0082565

100/300 AREA UNIT MANAGER MEETING
ATTENDANCE AND DISTRIBUTION
June 11, 2009

NAME	E-MAIL ADDRESS	MSIN	COMP	SIGNATURE
Childers, Heather	Original +1 copy	H6-08	ADREC	
Alder, Jason G	Jason_G_Alder@rl.gov	A3-04	DOE	
Balone, Steven N	Steven_N_Balone@rl.gov	A3-04	DOE	
Chance, Joanne C	Joanne_C_Chance@rl.gov	A3-04	DOE	Joanne C. Chance
Charboneau, Briant L	Briant_L_Charboneau@rl.gov	A6-33	DOE	
Clark, Clifford E	Clifford_E_Cliff_Clark@rl.gov	A5-15	DOE	
French, Mark	Mark_S_French@rl.gov	A6-38	DOE	
Guercia, Rudolph F	Rudolph_F_Rudy_Guercia@rl.gov	A3-04	DOE	
Hanson, James P	James_P_ Hanson@rl.gov	A5-13	DOE	James P. Hanson
Morse, John G	John_G_Morse@rl.gov	A6-38	DOE	
Neath, John P	John_P_Neath@rl.gov	A3-04	DOE	
Post, Thomas	Thomas_C_Post@rl.gov	A3-04	DOE	
Sands, John P	John_P_Sands@rl.gov	A3-04	DOE	
Sinton, Gregory L	Gregory_L_Sinton@rl.gov	A6-38	DOE	
Smith, Chris	Douglas_C_Chris_Smith@rl.gov	A3-04	DOE	
Thompson, Mike	K_M_Mike_Thompson@rl.gov	A6-38	DOE	
Weil, Stephen	Stephen_R_Weil@rl.gov	A5-16	DOE	
Zeisloft, Jamie	Jamie_Zeisloft@rl.gov	A3-04	DOE	
Ayres, Jeffrey M	JAYR461@ECY.WA.GOV	H0-57	ECO	
Bond, Fredrick	FBON461@ECY.WA.GOV	H0-57	ECO	
Goswami, Dib	DGOS461@ECY.WA.GOV	H0-57	ECO	
Huckaby, Alisa D	AHUC461@ECY.WA.GOV	H0-57	ECO	
Jackson-Maine, Zelma	ZJAC461@ECY.WA.GOV	H0-57	ECO	
Jones, Mandy	MJON461@ECY.WA.GOV	H0-57	ECO	Mandy Jones
Price, John	JPRI461@ECY.WA.GOV	H0-57	ECO	
Rochette, Elizabeth	BROC461@ECY.WA.GOV	H0-57	ECO	
Shea, Jacqueline	JASH461@ECY.WA.GOV	H0-57	ECO	
Smith-Jackson, Noe'l	NSMI461@ECY.WA.GOV	H0-57	ECO	
Vanni, Jean	Jvan461@ECY.WA.GOV	H0-57	ECO	
Whalen, Cheryl	CWHA461@ECY.WA.GOV	H0-57	ECO	
Buelow, Laura	BUELOW.LAURA@EPA.GOV	B1-46	EPA	

RECEIVED
JUL 20 2009
EDMC

145578

100/300 AREA UNIT MANAGERS MEETING
APPROVAL OF MEETING MINUTES
June 11, 2009

APPROVAL: _____ Date 7/9/09
Mark French, DOE/RL (A3-04)
River Corridor Project Manager

APPROVAL: _____ Date 7/9/09
Briant Charboneau, DOE/RL (A6-33)
Groundwater Project Manager

APPROVAL: _____ Date 7/9/09
Mandy Jones or Les Fort, Ecology
(H0-57) Acting Environmental Restoration
Project Manager(s)

APPROVAL: _____ Date 7/9/09
Rod Lobos, Laura Buelow, or Craig
Cameron EPA (B1-46)
100 Area Project Manager

APPROVAL: _____ Date 7-9-09
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

June 11, 2009

ADMINISTRATIVE

- Next Unit Manager Meeting (UMM) - The next meeting will be held July 9, 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 May 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).
- Action Item Status - Status of action items was performed, and updates provided (Attachment C). There are no action items at this time.
- Agenda: Attachment D is the meeting agenda.

EXECUTIVE SESSION (Tri-Parties Only)

Session was not 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 schedule for 100-IU-2 and 100-IU-6 leading to eventual soil remediation starting later this year. No issues were identified, no agreements were documented, and no action items were documented.

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

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

Agreement 1: Attachments 3 documents Ecology approval of the 128-D-2 and 100-D-7 staging pile areas.

Agreement 2: Attachment 4 documents Ecology approval of modifying the design depth at the 628-3 waste site

Agreement 3: Attachment 5 documents Ecology approval to add the 100-H-28:2, 100-H-4, and 126-H-2 waste sites to the 100-H Air Monitoring Plan.

Agreement 4: Attachment 6 documents Ecology approval of the 126-H-2, 1607-H1, and 1607-H3 waste sites designs.

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

Attachment 1 provides a status or information for groundwater. Attachment 7 provides a status or information for D4 activities. No issues were identified, no agreements were documented, and no action items were documented.

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

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

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

Attachment 1 provides a status or information for groundwater. Attachment 8 provides a status or information for soil remediation at various 100-B/C waste sites. No issues were identified, and no action items were documented.

Agreement: Attachment 9 documents RL and EPA approval to treat chromium contaminated soils and absorbent material at the 100-B-28 in accordance with *Treatment Plan and Protocol for Treatment of Chromium-Contaminated Soils*, WCH-284, Rev. 1.

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

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

Agreement: Attachment 10 documents RL and EPA approval of the *Air Monitoring Plan for Nonintrusive Characterization of the 618-10 and 618-11 Burial Grounds*, dated May 2009.

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 DCOUMENTS OVERALL SCHEDULE

Attachment 11 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 12 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 13 (TPA-CN-284) documents RL, EPA, and Ecology approval to make changes to DOE/RL-2008-11, Rev. 0, "Remedial Investigation Work Plan for the Hanford Site Releases to the Columbia River." Changes pertain to adding an itemized list of the additional sturgeon related sampling and analysis scope approved by RL.

5-YEAR RECORD OF DECISION ACTION ITEM UPDATE

No update was provided, but an update will be provided at the July UMM. No issues were identified, no agreements were documented, and no action items were documented.

Attachment A

Cameron, Craig E	CAMERON.CRAIG@EPA.GOV	B1-46	EPA	
Einan, Dave	EINAN.DAVID@EPA.GOV	B1-46	EPA	
Emerald, Laija	LAIJA.EMERALD@EPA.GOV	B1-46	EPA	
Gadbois, Larry E	GADBOIS.LARRY@EPA.GOV	B1-46	EPA	
Lobos, Rod	LOBOS.ROD@EPA.GOV	B1-46	EPA	
Adams, Margie R	M_R_Margie_Adams@rl.gov	R3-60	CH	
Alexander, Deb	Debra_J_Deb_Alexander@rl.gov	E6-35	CH	
Barrett, Bill F	William_F_Barrett@rl.gov	E6-44	CH	
Black, Dale	Dale_G_Black@rl.gov	E6-35	CH	
Borghese, Jane V	Jane_V_Borghese@rl.gov	E6-35	CH	
Day, Roberta E	Roberta_E_Day@rl.gov	E6-35	CH	
Hartman, Mary J	Mary_J_Hartman@rl.gov	B6-06	CH	
Hickey, Michael J	Michael_Hickey@rl.gov	E6-44	CH	
Horton, Duane G	Duane_G_Horton@rl.gov	E6-35	CH	
Piippo, Rob	Robert_E_Piippo@rl.gov	H8-12	CH	
Petersen, Scott	Scott_W_Petersen@rl.gov	E6-35	CH	
Robertson, Julie	Julie_R_Robertson@rl.gov	E6-35	CH	
Rossi, Amadeo J	Amadeo_J_Rossi@rl.gov	R3-60	CH	
Shrimpton, David J	David_J_Shrimpton@rl.gov	E6-44	CH	
Smoot, John L	John_L_Smoot@rl.gov	B6-06	CH	
Toews, Michelle R	Michelle_R_Toews@rl.gov	R3-60	CH	
Triner, Glen C	Glen_C_Triner@rl.gov	E6-44	CH	
VonBargen, Brian H	Brian_H_Von_Bargen@rl.gov	R3-19	CH	
Winterhalder, John A	John_A_Winterhalder@rl.gov	E6-35	CH	
Williams, Janice	Janice_D_Williams@rl.gov	E6-35	CH	
Dresel, Evan	Evan.dresel@pnl.gov		PNNL	
Fruchter, Jonathan S	john.fruchter@pnl.gov	K6-96	PNNL	
Peterson, Robert E	robert.peterson@pnl.gov	K6-75	PNNL	
Cimon, Shelley	scimon@oregontrail.net		Oregon	
Danielson, Al	Al.danielson@doh.wa.gov		WDOH	
Utley, Randy	Randell.Utley@doh.wa.gov		WDOH	
Lilligren, Sandra	sandral@nezperce.org		TRIBES	
Bignell, Dale	Dale.Bignell@wch-rcc.com	H4-22	WCH	
Buckmaster, Mark A	mark.buckmaster@wch-rcc.com	X9-08	WCH	
Carlson, Richard A	richard.carlson@wch-rcc.com	X4-08	WCH	
Capron, Jason	jmcapron@wch-rcc.com	H4-23	WCH	

Cathel, Robert L	rlcathel@wch-rcc.com	X5-50	WCH	Bob Cathel
Cearlock, Christopher S	cscearlo@wch-rcc.com	H4-22	WCH	
Clark, Steven W	steven.clark@wch-rcc.com	H4-23	WCH	
Darby, John W	john.darby@wch-rcc.com	L6-06	WCH	
Donnelly, Jack W	jack.donnelly@wch-rcc.com	H4-22	WCH	
Fancher, Jonathan D (Jon)	jon.fancher@wch-rcc.com	L6-06	WCH	
Faulk, Darrin E	defaulk@wch-rcc.com	L6-06	WCH	Darrin Faulk
Fletcher, Jill E	jfletcher@wch-rcc.com	H4-22	WCH	
Hadley, Karl A	karl.hadley@wch-rcc.com	H4-21	WCH	
Hedel, Charles W	charles.hedel@wch-rcc.com	H4-22	WCH	
Hulstrom, Larry C	larry.hulstrom@wch-rcc.com	H4-22	WCH	
Jacques, Duane	idjacque@wch-rcc.com	H4-22	WCH	
Johnson, Wayne	Wayne.johnson@wch-rcc.com	H4-22	WCH	
Landon, Roger J	roger.landon@wch-rcc.com	H4-21	WCH	
Lerch, Jeffrey A	jeffrey.lerch@wch-rcc.com	H4-22	WCH	
Little, Nelson C	nclittle@wch-rcc.com	L6-06	WCH	
Obenauer, Dale F	dale.obenauer@wch-rcc.com	X2-05	WCH	
Parnell, Scott E	scott.parnell@wch-rcc.com	N3-21	WCH	SE Parnell
Proctor, Megan	Megan.Proctor@wch-rcc.com	H4-22	WCH	
Saueressig, Daniel G	Daniel.Saueressig@wch-rcc.com	X2-07	WCH	
Strand, Chris	cpstrand@wch-rcc.com	L1-07	WCH	
Strom, Dean N	dean.strom@wch-rcc.com	X9-10	WCH	
Yasek, Donna	Donna.yasek@wch-rcc.com	L1-07	WCH	

