

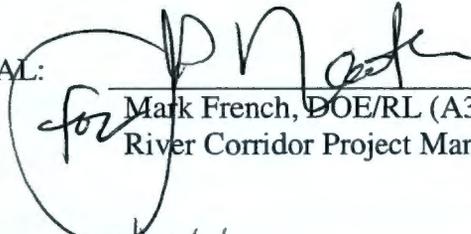
100/300 AREA UNIT MANAGER MEETING  
ATTENDANCE AND DISTRIBUTION  
September 10, 2009

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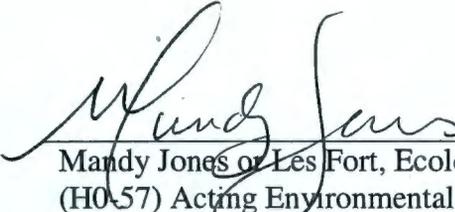
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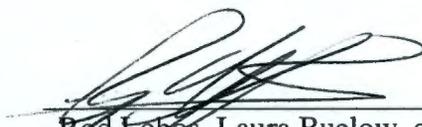
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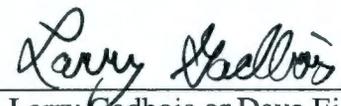
100/300 AREA UNIT MANAGERS MEETING  
APPROVAL OF MEETING MINUTES  
September 10, 2009

APPROVAL:  Date 10/8/09  
for Mark French, DOE/RL (A3-04)  
River Corridor Project Manager

APPROVAL:  Date 10/8/09  
Briant Charboneau, DOE/RL (A6-33)  
Groundwater Project Manager

APPROVAL:  Date 10/8/09  
Mandy Jones or Les Fort, Ecology  
(H0-57) Acting Environmental Restoration  
Project Manager(s)

APPROVAL:  Date 10/8/09  
Rod Lobos, Laura Buelow, or Craig  
Cameron EPA (B1-46)  
100 Area Project Manager

APPROVAL:  Date Oct 8, 2009  
Larry Gadbois or Dave Einan, EPA  
(B1-46)  
300 Area Project Manager

**100 & 300 AREA UNIT MANAGER MEETING MINUTES****Groundwater and Source Operable Units; Facility Deactivation, Decontamination, Decommission, and Demolition (D4); Interim Safe Storage (ISS); and Mission Completion****September 10, 2009****ADMINISTRATIVE**

- **Next Unit Manager Meeting (UMM)** - The next meeting will be held October 8, 2009 at the Washington Closure Hanford (WCH) Office Building, 2620 Fermi Avenue, Room C209.
- **Attendees/Delegations** - Attachment A is the list of attendees. Representatives from each agency were present to conduct the business of the UMM. Attachment B documents any delegations received from the agencies.
- **Approval of Minutes** - The July 2009 meeting minutes were approved by the U.S. Environmental Protection Agency (EPA), Washington State Department of Ecology (Ecology), and U.S. Department of Energy, Richland Operations Office (RL). No meeting was held in August 2009.
- **Action Item Status** - Status of action items was performed, and updates provided (Attachment C).
- **Agenda**: Attachment D is the meeting agenda.

**EXECUTIVE SESSION (Tri-Parties Only)**

No executive session was held.

**100-F & 100-IU-2/100-IU-6 AREAS (GROUNDWATER, SOILS, D4/ISS)**

Attachment 1 provides a status or information for groundwater. Attachment 2 provides a status or information for soil remediation at 100-IU-2 and 100-IU-6. No issues were identified and no action items were documented.

**Agreement**: Attachment 3 documents RL and EPA's approval for decontaminating potential archaeological items from the 600-202 and 600-109 waste sites, including management of water used in the decontamination process.

**100-D & 100-H AREAS (GROUNDWATER, SOILS, D4/ISS)**

Attachment 1 provides a status or information for groundwater. Attachment 4 provides a status or information for soil remediation at 100-H and Attachment 5 provides a status or information for soil remediation at 100-D. No issues were identified.

**Agreement 1**: Attachment 6 documents Ecology approval of the 128-D-2 waste staging pile area, and Ecology requires that once remediation activities are completed, the staging pile area will be surveyed along with the clean overburden site, and this information shall be included in the final verification sampling design.

**Agreement 2**: Attachment 7 documents Ecology approval that the waste staging pile area for the 118-D-3:1 waste site has met the closeout requirements, and the information and results be included in the Remaining Sites Verification Package for 118-D-3:1.

Agreement 3: Attachment 8 (TPA-CN-291) documents RL and Ecology approval to add 15 Remedial Process Optimization (RPO) wells to DOE/RL-97-01, Rev. 6.

Action: RL shall provide Ecology with information relating to the 100-DR-5 groundwater treatment system upset.

#### **100-N AREA (GROUNDWATER, SOILS, D4/ISS)**

Attachment 1 provides a status or information for groundwater. Attachment 9 provides supplemental information for the existing Permeable Reactive Barrier Apatite Injections. Attachment 10 provides a status or information for soil remediation. Attachment 11 provides a status or information for D4 and ISS. No issues were identified and no action items were documented.

Agreement: Attachment 12 documents RL and Ecology approval for specific requirements in completing the demolition of the 1706-NA Lift Station.

#### **100-K AREA (GROUNDWATER, SOILS, D4/ISS)**

Attachment 1 provides a status or information for groundwater. No issues were identified and no actions items were identified.

Agreement 1: Attachment 13 documents RL and EPA approval of the backfill concurrence for specific portions of the 118-K-1 burial ground.

#### **100-B/C AREA (GROUNDWATER, SOILS, D4/ISS)**

Attachment 1 provides a status or information for groundwater. Attachment 14 provides a status or information for soil remediation. No issues were identified, no agreements were documented, and no action items were documented.

#### **300 AREA – 618/10/11 (GROUNDWATER, SOILS, D4/ISS)**

Attachment 1 provides a status or information for groundwater. No issues were identified, no agreements were documented, and no action items were documented.

#### **300 AREA - GENERAL (GROUNDWATER, SOILS, D4/ISS)**

Attachment 1 provides a status or information for groundwater. No issues were identified, no agreements were documented, and no action items were documented.

#### **REGULATORY CLOSEOUT DOCUMENTS OVERALL SCHEDULE**

Attachment 15 provides a status or information on review schedules for various regulatory documents. No issues were identified, no agreements were documented, and no action items were documented.

### **MISSION COMPLETION PROJECT**

Attachment 16 provides a status or information regarding the orphan sites evaluation, River Corridor Baseline Risk Assessment, and the Remedial Investigation of Hanford Releases to the Columbia River. No issues were identified and no action items were documented.

Agreement: Attachment 17 (TPA-CN-294) documents RL, EPA, and Ecology approval to change the minimize length size for walleye, and expand the area allowed for sturgeon as governed by DOE/RL-2008-11, Rev. 0.

### **5-YEAR RECORD OF DECISION ACTION ITEM UPDATE**

Attachment 18 provides an update to the Five-Year Review Action Item List. No issues were identified and no agreements were documented.

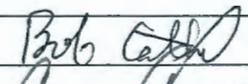
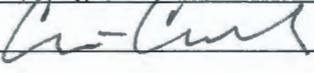
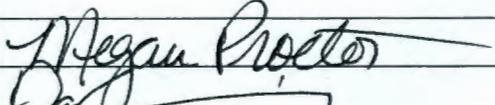
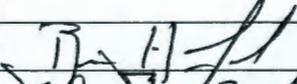
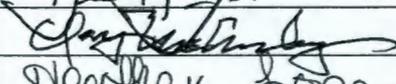
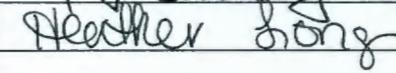
Action: RL and EPA shall further discuss Action Item 1-3 regarding the protectiveness determination and determine a path forward.

### **2009 ANNUAL SITEWIDE INSTITUTIONAL CONTROLS REVIEW**

Attachment 19 provides the scope and results of the annual institutional control review conducted by RL's River Corridor Contractor.

**Attachment A**

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**Attachment B**

**Attachment C**

100/300 Area UMM  
Action List  
September 10, 2009

Open (O)/ Closed (X)	Action No.	Co.	Actionee	Project	Action Description	Status
O	100-167	RL	J. Hanson	100-D	RL shall provide Ecology with information relating to the 100-DR-5 groundwater treatment system upset.	Open: 9/10/09; Action:
O	100-168	RL	J. Hanson	5-Year Review	RL and EPA shall further discuss Action Item 1-3 regarding the protectiveness determination and determine a path forward.	Open: 9/10/09; Action:

**Attachment D**

100/300 Area Unit Manager Meeting  
September 10, 2009  
Washington Closure Hanford Building  
2620 Fermi Avenue, Richland, WA 99354  
Room C209; 1:00-4:30 p.m.

1:00 - 1:30 p.m.

Executive Session (Tri-Parties Only):

- None

1:30 - 2:00 p.m.

Administrative:

- Approval and signing of previous meeting minutes (July 2009); August 2009 meeting was cancelled.
- Update to Action Items List (No action items at this time)
- Next UMM (10/8/2009, Room C209)

2:00 - 4:00 p.m.

Open Session: Project Area Updates - Groundwater, Field Remediation, D4/ISS:

*Note: Each session is estimated at 5 to 15 minutes.*

- 100-F & 100-IU-2/6 Areas (Mike Thompson/Jamie Zeisloft)
- 100-D & 100-H Areas (Jim Hanson/Tom Post/Joanne Chance)
- 100-N Area (Joanne Chance, Rudy Guercia, Mike Thompson)
- 100-K Area (Jim Hanson, Jamie Zeisloft, Ellen Dagon, Steve Balone)
- 100-B/C Area (Greg Sinton, Tom Post)
- 300 Area - 618-10/11 exclusively (Chris Smith)
- 300 Area (Mike Thompson/Chris Smith/Rudy Guercia)
- Regulatory Closeout Documents Overall Schedule (John Neath, Mike Thompson)
- Mission Completion Project (John Sands)

4:00 - 4:15 p.m.

Special Topics/Other

- 5-Year Record of Decision Action Item Update (Jim Hanson)
- Annual Institutional Control Assessment - River Corridor Project (John Sands)

4:15 - 4:30 p.m.

Adjourn

**Attachment 1**

(1)

**100/300 Areas Unit Managers Meeting  
September 10, 2009**

**100-FR-3 Operable Unit—Nathan Bowles**

(M-15-63, 9/30/2009, Submit CERCLA RI/FS Work Plans for the 100-FR-1, 100-FR-2, 100-FR-3, 100-IU-2, and 100-IU-6 Operable Units for groundwater and soil.)

*Schedule Status- On schedule to meet TPA milestone*

No new groundwater monitoring results since the July UMM.

The fourth quarterly sample for new well 199-F8-7 was scheduled to be collected in July, but sampling was delayed because of fire danger (lots of dry vegetation on road to well). It will be sampled this month. In FY 2010 it switches from quarterly to annual. We have moved the FY 2010 sampling event (originally scheduled for October 2009) to May 2010 to avoid sampling two months in a row. This May sample will be co-sampled with another project (100-F Decision Unit risk assessment).

**100-HR-3 Groundwater OU - Dave Shrimpton**

(M-016-112A, 12/31/2009, RL shall complete demonstrations for biostimulation and electrocoagulation according to previously approved test plans (DOE/RL-2006-70 and PNNL-16424).

Schedule Status: On schedule to meet TPA milestone

- HR-3 Treatment System
  - For the period July 1 through 30, 2009 (no data for July 31):
    - The system ran normally with three exceptions: well 199-H4-3 was out of service due to a faulty flow transmitter. This is a low concentration, low producing well and its repair is a low priority; well 199-H4-4 was out of service from July 20 due to low level/low flow; and well 199-H4-15 was out of service from July 13 due to an electrical fault in the AFD/motor system.
    - Average flow through the system was 170 gpm.
    - Average influent hexavalent chromium concentration for H Area was 15 ug/L
    - Average influent hexavalent chromium concentration for D Area was 75 ug/L
  - For the period August 1 through 31, 2009:
    - The system ran through August 18, when it was shut down in its entirety for the 100-H Area Aquifer Test. Flow from 100-D Area was restored September 8 following a necessary pipe relocation round the new DX Transfer Building site. Wells 199-H4-3, -4 and -15 remained out of service through August 18. Average flow through the system was 89 gpm, about half of normal due to the August 18 shutdown
    - Average influent hexavalent chromium concentration for H Area was 17 ug/L
    - Average influent hexavalent chromium concentration for D Area was 149 ug/L, about twice last month's due to a rebalancing of the flows from the extraction wells and increased flows from higher concentration wells.

**100/300 Areas Unit Managers Meeting  
September 10, 2009**

- DR-5 Treatment System
  - For the period July 1 to 31, 2009
    - System operated normally.
    - Total average flow through the system was 29.5 gpm, below DR-5 capacity of 50 gpm because the injection well D4-42 will not accept a higher flow. Construction will start in September to replace D4-42 with D4-41, redevelop D4-42 and reconnect it, thereby returning DR-5 to maximum throughput.
    - The average influent hexavalent chromium concentration was 733 ug/L.
  - For the period August 1 to 31, 2009
    - System operated normally.
    - Total average flow through the system was 28.2 gpm
    - The average influent hexavalent chromium concentration was 959 ug/L, higher than last month's due to a rebalancing of extraction flows favoring higher concentration wells.
  - DR-5 Optimization status: Filtrate and rinsate from regeneration continue to be bled into the injection stream on average of 1 gpm with no apparent change in injection operation.
- ISRM Pond Status. In accordance with the IAMIT agreement of October 2008, the discharge from DR-5 to the pond was stopped in January 2009 and the pond has been drying out since then. An application of fixative was made in July to the outer 1/3 to 1/2 of the pond area, but the inner portions still contain a soupy residue covered by a salty crust. Further treatments are being discussed with Ecology, but it appears that sealing the pond by September 30, 2009 will not be practical. A final review with the vendor is planned the week of September 14, 2009 to determine if final applications can be made prior to September 30, 2009.
  - Remediation Process Optimization (RPO)
  - Modeling for groundwater flows in 100-HR-3 and development of a system of 70 new extraction and injections wells to meet the river protection goal (i.e., to meet the aquatic standard) by 2012, and remediate the hexavalent chromium plume by 2020. A Technical Memorandum has been prepared and is being revised to reflect the increase in scope from 49 to 70 new wells.
  - 49 new well locations have been staked and walked down with Ecology and interested stakeholders. Ecology has approved a TPA Change Notice and Sampling & Analysis Plan, Revision 1 for the first 37 new RPO wells, and drilling has started in 100-H Area. Work on a second TPA CN and SAP Revision 2 for the remaining 33 of 70 wells is planned for September.
  - Modeling and cost/benefit analyses for 5 alternative well field designs have been completed and results presented to RL and Ecology. The recommended alternative, Alternative 5, expands the current baseline of 49 wells by adding 21 wells upgradient to achieve greater mass capture by 2020.
  - The Technical Memorandum on Ex Situ Treatment Options comparing 600 gpm systems using three types of resin and three resin regeneration options is complete.

**100/300 Areas Unit Managers Meeting  
September 10, 2009**

This TM recommends changing from Dowex 21K to either Purolite A-500 or ResinTech SIR-700 for the DX plant. Several design issues are being resolved and DX design for SIR-700 will be complete in November.

- The second resin test at DR-5 is complete and a third series initiated. ResinTech SIR-700 has continued to adsorb hexavalent chromium; its capacity was over 40,000 bed volumes at press time. The resin test report recommended using SIR-700 in DX and this recommendation has been accepted by RL.
- The DX Expansion design team has progressed design to about 70% complete, less than that claimed in June due to design changes, and a 90% design review is planned for October. Design is based on the KX design media, amended as needed to reflect the selection of ResinTech SIR-700 and the expansion of the well field from 49 to 70 new wells. RPO is also addressing the 199-D5-99 hot spot and HR-3 capacity issues.
- It has also been determined that additional capacity is needed in 100-H Area to offset uncertainties in modeled flows, and treatment capacity in 100-H Area has been increased from a proposed 400 gpm to 700 gpm (current capacity is 300 gpm). As a result of a cost study, this capacity will now be provided by a new HX facility and a recommendation to shut down the existing HR-3 facility.
- A Performance Monitoring Technical Memorandum is in preparation.
- Deep Chromium Investigation
  - The Aquifer Test on three existing RUM wells was started August 18 to address the CERCLA 5-year Review Action Item 12-1. Three wells (199-H3-2C, 199-H4-12C, and 199-H4-15CS) are being tested to evaluate both the extent of chromium contamination and hydraulic properties in the RUM portion of the aquifer below the 100-HR-3 OU. The HR-3 pump and treat was shut down and reconfigured to allow two of the wells (199-H3-2C and 199-H4-12C) to be piped into the pump and treat system in order to handle the large quantity of water to be pumped over a 30-day testing period. Well 199-H4-15CS, a 2" diameter well with a 2 ft screened interval, will be tested separately via the use of a Redi-flo II pump with effluent contained in temporary tanks on site. A rebound study is under way to evaluate the state of the chromium contamination in the unconfined aquifer. This study will start with a set of baseline samples and continue with sets of sampling from monitoring wells across HR-3 for three months to evaluate the chromium plume response. The pump and treat was shutdown on August 18 and is scheduled to resume normal operations in late November or early Dec. 2009
- RD/RA Work Plan and IAMP. Both documents are being revised to make them stand-alone for 100-HR-3 and bring them up to date. Internal review is under way.
- EM-22 Technology Projects
  - Investigation for mending ISRM Barrier: A contract has been awarded to MSE for laboratory studies into 8 alternative ZVI amendments and 3 different dispersants. Results will be available in late 2009.
  - Electrocoagulation Treatability Test: The treatability test report is being finalized for publication in September.

