |
| 225BD | 200E | 20 |
| 225BE | 200E | 260 |
| <u>225BF</u> | <u>200E</u> | <u>331</u> |
| 225BG | 200E | 120 |
| 225EC | 200E | 10 |
| 2400E | 200E | 60 |
| 2402EC | 200E | 10 |
| 2402EG | 200E | 40 |
| 2403E | 200E | 90 |
| 2403EA | 200E | 20 |
| 2404E | 200E | 20 |
| 241A201 | 200E | 230 |
| 241AN273 | 200E | 20 |
| 241AN274 | 200E | 10 |
| 241AN801 | 200E | 10 |
| 241AP273 | 200E | 20 |
| 241AP801 | 200E | 10 |
| 241AW273 | 200E | 20 |
| 241AW801 | 200E | 10 |
| 241AZ156 | 200E | 80 |
| 241AZ271 | 200E | 90 |
| 241B701 | 200E | 10 |
| 241C73 | 200E | 10 |
| 241C90 | 200E | 20 |
| 242A81 | 200E | 50 |
| 242A-BA | 200E | 190 |
| 242AC | 200E | 60 |
| 242AL11 | 200E | 100 |
| 242AL71 | 200E | 10 |
| 243G1 | 200E | 100 |
| 243G1A | 200E | 30 |
| 243G2 | 200E | 90 |
| 243G3 | 200E | 40 |

Table A-1. 200-UP-1 Well List

| | | |
|--------------------------|--------------------------------|--------------------------|
| 299-E11-1 | 299-W19-107 | 299-W22-113 ^f |
| 299-E13-14 | 299-W19-113 ^e | 299-W22-114 ^g |
| 299-E13-19 | 299-W19-114 ^e | 299-W22-115 |
| 299-E20-1 | 299-W19-115 ^g | 299-W22-116 |
| 299-E20-2 | 299-W19-116 ^g | 299-W23-4 |
| 299-W9-2 | 299-W19-123 ^g | 299-W23-8 |
| 299-W14-56 | 299-W19-124 | 299-W23-9 |
| 299-W14-57 | 299-W19-125 ^g | 299-W23-10 |
| 299-W14-58 | 299-W19-126 ^h | 299-W23-14 |
| 299-W14-71 | <u>299-W19-127ⁱ</u> | 299-W23-15 |
| 299-W15-37 | <u>299-W19-128ⁱ</u> | 299-W23-16 |
| 299-W17-3 | 299-W21-1 | 299-W23-17 |
| 299-W18-15 | 299-W21-2 | 299-W23-19 |
| 299-W18-20 | 299-W21-3 ^g | 299-W23-20 |
| 299-W18-21 | 299-W22-4 | 299-W23-21 |
| 299-W18-22 | 299-W22-8 | 299-W23-236 |
| 299-W18-29 | 299-W22-9 | 299-W27-2 |
| 299-W18-30 | 299-W22-10 | 299-W26-12 |
| 299-W18-31 | 299-W22-20 | 299-W26-13 |
| 299-W18-33 | 299-W22-22 | 299-W26-14 |
| 299-W18-40 | 299-W22-24P | 699-17-70 |
| 299-W18-250 | 299-W22-44 | 699-19-88 |
| 299-W18-251 | 299-W22-50 | 699-26-57 ^h |
| 299-W18-260 ^f | 299-W22-79 | 699-27-68 ^h |
| 299-W19-1 | 299-W22-80 | 699-29-55 ^h |
| 299-W19-4 | 299-W22-81 | 699-29-66 ^g |
| 299-W19-5 | 299-W22-82 | 699-26-89 |
| 299-W19-6 | 299-W22-84 | 699-30-70 ^h |
| 299-W19-7 | 299-W22-85 | 699-30-73 |
| 299-W19-12 | 299-W22-123 | 699-31-68 ^g |
| 299-W19-18 | 299-W22-23 | 699-30-57 ^g |
| 299-W19-20 | 299-W22-24R ⁱ | 699-30-66 |
| 299-W19-26 | 299-W22-24S ⁱ | 699-32-62 |
| 299-W19-31 | 299-W22-24T ⁱ | 699-32-70B |
| 299-W19-32 | 299-W22-26 | 699-32-72A |
| 299-W19-34A | 299-W22-28 | 699-32-76 |
| 299-W19-34B | 299-W22-37 | 699-33-56 |
| 299-W19-35 | 299-W22-38 | 699-33-74 |
| 299-W19-36 | 299-W22-40 | 699-33-75 |