Attachment B

Donnelly, Jack W

From: Price, John (ECY) [Jpri461@ECY.WA.GOV]

Sent: Thursday, June 25, 2009 12:19 PM

To: Charboneau, Briant L; Farabee, Al; Cameron.Craig@epamail.epa.gov; Buelow, Laura; Lobos.Rod@epamail.epa.gov; laija.emerald@epa.gov; Einan, David R; Gadbois, Larry E; French, Mark S

Cc: Jones, Mandy; Fort, Leslie; Donnelly, Jack W; Williams, Janice D; ECY DL RO CLEANUP; Sinton, Gregory L; Bond, Fredrick W; Tortoso, Arlene C; Hildebrand, R Doug; Voogd, Margo J; Roddy, Francis M; Leary, Kevin D; Hanson, James P; Cummins, Gloria D

Subject: Delegation of TPA Project Manager authority & responsibility for certain operable units, milestones, and TSDs

Hanford Federal Facility Agreement and Consent Order Section 4.1 allows delegation of project manager authority and responsibilities with notice to the other affected parties. This email is notice that I delegate to Mandy Jones and Les Fort the authority and responsibility for the following operable units, milestones, and TSDs. Both Mandy Jones and Les Fort have the necessary experience and capability to fulfill this role. This delegation is effective immediately and continues through September 30, 2009.

I am retaining Project Manager authority and responsibility for the TSDs currently assigned to me, and not noted below. It's my intent to retain authority and responsibility for those TSDs until the Hanford Site-wide permit is issued for public comment.

Mandy Jones

100-DR-1 100-DR-2

100-HR-1 100-HR-2 100-HR-3

M-16-00A

M-16 series interim milestones (except M-16-55)

Les Fort

100-NR-1 100-NR-2

200-CW-1 200-IS-1

200-LW-1 200-LW-2

200-MG-1 200-PO-1

200-PW-2 200-PW-4

200-TW-2 200-UP-1

200-UW-1

M-15-00 M-15-00c

M-15 series interim milestones

M-16-55

241-CX Tank System TSD

Hexone Storage & Treatment Facility (276-S-141 and -142 tanks)

John Price

Tri-Party Agreement Section Manager

State of Washington, Dept. of Ecology

Nuclear Waste Program

3100 Port of Benton Blvd.

Richland, WA 99354

(509) 372-7921

The mission of the Nuclear Waste Program (NWP) is to ensure sound management of nuclear waste site-wide and to promote the sound management and protection of the environment at, and adjacent to, the United States Department of Energy's Hanford Site.

Attachment C

Attachment D

100/300 Area Unit Manager Meeting
June 11, 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 (May 2009)
- Update to Action Items List
- Next UMM (7/09/2009, 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)

4:15 - 4:30 p.m. **Adjourn**

Attachment 1

100/300 Areas Unit Managers Meeting
June 11, 2009

100-FR-3 Operable Unit—Bill Barrett

(M-015-63, 09/30/2009): Submit CERCLA RI/FS Work Plan for the 100-FR-1 /100-FR-2, 100-FR-3, 100-IU-2 and 100-IU-6 Operable Units for groundwater and soil.

All of the wells scheduled for annual or biennial sampling in FY 2009 have been sampled. The new well, 199-F8-7, is sampled quarterly; next scheduled for July.

100-HR-3 Groundwater OU - Dave Shrimpton

(M-016-112A, 12/31/2009, DOE 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

(M-015-69, 5/31/2009, Submit RI/FS Work Plan for the 100-HR-1, 100-HR-2 and 100-HR-3, 100-DR-1 and 100-DR-2 OUs for groundwater and soil.)

Schedule Status: **Completed 2 days ahead of schedule.**

- HR-3 Treatment System
  - For the period May 1 through 31, 2009:
    - The system was shut down from May 1 through May 26 to replace pressure relief valves and piping, required as a result of a new code interpretation by a new inspector. It was restarted on May 27 and ran normally except for a minor outage due to a blown PLC fuse. Total average flow through the system was 22.6 gpm as a result of the shutdown.
    - Average influent hexavalent chromium concentration for H Area was 17 ug/L, lower than normal due to higher river levels.
    - Average influent hexavalent chromium concentration for D Area was 101 ug/L.

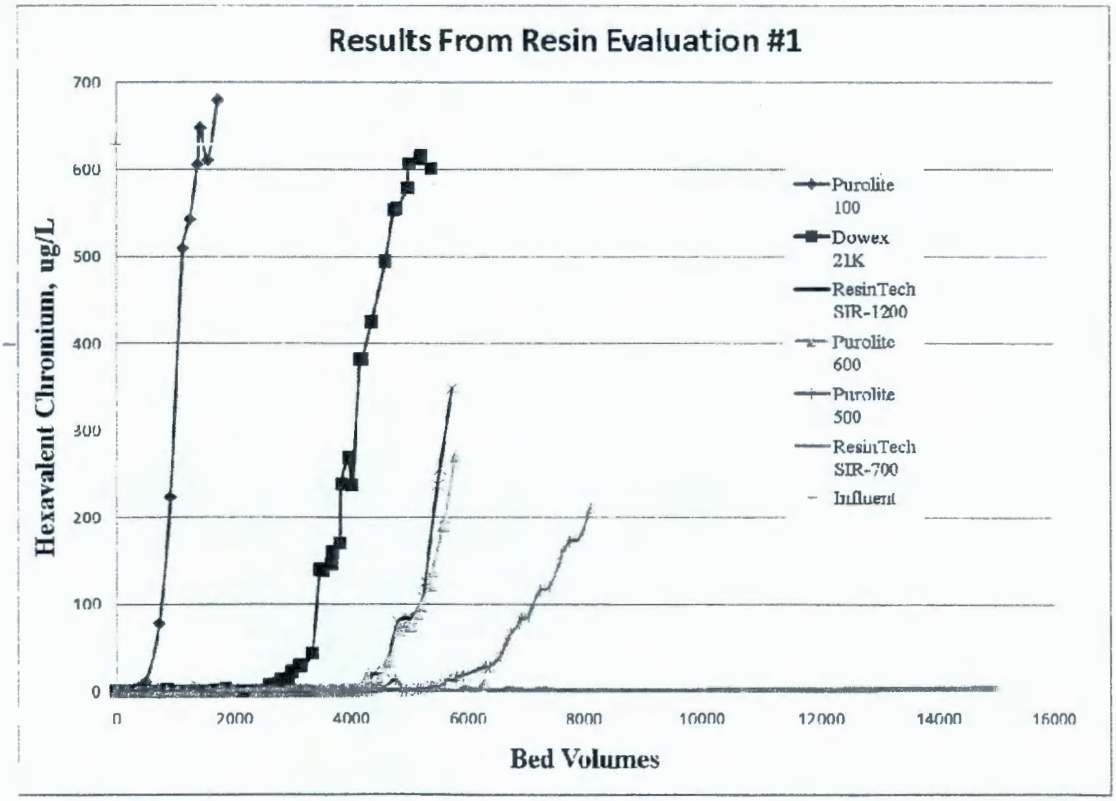
- DR-5 Treatment Status
  - For the period May 1 to 31, 2009
    - System operated normally.
    - Total average flow through the system was 27.3 gpm. Throughput is below DR-5 capacity of 50 gpm because the injection well D4-42 will not accept a higher flow. Engineering is under way to replace D4-42 with D4-41, redevelop D4-42 and reconnect it, thereby returning DR-5 to maximum throughput.
    - The average influent hexavalent chromium concentration was 773 ug/L.

  - 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 operation.

- Remediation Process Optimization (RPO)
  - RPO has focused on modeling for groundwater flows in 100-HR-3 and development of a system of extraction and injections wells to meet the river protection goal, i.e., to

meet the aquatic standard) by 2012, and provide a base for chrome plume remediation by 2020. A Technical Memorandum has been prepared and is essentially ready for release to RL.

- 49 new well locations have been staked and walked down with Ecology and interested stakeholders. DOE/CHPRC has prepared a TPA Change Notice and Sampling & Analysis Plan for the first 21 new RPO wells, which are ready for Ecology approval. A second TPA CN and SAP revision are planned for the remaining 28 of 49 wells.
- A second focus has been on the Technical Memorandum on Ex Situ Treatment Options comparing 600 gpm systems using three types of resin and a central resin regeneration facility. This TM, and the resin testing described below, provided the basis for a multi-attribute decision analysis on April 29-30. The analysis recommended changing from Dowex 21K to Purolite A-500 as the preferred resin for the DX plant, and designing the system for in-vessel regeneration, like DR-5. There are several design issues to be considered before a process design change can be made; in the meantime, the system will be designed for either process. A single-use resin, ResinTech SIR-700, is also under consideration.
- The second resin test at DR-5, designed to validate the pre-conceptual resin selection, or provide a basis for an alternative selection for DX, is complete and the test report initiated (due Rev 0 to DOE on August 31, 2009). Subsequent tests will be planned for DR-5, HR-3 and KR-4 to assess resin performance over a range of feed stocks.



- The DX Expansion project was kicked off in December. A design team has prepared a Project Execution Plan, Engineering Work Plan (approved) and Functional Design Criteria (approved) and progressed design to about 70% complete (a 90% design review is planned for early July). Initial design was based on the KX design media, amended as needed to reflect KX experiences, RPO Technical Memoranda on Ex-Situ

Treatment Options, and the resin tests to date. RPO is also addressing the 199-D5-99 hot spot and HR-3 capacity issues. A short term strategy using one existing well only has been modeled and is now in engineering.

- A second decision analysis on system performance monitoring was conducted May 27-28 to develop options for system performance measurement technologies, locations and reporting, to be submitted to DOE to substantiate system performance goals. The outcome of this will be a performance Monitoring Technical Memorandum.