**100/300 Areas Unit Managers Meeting  
September 10, 2009**

- 100-D Southern Plume Investigation: A final report on the southern plume chromium source investigation in 100-D is being prepared for issue in September. . Samples obtained from wells 199-D5-99 and 199-D5-122 on in May had hexavalent chromium concentrations of 42,200 and 51,700 ug/L, respectively.
- 100-D Northern Plume Investigation: This investigation has been terminated and a report is in preparation. The investigation of the 100-D Northern plume is now part of the RI for the final remedy.
- In situ Biostimulation: Monitoring of the molasses and emulsified vegetable oil tests continues. CHPRC will continue monitoring select test area wells after PNNL's report is delivered at the end of September 2009.
  
- **RI/FS Work Plan**
  - 100-Area RI/FS Work Plan is being revised per agencies comments. Schedule is to provide a tracked changes document to the agencies and an updated RCR on September 16, 2009. This version will then be discussed at a tentative meeting planned for September 30 and October 1, 2009, with an approval goal of October 15, 2009.
  - The 100 DH Decision Unit Addendum 1 has been under discussion with Ecology. Open comment items are currently being discussed. A meeting regarding boreholes will be scheduled for the September 17, 2009. A tracked changed document and updated RCR will be provided by September 30, 2009. A 'mini' SAP is being prepared for DH groundwater items so that fall groundwater sampling can take place.
  - 100 K Decision Unit Addendum 2 is undergoing final author check after EPA's comments have been incorporated. The final Technical edit will occur this weekend and a document will be ready for RL and EPA approval by the September 18, 2009.
  
- ~~EPA has approved a revision of the ESD for the HR-3/KR-4 IROD to RL for review.~~ 10/8/2009  
By direction  
of EPA &  
OOE (RL)
  
- The FFS/PP for in-situ remediation at certain locations in the 100-Area was submitted to EPA and Ecology and will not go forward as envisioned by the Tri-Parties. Instead, a more limited FFS/PP will be prepared for 100-K Area for application of this technology. This will be supported by a design test work and full scale deployment in 100-D/H Area, for which appropriate regulatory authorizations (an ESD to the interim ROD, as amended for the ISRM Barrier, or Treatability Test Plan) will be requested by RL.

**100-NR-2 Groundwater OU – Nathan Bowles**

(M-15-61, 12/31/2009, Submit RI/FS Work Plan for the 100-NR-1 and 100-NR-2 Operable Units.)  
*Schedule Status- On schedule to meet TPA milestone*

(M-16-14B, 12/30/2009, Submit a Draft CERCLA Proposed Plan [PP] to either amend the 1999 100-NR-01/NR-02 rod for interim action or to propose a new ROD. The PP will evaluate the permeable reactive barrier technology.)  
*Schedule Status- On schedule to meet TPA milestone*

- 100-N Integrated Sampling and Analysis Plan – RL received initial comments from Ecology on a draft, consolidated groundwater monitoring plan for the 100-NR-2 Groundwater Operable Unit. This plan will include monitoring for all programs currently

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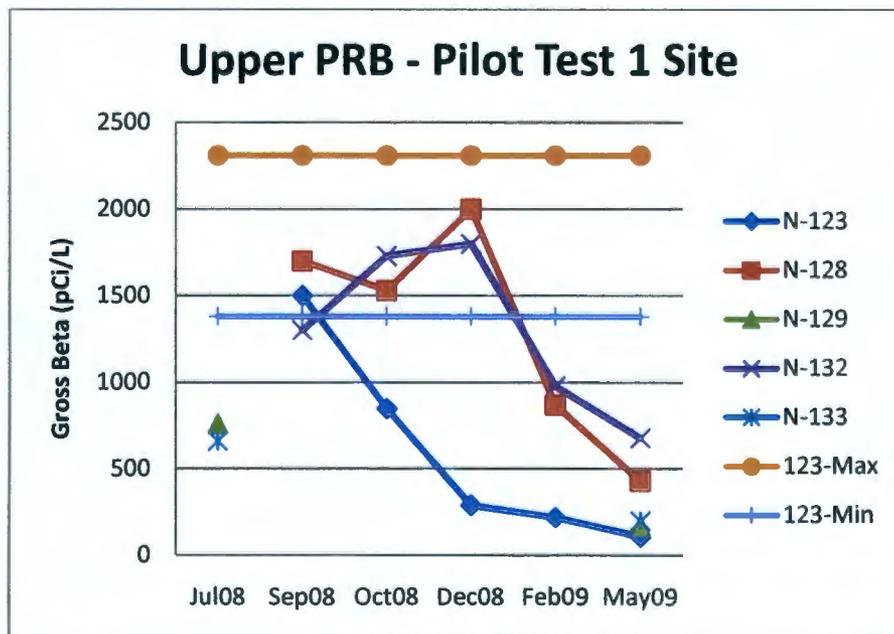
required at the 100-N Area, including CERCLA, AEA, RCRA, and remediation technology monitoring (e.g. Apatite PRB, TPH Plume investigation). RL and CHPRC groundwater staff will respond to comments and schedule a meeting with Ecology to discuss them.

- Apatite PRB – Quarterly sampling was performed on 8-13-09.

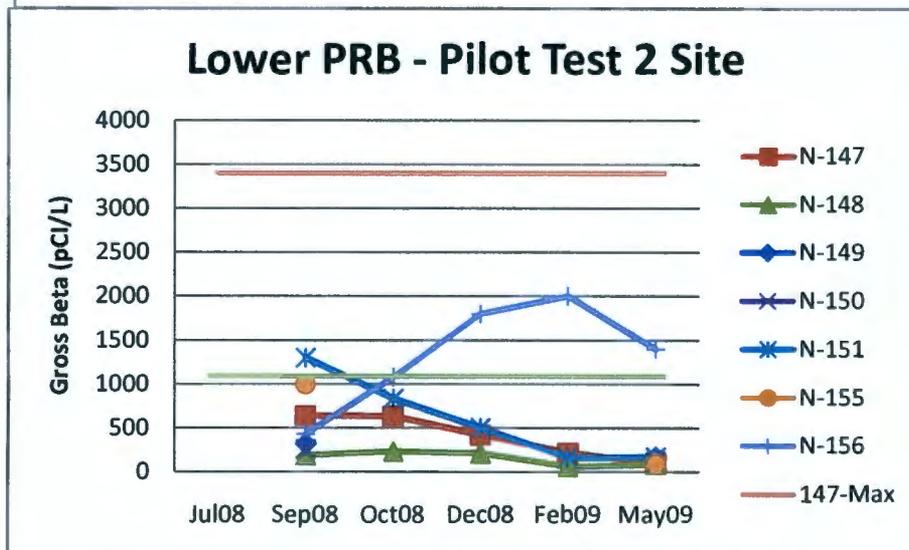
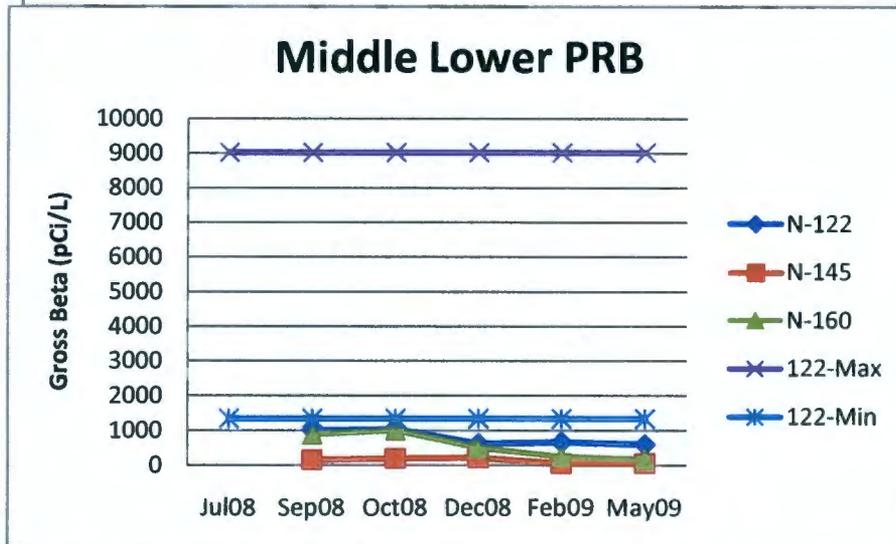
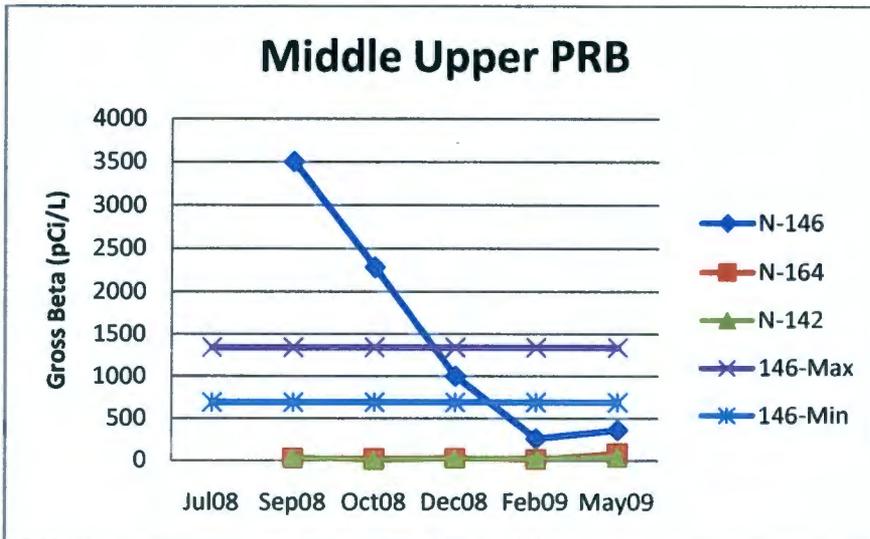
The DOW and SOW for installation of the multipurpose wells for the Apatite PRB have been written, and the related RFP was issued. The contract was awarded in late August, and drilling is planned to begin in late September using sonic drilling methods.

The DOW and SOW for testing the alternative Jet Injection method for Apatite PRB installation have been written, and the associated RFP was issued. The related Treatability Test Plan (TTP) Addendum (Add. 3 to DOE/RL-2005-96) is under revision based on Ecology comments. Proposals have been received, and a contract will be awarded following Ecology approval of the TTP addendum. The test is currently planned to begin in October.

Below are Gross Beta plots for the wells sampled in May, which included wells in four general locations along the existing permeable reactive barrier (PRB). Location 1 - wells located in the Pilot Test 1 site (upriver end of PRB). Location 2 - wells located in the upper middle of the PRB. Location 3 - wells located in the lower middle of the PRB. Location 4 - wells located in the Pilot Test 2 site (downriver end of the PRB). Plots include initial/background data (taken in 2006 before injections began), the maximum and minimum recorded values for the four monitoring wells (199-N-122, -123, -146, -147) associated with these locations (for samples taken prior to injections), and performance monitoring data from 9-1-2008 through 5-26-2009 (since injections ceased in 2008). All wells are showing a downward trend, and most are below the initial measurements taken before injections began in 2006.



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**100/300 Areas Unit Managers Meeting  
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- Phytoremediation – The trees are growing well and work continues at the plot in the 100-K Area. See photos below from August 10, 2009.



- Total Petroleum Hydrocarbon Investigation – Sampling was scheduled for the TPH Well (199-N-173) and four other locations (199-N-18, 199-N-96A, 199-N-167, and 199-N-172) for August and September. The August samples were collected as planned. Samples are being collected for field parameters (pH, Temperature, Conductivity, Dissolved Oxygen, Turbidity), Anions, Metals, VOAs, SVOAs, Sr-90, and TPH-Diesel). Data will be used by PNNL in the development of a conceptual model and for evaluating potential remediation technologies/option for the TPH plume.

**100-KR-4 Groundwater OU - Julie Robertson**

- Monthly monitoring of cultural resources for 100-KR-4 was performed on July 17 and August 12, 2009. No problems were observed.
- Explanation of Significant Difference: An ESD to the 100-HR-3 and 100-KR-4 Operable Units interim action record of decision was signed and released. Notice to the public was provided on September 1, 2009. The ESD lowers the remedial action goal from 22 ppb to 20 ppb and lowers the effluent discharge limit from 50 ppb to 20 ppb in systems having injection wells that are not upgradient of a plume.
- RI/FS Work Plan, Addendum 2 (K Decision Unit): EPA comments were received in July and were being dispositioned during August. Comment incorporation is progressing well. In August, proposed locations for RI wells were shared with Tribal representatives, who expressed a good deal of concern. A follow up meeting is being scheduled.
- Interim Action Monitoring Plan: An updated Interim Action Monitoring Plan specific to the 100-KR-4 Operable Unit interim action underwent internal contractor review. Incorporation of internal review comments continues.
- 100-KR-4 System for the period of July 1, 2009 through July 31, 2009.
  - Flow from extraction wells 199-K-119A and K-125A, both of which contained very low levels of Cr+6, was terminated mid-month as a part of Phase 2 realignment.

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Transfer Building 1 (extraction wells K-120A and K-127) was shut down for one day at the end of the month to support final disconnects.

- Total average flow through the system was approximately 252 gpm.
- Average influent hexavalent chromium concentration was 22 µg/L.
  
- 100-KR-4 System for the period of August 1, 2009 through August 31, 2009.
  - The entire facility was in outage August 11-23 as a result of a grass fire that damaged lines to the system injection wells. Transfer Building 1 (extraction wells K-120A and K-127) remained in outage after the fire damage was repaired to support Phase 2 realignment construction.
  - Total average flow through the system was approximately 125 gpm.
  - Average influent hexavalent chromium concentration was 34 µg/L.
  
- KX System for the period of July 1, 2009 through July 31, 2009:
  - The facility was in operational test mode and operated at reduced flow rates to support Phase 2 construction activities at Transfer Building 1 and repair of PVC piping in the main process building. Transfer Building 1 (extraction wells K-141, K-145, K-154, K-162, and K-163) was in outage August 11-24 as a result of a grassfire that damaged system lines.
  - Extraction well 199-K-144 remained out of service due to elevated tritium; injection well 199-K-171 remained out of service due to elevated hexavalent chromium. Connection of these wells will be accomplished as a part of Phase 2 realignment. Extraction well 199-K-141 was taken out of service July 9, 2009 pending repair of a valve leak at Transfer Building 1.
  - Total average flow through the system was approximately 479 gpm.
  - Average influent hexavalent chromium concentration was 59 µg/L.
  
- KX System for the period of August 1, 2009 through August 31, 2009:
  - The facility was in operational test mode and operated at reduced flow rates to support Phase 2 construction activities and repair of PVC piping in the main process building. Transfer Building 1 (extraction wells K-145, K-154, K-162, and K-163) was in outage August 11-24 as a result of a grassfire that damaged system lines. The system also experienced intermittent, short-duration outages during the month to support construction.
  - Extraction well 199-K-144 remained out of service due to elevated tritium; injection well 199-K-171 remained out of service due to elevated hexavalent chromium. Extraction well 199-K-141 remained out of service due to a failed valve. Connection of these wells will be accomplished as a part of Phase 2 realignment.
  - Total average flow through the system was approximately 333 gpm.
  - Average influent hexavalent chromium concentration was 55 µg/L.
  
- KX/KR4 Well Realignment
  - Phase 1: Operational testing equipment checks are complete for Phase 1 modifications.
  
  - Phase 2: Phase 2 is modifying both the KX and KR4 well networks to connect new wells and address the tritium plume at the south end of the mile-long trench in

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accordance with approved TPA Change Notice 273. Construction work continued. The first of five new wells associated with Phase 2 is being built. The cultural review paperwork for the final 2 wells is in process.