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Table A-1. 200-UP-1 Well List

| | | |
|---------------------------------------|-------------------------|-------------------------------|
| 299-W19-37 | 299-W22-45 | 699-33-76 |
| 299-W19-39 | 299-W22-46 | 699-34-61 |
| 299-W19-40 | 299-W22-47 | 699-34-72 |
| 299-W19-41 | 299-W22-48 | 699-35-59 |
| 299-W19-42 | 299-W22-49 | 699-35-66A |
| 299-W19-43 | 299-W22-60 | 699-35-70 |
| 299-W19-44 | 299-W22-69 | 699-35-78A |
| 299-W19-45 | 299-W22-72 | 699-36-61A |
| 299-W19-46 | 299-W22-74 | 699-36-63B ^g |
| 299-W19-47 | 299-W22-83 | 699-36-66B |
| 299-W19-48 | 299-W22-86 | 699-36-70A |
| 299-W19-49 | 299-W22-87 | 699-36-70B |
| (229-W19-50) 299-W19-101 ^a | 299-W22-88 | 699-37-66 |
| 299-W19-90 | 299-W22-89 | 699-38-61 |
| 299-W19-91 | 299-W22-90 ^b | <u>699-38-64B^j</u> |
| 299-W19-92 | 299-W22-91 ^b | 699-38-65 |
| 299-W19-93 | 299-W22-92 ^b | 699-38-68A |
| 299-W19-105 | 299-W22-93 ^f | 699-38-70 |
| | 299-W22-94 ^c | 699-38-70B |
| | 299-W22-95 ^d | 699-38-70C |
| | 299-W22-96 ^d | <u>699-39-68^j</u> |
| | 699-30-63 | 699-40-62 |
| | 699-31-50 ^h | 699-40-65 |
| | 699-32-59 | |
| | 699-32-64 | |

a. During the drilling of Well 299-W19-50, a large rock was encountered that required this well to be redrilled as Well 299-W19-101.

b. S/SX extraction wells were installed in fiscal year 2011.

c. M-24 monitoring wells were installed in fiscal year 2011.

d. 200-UP-1 monitoring wells were installed in fiscal year 2011.

e. 200-UP-1 extraction wells were installed in fiscal year 2014.

f. M-24 monitoring wells were installed in fiscal years 2014 and 2015.

g. Installation is planned for fiscal year 2016.

h. Installation is optional but may occur during fiscal year 2017.

i. Included in DOE/RL-2015-14, 2015, *Performance Monitoring Plan for the 200-UP-1 Groundwater Operable Unit Remedial Action*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington. Available at: <http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=0080202H>.

j. Installation is planned for fiscal year 2018.

TRI-PARTY AGREEMENT

| | | |
|---|------------------------|--|
| Change Notice Number TPA-CN- 0809 | TPA CHANGE NOTICE FORM | Date: 12/04/2017 |
| Document Number, Title, and Revision: DOE/RL-2014-37, Rev 0. Removal Action Work Plan for 200-DV-1 Operable Unit Perched Water Pumping/Pore Water Extraction | | Date Document Last Issued: 11/30/2015 |
| Approved Change Notices Against this Document: TPA-CN-719 | | |
| Originator: Sean Sexton | | Phone: 373-2285 |

Description of Change:

Added a new bullet to section 2.2.1, Perched Water Well Field Activities, which allows for the injection of potable water to develop extraction wells as needed to keep the wells working properly.

M.W. Cline and D. Goswami agree that the proposed change **DOE** **Lead Regulatory Agency** modifies an approved workplan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, *Documentation and Records*, and not Chapter 12.0, *Changes to the Agreement*.