- Deep Chromium Investigation
  - Plans for drilling 3 wells into the first water-bearing unit of the RUM in FY09 have been deferred to FY10 as part of the RI for the final remedy. An aquifer test on three existing RUM wells will be conducted to address the CERCLA 5-year review action item. Engineering is under way. An Aquifer Test Plan has been drafted and is undergoing internal review for submittal to DOE by mid-June, for completion of characterization by September 30.

- RD/RA Work Plan and IAMP Review. Both documents are in need of a general revision – another set of supplements would make interpretation more difficult than it is now.

The Annual Pump & Treat report was completed and issued to RL; however, a reissue will need to be made to reinsert some omitted text.

- EM-22 Technology Projects
  - Investigation for mending ISRM Barrier: Analyses of the samples from the verification well drilled in March have been completed.
  - EC Treatability Test: The treatability test report is being finalized for publication.
  - 100-D Southern Plume Investigation: A final report on the southern plume chromium source investigation in 100-D is being prepared. The report will be released at the end of June 2009. Samples obtained from wells 199-D5-99 and 199-D5-122 on in mid-April had hexavalent chromium concentrations slight less than of 50,000 ug/L.
  - 100-D Northern Plume Investigation: Drilling by compact sonic technology began June 3rd.
  - In situ Biostimulation: Monitoring of the molasses and emulsified vegetable oil tests continues. CHPRC will continue monitoring select test area wells after PNNL's project completes at the end of FY09.

- RI/FS Work Plan
  The 100-Area RI/FS Work Plan and Addenda for 100-HR-3 and 100-KR-4 were submitted to the regulators for review ahead of schedule, on May 29, 2009. An initial comment review session is planned for June 11, 2009.
- EPA has provided a revision of the ESD for the HR-3/KR-4 IROD to RL for review.

<u>100-NR-2 Groundwater OU – Bill Barrett</u>

(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

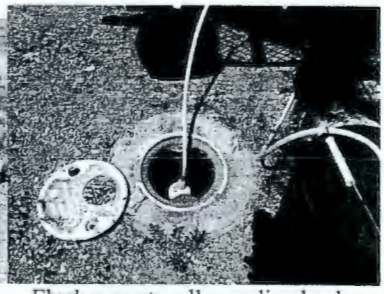
- Apatite PRB – List of wells to be sampled has been reduced per TPA Change Notice 271. All eighteen wells listed below were sampled on Tuesday, May 26. Pictures of the sampling event are seen below.

  199-N-122, 199-N-123, 199-N-146, 199-N-147 - Four monitoring wells
  199-N-128, 199-N-129 - Hanford/Ringold pair - Pilot Test 1 site
  199-N-132, 199-N-133 - Hanford/Ringold pair - Pilot Test 1 site
  199-N-142, 199-N-164 - Hanford/Ringold pair - Mid-point upper barrier
  199-N-145, 199-N-160 - Hanford/Ringold pair - Mid-point lower barrier
  199-N-148, 199-N-149 - Hanford/Ringold pair - Pilot Test 2 site
  199-N-150, 199-N-151 - Hanford/Ringold pair - Pilot Test 2 site
  199-N-155, 199-N-156 - Hanford/Ringold pair - Pilot Test 2 site

  Samples were collected for gross beta and field parameters for each of the above locations. The next sampling event will be in August.

Purging the well prior to sampling

Sampling the well


Flush mount well sampling hook-up

- Phytoremediation – The trees are out of dormancy and have sprouted (see photo below). The river level is up (see other photo below) and PNNL will get to the plot as soon as river level decreases.

Coyote willows showing new growth (5-15-09) and Coyote Willow plot under water (6-3-09)

Analysis of Mulberry trees – PNNL is preparing reports on the mulberry trees sampled thus far. Additional leaf samples from two locations along the shoreline at 100-N were sampled and delivered to PNNL on June 2nd. These samples will also be analyzed for Sr-90.

Total Petroleum Hydrocarbon Investigation – Work is currently underway to schedule sampling at the TPH Well (199-N-173) and four other locations (199-N-18, 199-N-96A, 199-N-167, 199-N-172, and 199-N-173). Samples will be collected twice between July and October 1. Samples are being collected for field parameters (pH, Temp, Cond, DO, Turb), Anions, Metals, VOAs, Sr-90, and TPH-Diesel). Data will be used by PNNL in the development of potential remediation technologies for the TPH plume clean-up.

100-KR-4 Groundwater OU - Julie Robertson

(P-016-111A, 05/31/ 2009, Expand current pump-and-treat system at 100-KR-4 Operable Unit to be operational and functional at a total 900 gpm capacity.

Schedule Status: Proposed milestone met on May 20, 2009. Systems generally operate at combined flow of greater than 1,000 gpm.

(P-016-65, 05/31/2009, Submit CERCLA RI/FS Work Plan for the 100-KR-1, 100-KR-2 and 100-KR-4 Operable Units for groundwater and soil.

Schedule Status: Proposed milestone met on May 29, 2009. Document is now in 60-day agency review.

- Monthly monitoring of cultural resources for 100-KR-4 was performed on May 22, 2009. No problems were observed.

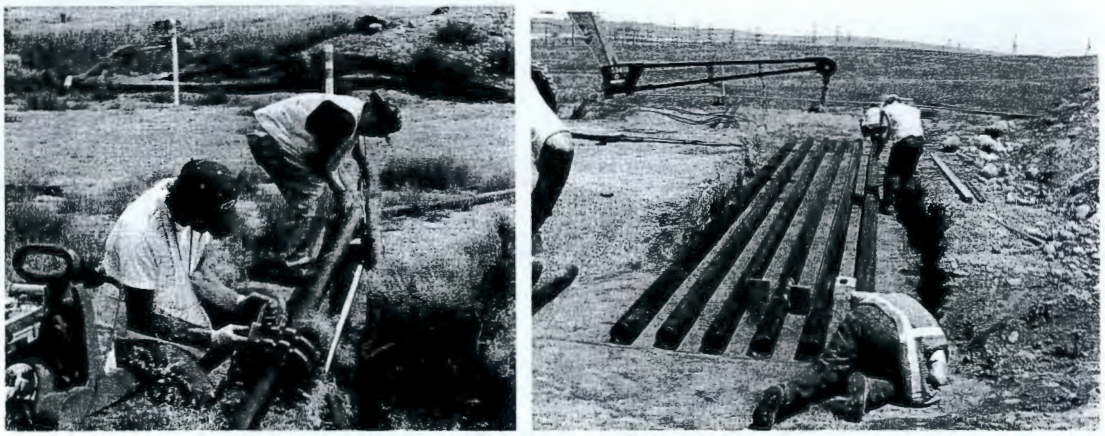
- Interim Action Monitoring Plan: An updated Interim Action Monitoring Plan specific to the 100-KR-4 Operable Unit interim action is being readied for internal contractor review.

- 100-KR-4 System for the period of May 1, 2009 through May 31, 2009.
  - The system was restarted on May 20, 2009 after completion of repairs to pressure relief valve piping. All wells operated normally for the remainder of the month.
  - Total average flow through the system was approximately 128 gpm.
  - Average influent hexavalent chromium concentration was 22 μg/L.

- KX System for the period of May 1, 2009 through May 31, 2009:
  - The facility operated in testing mode, experiencing brief, temporary outages associated with test activities. Acceptance testing turned over to operational testing on May 20, 2009. Extraction well 199-K-144 remains out of service due to elevated tritium; injection well 199-K-171 remains out of service due to elevated hexavalent chromium.
  - Total average flow through the system was approximately 491 gpm.
  - Average influent hexavalent chromium concentration was 68 μg/L.

100/300 Areas Unit Managers Meeting
June 11, 2009

- KX/KR4 Well Realignment
  - Phase 1: Phase 1 connected three previously existing monitoring wells to the KX system as extraction wells. Acceptance testing was completed, and operational testing initiated, on May 20, 2009.



Installation of Well Realignment Piping

  - Phase 2: Phase 2 will modify 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. TPA Change Notices 273 and 280 were approved on May 21, 2009. Change notice 273 modifies the KX RDR/RAWP to reflect the proposed realignment. Change notice 280 modifies the HR3/KR4 waste management plan to incorporate the drilling of five new wells in the KR4 operable unit.

- KW System for the period of April 1, 2009 through April 30, 2009:
  - Total average flow through the system was approximately 120 gpm.
  - Average influent hexavalent chromium concentration was 337 µg/L.

- KW System for the period of May 1, 2009 through May 31, 2009:
  - The expanded system operated in test mode (acceptance testing turned to operational testing on May 18, 2009). Extraction from well 199-K-140 has been terminated in keeping with information in the revised RDR/RAWP. Hexavalent chromium levels in newly connected extraction well 199-K-166 have dropped to below the cleanup goal. Consideration is being given to reconnecting to previously used extraction well 199-K-139. The revised RDR/RAWP was transmitted to RL on May 26, 2009 to support transmittal to EPA for review.
  - Total average flow through the system was approximately 184 gpm.
  - Average influent hexavalent chromium concentration was 333 µg/L.

- Monitoring Activities
  - Routine Monitoring: One hundred samples were collected at 24 KR4 wells in May 2009. No aquifer tubes were sampled in May 2009.
  - Aquifer tube Cr+6 results: April 2009 sample results: 26-D declined to 5.3 µg/L from August 2008 value of 27.7 µg/L; AT-K-3-D declined from December 2007 value of

80.9 µg/L to 33.0 µg/L; AT-K-3-M declined from 67.1 µg/L in 12/07 to 5.7 µg/L; all other results were below 20 µg/L.

- KW extraction wells: Except for 199-K-166, which dropped below 20 µg/L, all extraction wells remain above the cleanup goal. Concentrations at all extraction wells are declining. Cr6+ at K-137 has declined from 1,648 µg/L at the end of April 2009 to 740 µg/L at the end of May 2009.
- KR-4 Extraction Wells: Based on most recent data, wells 199-K-119A, K-125A and K-127 are below the aquatic standard. Wells K-119A and K-125A will be disconnected as part of Phase 2 realignment. All other extraction wells are above the standard, with a high concentration of 74 µg/L at K-115A (3/2/09 data).
- KX Extraction Wells: Except for 199-K-150 which is just below the aquatic standard, all extraction wells are above the standard and declining or stable. Recently connected wells K-154 and K-163 remain above 100 µg/L.
- Trending: Concentrations at well 199-K-18 continue to increase (187 µg/L as of April 2009). Concentrations at K-108A (KW plume) have been increasing over the last 9 months, from 31.9 µg/L in July 2008 to 143 µg/L in April 2009.