- KW System for the period of July 1, 2009 through July 31, 2009:
  - The expanded system was in operational test mode. Hexavalent chromium levels in newly connected extraction well 199-K-166 remained below the cleanup goal. Although this well will remain connected to the system, flows will be reduced to near zero unless the Cr+6 concentrations rise above the cleanup goal. Flow rates from K-140 were also reduced to near zero through the month due to low hexavalent chromium values. The revised RDR/RAWP was in EPA review.
  - Total average flow through the system was approximately 187 gpm.
  - Average influent hexavalent chromium concentration was 195 µg/L.
  
- KW System for the period of August 1, 2009 through August 31, 2009:
  - The expanded system was in operational test mode; operational testing equipment checks are complete. Hexavalent chromium levels in newly connected extraction well 199-K-166 remained at or below 17 ppb. Although this well will remain connected to the system, flows will be reduced to near zero. Flow from extraction well K-140 was kept at zero through the month due to low hexavalent chromium values. K-140 will be disconnected from the system and replaced by K-139 in the near-future. EPA comments on the revised RDR/RAWP were provided informally on August 10. EPA informally approved disconnection of K-140 and reconnection of K-139 as an extraction well to improve system treatment efficiencies. Well K-166 will be kept as an operational well and turned on when concentrations exceed 30 µg/L.
  - On August 20, 2009, the treated effluent discharged to injection wells connected to the KW system exceeded the Cr+6 discharge limit of 50 µg/L identified in both the applicable interim action ROD and the KW RDR/RAWP for an estimated 4-hour window. The Cr+6 level in the effluent began rising during a resin change-out, and the highest transitory level measured was 70 µg/L. The treatment train associated with the issue was valved off-line after confirmation of elevated Cr+6 levels in the KW effluent tank, and levels quickly dropped off again to well below the discharge limit. The system was operated at reduced flow for a number of days until the resin was again changed, and normal flow was restored.
  - Total average flow through the system was approximately 180 gpm.
  - Average influent hexavalent chromium concentration was 167 µg/L.
  
- Monitoring Activities
  - Routine Monitoring: Fifty six samples were collected at 14 100-KR-4 wells in July 2009. Seventy nine samples were collected at 22 100-KR-4 wells in August 2009.
  - Aquifer tube Sampling: None of the aquifer tubes at the 100-KR-4 OU were sampled in July or August, 2009
  - Aquifer Tube Results: Elevated hexavalent chromium results were reported for the following aquifer tubes: AT-25D 30 µg/L on 3/29/09, AT-K-3-D (33 µg/L) on 4/14/09, AT-K-3-S (40.6 µg/L) on 12/3/07.

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- KW extraction wells: All extraction wells are above the aquatic standard. Well 199-K-166, which was below 20 µg/L for most of May through July 2009, has increased in August, up to 37 µg/L. Cr6+ at K-137 has declined from 522 µg/L at the end of June to 466 µg/L on July 27, 2009 and 348 µg/L on Aug 31, 2009. Cr6+ levels at 199-K-165 have stabilized between 175 and 195 µg/L in August 2009. Cr6+ levels at former extraction well 199-K-140 remained well below 20 µg/L.
- KR4 Extraction Wells: Based on July 2009 data, wells 199-K-114A, K-117A, K-119A, K-120A, K-125A, and K-127 remained at or dropped below the aquatic standard. All others are above the standard, with high concentrations of 55 µg/L at K-115A and 35 µg/L at K-129. Overall declines at the wells are attributed to the higher river stage which should be abating shortly.
- KX Extraction Wells: Well 199-K-149 joined K-150 in remaining consistently below the aquatic standard in August with concentrations at 19 and 10 µg/L, respectively. All other extraction wells are above the standard and on declining or stable trends. At 76 µg/L, well 199-K-148 exhibits highest Cr6+ concentration. Extraction well 199-K-141 has declined from 286 µg/L at start-up to 58 µg/L on June 29, 2009 and 66 µg/L on July 6, 2009. Wells K-154 and K-163 were fluctuating just above to just below the 100 µg/L level in July and August 2009.
- Monitoring Wells: Cr6+ at well 199-K-18 continues to increase, remaining above 200 µg/L since July 22, 2009. Cr6+ at K-108A (KW plume) increased over the 10 months through June 2009, to 298 µg/L, but declined rapidly to 20 µg/L in July 2009. The low results were confirmed through reanalysis. August data at this well (10 µg/L) further confirms the decline.
- Elevated tritium concentrations of 63,000 pCi/L and 100,000 pCi/L, respectively, reported at wells 199-K-146 and K-147 were reanalyzed and now are reported at 66 and 700 pCi/L respectively. Tritium concentrations at 199-K-144 were reported at 17,000 pCi/L data is being reanalyzed. Tritium at 199-K-157 has declined from 620,000 pCi/L in Sept 2008 to 260,000 pCi/L in July 2009. Concentrations of tritium at 199-K-162 remain above the DWS (20,000 pCi/L) at 50,000 pCi/L.

**100-BC-5 Operable Units—Nathan Bowles**

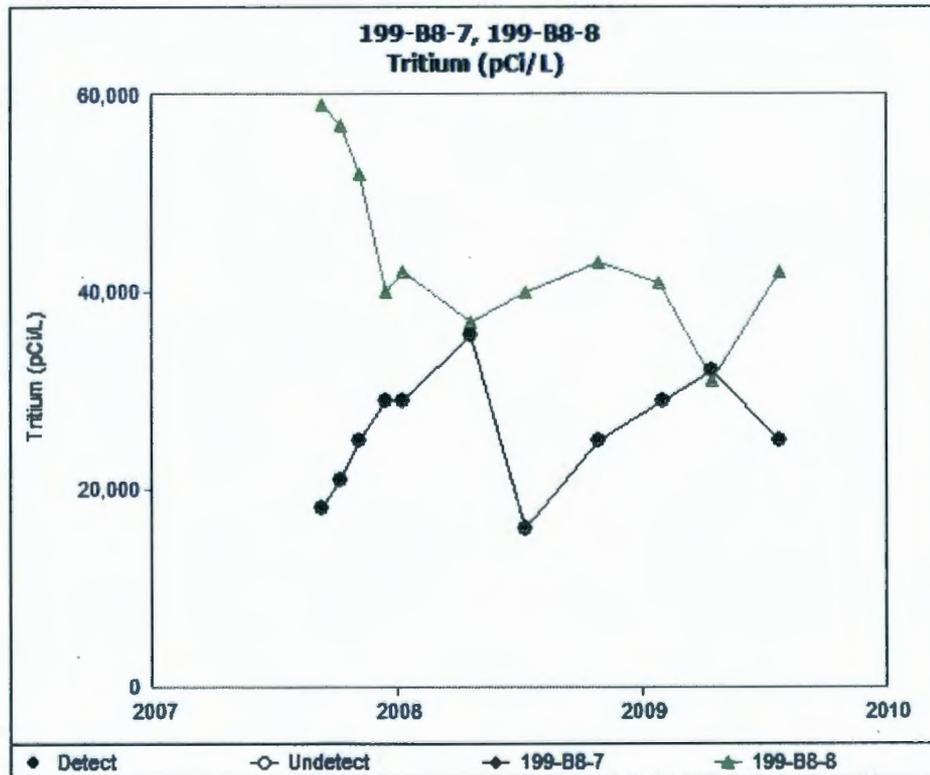
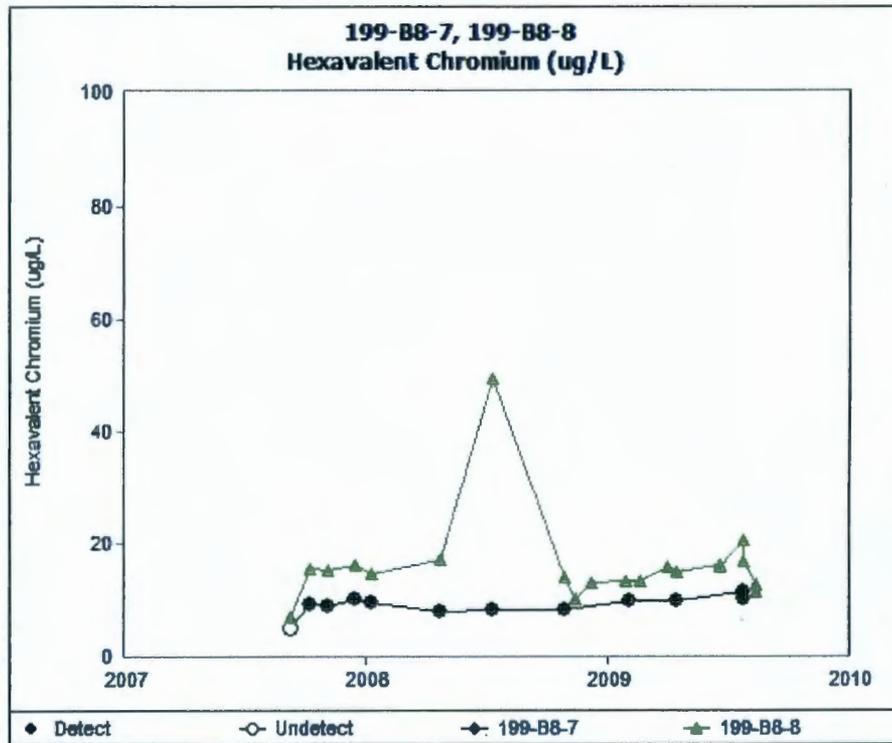
(M-15-67, 9/30/2009, Submit CERCLA RI/FS Work Plans for the 100-BC-1, 100-BC-2, and 100-BC-5 Operable Units.)

*Schedule Status- On schedule to meet TPA milestone*

The SAP, DOW, and SOW for the installation of four new wells have been written, and the related RFP was issued. The contract was awarded in late August, and drilling is scheduled to begin in late September.

The graphs below show chromium and tritium trends in wells 199-B8-7 and 199-B8-8 through July and August 2009. In July, well 199-B8-8 had two hexavalent chromium results: 20.6 µg/L (filtered sample) and 16.7 µg/L (unfiltered sample). The August results were 12.7 and 11.3 µg/L. Because the chromium “spike” of July 2008 was not repeated, a TPA change notice is being prepared to change from monthly sampling back to quarterly sampling at well 199-B8-8. Tritium results in July were in the same range as previous samples (>DWS).

**100/300 Areas Unit Managers Meeting  
September 10, 2009**



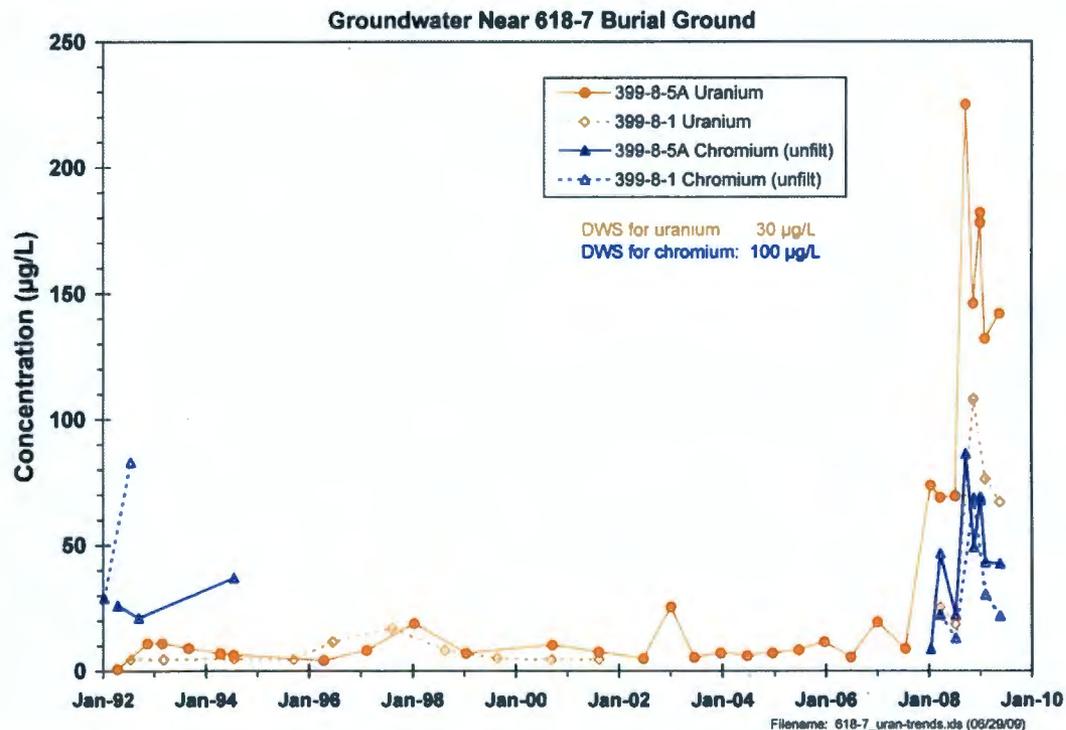
**100/300 Areas Unit Managers Meeting  
September 10, 2009**

**300-FF-5 Operable Unit—Mark Kemner/Jane Borghese/Bob Peterson**

(M-15-71, 10/30/09, Submit CERCLA RI/FS Work Plan for the 300-FF-2 and 300-FF-5 Operable Units for groundwater and soil.)

Schedule Status: On schedule to meet TPA milestone

- Documents
  - The Decisional Draft A work plan for the 300 Area Decision Unit is being revised to incorporate RL comments received on July 27, 2009. It is on schedule for submittal as Draft A on September 31, 2009
  -
- 300-FF-5 Operations and Maintenance Plan Activities
  - *300 Area Subregion:* The most recent results for contamination indicators are for samples collected during late May 2009 (no change since July UMM). The semi-annual sampling event occurred in late June/early July during the period of elevated water table conditions. The annual review of the groundwater monitoring schedule was completed as part of planning for fiscal year 2010.
  - *Special sampling near former 618-7 Burial Ground:* The most recent results are for samples collected in late May 2009 (no change since July UMM; see trend chart below that illustrates uranium and chromium trends). The most recent samples were collected in July 2009 (quarterly frequency).



- *Special sampling near former 618-1 Burial Ground:* The most recent results are for samples collected in late May 2009, with no evidence for impacts to groundwater because

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of activities at 618-1 (no change since July UMM). The most recent sampling occurred in July.

- *618-11 Burial Ground Subregion*: The most recent results for contamination indicators are for samples collected in early April (no change since July UMM).
- *618-10 Burial Ground Subregion*: The most recent results for contamination indicators are for samples collected in early May (no change since July UMM).
- **Other Activities:**
  - *Treatability tests associated with uranium contamination (polyphosphate technology)*: The first groundwater sampling results from several wells at the infiltration test site show that uranium concentrations in groundwater at the water table (2-foot screened intervals) are significantly higher than concentrations in conventional wells (~15-foot screened intervals). This supports the hypothesis that uranium is being resupplied to the plume from the lower vadose zone via water table zone processes, especially during periods of high water table conditions.
  - *Integrated Field-Scale Research Challenge Project, 300 Area*: Information on the activities of this project are available at <http://ifchanford.pnl.gov>. The project is being conducted under the DOE's Office of Biological and Environmental Research, Environmental Remediation Science Division.

**Attachment 2**



# Field Remediation IU-2/6 TPA Milestone M-16-56 (02/28/12)

Milestone Description: Complete Interim Remedial Actions for 100-IU-2 & 100-IU-6 Waste Sites

Activity ID	Activity Description	% Comp	Rem Dur	Early Start	Early Finish	FY09					FY10				
						MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
<b>Archaeological</b>															
1090	600-109 Mechanical Digging	31	10	02SEP09A	28SEP09										
1100	Remobilization	0	8	29SEP09	12OCT09										
1120	600-202 Mechanical Digging	0	12	13OCT09	02NOV09										
1130	De-mobilization	0	4	03NOV09	09NOV09										
<b>Remediation</b>															
100	RFP	94	3	17JUN09A	15SEP09										
80	PSR	42	30	03AUG09A	02NOV09										
40	Issue Award	0	0		15SEP09										
50	Pre-Construction Meeting	0	0		22SEP09										
60	Mobilize	0	10	15OCT09	02NOV09										
70	Start Remediation	0	0	02NOV09											

**Activity /Actions Supporting Schedule**

- None

**ISSUE / CONCERNS**

- Other IU-2/6 sites have the potential to require archeological support due to the cultural/historical concerns.
- Environmental Services are preparing a detailed schedule for inclusion into the POW to show a resolution to the cultural/historical concerns.



**Attachment 3**

**Faulk, Darrin E**

---

**From:** Zeisloft, Jamie [Jamie\_Zeisloft@RL.gov]  
**Sent:** Monday, July 13, 2009 8:51 AM  
**To:** Faulk, Darrin E; Cameron.Craig@epamail.epa.gov  
**Subject:** RE: Decontamination of potential museum pieces at 600-202 and 600-109

Looks good to me, thanks Darrin.