A new bullet has been added to section 2.2.1 to allow for injection of potable water into the well as part of the rehabilitation process.

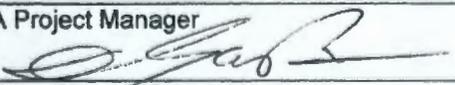
The additional text on page 13 of the document is indicated by a double underline.

Note: Include affected page number(s) 13

Justification and Impacts of Change:

The extraction wells for the perched water pumping/pore water extraction system have very little water, so a proper well development cannot be performed at the wells without the addition of water to the well casing. By allowing the addition (injection) of potable water, well maintenance will be able to better develop these extraction wells and improve the ability of the wells to produce water. The injected water will later be removed during pumping of the perched water.

Approvals:

| | | |
|--|--------------------------|---|
|  _____ DOE Project Manager N/A | <u>12/6/2017</u> Date | <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved |
| _____ EPA Project Manager | _____ Date | <input type="checkbox"/> Approved <input type="checkbox"/> Disapproved |
|  _____ Ecology Project Manager | <u>12/6/17</u> Date | <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved |

2.2.1 Perched Water Well Field Activities

Activities performed at the well field may include, but are not necessarily limited to, the following:

- Cyclical pumping of up to three wells to remove perched water
- Collecting the extracted perched water in a nearby aboveground container
- Performing water-level and electrical conductivity measurements in the collection container
- Collecting baseline samples of perched water prior to initiating extraction operations under this removal action
- Collecting samples of extracted perched water from the wells and the collection container during extraction operations
- Injecting potable water for well maintenance and well development (typically less than 1000 gallons)

Field sampling activities are described in DOE/RL-2014-51, *Sampling and Analysis Plan for 200-DV-1 Operable Unit Perched Water Pumping/Pore Water Extraction*. If the vacuum-enhanced recovery and/or pore water extraction phases are implemented, and additional well field activities will be described in a supplemental sampling and analysis plan (SAP) or SAP addendum. If vacuum-enhanced recovery is used, air emissions will be monitored in accordance with the air emission plan for 200-DV-1 OU vacuum-enhanced recovery/pore water extraction (Appendix C of this RAWP).

2.2.2 Perched Water Transportation Activities

The 200-DV-1 OU extracted perched water will be pumped from the collection container located in the well field into a tank truck. The truck will transport the water to the 200 West P&T, where water the water will be pumped into a holding tank. When available as an alternative, 200-DV-1 OU perched water will be conveyed by pipeline to the 200 West P&T. The water will be periodically drained from the collection container to the pipeline. The pipeline from the 200-DV-1 OU perched water wells will feed into the transfer pipeline for the 200-BP-5 OU extraction wells. The tank truck route and planned pipeline route are depicted in Figure 6.

2.2.3 Perched Water Treatment and Disposal

The 200-DV-1 OU extracted perched water will be treated at the 200 West P&T to reduce COC concentrations (with the exception of tritium) to below MCLs. A treatment method is not available for tritium; however, the resulting combined discharge concentration from 200 West P&T is expected to be below the MCL. The treatment approach involves multiple steps to remove the various COCs. The 200 West P&T treatment steps are shown in Figure 7. The treatment process is summarized in this section, and additional details are provided in DOE/RL-2009-124, *200 West Pump and Treat Operations and Maintenance Plan*.

Influent contaminated water is first filtered to remove fine particulate matter. The 200-DV-1 OU extracted perched water is blended with uranium-contaminated groundwater from the 200-UP-1 OU and 200-BP-5 OU extraction wells, and with other potential sources, in the blended water feed tank. The blended water then flows through the uranium ion exchange (IX) vessels to remove the uranium. Water from the uranium system is then combined with groundwater from the 200-ZP-1 OU and other technetium-99-contaminated groundwater that did not contain uranium contamination. This combined water then passes through another set of filters to remove fine particulates and then flows through the technetium-99 IX vessels to remove technetium-99. The water then passes through a final set of filters before being transferred to the central treatment facility for biological treatment of nonradionuclide COCs.