100-KR-4: K-Basins Monitoring Task—Duane Horton

- Leak Detection Monitoring Results:
  - There were three wells downgradient of the KE Basin that were sampled monthly for AEA monitoring until May 2008 when wells 299-K-27 and 299-K-109A were decommissioned as part of the preparation for decommissioning the Basin. Well 199-K-141 and 199-K-142 were added as monthly wells at that time. Access to well 199-K-29 became limited in October 2008 when it was incorporated in the construction footprint at the KE Basin and well 199-K-141 became unable to sample in May 2009 when it was converted to an extraction well. Currently, there is one well remaining downgradient of the KE Basin that is part of the monthly sampling schedule.
  - Well 199-K-142 is the only remaining well in the monthly AEA sampling schedule. The well is located about 150 meters downgradient of the KE Basin which is one to four years downgradient based on estimated 0.1 to 0.4 m/d flow rate.
  - Recommend suspending monthly AEA sampling at the KE Basin until decommissioning activities are complete based on
    - The initial purpose of monthly AEA monitoring for shielding water leaks is no longer applicable because the shielding water has been removed.
    - The monthly AEA monitoring network has been reduced to one mid-field well.
    - Use the tritium data from wells in the CERCLA monitoring network and schedule as an interim system
  - Evaluate need for reinstating monthly AEA monitoring after decommissioning of KE Basin is complete and underlying soils have been analyzed.

- Monitoring Well Network:
  - The most recent routine quarterly sampling of K-Basins monitoring network wells took place in April 2009.
  - A few analytical results for hexavalent chromium were received in May. Chromium exceeded the drinking water standard in two wells. The chromium concentration increased slightly in well 199-K-108A from 123 to 142 µg/L and decreased substantially in well 199-K-141 from 420 to 96 µg/L after extraction began.

- The next routine quarterly sampling of K-Basins network wells is scheduled for July 2009.

- Reporting:
  - The fiscal year 2008 annual groundwater report (DOE/RL-2008-66) was released on March 30, 2008 and is available at http://www.hanford.gov/cp/gpp/library/gwrep08/start.htm.

100-BC-5 Operable Units—Bill Barrett

(M-015-67, 09/30/2009): Submit CERCLA RI/FS Work Plan for the 100-BC-1, 100-BC-02 and 100-BC-5 Operable Units for groundwater and soil.

All of the wells scheduled for annual or biennial sampling in FY 2009 have been sampled. Sampling is on schedule for the quarterly well (199-B8-7) and the monthly well (199-B8-8). The latest hexavalent chromium result for 199-B8-8 remained low (14.9 ug/L on April 14).

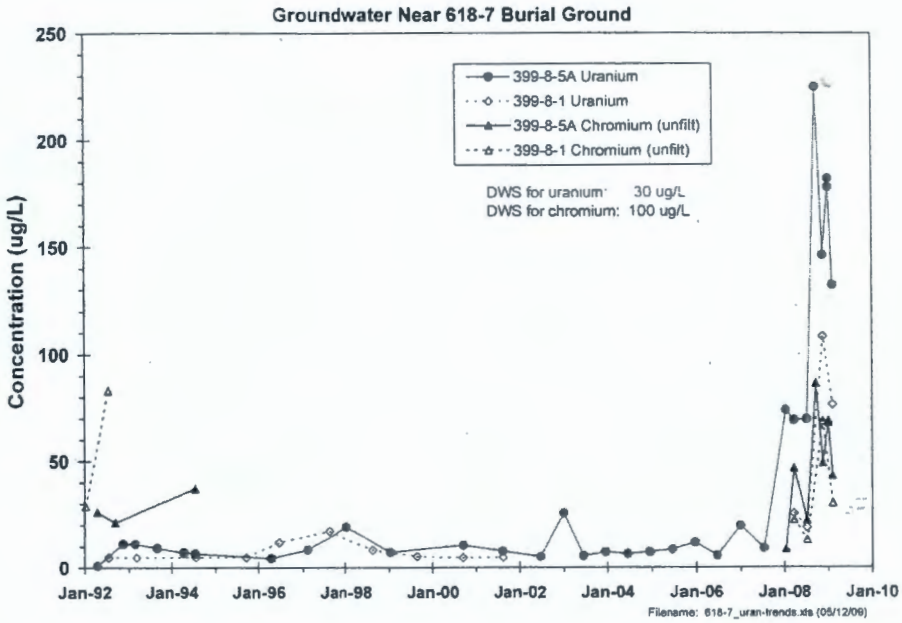
300-FF-5 Operable Unit—Jane Borghese/Bob Peterson (updated June 6, 2009)

(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
  - Internal contractor review of the draft work plan for the 300 Area Decision Unit is complete and the document is currently being revised, with delivery to DOE planned for June 26.

- Operations and Maintenance Plan Activities
  - *300 Area Subregion:* The most recent results are for samples collected during March 2009 and are within expectations. Most recent sampling occurred in mid-April.
  - *618-7 Burial Ground Special Sampling:* The most recent results are for samples collected in February 2009. No changes since the report for the May unit manager meeting, i.e., uranium, along with several other constituents (calcium, chloride, and chromium), remains elevated (see trend chart below that illustrates uranium and chromium trends). The most recent samples were collected in May 2009 (quarterly frequency).

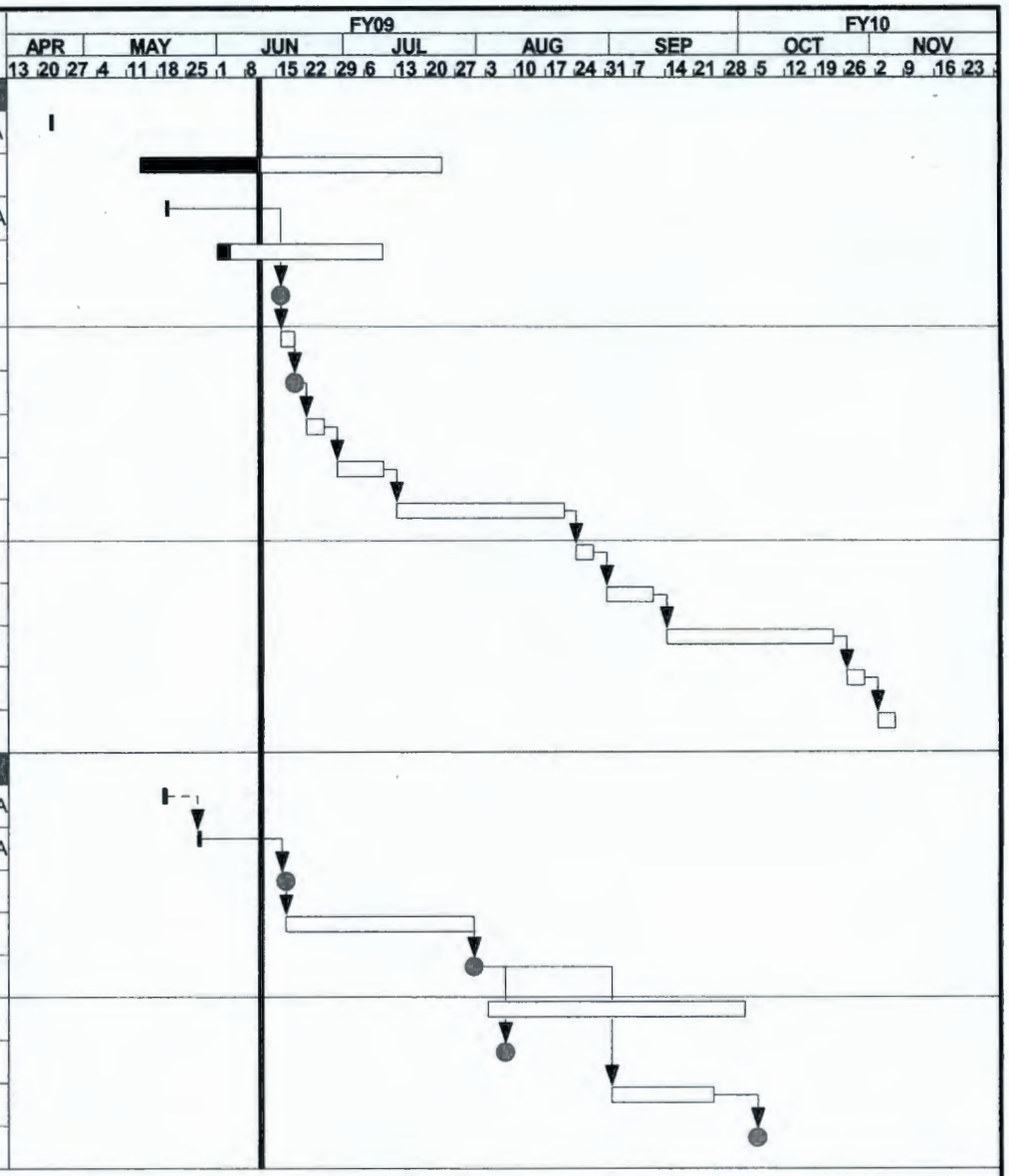


- *618-1 Burial Ground:* The most recent results are for samples collected in March 2009, with no evidence for impacts to groundwater because of activities at 618-1. The most recent sampling occurred in late May.
- *618-11 Burial Ground Subregion:* No new information to report since the May unit manager meeting. The most recent samples were collected in early April.
- *618-10 Burial Ground Subregion:* No new information to report since the May unit manager meeting. The most recent samples were collected in early May.

- Other Activities:
  - *Uranium Treatability Testing (polyphosphate technology):* Analysis of cores and samples collected during drilling at the 15 borehole locations associated with the infiltration test continues. Physical properties and electrical resistivity measurements are being made to characterize the vadose zone sediment. Each borehole has been completed as water table monitoring well.
  - *Integrated Field-Scale Research Challenge Project, 300 Area*: No new information to pass along on this project. Current 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

Activity ID	Activity Description	% Comp	Orig Dur	Early Start	Early Finish
Archeological					
1000	Issue RFP	100	3	23APR09A	23APR09A
1070	Cultural Review for 600-109	40	35	14MAY09A	23JUL09
1140	Prebid Meeting & Tour	100	7	20MAY09A	20MAY09A
1030	PSR	8	24	01JUN09A	09JUL09
1010	Bids Due	0	0		15JUN09
1150	Review Bids	0	3	16JUN09	18JUN09
1020	Issue Award	0	0		18JUN09
1040	Pre-Construction Meeting	0	4	22JUN09	25JUN09
1060	Mobilize	0	7	29JUN09	09JUL09
1080	600-202 Hand Excavation	0	24	13JUL09	20AUG09
1090	600-202 Mechanical Digging	0	4	24AUG09	27AUG09
1100	Remobilization	0	7	31AUG09	10SEP09
1110	600-109 Hand Excavation (optional work)	0	24	14SEP09	22OCT09
1120	600-109 Mechanical Digging (optional work)	0	4	26OCT09	29OCT09
1130	De-mobilization	0	4	02NOV09	05NOV09
Remediation					
10	Issue RFP	100	5	19MAY09A	19MAY09A
20	Prebid Meeting & Tour	100	11	27MAY09A	27MAY09A
30	Bids Due	0	0		16JUN09
100	Review Bids	0	25	17JUN09	30JUL09
40	Issue Award	0	0		30JUL09
80	PSR	0	35	03AUG09*	01OCT09
50	Pre-Construction Meeting	0	0		06AUG09
60	Mobilize	0	14	01SEP09	24SEP09
70	Start Remediation	0	0	05OCT09	



Start Date	29AUG05	Early Bar	
Finish Date	05NOV09	Progress Bar	
Data Date	11JUN09	Critical Activity	
Run Date	09JUN09 15:27		

© Primavera Systems, Inc.