Craig – I asked Darrin to put something together for the UMM minutes. As Darrin states below, this project is rather unique and I wanted to make sure everyone was aware of and in agreement with our approach to collecting, deconning and preserving artifacts of interest.

---

**From:** Faulk, Darrin E [mailto:default@wch-rcc.com]  
**Sent:** Monday, July 13, 2009 6:30 AM  
**To:** Zeisloft, Jamie; Cameron.Craig@epamail.epa.gov  
**Subject:** Decontamination of potential museum pieces at 600-202 and 600-109

Jamie/Craig

I would like to document an agreement regarding the decontamination of potential museum pieces during the archaeological work at 600-202 and 600-109. If you agree, I would like to enter this into the minutes at the next Unit Manager Meeting.

Items from the 600-202 and 600-109 landfills will be mechanically excavated and sorted in their respective Areas of Contamination. Within the AOC, archaeologists will be removing potentially culturally significant items and washing them off to further evaluate as potential museum pieces. Items will be washed with raw or potable water by gently spraying or pouring the water on them and wiping or scrubbing. It is also possible that items will be immersed and scrubbed to remove dirt.

The project would like to have concurrence from you that section 3.1.5 of the RDR/RAWP (DOE/RL-96-17) applies when washing the items by spraying or pouring water is employed. This section of the RDR/RAWP discusses equipment decontamination. The section is written to apply mainly to heavy equipment and vehicles. The archaeological work in 600-202 and 600-109 is a somewhat unique operation that was not envisioned in the RDR/RAWP. Generally, when items are removed from a landfill they are considered waste and decontamination is not needed. In the case of 600-202 and 600-109, potential museum pieces are not waste and the decontamination section is appropriate to be used for washing contaminants off of the pieces.

For items that are decontaminated by immersing in water, the project would also like concurrence that the spent containerized washwater can be used within the area of contamination as a dust suppression agent. Any contaminants that are in the washwater will be removed during subsequent remediation of the site.

Decontaminated potential museum pieces will be placed into a staging area where they will be further evaluated. Some will be deemed worthy to be placed into a museum. Items that are not chosen to be placed into a museum will be considered waste and will be dipositioned as appropriate based on the waste designation.

**Darrin Faulk**  
Washington Closure Hanford  
Environmental Project Lead  
Field Remediation Project  
509-392-2932

**Faulk, Darrin E**

---

**From:** Cameron.Craig@epamail.epa.gov  
**Sent:** Monday, July 13, 2009 11:46 AM  
**To:** Faulk, Darrin E  
**Cc:** Zeisloft, Jamie  
**Subject:** Re: Decontamination of potential museum pieces at 600-202 and 600-109

All,

I think the proposal in your message is fine. However, I was wondering how you know that the items (especially softer, non-metal ones) are properly deconned?

Craig Cameron  
U.S. Environmental Protection Agency  
Hanford Project Office  
309 Bradley Blvd, Suite 115  
Richland, WA 99352  
Phone: 509 376-8665  
Fax: 509 376-2396  
E-mail: cameron.craig@epa.gov

"Faulk, Darrin  
E"  
<default@wch-rcc  
.com>

07/13/2009 06:29  
AM

To  
"Zeisloft, Jamie"  
<Jamie\_Zeisloft@rl.gov>, Craig  
Cameron/R10/USEPA/US@EPA

cc

Subject  
Decontamination of potential  
museum pieces at 600-202 and  
600-109

Jamie/Craig

I would like to document an agreement regarding the decontamination of potential museum pieces during the archaeological work at 600-202 and 600-109. If you agree, I would like to enter this into the minutes at the next Unit Manager Meeting.

Items from the 600-202 and 600-109 landfills will be mechanically excavated and sorted in their respective Areas of Contamination. Within the AOC, archaeologists will be removing potentially culturally significant items and washing them off to further evaluate as potential museum pieces. Items will be washed with raw or potable water by gently spraying or pouring the water on them and wiping or scrubbing. It is also possible that items will be immersed and scrubbed to remove dirt.

The project would like to have concurrence from you that section 3.1.5 of the RDR/RAWP (DOE/RL-96-17) applies when washing the items by spraying or pouring water is employed.

This section of the RDR/RAWP discusses equipment decontamination. The section is written to apply mainly to heavy equipment and vehicles. The archaeological work in 600-202 and 600-109 is a somewhat unique operation that was not envisioned in the RDR/RAWP. Generally, when items are removed from a landfill they are considered waste and decontamination is not needed.

In the case of 600-202 and 600-109, potential museum pieces are not waste and the decontamination section is appropriate to be used for washing contaminants off of the pieces.

For items that are decontaminated by immersing in water, the project would also like concurrence that the spent containerized washwater can be used within the area of contamination as a dust suppression agent.

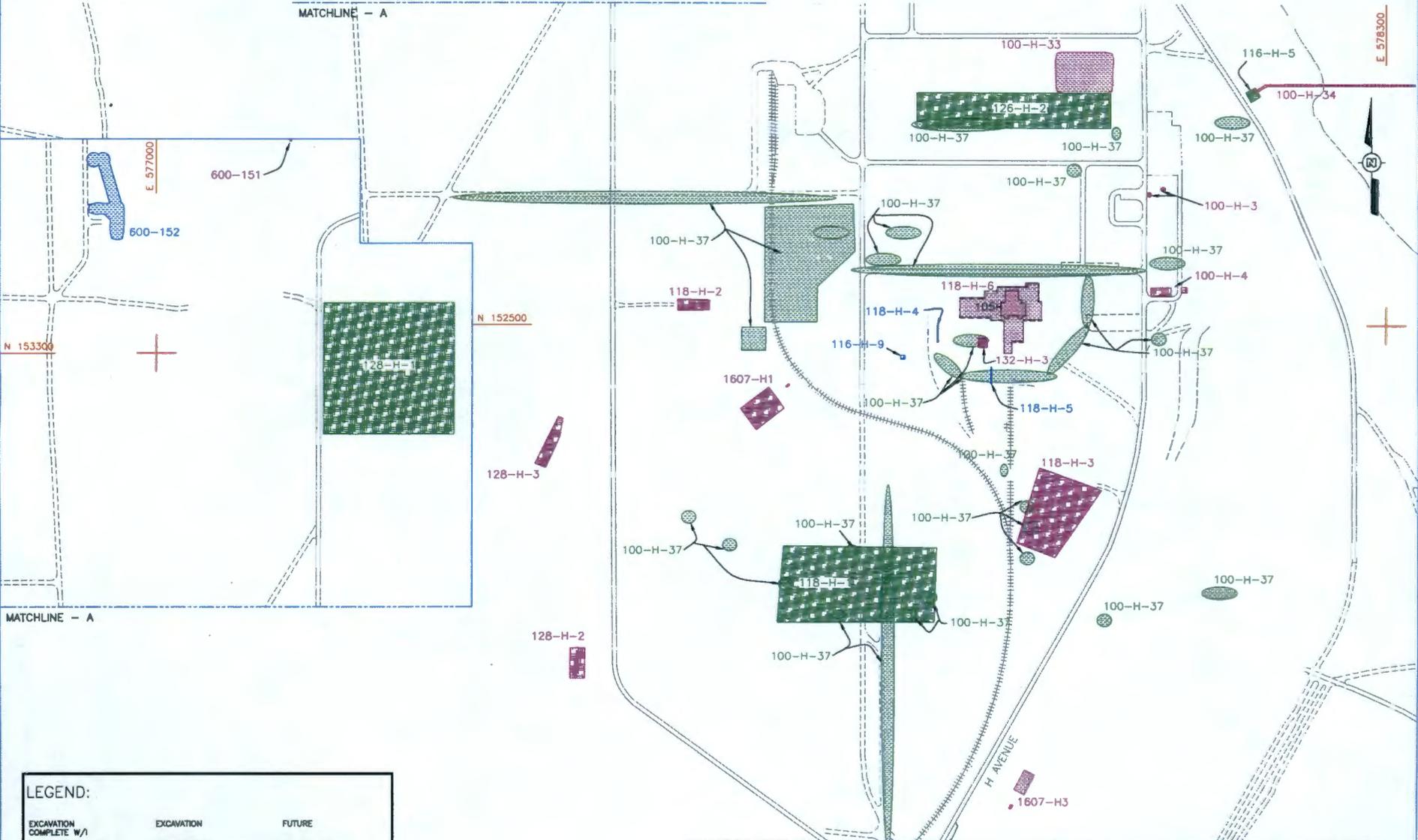
Any contaminants that are in the washwater will be removed during subsequent remediation of the site.

Decontaminated potential museum pieces will be placed into a staging area where they will be further evaluated. Some will be deemed worthy to be placed into a museum. Items that are not chosen to be placed into a museum will be considered waste and will be dispositioned as appropriate based on the waste designation.

Darrin Faulk  
Washington Closure Hanford  
Environmental Project Lead  
Field Remediation Project  
509-392-2932

**Attachment 4**

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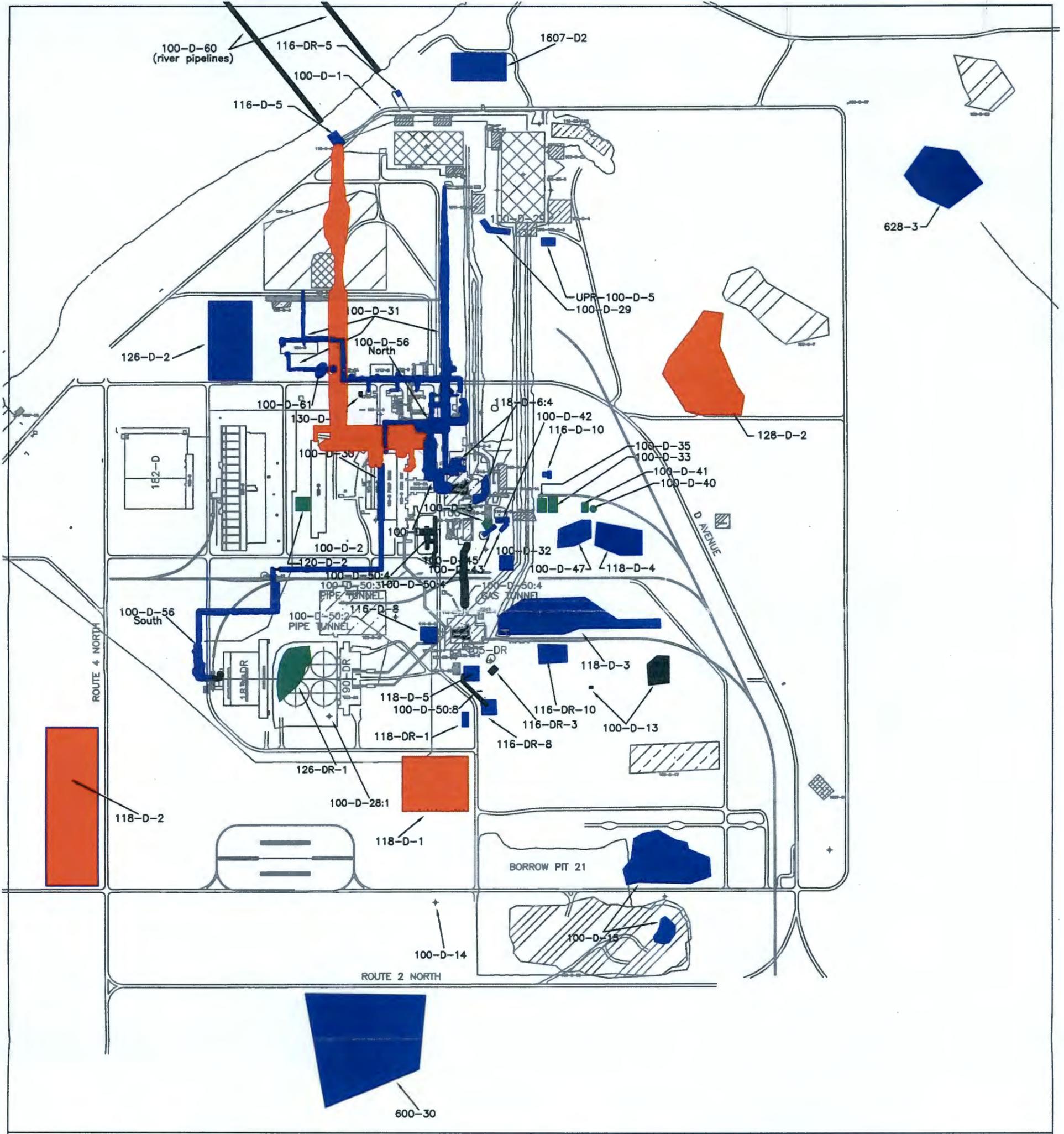
**LEGEND:**

EXCAVATION COMPLETE W/1		EXCAVATION		FUTURE	
	TPA		TPA		TPA
	NON-TPA		NON-TPA		NON-TPA

U.S DEPARTMENT OF ENERGY  
DOE RICHLAND OPERATIONS OFFICE  
RIVER CORRIDOR CLOSURE CONTRACT

100-H AREA  
OVERALL REMEDIATION SITE PLAN

**Attachment 5**



- future scope
- Active remediation
- Excavation complete/close-out in progress
- Close-out complete

WCH 100D Field Remediation  
For Information Only  
(August '09)

**Attachment 6**

6

146445

**^WCH Document Control**

---

**From:** Saueressig, Daniel G  
**Sent:** Wednesday, September 09, 2009 12:40 PM  
**To:** ^WCH Document Control  
**Subject:** FW: 128-D-2 Staging Stockpile Area

Please provide a chron number. This email documents a regulatory agreement.

Thanks,

Dan Saueressig  
FR Environmental Project Lead  
**NOTE NEW CELL PHONE NUMBER 521-5326**

---

**From:** Vanni, Jean (ECY) [mailto:jeva461@ECY.WA.GOV]  
**Sent:** Monday, August 17, 2009 9:57 AM  
**To:** Buckmaster, Mark A; Jones, Mandy; Shea, Jacqueline; Vanni, Jean  
**Cc:** Saueressig, Daniel G; Laurenz, Julian E  
**Subject:** RE: 128-D-2 Staging Stockpile Area

Mark,

Ecology has reviewed your 128-D-2 burn Site waste staging area proposal and approves with the following caveat. Once remediation activities are completed, you'll survey the area along with the clean overburden site, include it in final verification sampling design, and perform verification sampling of the overburden piles as usual, which will include all the COPCs for the site.

Let me know if you have any questions. Please capture this agreement in the 100/300 Area UMM minutes.

Jean

Thanks!