FR90

IU-2/6 Excavation

2

Attachment 3

3

144990

^WCH Document Control

From: Saueressig, Daniel G
Sent: Wednesday, June 10, 2009 8:48 AM
To: ^WCH Document Control
Subject: FW: 128-D-2 & 100-D-7 staging piles

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

Thanks,

Dan Saueressig
FR Environmental Project Lead
420-6835

From: Vanni, Jean (ECY) [mailto:jeva461@ECY.WA.GOV]
Sent: Wednesday, May 27, 2009 11:22 AM
To: Laurenz, Julian E
Cc: Buckmaster, Mark A; Saueressig, Daniel G; Shea, Jacqueline; Jones, Mandy
Subject: 128-D-2 & 100-D-7 staging piles

Julian,

Ecology has reviewed WCH proposal for an additional staging pile area for the 128-D-2 & 100-D-7 sites. Ecology approves your suggested staging pile as previously identified on Civil Plot #0100D-DD-CO477. As stated in the Remedial Design Report/Remedial Action Work Plan for the 100 Area, DOE/RL-96-17, Rev 5, it is necessary for the staging pile to be operated in accordance with the substantive standards and design criteria prescribed in 40 CFR 264.554, paragraphs (d) thru (k). Also, It is Ecology's understanding that the staging pile will be subdivided in such a manner that wastes from the two sites will be segregated. With closure of the staging pile, all potential contaminants of concern and contaminants of concern for the contributing sites shall be carried forward into the cleanup verification sampling plan and the underlying areas sampled accordingly.

Please have this agreement captured in the 100/300 Area UMM minutes along with the civil drawing #0100D-DD-CO477.

Let me know if you have any questions. Thanks.

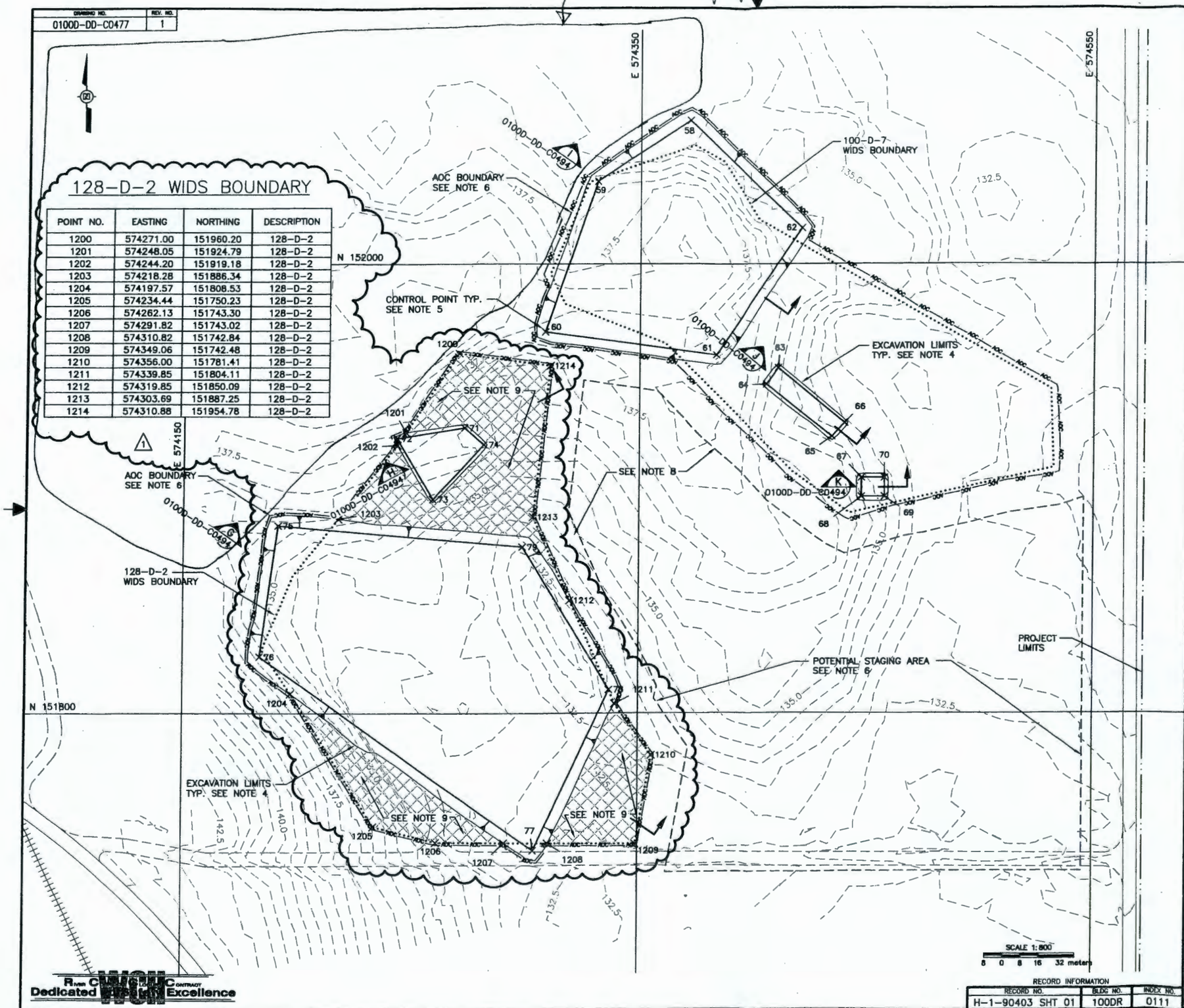
Jean

Thanks!

Jean Vanni-Environmental Specialist
Washington State Department of Ecology
Nuclear Waste Program-Clean Up Section
3100 Port of Benton Blvd, Richland
Phone 509-372-7930, Fax 372-7971

Potential Staging Area

DRAWING NO.	REV. NO.
0100D-DD-C0477	1



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

1. SEE DRAWING 0100D-DD-C0352 FOR GENERAL ABBREVIATIONS AND SYMBOLS LIST.
2. BENCHMARKS HAVE BEEN ESTABLISHED. SUBCONTRACTOR SHALL VERIFY CONTROL POINTS PRIOR TO COMMENCING WORK.
3. CONTOUR INTERVAL IS 0.5 METERS.
4. 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.
5. SEE DRAWING NO. 0100D-DD-C0490 FOR REMAINING SITES SURVEY CONTROL POINT COORDINATE DESIGN TABLES.
6. 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.
7. SUBCONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND PROTECTION OF ALL ABOVE AND BELOW GRADE INTERFERENCES INCLUDING WELLS, BENCHMARKS, AND EXISTING UTILITIES.
8. RUNON/RUNOFF CONTROL BERM, CONSTRUCT AS REQUIRED. SEE DETAIL ON DRAWING NO. 0100D-DD-C0385.
9. WIDS BOUNDARY FOR SITE 128-D-2 WILL BE SCRAPED 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. (1)

STACY B. CULLEN — STATE OF WASHINGTON — 33194 — PROFESSIONAL ENGINEER — 3-31-09

DOCUMENT CONTROL 04/13/09

MY STAMP AND SEAL APPLY TO THOSE CHANGES MADE IN REVISION(S) 1. THE ORIGINAL DESIGN WAS NOT PREPARED UNDER MY DIRECTION.

REV.	DATE	DESCRIPTION	DRAWN BY	DSGN/CHK	DSGN/CHK	CHK'D CHK	CHK'D CHK	APPR	APPR
1	4/1/09	ISSUED FOR CHANGE ORDER	GC	CAB	DAG	SWC	N/A	DFD	
0	6/24/08	ISSUED FOR CHANGE ORDER	GC	CAB	DAG	SWC	N/A	DFD	

SCALE AS SHOWN

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

RECORD INFORMATION

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

Dedicated WCH Excellence

Attachment 4

144817

^WCH Document Control

From: Saueressig, Daniel G
Sent: Wednesday, May 27, 2009 5:57 AM
To: ^WCH Document Control
Subject: FW: 628-3 site

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

Thanks,

Dan Saueressig
FR Environmental Project Lead
420-6835

From: Vanni, Jean (ECY) [mailto:jeva461@ECY.WA.GOV]
Sent: Tuesday, May 26, 2009 6:04 PM
To: Laurenz, Julian E
Cc: Saueressig, Daniel G; Buckmaster, Mark A; Shea, Jacqueline; Jones, Mandy; Vanni, Jean
Subject: 628-3 site

Julian,

Ecology has reviewed your proposal to reduce the depth of the design for the 628-3 Burn Pit and additional information provided in the RTD Report. Ecology supports your request with the caveat that WCH will chase any debris or contamination to greater depths or outside the WIDs boundary (identified in Figure 2) as necessary.

If you have any questions, let me know. Thank you.

Jean

Thanks!

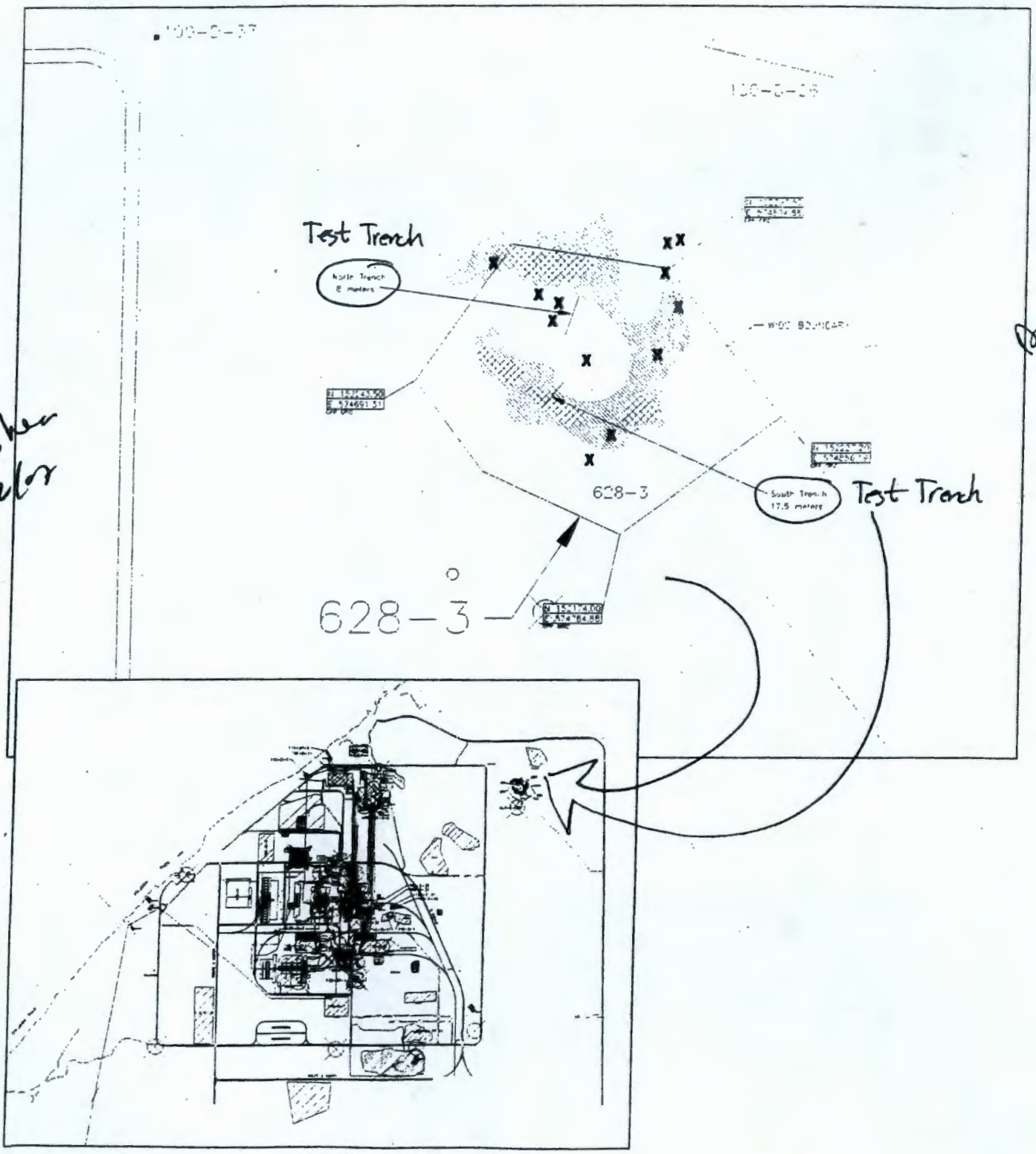
Jean Vanni-Environmental Specialist
Washington State Department of Ecology
Nuclear Waste Program-Clean Up Section
3100 Port of Benton Blvd, Richland
Phone 509-372-7930, Fax 372-7971

Logbook: EL-1607-2

Attachment 2

100 D Burial Grounds/Remaining Sites-Sampling (continued)

David W. Shea, WCH-AFS, DWShea		Date: 081607



DWShea 8/22/07

Shea 8/22/07

David W. Shea, WCH-AFS, DWShea
Read and understood by: JE Laurent, JEL

Date: 8/22/07
Date: 9/13/07
Continued on Page: NA

Signature Date Signature Date

Attachment 5

Attachment 6

(5)

144991

^WCH Document Control

From: Saueressig, Daniel G
Sent: Wednesday, June 10, 2009 8:57 AM
To: ^WCH Document Control
Subject: FW: 100-H Area Air Monitoring Plan

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

Thanks,

Dan Saueressig
FR Environmental Project Lead
420-6835

From: Vanni, Jean (ECY) [mailto:jeva461@ECY.WA.GOV]
Sent: Tuesday, June 02, 2009 1:38 PM
To: Saueressig, Daniel G
Cc: Price, John; Shea, Jacqueline; Jones, Mandy; Buckmaster, Mark A; Vanni, Jean; Post, Thomas C
Subject: 100-H Area Air Monitoring Plan

Dan,

Ecology supports WCH request to add additional sites (100-H-28:2, 100-H-4 and 126-H-2) to the 100-H Area AMP with the following caveat. Please revise the 100-H Area AMP to include the proposed sites and to reflect current operations as directed below.

- Revise Section 1.1 work scope to reflect current projects
- Revise Section 2.0 Airborne Source Information
- Revise Section 4.0 Air Monitoring"
- Maintain the BARCT and monitoring requirements of Sections 3.0 and 4.0

Let me know if you have any questions. Thank you.

Jean

Thanks!

Jean Vanni-Environmental Specialist
Washington State Department of Ecology
Nuclear Waste Program-Clean Up Section
3100 Port of Benton Blvd, Richland
Phone 509-372-7930, Fax 372-7971

(b)

Callison, Stacey W

From: Jones, Mandy (ECY) [mjon461@ECY.WA.GOV]
Sent: Tuesday, May 19, 2009 9:44 AM
To: Callison, Stacey W
Cc: Chance, Joanne C; Vanni, Jean; Wilkinson, Stephen G; Price, John; Shea, Jacqueline
Subject: Approval of 100-H remediation designs (126-H-2, 1607-H1, and 1607-H3)

Stacey,

This message is to document Ecology's approval of the remediation design for 126-H-2, 1607-H1 and 1607-H3 waste sites. In addition to this e-mail, the comments and responses for these three designs should be submitted into the record at the next 100 Area UMM, to document our approval.

Please let me know if you have any questions or concerns.

Thank you,

Mandy

Mandy Jones
Washington State Department of Ecology
Nuclear Waste Program - Clean Up Section
3100 Port of Benton Blvd, Richland
Phone - 372-7916, Cell - 531-2165, Fax - 372-7971

From: Callison, Stacey W [mailto:swcallis@wch-rcc.com]
Sent: Tue 5/19/2009 6:19 AM
To: Shea, Jacqueline (ECY)
Cc: Chance, Joanne C; Jones, Mandy (ECY); Vanni, Jean (ECY); Wilkinson, Stephen G
Subject: RE: 100-H remediation designs (126-H-2, 128-H-1, 1607-H1, and 1607-H3)

Jacqui -

I concur with the responses in your attachment below.

Stacey

From: Shea, Jacqueline (ECY) [mailto:jash461@ecy.wa.gov]
Sent: Monday, May 18, 2009 5:25 PM
To: Callison, Stacey W
Cc: Chance, Joanne C; Jones, Mandy; Price, John; Vanni, Jean
Subject: RE: 100-H remediation designs (126-H-2, 128-H-1, 1607-H1, and 1607-H3)

Stacey,

I cut and pasted your response below into the electronic file with our responses. We have accepted all the responses, so I think we are ready to approve the design for 126-H-1, 1607-H1, and 1607-H3. We will have additional comments on the revised design for 128-H-1, as noted in

our comment responses. Please let us know if you concur with the responses, then we will send an email documenting our approval. The design, comments & responses, and our approval can then be entered into the UMM minutes.

Thanks,
Jacqui
<<Design Briefing_126-H-2_128-H-1_1607-H1_3 response 050709_ECY Response.docx>>

From: Callison, Stacey W [mailto:swcallis@wch-rcc.com]
Sent: Thursday, May 14, 2009 2:56 PM
To: Shea, Jacqueline (ECY)
Subject: RE: 100-H remediation designs (126-H-2, 128-H-1, 1607-H1, and 1607-H3)

Jacqui -

As discussed today, attached are the revised comment responses. One response was changed and is copied below.

Stacey

> Response – The scattered transite in the area to the north of the WIDS boundary will be removed during the 128-H-1 remediation activity. The area with the following note will be added to the drawing – "Remove debris as directed by CONTRACTOR."

<< File: Design Briefing_126-H-2_128-H-1_1607-H1_3 response 051409.doc >>

From: Callison, Stacey W.
Sent: Thursday, May 07, 2009 7:25 AM
To: Shea, Jacqueline; Vanni, Jean; Jones, Mandy
Cc: Chance, Joanne C; Carlson, Richard A
Subject: 100-H remediation designs (126-H-2, 128-H-1, 1607-H1, and 1607-H3)

Jaqui -

Attached are responses to Ecology's comments for the remediation designs for the 126-H-2, 128-H-1, 1607-H1, and 1607-H3 sites.

I would also like to meet with Ecology late next week either late Wednesday (5-13-09) or Thursday (5-14-09) to brief the 600-151 and the 100-H-3 designs and to also brief modifications to the 128-H-1 design. Let me know if there is a good time on one of those days and if you have a preference for a meeting location and I'll schedule a time. Thanks.

Stacey

<< File: Design Briefing_126-H-2_128-H-1_1607-H1_3 response 050709.doc >>

From: Shea, Jacqueline (ECY) [mailto:jash461@ecy.wa.gov]
Sent: Monday, April 27, 2009 3:24 PM
To: Callison, Stacey W; Vanni, Jean; Jones, Mandy
Cc: Chance, Joanne C; Carlson, Richard A; Vanni, Jean; Jones, Mandy; Price, John
Subject: RE: 1607-H3 design

<< File: Design Briefing_126-H-2_128-H-1_1607-H1_3.doc >>
Stacey,

Please find our comments on the Remedial Design for 126-H-2, 128-H-1, 1607-H1, and 1607-H-3 attached. Please let me know if you have any questions.

Thanks,
Jacqui

From: Callison, Stacey W [mailto:swcallis@wch-rcc.com]
Sent: Wednesday, April 15, 2009 10:09 AM
To: Vanni, Jean (ECY); Shea, Jacqueline (ECY); Jones, Mandy (ECY)
Cc: Chance, Joanne C; Carlson, Richard A
Subject: 1607-H3 design

Jaqui, Jean, and Mandy -

Attached are the completed draft remediation design drawings for the 1607-H3 site. If you are in agreement, I'd like to include the 1607-H3 site as part of the design briefing that was done on Monday (4/13/2009) for the 126-H-2, 128-H-1, and 1607-H1 sites.

There will be additional design briefings for additional 100-H sites as the designs progress. This pieced approach for the design briefings is necessary in order to provide the 100-H remediation project with continued and timely work. I anticipate another briefing for the 600-151 site and possibly additional sites in a week to two weeks. I will let you know and schedule a time at a later date for additional briefings.