Jean Vanni-Environmental Specialist  
Washington State Department of Ecology  
Nuclear Waste Program-Clean Up Section  
3100 Port of Benton Blvd, Richland

9/9/2009

Phone 509-372-7930, Fax 372-7971

146445

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**From:** Buckmaster, Mark A [<mailto:MABUCKMA@wch-rcc.com>]  
**Sent:** Wednesday, August 12, 2009 3:02 PM  
**To:** Vanni, Jean (ECY)  
**Cc:** Saueressig, Daniel G; Laurenz, Julian E  
**Subject:** 128-D-2 Staging Stockpile Area

Jean

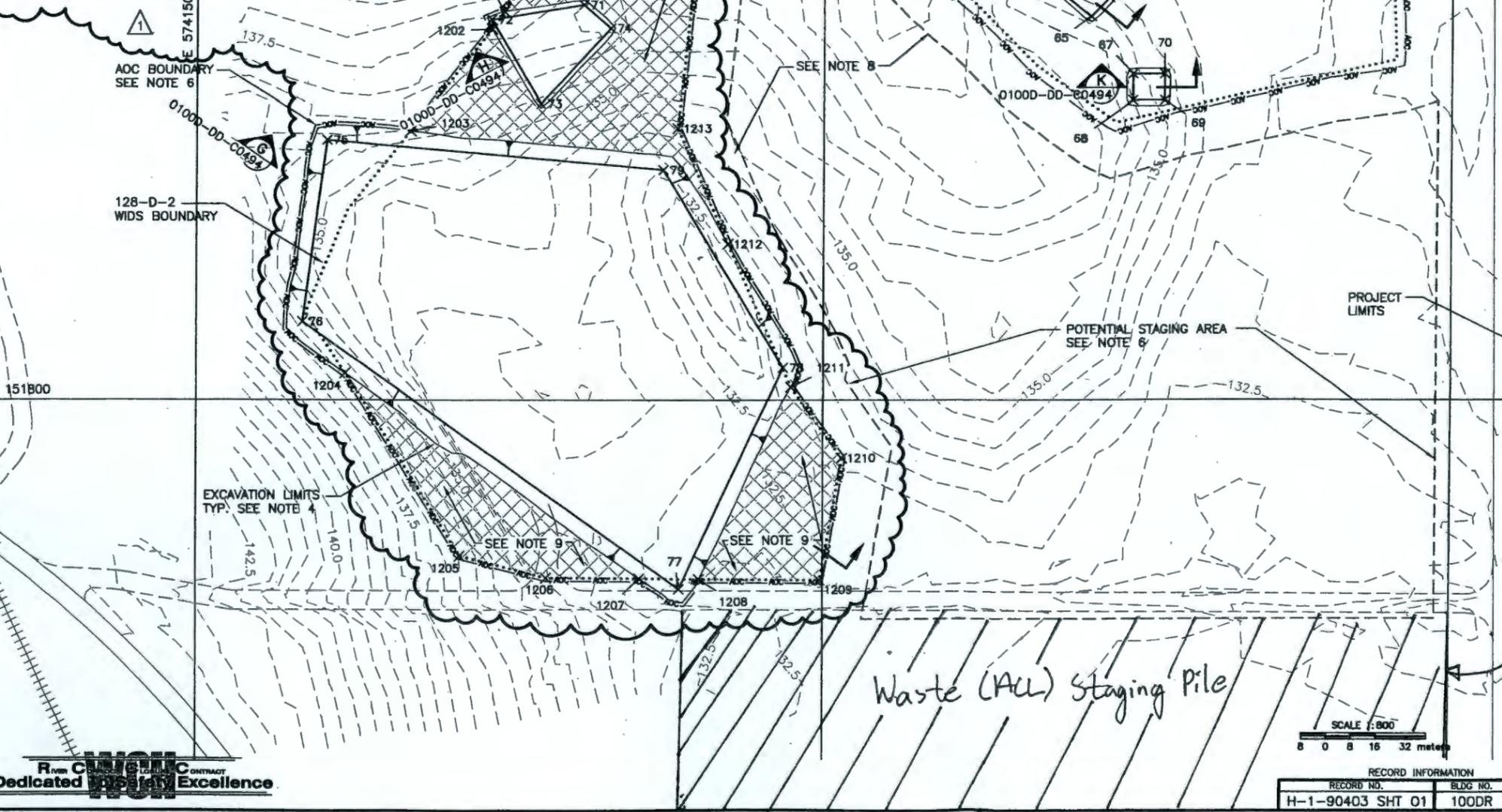
WCH requests approval to expand the staging/stockpile area for the 128-D-2 Burn Site as indicated on the drawing provided to you this morning. No waste sites have been identified in this area. If you have any additional questions or comments, please let me know.

mark



**128-D-2 WIDS BOUNDARY**

POINT NO.	EASTING	NORTHING	DESCRIPTION
1200	574271.00	151960.20	128-D-2
1201	574248.05	151924.79	128-D-2
1202	574244.20	151919.18	128-D-2
1203	574218.28	151886.34	128-D-2
1204	574197.57	151808.53	128-D-2
1205	574234.44	151750.23	128-D-2
1206	574262.13	151743.30	128-D-2
1207	574291.82	151743.02	128-D-2
1208	574310.82	151742.84	128-D-2
1209	574349.06	151742.48	128-D-2
1210	574356.00	151781.41	128-D-2
1211	574339.85	151804.11	128-D-2
1212	574319.85	151850.09	128-D-2
1213	574303.69	151887.25	128-D-2
1214	574310.88	151954.78	128-D-2



**NOTES**

- SEE DRAWING 0100D-DD-C0352 FOR GENERAL ABBREVIATIONS AND SYMBOLS LIST.
- BENCHMARKS HAVE BEEN ESTABLISHED. SUBCONTRACTOR SHALL VERIFY CONTROL POINTS PRIOR TO COMMENCING WORK.
- CONTOUR INTERVAL IS 0.5 METERS.
- LIMITS OF EXCAVATION ARE BASED ON A 1.5 HORIZONTAL TO 1.0 VERTICAL CUT SLOPE. THE ACTUAL EXCAVATION LIMITS SHALL BE ESTABLISHED IN ACCORDANCE WITH CIVIL SPECIFICATION 0100D-SP-C0005.
- SEE DRAWING NO. 0100D-DD-C0490 FOR REMAINING SITES SURVEY CONTROL POINT COORDINATE DESIGN TABLES.
- STAGING OF WASTE SHALL OCCUR WITHIN THE AOC/WASTE SITE BOUNDARY UNLESS DIRECTED BY CONTRACTOR. ANY STAGING OUTSIDE THE AOC/WASTE SITE BOUNDARY, SHALL HAVE PRIOR APPROVAL BY THE CONTRACTOR BEFORE PROCEEDING.
- SUBCONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND PROTECTION OF ALL ABOVE AND BELOW GRADE INTERFERENCES INCLUDING WELLS, BENCHMARKS, AND EXISTING UTILITIES.
- RUNON/RUNOFF CONTROL BERM, CONSTRUCT AS REQUIRED. SEE DETAIL ON DRAWING NO. 0100D-DD-C0385.
- WIDS BOUNDARY FOR SITE 128-D-2 WILL BE SCRAPPED TO ONE FOOT IN DEPTH TO ENSURE THAT ALL DISTRESSED VEGETATION AREAS AND SHALLOW GEOPHYSICAL ANOMALIES ARE INVESTIGATED, AND IF NECESSARY REMOVED FROM THE SITE.

Request expansion of stockpile area for 128-D-2/100-D-7. Expansion would be approximately 200 ft south of existing area. Area in red represents approximate length of stockpile.



DOCUMENT CONTROL 04/13/09

MY STAMP AND SEAL APPLY TO THOSE CHANGES MADE IN REVISION(S) THE ORIGINAL DESIGN WAS NOT PREPARED UNDER MY DIRECTION.

NO.	DATE	DESCRIPTION	ISSUED BY	CHECKED BY	DATE
4/1/09		ISSUED FOR CHANGE ORDER	CC	CCB	DAG
8/24/08		ISSUED FOR CHANGE ORDER	CC	CAB	DAG

**U.S. DEPARTMENT OF ENERGY**  
DOE RICHLAND OPERATIONS OFFICE  
RIVER CORRIDOR CLOSURE CONTRACT

**WASHINGTON CLOSURE HANFORD LLC.**  
RICHLAND, WASHINGTON

100 D/DR AREA  
FY08 REMAINING SITES REMEDIAL ACTION  
CIVIL PLOT PLAN - 6: 128-D-2 & 100-D-7

WCH JOB NO.	DOE CONTRACT NO.	CADD FILENAME
14655	DE-AC06-05RL-14655	1DDC0477.DWG
TASK	DRAWING NO.	REV. NO.
100D	0100D-DD-C0477	1



SCALE 1:800  
0 8 16 32 meters

RECORD NO.	BLDG NO.	INDEX NO.
H-1-90403 SHT 01	100DR	0111

**Attachment 7**

**^WCH Document Control**

146000

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**From:** Proctor, Megan L  
**Sent:** Wednesday, August 26, 2009 8:30 AM  
**To:** ^WCH Document Control  
**Subject:** FW: 118-D-3:1

Hi. Please chron this email as a regulatory agreement. Please let me know the CCN.

Thanks.  
Megan

---

**From:** Jones, Mandy (ECY) [mailto:mjon461@ECY.WA.GOV]  
**Sent:** Wednesday, August 26, 2009 7:03 AM  
**To:** Proctor, Megan L  
**Cc:** Vanni, Jean; Faust, Toni L; Laurenz, Julian E; Saueressig, Daniel G; Buckmaster, Mark A; Post, Thomas C; Thompson, Wendy S  
**Subject:** RE: 118-D-3:1

Megan, thank you for the detailed e-mail. I appreciate the information.

Ecology concurs with the process described below. We agree that WCH has met the intent of the regulatory closure requirements for the storage cells. We also agree that it is appropriate to document the verification sampling and results in the Remaining Sites Verification Package for 118-D-3:1.

Do you have an anticipated date when we will see the verification work instruction for 118-D-3:1?

Thank you,  
Mandy

---

**From:** Proctor, Megan L [mailto:mlprocto@wch-rcc.com]  
**Sent:** Tue 8/25/2009 2:56 PM  
**To:** Jones, Mandy (ECY)  
**Cc:** Vanni, Jean (ECY); Faust, Toni L; Laurenz, Julian E; Saueressig, Daniel G; Buckmaster, Mark A; Post, Thomas C; Thompson, Wendy S  
**Subject:** 118-D-3:1

Hi Mandy. We are currently in the process of preparing a verification work instruction for 118-D-3:1, which includes associated sorting cells. Due to the timing of work instruction preparation, review and approval, the purpose of this email is to gain Ecology concurrence that the current condition of the 118-D-3:1 Burial Ground Sorting Cells (SCs) meet staging piles closure requirements specified in the *Remedial Design Report/Remedial Action Work Plan for the 100 Area (DOE-RL 2005)*.

The *Remedial Design Report/Remedial Action Work Plan for the 100 Area (DOE-RL 2005)* (RDR) requires that staging piles must be closed by removing or decontaminating all remediation waste; contaminated containment system components, structures, and equipment contaminated with waste; and leachate. The work plan further requires this to be accomplished within 180 Days after the operating term of the staging pile located in a

8/26/2009

146000

previously uncontaminated area. The staging pile must be closed in accordance with provisions of 40 CFR 264.258(a) and 40 CFR 264.111, or 40 CFR 265.258(a) and 40 CFR 265.111. 40 CFR 264.258(a) and 40 CFR 265.258 (a) require, "At closure, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate and manage them as hazardous waste unless § 261.3(d) of this chapter applies."

The SCs began operation on August 2, 2007, with the delivery of the first excavated soil from the 118-D-3 burial grounds for sorting, sampling and storage pending shipment to the Environmental Restoration Disposal Facility (ERDF). The last delivery of excavation material to the SCs occurred on January 20, 2009. The SCs continued to operate in this capacity until March 3, 2009, when the last of the excavated material from the 118-D-3 Burial Ground was removed. Between March 3, 2009, and August 2, 2009, the SCs were managed in a readiness condition that meet the intent of closure but also allowed for additional use should the need arise during continued remediation of the 118-D-3 Burial ground.

The 118-D-3 Burial Ground SCs were constructed and managed in accordance with the RDR (DOE-RL 2005) for the allowed operational 2 years. As required for closure of the SCs within 180 days of the operating term all hazardous and radioactive material were removed in accordance with provisions of 40 CFR 264.258(a) and 40 CFR 264.111, or 40 CFR 265.258(a) and 40 CFR 265.111. The SCs were further excavated to remove the exposed soil below the SCs. Final GPERs indicated no gamma contamination above background. The SCs final configuration is protective of human health and the environment and meets the closure requirements specified in the RDR.

In conclusion, we are proposing for your concurrence that we have met the intent of the regulatory closure requirements for the SC's and that verification sampling and analysis requirements as specified in the 100 Area Burial Grounds SAP (DOE-RL 2001) will be completed as part of the verification sampling for interim closure of 118 -D-3:1, 100-D Burial Ground #3. The results of the verification sampling for the SCs will be incorporated into the Remaining Sites Verification Package for the 118-D-3:1 Burial Ground.

If you have any questions or would like a more detailed write-up please let me know. Your prompt response would be greatly appreciated.

Thanks for your help.  
Megan

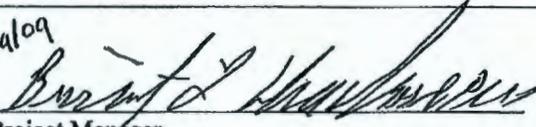
Megan Proctor  
Washington Closure Hanford  
Sample Design & Cleanup Verification  
Office: 372-9227 Cell: 521-9622

8/26/2009

**Attachment 8**



Change Notice for Modifying Approved Documents/ Workplans  
In Accordance with the Tri-Party Agreement Action Plan,  
Section 9.0, Documentation and Records

<b>Change Number</b> TPA-CN-291	<b>Document Submitted Under Tri-Party Agreement Milestone</b> N/A	<b>Date:</b> 8/19/09		
<b>Document Number and Title:</b> Interim Action Waste Management Plan for the 100-HR-3 and 100-KR-4 Operable Unit, DOE/RL-97-01, Rev. 6		<b>Date Document Last Issued:</b> August 2005		
<b>Originator:</b> John Winterhalder/John Smoot		<b>Phone:</b> 373-2522/373-5884		
<b>Description of Change:</b> Update Appendix A, Table A-1 and A-3 of the HR-3/KR-4 Operable Units Waste Management Plan.				
<p><u>B. Charboneau</u> and <u>M. Jones</u> agree that the proposed change modifies an <u>RL</u> <u>Lead Regulatory Agency</u></p> <p>approved work plan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, <i>Documentation and Records</i>, and not Chapter 12.0, <i>Changes to the Agreement</i>.</p> <p>Appendix A, Table A-1 of the above referenced plan has been modified as follows:</p> <ul style="list-style-type: none"> <li>Added 15 Remedial Process Optimization (RPO) wells (199-H1-20, 199-H1-21, 199-H1-25, 199-H1-27, 199-H1-43, 199-H1-45, 199-H3-25, 199-H3-26, 199-H3-27, 199-H4-69, 199-H4-70, 199-H4-71, 199-H4-72, 199-H4-73, 199-H6-2) in the 100-H plume.</li> </ul>				
<b>Justification and Impacts of Change:</b>				
Wells need to be added to the 100-HR-3 Operable Unit Well List so waste can be properly managed in accordance with the <i>Interim Action Waste Management Plan for the 100-HR-3 and 100-KR-4 Operable Unit</i> .				
<b>Approvals:</b>				
 <u>Brent J. Winterhalder</u> RL Project Manager		<u>8-19-09</u> Date	<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Disapproved
 <u>Mandy Jones</u> Ecology Project Manager		<u>8-20-09</u> Date	<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Disapproved

**APPENDIX A**  
**100-HR-3 AND 100-KR-4 WELL, AQUIFER SAMPLING TUBE**  
**AND SEEP LIST**

SHADING INDICATES CURRENT CHANGES

**Table A-1. 100-HR-3 Operable Unit Well List**

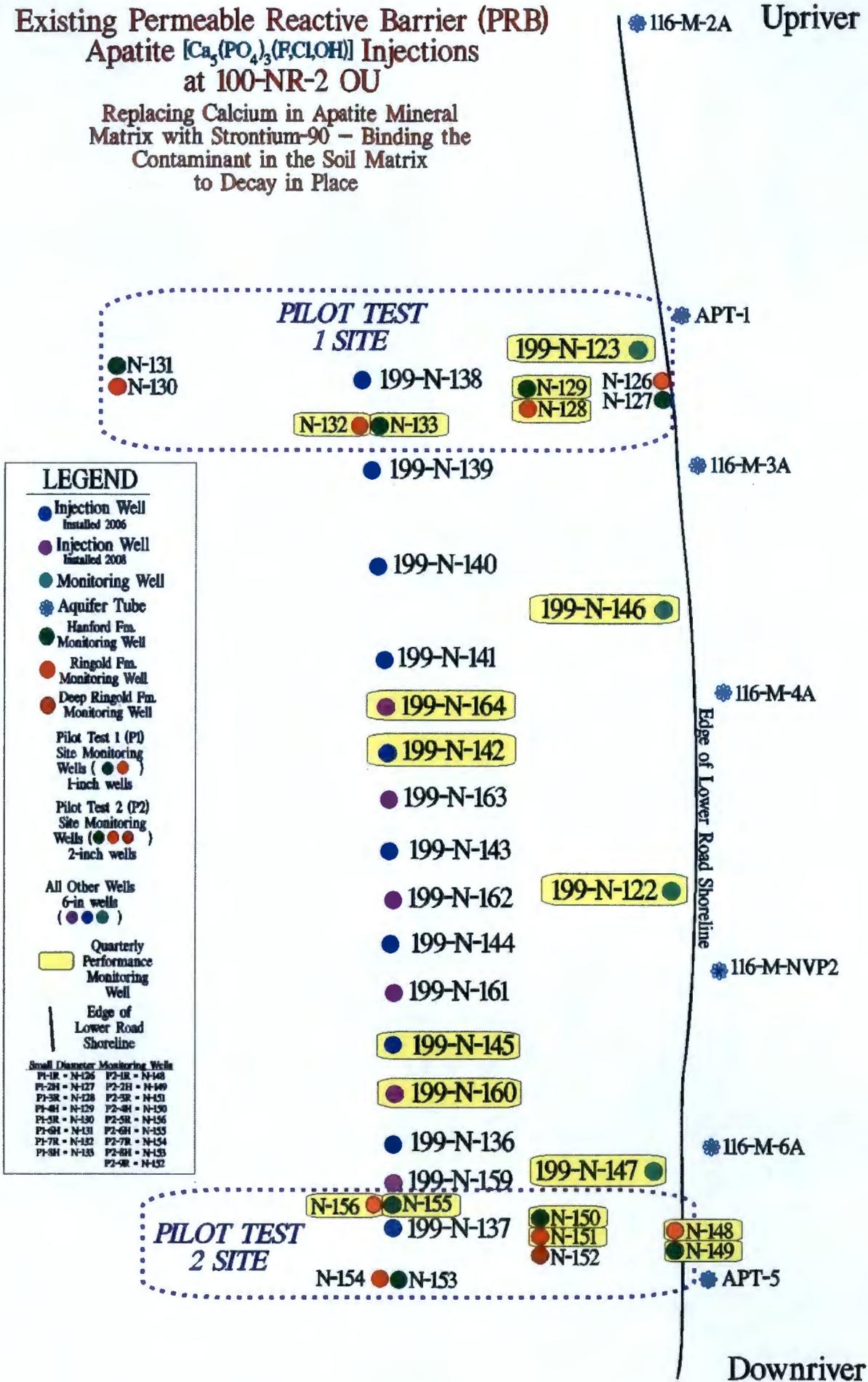
Well Name/ID				
199-D2-06	199-D4-29	199-D4-66	199-D5-16	199-D8-04
199-D2-08	199-D4-30	199-D4-67	199-D5-17	199-D8-05
199-D2-09	199-D4-31	199-D4-68	199-D5-18	199-D8-06
199-D2-10	199-D4-32	199-D4-69	199-D5-19	199-D8-53
199-D2-11	199-D4-33	199-D4-70	199-D5-20	199-D8-54A
199-D2-12	199-D4-34	199-D4-71	199-D5-32	199-D8-54B
199-D3-02	199-D4-35	199-D4-72	199-D5-33	199-D8-55
199-D3-03	199-D4-36	199-D4-73	199-D5-34	199-D8-68
199-D3-04	199-D4-37	199-D4-74	199-D5-36	199-D8-69
199-D4-01	199-D4-38	199-D4-75	199-D5-38	199-D8-70
199-D4-02	199-D4-39	199-D4-76	199-D5-39	199-D8-71
199-D4-03	199-D4-40	199-D4-77	199-D5-40	199-D8-72
199-D4-04	199-D4-41	199-D4-78	199-D5-41	199-D8-73
199-D4-05	199-D4-42	199-D4-79	199-D5-42	199-D8-88
199-D4-06	199-D4-43	199-D4-80	199-D5-43	199-D8-89
199-D4-07	199-D4-44	199-D4-81	199-D5-44	199-D8-90
199-D4-08	199-D4-45	199-D4-82	199-D5-86	199-D8-91
199-D4-09	199-D4-46	199-D4-83	199-D5-92	199-H1-20
199-D4-10	199-D4-47	199-D4-84	199-D5-93	199-H1-21
199-D4-11	199-D4-48	199-D4-85	199-D5-95	199-H1-25
199-D4-12	199-D4-49	199-D4-86	199-D5-97	199-H1-27
199-D4-13	199-D4-50	199-D4-87	199-D5-98	199-H1-32
199-D4-14	199-D4-51	199-D4-88	199-D5-99	199-H1-33
199-D4-15	199-D4-52	199-D4-89	199-D5-100	199-H1-34
199-D4-16	199-D4-53	199-D4-90	199-D5-101	199-H1-35
199-D4-17	199-D4-54	199-D4-91	199-D5-102	199-H1-36
199-D4-18	199-D4-55	199-D4-92	199-D5-103	199-H1-37
199-D4-19	199-D4-56	199-D4-93	199-D5-104	199-H1-38
199-D4-20	199-D4-57	199-D4-95	199-D5-106	199-H1-39
199-D4-21	199-D4-58	199-D4-96	199-D5-119	199-H1-40
199-D4-22	199-D4-59	199-D4-97	199-D5-120	199-H1-42
199-D4-23	199-D4-60	199-D4-98	199-D5-121	199-H1-43
199-D4-24	199-D4-61	199-D4-99	199-D5-122	199-H1-45
199-D4-25	199-D4-62	199-D4-100	199-D5-123	199-H3-2A
199-D4-26	199-D4-63	199-D5-13	199-D5-124	199-H3-2B
199-D4-27	199-D4-64	199-D5-14	199-D5-125	199-H3-2C
199-D4-28	199-D4-65	199-D5-15	199-D5-126	199-H3-03



**Attachment 9**

# Existing Permeable Reactive Barrier (PRB) Apatite $[Ca_5(PO_4)_3(F,Cl,OH)]$ Injections at 100-NR-2 OU

Replacing Calcium in Apatite Mineral  
Matrix with Strontium-90 – Binding the  
Contaminant in the Soil Matrix  
to Decay in Place



**Attachment 10**

**UPR-100-N-17 BIOVENTING UPDATE**  
9-10-09

The subcontract was awarded to RC Construction Services, Inc., to construct, install and operated the 100-N bioventing system for waste site UPR-100-N-17. Power pole and power installation being performed by Fowler Construction is scheduled to be complete by the end of September 2009. The bioventing system is scheduled to be installed in October or November 2009, depending on material availability.

**Attachment 11**

(10)

**100 Area D4/ISS Status  
September 10, 2009**

**100/300 Area Combined Unit Manager Meeting**

**Completed / On-going Activities**

- 107N above-grade demolition complete; Phase I below-grade demolition 25% complete
- The south portion of the 1310-N Golf Ball Facility soil berm has been removed and disposed at the ERDF
- Preparatory activities continue at the 105NE Fission Product Trap
- Preparatory activities continue at 181N (River Pumphouse) to remove large equipment

**WM Dickson Subcontractor Activities**

- Size reduction and waste load out of debris and material from the below-grade demolition of 109N continues
- Below-grade excavation and demolition of equipment and piping located at and below the minus 16-foot level on the south and east sides of 109N is complete
- Penetrations (doors, pipes, etc) at the 109N Safe Secure Enclosure (SSE) boundary are being sealed

**Proposed work through 10/31/09**

- Continue sealing of SSE penetrations at the 109N SSE boundary
- Re-start asbestos abatement in 182N
- Continue demolition of 107N; Phase I to be complete no-later-than September 30, 2009
- Continue preparatory activities at the 105NE Fission Product Trap
- Removal of large equipment (e.g., pumps, motors, etc.) from 181N
- Demolition of the 1112NA Microwave Tower
- Demolition of the 1706NA Lift Station
- Demolition of the 1902D Water Tower (at 100D)

**Agreements**

An agreement between DOE and Ecology regarding the demolition of the 1706-NA Lift Station will be submitted for inclusion in the meeting minutes.

**Attachment 12**

## **AGREEMENT BETWEEN DOE-RL AND ECOLOGY**

### **Demolition of 1706-NA Lift Station at 100-N Area**

The 1706-NA Lift Station is a concrete structure nominally 6-feet in diameter and 13-feet deep. There exists approximately 200 – 300 gallons of water within the 1706-NA lift station. This water was sampled and analyzed however the results were not supportive for use as dust suppression. DOE's contractor (WCH) proposed to collapse the top of the lift station into itself and place soil from around the lift station into the void. This would absorb any liquid as well as address the identified fall hazard by filling in the void prior to removal of the lift station by heavy equipment. The facility would then be demolished and disposed of at the ERDF.

Ecology has discussed this proposal and DOE and Ecology support this approach acknowledging the following conditions:

- None of the liquids (including any added dust suppressant waters) are to be used or re-used for dust suppression
- All material (facility) and soils (those used to absorb the liquids in the 1706-NA) will be disposed of at the ERDF; other soils from the overburden, if used for back fill of the excavated site, will be surveyed and sampled; and, if determined as clean can be used for back fill of the excavated site.
- The ERDF waste profile will include the Contaminants of Concern (COCs) previously identified (Gross Alpha, Gross Beta, Gamma Emitters, ICP Metals, IC Anions, pH)
- WCH will perform site beta and gamma surveys after removal actions
- If any staining is observed, WCH will continue excavation to a depth of approximately 15 feet and sample for the COCs, in consult with Ecology
- All observations, etc., will be documented in a Facility Status Change Form for future Field Remediation work.

**Attachment 13**

<b>Waste Site:</b> 118-K-1 Burial Ground (Areas shown in Attachment E)	<b>BACKFILL CONCURRENCE CHECKLIST</b> (Concurrence to Proceed with Waste Site Backfill Operations)	<b>WIDS No:</b> 118-K-1
--	---	----------------------------

This checklist is a summary of cleanup verification results for remediated portions of the 118-K-1 Burial Ground. The checklist is intended as an agreement allowing the RCCC subcontractor to backfill the excavation prior to the issuance of the final cleanup verification package. This backfill concurrence authorizes backfill only in portions of remediated areas, as shown and described in Attachment E. This backfill concurrence also documents fulfillment of the requirements of 40 CFR 264.554 for the previously used staging pile area (including sorting cells). Copies of calculations are included with this checklist with results summarized below.

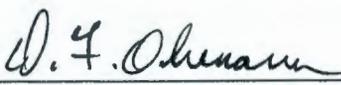
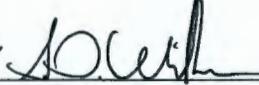
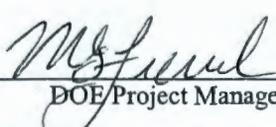
Regulatory Requirement	Remedial Action Goals (RAG)	Results	RAG Attained	Ref.
Direct Exposure – Radionuclides	1. Attain 15 mrem/yr dose rate above background over 1,000 years.	1. The maximum predicted dose rates for remediated areas of the 118-K-1 Burial Ground are less than 15 mrem/yr.	Yes	D
Direct Exposure – Nonradionuclides	1. Attain individual RAGs.	1. All individual contaminant of concern (COC) and contaminant of potential concern (COPC) concentrations are below the direct exposure RAGs.	Yes	A, B
Nonradionuclide Risk Requirements	1. Attain hazard quotient of less than 1 for noncarcinogens.	1. The hazard quotients for individual nonradionuclide COCs/COPCs are less than 1.	Yes	C
	2. Attain cumulative hazard quotient of less than 1 for noncarcinogens.	2. The cumulative hazard quotient for all sampling areas ( $1.7 \times 10^{-1}$ ) is less than 1.		C
	3. Attain excess cancer risk of $<1 \times 10^{-6}$ for individual carcinogens.	3. Excess cancer risk values for individual nonradionuclide COCs/COPCs are less than $1 \times 10^{-6}$ .		C
	4. Attain a total excess cancer risk of $<1 \times 10^{-5}$ for carcinogens.	4. The total excess carcinogenic risk for all sampling areas ( $6.8 \times 10^{-11}$ ) is less than $1 \times 10^{-5}$ .		C
Groundwater/River Protection – Radionuclides	1. Attain single COC groundwater & river RAGs.	1. No radionuclides are predicted to impact groundwater within 1,000 years.	Yes	D
	2. Attain National Primary Drinking Water Regulations 4 mrem/yr (beta/gamma) dose standard to target receptor/organ.	2. No radionuclides are predicted to impact groundwater within 1,000 years.	Yes	D
	3. Meet drinking water standards for alpha emitters: the more stringent of 15 pCi/L MCL or 1/25 <sup>th</sup> of the derived concentration guide for DOE Order 5400.5.	3. No alpha-emitting radionuclides are predicted to impact groundwater within 1,000 years.	Yes	D
	4. Meet total uranium standard of 21.2 pCi/L.	4. No uranium isotopes were detected above background levels in verification soil samples.	Yes	A, B

<b>Waste Site:</b> <b>118-K-1 Burial Ground</b> <b>(Areas shown in Attachment E)</b>	<b>BACKFILL CONCURRENCE CHECKLIST</b> <b>(Concurrence to Proceed with Waste Site Backfill Operations)</b>	<b>WIDS No:</b> <b>118-K-1</b>
--	--	-----------------------------------

Regulatory Requirement	Remedial Action Goals (RAG)	Results	RAG Attained	Ref.
Groundwater/River Protection – Nonradionuclides	1. Attain individual nonradionuclide groundwater and river cleanup requirements.	1. Residual concentrations of copper, vanadium, and zinc slightly exceeded soil RAGs for the protection of groundwater and/or the Columbia River. However, none of these constituents is predicted to migrate to groundwater (and thus the Columbia River) at concentrations exceeding groundwater or river criteria within 1,000 years. Therefore, residual concentrations achieve the remedial action objectives for groundwater and river protection.	Yes	A

Other Supporting Information	1. Sampling Area Layout/Areas Approved for Backfill			E
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All citations above and attached sheets are on record with Washington Closure Hanford, Records and Document Control. Above noted regulatory requirements have been attained.

	4/2/09		6/4/09		6/16/09
WCH Field Remediation Manager	Date	WCH Project Engineer	Date	DOE Project Manager g3	Date

Given the attached information, DOE can proceed with backfill of the site with minimal risk. Final approval that the site has met remedial action objectives and goals will occur with the submittal, review, and approval of the Cleanup Verification Package(s) by the lead regulatory agency.

	6-16-09	N/A	N/A
EPA Project Manager	Date	Ecology Project Manager	Date

**Attachment 14**

# Field Remediation 100 BC Area TPA Milestone M-16-94 (11-30-10)



**Milestone Description: Complete Interim Remedial Actions at 100-BC**

Activity ID	Activity Description	%	Rem Dur	Early Start	Early Finish	FY09		FY10			DEC			JAN						
						7	14	21	28	5	12	19	26	2	9	16	23	30	7	14
<b>100BC</b>																				
BB521D5	Prepare Closure Document 100-B-25 (first site)	25	46	03SEP09A	02DEC09	[Gantt bar from 03SEP09 to 02DEC09]														
BB521D5A	RL/Reg Review/Appr 100-B-25 Backfill Concurrence	0	8	21OCT09	03NOV09	[Gantt bar from 21OCT09 to 03NOV09]														
BB521F	Backfill 100-BC sites	0	25	04NOV09	21DEC09	[Gantt bar from 04NOV09 to 21DEC09]														
BB524D1	Prepare Verif Sample WI for 100-B-33 (last site)	90	10	10JUN09A	28SEP09	[Gantt bar from 10JUN09 to 28SEP09]														
BB524D4	Closure Sampling & Analysis for 100-B-33	25	10	02SEP09A	28SEP09	[Gantt bar from 02SEP09 to 28SEP09]														
BB524D5	Prepare Closure Document for 100-B-33	0	50	29SEP09	30DEC09	[Gantt bar from 29SEP09 to 30DEC09]														
BCREVEG	Reveg 100-BC sites	0	9	14DEC09	30DEC09	[Gantt bar from 14DEC09 to 30DEC09]														
C8100C713	TPA M-16-94 Comp IRA 100 B/C	0	0		30DEC09	[Milestone diamond at 30DEC09]														

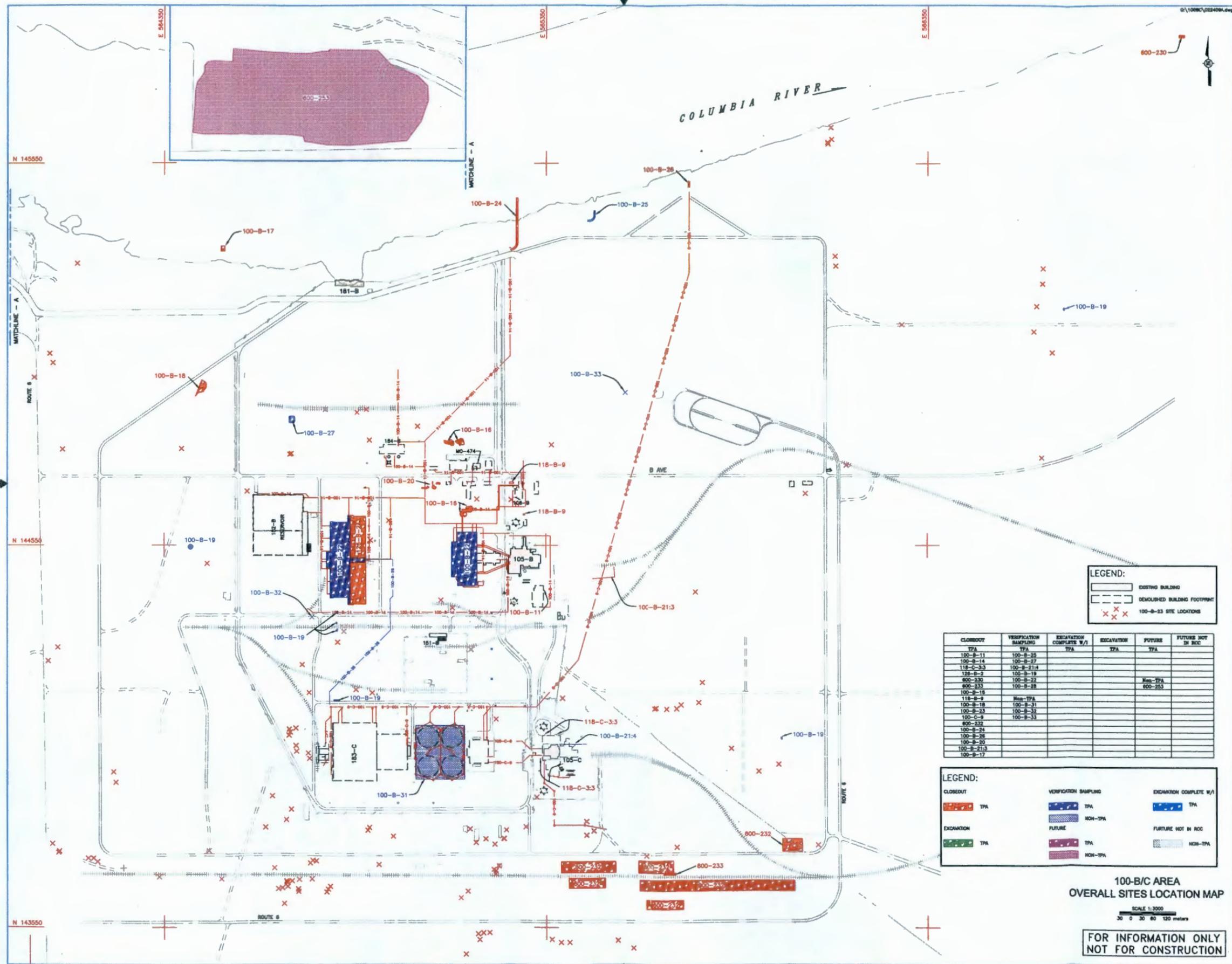
due date 30-Nov-10

**ACTIVITIES / ACTIONS SUPPORTING SCHEDULE**

- None.