Thanks.

Stacey

<< File: 1HDC0206 (A).pdf >> << File: 1HDC0216 (A).pdf >>

Document Review: Drawings *0100H-DD-C0201, 0100H-DD-C0211, 0100H-DD-C0202, 0100-H-DD-C0212, 0100H-DD-C0204, 0100-H-DD-C0214, Exhibit "D" Remedial Action of the 100-H Area Burial Grounds and Remaining Sites and Field Support to 100-IU-6 Operable Unit During Archaeological Investigations*, and *Design Basis for Remediation of the 100-H Area Burial Grounds and Remaining Sites*
Reviewer: Jacqueline Shea, Jean Vanni, Mandy Jones
Date: April 27, 2009

General Comments:

1. This comment is notice from the lead regulatory agency (Ecology), per Remedial Design Report/Remedial Action Work Plan for the 100-Area (DOE/RL-96-17), Section 3.4.5, that approval of the remedial design for sites briefed on April 13 (126-H-2, 128-H-1, and 1607-H1) is warranted. Approval, comments, and comment responses can be documented at the 100-Area Unit Manager's Meeting.

Response – Concur.

2. Ecology has determined that approval of *Exhibit "D" Remedial Action of the 100-H Area Burial Grounds and Remaining Sites and Field Support to 100-IU-6 Operable Unit During Archaeological Investigations* is not warranted, since this document provides little information on the design for these sites, and rather provides direction from the contractor to the subcontractor.

Response – Concur.

3. From review of *Design Basis for Remediation of the 100-H Area Burial Grounds and Remaining Sites* it is determined that this document contains little information on the scope of remedial design of these sites, but rather contains a description of the sites. Ecology has previously expressed that it is problematic to approve a remedial design based on drawings alone, since drawings are subject to interpretation. Therefore, it is recommended that these comments and comment responses be attached to 100-Area Unit Manager Meeting minutes for a record of any agreements or clarifications that are not provided by the reviewed drawings.

Response – Concur.

Specific Comments:

1. **126-H-2 Clearwells Drawings, 0100H-DD-C0201 and 0100H-DD-C0211:**

- It is understood from the design briefings on March 4 and April 13, 2009, that the scope of remediation will include the debris in the east clearwell, excluding the west clearwells and the concrete floor. As previously indicated by Ecology (email from J. Shea to S. Callison, dated March 9, 2009) it will be necessary to include the east and west clearwells in the verification sampling strategy. It is currently presumed that sodium dichromate was added to the treatment system after the clearwells; however, this assumption requires verification. Ecology notes that the WIDS site includes the east and west portions of the clearwells.

Response – Concur. If the underlying structure beneath the 126-H-2 disposed debris site meets remedial action goals it may be appropriate to make the analogy that the intact west clearwell also meets remedial action goals. The verification strategy will be the subject of the 126-H-2 verification work instruction review and approval.

ECY Response: When the time comes, Ecology will review and comment on the verification sampling strategy. Comment closed.

- The geophysical survey map and surface features map included in CCN 124815 shows metal/mixed debris and concentrated geophysical anomalies in areas other than the eastern clearwells. Please state the disposition of this debris.

Response – The geophysical survey map shows pipelines associated with other known pipeline sites (e.g. 100-H-28:2, 100-H-28:3, 100-H-28:5, and 100-H-28:7). It also shows the subsurface remnants of the 183-H Filter Plant foundation to the north of the 126-H-2 clearwells. With the exceptions of the 116-H-6/100-H-33 portions of the 183-H Filter Plant, the former location of the 183-H Filter Plant has currently been determined to not warrant waste site status. The other miscellaneous surface debris is generally considered minimal, associated with well installation activities, degrading asphalt roadways, and the former 183-H Filter Building and is not anticipated to pose a threat to human health or the environment. Much of the surrounding debris will likely be excavated during remediation of some of the pipeline sites referenced above. The current 126-H-2 remediation scope is the removal of the waste disposed of into the clearwell.

ECY Response: Accept; however, upon completion of the removal of the waste from the clearwell, Ecology would like to tour the site to assess the remaining debris. Comment closed.

2. **128-H-1 Burn Pit, Drawings 0100H-DD-C0202 and 0100H-DD-C0212:**

- The drawings indicate an excavation depth of 10 ft in the northern portion of the site and an excavation depth of 1 ft in the southern portion of the site. As a first step, Ecology concurs with the strategy for the 10 ft excavation of the northern portion and 1 ft excavation of the southern portion. However, the geophysical investigation shown in CCN 126369 shows concentrated anomalies extending beyond the northern boundary of the site and within the southern portion of the site. If the 1 ft excavation in the southern portion does not reveal these anomalies, it is expected that additional excavation will be performed for purposes of characterization in consultation with Ecology. Similarly, for the anomalies that extend beyond the northern boundary.

Response – Concur. Note because of the large potential volumes and large potential costs associated, there are additional changes to the remediation strategy for the large lateral area of the 128-H-1 site. Ecology will be briefed on the modified 128-H-1 remediation design and strategy. The 128-H-1 site will be appropriately remediated.

ECY Response: Ecology will submit comments on the revised design as necessary.

- The drawing shows an area labeled as "characterization area" along the eastern boundary of the site. Please indicate the characterization that will be performed in this portion of the site. (Note: Email to Shea from S. Callison dated 4/7/09, indicated test pitting in the gravel road area along the east boundary of the site would be performed to determine the presence or absence of waste requiring remediation. Number of test pits and sampling of test pits if necessary, would be determined at the time of site remediation in consult with Ecology.)

Response – Currently, the anticipated number of test pits in the road area is 2. The Characterization Area will have the following note added - "Area requiring test pit characterization (number, location, and depth to be determined)." We feel that it is premature to definitively identify the number and location of test pits. The number of test pits, their locations, depths, and potential sampling is better determined during remediation of the site based on wastes encountered, location of wastes, and contaminants encountered during remediation. Ecology will be consulted by field personnel during remediation or during the verification work instruction process to gain concurrence for the number of test pits, locations, depths, and potential sampling.

ECY Response: Accept. Comment closed.

- The surface features map in CCN 126369 shows scattered transite in an area just north of the WIDS boundary. Please indicate the path forward for the disposition of this debris.

Response – The scattered transite in the area to the north of the WIDS boundary will be removed during the 128-H-1 remediation activity. The area with the following note will be added to the drawing – "Remove debris as directed by CONTRACTOR."

ECY Response: Accept, comment closed.

- The geophysical survey showed several interpreted pipelines crossing through the WIDS boundary (i.e. a north-south linear parallel to the west boundary, a north-south linear parallel to the east boundary, and an east-west linear just south and parallel to the southern boundary). Please indicate the path forward for these pipelines.

Response – There is the potential that these linear features are pipelines, however they have not been located on historical drawings. These features are currently not anticipated to be pipelines. These features will be excavated and if determined to be waste requiring remediation, removed and disposed of.

ECY Response: Accept, comment closed.

3. **1607-H1 Septic System, Drawings 0100H-DD-C0204 and 0100H-DD-C0214:** The drawing shows that the manhole, piping to the tank, septic tank, piping to the drain field, and the drain field will be removed. It was stated in the design briefing that the piping leading to the tank (100-H-28:4) will be included in a later design.

- As discussed in the briefing, the cross-sections for the 1607-H1 Septic System (Drawing 0100-H-DD-C0214) should be revised to remove the contaminated soil zone shown on the far side-slope of the drain field.

Response – Concur. The drawings have been revised as indicated in the comment.
ECY Response: Accept, comment closed.

- In addition to the removal of the above items, removal of the fly ash should be considered for this site.

Response – Concur. The following note will be added to the drawing – "Fly ash encountered during excavation shall be stockpiled separately until its disposition (i.e. ACL or BCL) has been determined by the CONTRACTOR."

ECY Response: Accept, comment closed.

- Drawing 0100H-DD-C0214 shows that a portion (~8 ft) of the soils overlying the drain field will be presumed to be clean soil. Ecology requests that the drain field soils are removed in two lifts to form two separate overburden piles representing different depths within the excavation. These piles should be considered different decision units for purposes of verification sampling.

Response – Agreed. The drawing will be revised to indicate the two lift strategy. The following note will be added to the drawing – "Soil from BCL1 and BCL2 areas shall be stockpiled separately." The separate BCL pile decision units will be included in the verification work instruction.

ECY Response: Accept, comment closed.

4. **1607-H3 Septic System. Drawings 0100H-DD-C0206 and 0100H-DD-C0216:** From the design briefing, it is understood that the influent pipeline will be removed all the way to the buildings of origin. In addition, manholes, the septic tank, and drain field will be removed. In the briefing it was stated that since it is a shallow excavation, all the drain field soil would be removed to ERDF. However, drawing 0100H-DD-C0216 shows that some soil overlying the drain field will be considered clean soil. From cross section "Q", given the shallower depth of the drain field compared to 1607-H1, it is not clear that any of the soil should be considered to be clean.

Response – There is nearly 2 m of soil overlying the effluent pipe exiting the septic tank that is anticipated to be clean or BCL. The overlying soil is anticipated to taper to a shallower thickness of approximately 0.6 m to 1 m over the drainfield. Depending on the actual depth of the drainfield encountered during remediation, we would like the option of potentially stockpiling the soil overlying the drainfield as BCL. The BCL pile would be included in a verification work instruction for the site, sampled and confirmed as BCL. We do agree that if the overlying soil is generally 0.6 m or less that it does not make sense to attempt to segregate the overlying soil as BCL.

ECY Response: Accept. As stated, sampling of the overlying soils will need to be included in the verification sampling strategy. Comment closed.