**ISSUE / CONCERNS**

- Failed verification samples may create challenges with re-establishing subcontractor support for remediation.



**LEGEND:**  
 [Solid line] EXISTING BUILDING  
 [Dashed line] DEMOLISHED BUILDING FOOTPRINT  
 [Red X] 100-B-23 SITE LOCATIONS

CLOSEOUT	VERIFICATION SAMPLING	EXCAVATION COMPLETE W/1	EXCAVATION	FUTURE	FUTURE NOT IN RCC
TPA	TPA	TPA	TPA	TPA	
100-B-11	100-B-25				
100-B-14	100-B-27				
118-C-3/3	100-B-21/4				
100-B-5	100-B-19				
600-230	100-B-22			Non-TPA	
600-233	100-B-28			600-253	
100-B-15	Non-TPA				
100-B-18	100-B-31				
100-B-23	100-B-32				
100-C-4	100-B-33				
600-232					
100-B-24					
100-B-26					
100-B-20					
100-B-21/3					
100-B-17					

**LEGEND:**

<b>CLOSEOUT</b>	<b>VERIFICATION SAMPLING</b>	<b>EXCAVATION COMPLETE W/1</b>
[Red X] TPA	[Blue X] TPA	[Blue X] TPA
[Green X] EXCAVATION	[Purple X] NON-TPA	[Purple X] FUTURE NOT IN RCC
[Green X] TPA	[Purple X] TPA	[Purple X] NON-TPA
	[Purple X] NON-TPA	

100-B/C AREA  
 OVERALL SITES LOCATION MAP

SCALE 1:3000  
 30 0 30 60 120 meters

FOR INFORMATION ONLY  
 NOT FOR CONSTRUCTION

**Attachment 15**

Mission Completion  
Sample Design and Cleanup Verification  
September 2009

ACT	TITLE	ES	EF
<b>100-D Area Continued</b>			
	RL/Regulator Review Draft A Closure Document for 118-D-4	11/23/2009	1/6/2010
	RL/Regulator Review Draft A Closure Document for 116-D-10	11/30/2009	1/18/2010
	RL/Regulator Review Draft A Closure Document for 100-D-30	12/14/2009	1/27/2010
	RL/Regulator Review Draft A Closure Document for 600-30	12/21/2009	2/3/2010
<b>100-H Area</b>			
	RL/Regulator Review Draft A WI for 100-H-52	7/1/2009 (A)	9/13/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-52	9/28/2009	10/1/2009
	RL/Regulator Review Draft A WI for 100-H-49	7/13/2009 (A)	9/24/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-49	10/12/2009	10/15/2009
	RL/Regulator Review Draft A WSRF for 100-H-50	7/13/2009 (A)	10/15/2009
	RL/Regulator Sign Rev. 0 WSRF for 100-H-50	11/9/2009	11/12/2009
	RL/Regulator Review Draft A WI for 100-H-46	7/15/2009 (A)	9/24/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-46	10/12/2009	10/15/2009
	RL/Regulator Review Draft A WI for 100-H-35	8/13/2009 (A)	9/26/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-35	10/19/2009	10/22/2009
	RL/Regulator Sign Rev. 0 Closure Document for 100-H-8	8/19/2009 (A)	9/14/2009
	RL/Regulator Review Draft A WI for 118-H-2	9/3/2009 (A)	10/17/2009
	RL/Regulator Sign Rev. 0 WI for 118-H-2	11/7/2009	11/10/2009
	RL/Regulator Review of Draft A Closure Document for 100-H-36	9/9/2009	10/23/2009
	RL/Regulator Sign Rev. 0 Closure Document for 100-H-36	11/23/2009	12/1/2009
	RL/Regulator Review Draft A WI for 100-H-51:1	9/14/2009	10/28/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-51:1	11/19/2009	11/30/2009
	RL/Regulator Sign Rev. 0 Closure Document for 100-H-28:6	9/16/2009	9/22/2009
	RL/Regulator Sign Rev. 0 WSRF for 100-H-53	9/21/2009	9/24/2009
	RL/Regulator Approve Backfill Concurrence for 118-H-5	9/21/2009	9/24/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-41	9/24/2009	9/29/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-40	9/24/2009	9/29/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-45	9/24/2009	9/30/2009
	RL/Regulator Sign Rev. 0 WI for 118-H-3	9/24/2009	9/30/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-39	9/28/2009	10/1/2009
	RL/Regulator Review Draft A WI for 118-H-6:4	10/1/2009	11/14/2009
	RL/Regulator Sign Rev. 0 WI for 118-H-6:4	12/9/2009	12/15/2009
	RL/Regulator Review Draft A WI for 118-H-4	10/1/2009	11/14/2009
	RL/Regulator Sign Rev. 0 WI for 118-H-4	12/9/2009	12/15/2009
	RL/Regulator Review Draft A 100-H-51:3 WSRF	10/8/2009	11/21/2009
	RL/Regulator Sign Rev. 0 100-H-51:3 WSRF	12/17/2009	12/29/2009
	RL/Regulator Review Draft A 100-H-51:4 WSRF	10/8/2009	11/21/2009
	RL/Regulator Sign Rev. 0 100-H-51:4 WSRF	12/17/2009	12/29/2009
	RL/Regulator Review Draft A WI for 100-H-37	10/19/2009	12/2/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-37	12/29/2009	1/5/2010
	RL/Regulator Review Draft A Closure Document for 118-H-5	10/19/2009	12/2/2009
	RL/Regulator Review Draft A Closure Document for 100-H-28:7	10/20/2009	12/3/2009
	RL/Regulator Review Draft A Closure Document for 600-152	10/27/2009	12/10/2009
	RL/Regulator Review Draft A WI for 118-H-6:5	11/9/2009	12/23/2009
	RL/Regulator Review Draft A WI for 128-H-1	11/9/2009	12/23/2009
	RL/Regulator Review Draft A WI for 118-H-1	12/2/2009	1/15/2010
	RL/Regulator Review Draft A Closure Document for 116-H-9	12/7/2009	1/20/2010
<b>100-K Area</b>			
	RL/Regulator Review Draft A WI for 600-29	9/14/2009	10/28/2009
	RL/Regulator Sign Rev. 0 WI for 600-29	11/19/2009	11/30/2009
	RL/Regulator Sign Rev. 0 WI for 100-K-78	9/16/2009	9/23/2009

Mission Completion  
Sample Design and Cleanup Verification  
September 2009

ACT	TITLE	ES	EF
<b>100 Area</b>	RL Approve & Issue Rev. 0 of 100-A RDR	9/22/2009	9/30/2009
	RL Approve & Issue Rev. 0 of 100-A SAP	9/22/2009	9/30/2009
<b>300 Area</b>	618-10/11 Comment/Tech Edit/RL-EPA Sign SAP R-0	8/19/2008 (A)	9/9/2009
	RL/Regulator Sign Rev. 0 WI for 300-259	9/14/2009	9/17/2009
	RL/Regulator Review Draft A WI for UPR-300-17	9/16/2009	11/2/2009
	RL/Regulator Sign Rev. 0 WI for UPR-300-17	11/18/2009	11/24/2009
	RL/Regulator Review Draft A Closure Document for 618-13	10/7/2009	11/20/2009
	RL/Regulator Review Draft A WI for UPR-300-46/300-109	12/2/2009	1/14/2010
<b>100-B Area</b>	RL/Regulator Review Draft A WI for 100-B-33	9/17/2009	10/31/2009
	RL/Regulator Sign Rev. 0 WI for 100-B-33	11/23/2009	12/1/2009
	RL/Regulator Approve Backfill Concurrence for 100-B-27	10/1/2009	10/7/2009
	RL/Regulator Review Draft A Closure Document for 100-B-27	11/30/2009	1/13/2010
	RL/Regulator Backfill Concurrence for 100-B-25	10/13/2009	10/19/2009
	RL/Regulator Review Draft A Closure Document for 100-B-25	11/30/2009	1/13/2010
	RL/Regulator Approve Backfill Concurrence for 100-B-19	10/15/2009	10/21/2009
	RL/Regulator Review Draft A Closure Document for 100-B-19	12/7/2009	1/20/2010
	RL/Regulator Backfill Concurrence for 100-B-32	10/22/2009	10/28/2009
	RL/Regulator Review Draft A Closure Document for 100-B-32	12/28/2009	2/10/2010
	RL/Regulator Backfill Concurrence for 100-B-31	11/5/2009	11/11/2009
	RL/Regulator Review Draft A Closure Document for 100-B-31	12/7/2009	1/20/2010
	RL/Regulator Approve Backfill Concurrence for 100-B-21:4	11/5/2009	11/11/2009
	RL/Regulator Review Draft A Closure Document for 100-B-21:4	12/7/2009	1/20/2010
	RL/Regulator Approve Backfill Concurrence for 100-B-28	11/9/2009	11/12/2009
RL/Regulator Review Draft A Closure Document for 100-B-28	12/14/2009	1/27/2010	
	RL/Regulator Approve Backfill Concurrence for 100-B-22:2	12/9/2009	12/15/2009
<b>100-D Area</b>	RL/Regulator Review Draft A WI for 116-D-5	7/29/2009 (A)	9/11/2009
	RL/Regulator Sign Rev. 0 WI for 116-D-5	9/28/2009	10/5/2009
	RL/Regulator Sign Rev. 0 Closure Document for 100-D-31:6	8/18/2009 (A)	9/14/2009
	RL/Regulator Sign Rev. 0 Closure Document for 100-D-56:1	9/14/2009	9/17/2009
	RL/Regulator Sign Rev. 0 WI for 116-DR-10	9/14/2009	9/17/2009
	RL/Regulator Sign Rev. 0 Closure Document for 100-D-31:5	9/14/2009	9/17/2009
	RL/Regulator Sign Rev. 0 Closure Document for 100-D-61	9/14/2009	9/17/2009
	RL/Regulator Sign Rev. 0 WI for 100-D-63	9/15/2009	9/22/2009
	RL/Regulator Review Draft A Closure Document for 1607-D-2:2	9/17/2009	11/19/2009
	RL/Regulator Sign Rev. 0 Closure Document for 1607-D-2:2	11/24/2009	12/2/2009
	RL/Regulator Sign Rev. 0 Closure Document for 100-D-32	9/22/2009	9/29/2009
	RL/Regulator Review Draft A WI for 116-DR-5	9/24/2009	11/7/2009
	RL/Regulator Sign Rev. 0 WI for 116-DR-5	12/2/2009	12/8/2009
	RL/Regulator Review Draft A Closure Document for 100-D-56:2	9/25/2009	11/8/2009
	RL/Regulator Sign Rev. 0 Closure Document for 100-D-56:2	12/9/2009	12/15/2009
	RL/Regulator Sign Rev. 0 Closure Document for 100-D-47	9/28/2009	10/1/2009
	RL/Regulator Review Draft A WI for 118-D-3	9/28/2009	11/11/2009
	RL/Regulator Sign Rev. 0 WI for 118-D-3	12/7/2009	12/10/2009
	RL/Regulator Review Draft A Closure Document for 118-D-5	9/28/2009	11/11/2009
	RL/Regulator Sign Rev. 0 Closure Document for 118-D-5	12/15/2009	12/21/2009
	RL/Regulator Review Draft A WI for 628-3	10/8/2009	11/21/2009
	RL/Regulator Sign Rev. 0 WI for 628-3	12/16/2009	12/22/2009
	RL/Regulator Review Draft A WI for 118-D-6:4	10/12/2009	11/25/2009
	RL/Regulator Sign Rev. 0 WI for 118-D-6:4	12/21/2009	12/29/2009
	RL/Regulator Review Draft A Closure Document for 118-DR-1	10/19/2009	12/2/2009
	RL/Regulator Review Draft A Closure Document for 100-D-29	10/19/2009	12/3/2009
	RL/Regulator Review Draft A Closure Document for 116-DR-8	10/20/2009	12/3/2009
	RL/Regulator Review Draft A Closure Document for UPR-100-D-5	10/27/2009	12/10/2009

**Attachment 16**

**Environmental Protection Mission Completion Project**  
September 10, 2009

**Orphan Sites Evaluations**

- Received RL comments on the 100-N Orphan Sites Evaluation Report, Draft A. Ecology had no comments on the document. RL comments on the have been incorporated and the revision 0 document is anticipated to be issued in September once the MP-14 forms for the 23 orphan sites have been signed by all parties.
- Continue drafting Inter-Areas Segment 1 Orphan Sites Evaluation report. The MP-14 forms for the six orphan sites are currently at RL and will be forwarded to EPA for review/signature once RL signatures are obtained.
- Continued orphan site evaluations for Inter-Areas Segment 2 and 400 Areas.
- Continue field investigation phase for the 300-FF-2 orphan site evaluation. This phase of the evaluation will be completed in September.

**Long-Term Stewardship**

- The 100-FR-2 Operable Unit Remedial Action Report, Draft A was submitted to RL for formal review and subsequent transmittal to EPA on 8/24/09. The formal RL and EPA review period for the Draft A document began on 8/31 with comments due by 9/11. Informal comments on the draft report were received from RL and EPA in August were incorporated into the Draft A document.

**River Corridor Baseline Risk Assessment**

- Draft B report for Volume 1 (ecological) and Volume 2 (human health) are in pre-concurrence review at RL prior to submittal to regulators.

**Remedial Investigation of Hanford Releases to Columbia River**

- Phase IIb groundwater upwelling surveys (indicator contaminant screening) are continuing.
- Sturgeon collection nearing completion (4 upriver fish left). Walleye collection continues. Electrofishing for carp and sucker anticipated to begin week of 9/21 pending water temperature drop to < 64 degrees.

**Document Review Look-Ahead**

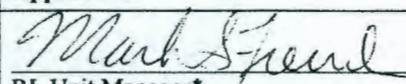
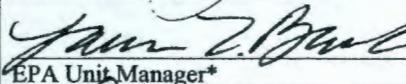
<b>Document</b>	<b>Regulator Review Start</b>	<b>Duration</b>
Inter-Areas Segment 1 Orphan Sites Evaluation Report	October 2009	45 days
100-FR-2 Remedial Action Report	August 31, 2009	14 days
River Corridor Baseline Risk Assessment Report	Early 2010	45 days

**Attachment 17**



**Change Notice for Modifying Approved Documents/ Workplans  
In Accordance with the Tri-Party Agreement Action Plan,  
Section 9.0, Documentation and Records**

197

<b>Change Number</b> TPA-CN-294	<b>Document Submitted Under Tri-Party Agreement Milestone</b> NA	<b>Date:</b> September 10, 2009	
<b>Document Number and Title:</b> DOE/RL 2008-11, Rev. 0. "Remedial Investigation Work Plan for Hanford Site Releases to the Columbia River"		<b>Date Document Last Issued:</b> September, 2008	
<b>Originator:</b> John Sands		<b>Phone:</b> 372-2282	
<b>Description of Change:</b> 1) Change the minimum length requirement for walleye to be included in composite samples from greater than 18 inches to greater than 15 inches. 2) Expand the area allowed for upriver sturgeon catch from river mile (RM) 420 to RM 441.			
<p>1) Appendix A, Section 2.4.4.2, paragraph 1 (p. A2-22) of the Work Plan (DOE/RL 2008-11) references Table 2-9 for the list of target fish and target fish size. The size for walleye in Table 2-9 is listed as greater than 18 inches. However, Washington State fishing regulations specify no minimum size requirement for walleye in the areas of the Columbia River covered in the Work Plan. This change will lower the minimum size for walleye to 15 inches. This change will allow more fish to be retained for the study within the preferred capture time of lower summer water flows.</p> <p>2) Under the Work Plan (DOE/RL 2008-11), the non-Hanford contaminant exposed sturgeon are to be obtained upriver of Wanapum Dam. The Work Plan specifies that the upstream area available for sturgeon capture extends to river mile (RM) 420. However, based on information from local fishing experts and the Grant County Public Utility District, the best fishing locations for sturgeon above the Wanapum Dam are upstream of RM 420, the upper boundary listed in the Work Plan. This change will extend the sturgeon fishing area upriver to RM 441.</p>			
<b>Justification and Impacts of Change:</b>			
<p>1) Walleye populations in the study areas are relatively smaller than the populations of the other non-sturgeon game fish covered in the Work Plan (whitefish, carp, suckers, and bass). Walleye fishing for this study is being done using a hook and line method, which is time intensive. Given that these fish are being captured to support a human-health risk assessment, and the population of fish in the study area is more limited than other game fish, it is reasonable to include fish for the study that are of smaller size but within the legal limit.</p> <p>Washington State game fishing regulations for the Columbia River for the fishing areas covered in the Work Plan specify that there is no minimum size for walleye. Of the daily limit of 10 fish, only 5 greater than 18 inches and 1 greater than 22 inches can be retained. Therefore, lowering the minimum size limit for walleye to 15 inches also allows samples to be more representative of the size range allowed for capture per state regulations in the study areas.</p> <p>2) Information from local fishing experts and agencies indicate that the most likely areas to catch legal-size sturgeon upriver of Wanapum Dam are not currently included in the Work Plan. Expanding the area from RM 420 to RM 441 will allow fish to be taken from locations more likely to be fished. This change will allow sturgeon to be captured from areas most likely to be fished and decrease the time required to capture the sturgeon for this study.</p>			
<b>Approvals:</b>			
 RL Unit Manager*	9/15/09 Date	<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Disapproved
 EPA Unit Manager*	9-16-09 Date	<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Disapproved
 Ecology Unit Manager*	9/17/09 Date	<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Disapproved

\*Send approved form to FH TPAI, H8-12, and the Administrative Record, H6-08

**Attachment 18**

CERCLA Five-Year Review Action Items

9/10/2009

Point of Contact	Action No.	Deliverables	Due Date	Status
<b>100 Area</b>				
WCH	1-1	Submit Draft A of the River Corridor Baseline Risk Assessment Report.	6/1/2007	Completed-6/2007
WCH	1-2	Submit draft Sampling and Analysis Plan for Inter-Areas Shoreline Assessment.	8/1/2006	Completed-7/2006
WCH/RL	1-3	Reassess and resubmit to EPA the protectiveness determinations for operable units 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-1, 100-FR-2, 100-HR-1, 100-HR-2, 100-HR-3, 100-IU-2, 100-IU-6, 100-KR-1, 100-KR-2, 100-KR-4, 100-NR-1, 300-FF-1 and 300-FR-2 using new information from the River Corridor Baseline Risk Assessment and submit to EPA an addendum with, as appropriated, updated Protectiveness Determinations, Issues, and Follow-Up Actions.	2/15/2008	This action was to be coordinated with the finalization of the Risk Assessment. The Risk Assessment is now projected to be completed around May 2010. With the emphasis of the Final RI investigations and reports, it is apparent that Protectiveness determinations will not be done until the RI reports are written.
RL	2-1	Submit Draft A of the River Corridor Strategy for Achieving Final Cleanup Decisions in the River Corridor. This document will identify issues for integration and provide alternatives for future discussion between the Tri-Party Agencies on milestones for final records of decision in the River Corridor.	11/1/2006	Completed
Williams, Janice	2-2	Reach agreement between the Tri-Party Agencies on a strategy and schedule to obtain final records of decision in the river corridor.	11/30/2007	Complete - The Tentative Agreement establishing the overall strategy and new milestones to reach final records of decisions will be out for public review from March 9 - April 23, 2009. Once public review is completed, it is anticipated the proposed milestones will be in effect.
Williams, Janice	2-3	Submit a Tri-Party Agreement change package with new milestones for submitting remedial investigation/feasibility study work plans and proposed plans for all operable units in the river corridor. New milestones shall require submission of remedial investigation/feasibility study work plans and proposed plans for final action at all of the following operable units that do not already have these documents approved: 100-BC-1, 100-BC-2, 100-BC-5, 100-DR-1, 100-DR-2, 100-FR-1, 100-FR-2, 100-FR-3, 100-HR-1, 100-HR-2, 100-HR-3, 100-IU-2, 100-IU-6, 100-KR-1, 100-KR-2, 100-KR-4, 100-NR-1, 100-NR-2, 300-FF-2, and 300-FF-5.	2/1/2008	Complete - The Tentative Agreement establishing the overall strategy and new milestones to reach final records of decisions will be out for public review from March 9 - April 23, 2009. Once public review is completed, it is anticipated the proposed milestones will be in effect.
Robertson, Julie	3-1	Install three additional wells to further delineate the southeastern (inland) extent of the chromium groundwater plume from the 116-K-2 trench, northeast of the current injection wells. Wells installed as part of the pump-and-treat system expansion or injection well relocation may count towards this effort if appropriately located..	8/1/2008	Completed - 1/2008. Drilling began on 18 KR-4 pump-and-treat wells on 10/4/07. Wells K153, 154 & 163 were drilled to address this action. Well development activities were completed for these wells in January 2008.
Robertson, Julie	4-1	Construct a new pump-and-treat facility to address the chromium groundwater plume in the KW Reactor area.	8/1/2008	Completed-1/2007. Operation of the KW pump-and-treat system began on 1/29/07. The system operated at design capacity of approximately 100 gpm using 4 extraction wells and 2 injection wells.
Robertson, Julie	5-1	Expand the 100-K pump-and-treat system by 378.5 liters (100 gallons) per minute to enhance remediation of the chromium plume between the 116-K-2 and the N Reactor perimeter fence.	8/1/2008	Completed - The existing KR-4 pump-and-treat system is operating at design capacity of approximately 300 gpm. Construction of the new KX P&T System was completed in September 2008. The facility was fully operational at 600gpm treatment capacity on May 20, 2009.

CERCLA Five-Year Review Action Items

9/10/2009

Point of Contact	Action No.	Deliverables	Due Date	Status
Robertson, Julie	5-2	Add additional wells between 166-K-2 [Note: this is a typo and should read 116-K-2] trench and the N Reactor perimeter fence for groundwater extraction and connect the additional wells to the pump-and-treat system.	To be completed with Action 5-1	Completed - Drilling was completed on 3/19/08. The K expansion wells K147, 148, 149, and 150 along with - existing wells K130 & 131 fulfill this action. The wells are connected to the KX P&T system.
Bowles, Nathan	6-1	Implement the treatability test plan for permeable reactive barrier utilizing apatite sequestration as described in the Strontium-90 Treatability Test Plan for 100-NR-02 Groundwater Operable Unit (DOE 2005c). Issue Treatability Test Report.	9/1/2008	Completed - Two pilot injection tests were conducted - June and September 2006. DOE used the results of these tests and subsequent bench scale testing to modify the chemistry of injected solution. DOE conducted two injection campaigns in FY 2007. The first campaign targeted the Ringold formation when the water table was relatively low (February 28 through March 22). The second campaign targeted the Hanford formation when the water table was high (June 6 through July 10). The Interim Report was completed by PNNL in July 2008 (PNNL-17429).
Bowles, Nathan	7-1	Perform additional data collection to support risk assessment, provide to Ecology previously collected data, and coordinate with River Corridor sampling efforts to collect additional pore water data from new and existing aquifer tubes along the 100-NR-2 shoreline in order to assess water quality impacts.	9/1/2008	(Partially completed August 2008) Samples were collected from aquifer tubes in FY07 and FY08. Section 2.4.1 of the Groundwater Annual report discusses significant results. PNNL placed additional aquifer tubes and collected samples to identify the dimensions of SR-90 and TPH contaminants along the shoreline at 100-NR-2 in 2007. The results are detailed in PNNL-16714. Additional tubes were installed in 2008. Previous sample results have been provided to Ecology. Ecology feels that the river pore data collections from seeps in the river described in the Remedial Investigation Work Plan for Hanford Site Releases to the Columbia River, DOE/RL-2008-11, Rev. 0 should be completed prior to closing out this action.

CERCLA Five-Year Review Action Items

9/10/2009

Point of Contact	Action No.	Deliverables	Due Date	Status
Shrimpton, Dave	8-1	Complete a field investigation to investigate additional sources of chromium groundwater contamination within the 100-D Area. Additional geologic and geochemical investigations of the vadose zone in the 100-D Area.	3/1/2009	<p>Complete - Initial field work was completed in March 2007 with the drilling of 7 groundwater monitoring wells (DOE/RL-2006-74). These wells and selected existing wells are currently being monitored to refine the source area. Based on this investigation, four additional boreholes were drilled to further refine the source area. See Figure 8-1. A letter report describing completion of the field investigation was submitted to RL in September 2008 (reference).</p> <p>An investigation of the northeastern chromium plume, including vadose boreholes and wells, took place in FY 2008.</p> <p>PNNL is completing geochemical investigations to determine how chromium is refined on sediments. An interpretive report was submitted to RL 9/30/08.</p>
Shrimpton, Dave	9-1	Perform additional characterization of the aquifer for chromium contamination between the 100-D and 100-H Area, in the area known as the "horn", and evaluate the need to perform remedial action to meet the remedial action objectives of the 100-D record of decision for interim action. This issue will also be addressed in the final record of decision.	9/30/2009	<p>Complete. Initiated drilling of 21 wells in August 2007 (SGW-33844). All wells were completed January 2008. Nine sets of aquifer tubes have been installed and sampled in October and November 2007. Post sampling and well monitoring continues. See Figure 9-1.</p> <p>A "horn" investigation report was issued to RL in June 2009.</p>
Shrimpton, Dave	9-2	Incorporate the "horn" area into the 100-HR-3 interim record of decision treatment zone if Action 9-1 indicates "horn" contains a groundwater chromium plume that needs immediate remediation.	9/1/2009	<p>Complete - This action is dependent on results of Action 9-1 above and was incorporated into the Systematic Planning Process for HR-3 OU. The results of Action 9-1 showed that the plume in the horn area was extensive, but only a small part was &gt;100 ug/L, the federal DWS. A portion of the plume exceeded the stake action level of 48 ug/L is scheduled for remedial action as part of RPO implementation under the interim ROD to meet remedial action objectives. The action was considered in the systematic planning proven for the RI/FS work plan.</p>
Shrimpton, Dave	10-1	Issue direction to the operating contractor to change operations to further minimize leakage from the 182-D reservoir.	Completed prior to issuing the five-year review	<p>Complete. A Timely Order was issued to prevent the use of 182-D except in the event of an emergency situation, such as fire control or loss of other safety system water supplies (Reference: JLD-02-02-2007-01 Rev02)</p>

CERCLA Five-Year Review Action Items

9/10/2009

Point of Contact	Action No.	Deliverables	Due Date	Status
Shrimpton, Dave	11-1	Initiate limited iron amendments to the insitu redox manipulation barrier to evaluate whether this enhances the performance.	9/1/2007	Completed - Field tests with zero valent iron occurred in FY 2008 and FY 2009. A report documenting the iron amendment test results will be submitted to RL in FY 2009.
Shrimpton, Dave (Note: this item was not part of the Executive Summary table in the CERCLA 5-year review but exists within the text in Section 1.4.6.4).	11-2	Expand groundwater pump-and-treat extraction within the 100-D Area by 378.5 liters (100 gallons) per minute to enhance remediation of the chromium plume.		On-going - Pump-and-treat extraction in the 100-D Area is being expanded by 600 gpr (DX Expansion project) and is scheduled for startup between 12/31/10 and 12/31/11.
Shrimpton, Dave	12-1	Perform additional characterization of the aquifer below the initial aquitard. [Note: this action is for H Area.]	9/30/2009	Ongoing - Additional characterization will be undertaken in the form of an aquifer rebound test and pumping from the RUM unit to verify the conceptual site model (or not) in FY 2009. Projected completion December 2009.
<b>200 Area</b>				
Byrnes, Mark	13-1	Complete a data quality objective process and sampling plan to further characterize the technetium-99 groundwater plume near T Tank Farm.	1/15/2007	Completed-Contract deliverable CD0510, "Data quality objective process and sampling plan to further characterize the technetium-99 groundwater plume near T Tank Farm" was completed and transmitted to DOE/RL on 2/15/07.
Byrnes, Mark	14-1	Assess treatment options to address technetium-99 near T Tank Farm.	9/6/2007	Completed by the implementation of an additional pump-and-treat system.
Benecke, Mark	15-1	Complete data quality objective process and sampling plan to further characterize the high soil conductivity measurements detected at B/C cribs and trenches.	11/28/2007	Completed-Sampling and Analysis Plan was approved on November 28, 2007.
Byrnes, Mark	16-1	Increase the pump size in 200-ZP-1 extraction wells 299-W15-45 AND 299-W15-47.	1/15/2007	Completed-Pump size increase in 200-ZP-1 extraction wells 299-W15-45 and 299-W15-47 was omitted as a deliverable requirement as this work could no longer be accomplished because of declining water levels in these wells.
Rohay, Virginia	17-1	Evaluate expanding the soil-vapor extraction operations. Review converting former groundwater extraction well 299-W15-32 to a soil-vapor extraction well.	3/29/2007	Completed- Soil-vapor operations should be expanded over the next 13 years. Current baseline schedule includes the conversion of 3 or 4 existing groundwater monitoring wells to SVE well. Well 299-W15-32 was converted to an SVE well in FY2006.
Byrnes, Mark	18-1	Prepare an explanation of significant difference for 200-UP-1 interim record of decision.	6/1/2008	Completed February 24, 2009.
Borghese, Jane	19-1	Complete focused feasibility study for 300-FF-5 Operable Unit to provide better characterization of the uranium consequences and evaluate treatment alternatives. Concurrently test injection of polyphosphate into the aquifer to immobilize the uranium and reduce the concentration of dissolved uranium. These activities support a CERCLA proposed plan..	9/1/2008	Complete. FH letter FH-0801578A R3, dated September 16, 2008, transmitted the Remediation Strategy for Uranium at the Hanford Site 300 Area, 300-FF-5 Operable Unit, DOE/RL-2008-36, Revision 0, which fulfilled this action in place of a Focused Feasibility Study.

**Attachment 19**

# 2009 Annual Sitewide Institutional Controls (IC) Review

River Corridor Contractor (RCC)

# 2009 RCC Annual IC Review

- **Basis**

- ***Sitewide Institutional Controls Plan for Hanford CERCLA Response Actions (DOE/RL-2001-41, Rev. 3)***
  - Requires annual IC effectiveness review
  - Results to be reported in September UMM

# 2009 RCC Annual IC Review

## Scope of 2009 Review

- Trespass events during CY 2008
- Access control/entry restrictions
- Excavation control
- Implementation of corrective actions from 2008 IC review
  - Correction of signage to 618-7 waste site and 618-10 and -11 Burial Grounds
- Field inspection of ICs
  - Required signage on entrances to active 100 Area waste sites within 100-B/C, 100-D, 100-H, and 100-N Areas
  - Required signage on entrance to 618-13 waste site in 300 Area

# 2009 RCC Annual IC Review

- Results

- No public trespass events on WCH managed projects during CY 2008
- Badging system in place and active
- Approved Excavation Permits in place for all active remediation activities at 100-B/C, 100-D, 100-H, and 100-N Area waste sites
- Corrective actions from 2008 review implemented at 618-10 and 618-11 Burial Grounds; remediation activities at 618-7 complete
- Ample warning signage in place at roadway entrances to active 100-B/C, 100-D, 100-H, and 100-N Area waste sites
  - Specific signage required by 100 Area RDR/RAWPs present at all roadway entrances except at west entrance to 100-D Area (D Avenue)
    - Required 100-D Area signage subsequently installed
- Required warning signage in place at roadway entrance to 618-13 waste site

# 2009 RCC Annual IC Review



**Signage at 618-10 and 618-11 Burial Grounds**

# 2009 RCC Annual IC Review



Roadway Signage at Entrances to 100-B/C

# 2009 RCC Annual IC Review



Roadway Signage at East Entrance to 100-D

# 2009 RCC Annual IC Review



**Roadway Signage at West Entrance to 100-D  
(New Signage Installed in Response to IC Review)**

# 2009 RCC Annual IC Review



Roadway Signage at Entrance to 100-H

# 2009 RCC Annual IC Review



Roadway Signage at Entrance to 100-N

# 2009 RCC Annual IC Review



**Roadway Signage at Entrance to 618-13 Waste Site**