Attachment 7

(7)

100 Area D4/ISS Status
June 11, 2009

100/300 Area Combined Unit Manager Meeting

Completed / On-going Activities

- 107N demolition preparations
- Shipped second of two Sand Filter Tanks from 107N to ERDF
- Preparing to remove lower portion of Backwash Settling Vessel (Tank T-1) from 107N and place into shield box for transport to ERDF
- Demolished above-grade portion of the 1310N Golf Ball Facility

WM Dickson Subcontractor Activities

- Size reduction and waste load out of debris from the above-, and below-grade demolition of 109N continues
- Below-grade excavation to, and demolition of equipment and piping located at and below the minus 16-foot level on the south and east sides of 109N

Proposed work through 7/30/09

- Continue below-grade demolition of 109N
- Continue asbestos abatement in 182N
- Continue preparations for removal of T-1 from 107N
- Begin demolition of 107N
- Size reduce and load out demo debris from 1310N Golf Ball Facility
- Begin preparatory activities at the 105NE Fission Product Trap

Agreements

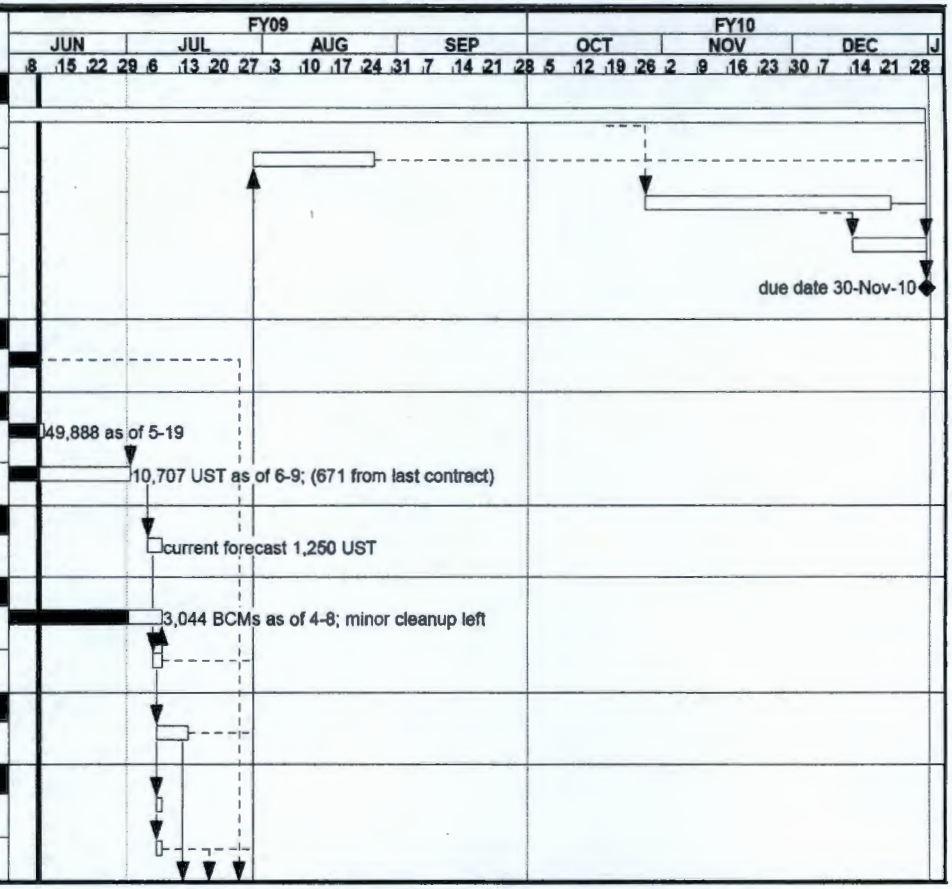
- N/A

Attachment 8

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
100BC					
BCCLOSUR	Closure Documents 100-BC sites	10	110	25MAR09A	30DEC09
BCDEMOB	100-BC Demobilization	0	16	30JUL09	26AUG09
BCBKFL	Backfill 100-BC sites	0	30	28OCT09	22DEC09
BCREVEG	Reveg 100-BC sites	0	9	14DEC09	30DEC09
C8100C713	TPA M-16-94 Comp IRA 100 B/C	0	0		30DEC09
100-B-17 Waste Site					
LO100B17A	Loadout 100-B-17 (1 UST)	100	0	03JUN09A	09JUN09A
100-B-27 Waste Site					
EXB27D10	Excavation 100-B-27 (15,000 BCMs orig design)	99	1	26FEB09A	11JUN09
LOB27A10	Loadout 100-B-27 (10,000 UST orig, 24,183 frcst)	53	12	18MAY09A	01JUL09
100-B-19 Waste Site					
LOB19E	100-B-19 Add'l loadout due to failed samples	0	3	06JUL09	08JUL09
100-B-28 Waste Site					
BB522A4	100-B-28 Excavation (14,429 BCMs orig design)	95	6	05FEB09A	08JUL09
BB522B4	100-B-28 Loadout (1,924 UST orig design)	0	2	07JUL09	08JUL09
100-B-31					
BC515B	100-B-31 Loadout	0	4	08JUL09	14JUL09
100-B-32					
BB523A	100-B-32 Excavation	0	1	08JUL09*	08JUL09
BB523B	100-B-32 Loadout	0	1	08JUL09	08JUL09



ACTIVITIES / ACTIONS SUPPORTING SCHEDULE

- None

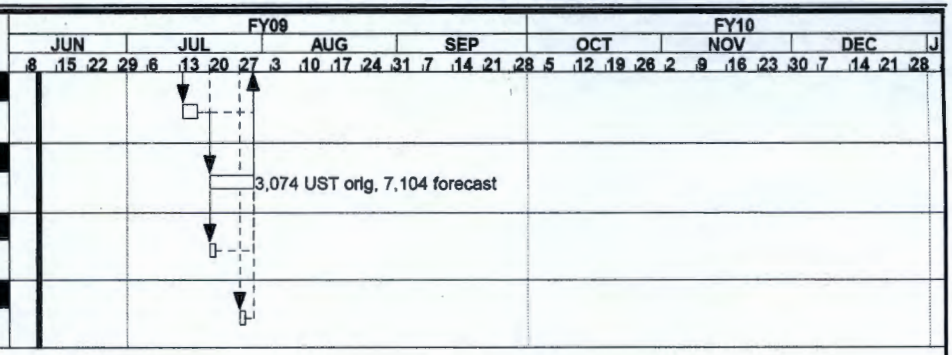
ISSUE / CONCERNS

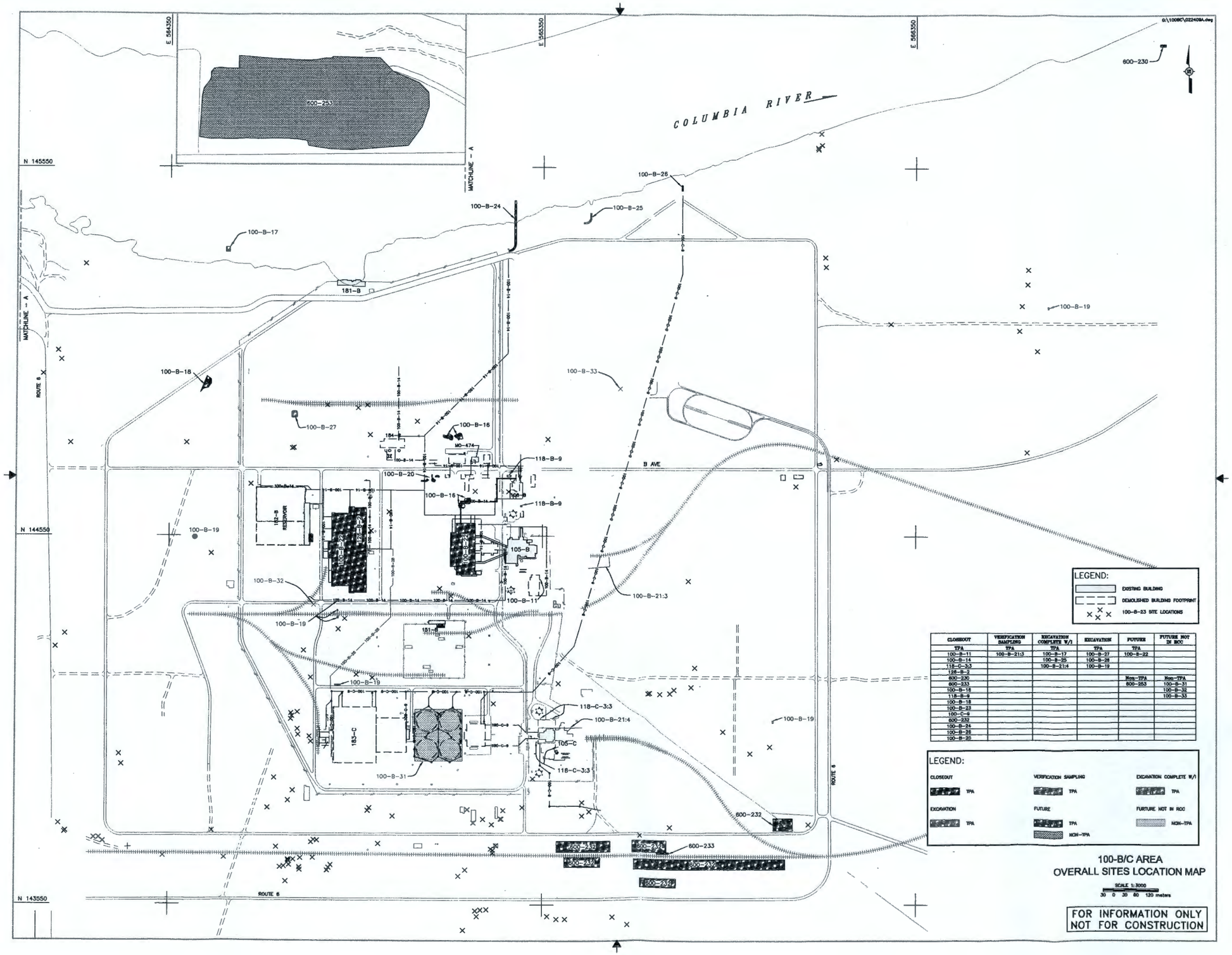
- Based on sample data from 100-B-27, 300 BCMs of material will need to be excavated.

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
100-B-21 Waste Site					
LOB21C	Loadout 100-B-21:4 (221 UST) CDD	0	3	14JUL09	16JUL09
100-B-25 Waste Site					
BB521B	100-B-25 Loadout (3,074 UST orig design)	0	7	20JUL09	29JUL09
100-B-33					
BB524B	100-B-33 Loadout	0	1	20JUL09	20JUL09
100-B-22 Waste Site					
LOB22A	Loadout 100-B-22:2 (230 UST)	0	1	27JUL09	27JUL09





CLOSEOUT	VERIFICATION SAMPLING	EXCAVATION COMPLETE W/I	EXCAVATION	FUTURE	FUTURE NOT IN ROC
TPA	TPA	TPA	TPA	TPA	
100-B-11	100-B-21:3	100-B-17	100-B-27	100-B-22	
100-B-14		100-B-25	100-B-28		
118-C-3:3		100-B-21:4	100-B-19		
118-B-9					
600-230				Non-TPA	Non-TPA
600-233				600-253	100-B-31
100-B-18					100-B-32
118-B-9					100-B-33
100-B-18					
100-B-23					
100-C-4					
600-232					
100-B-24					
100-B-26					
100-B-20					

Attachment 9

Approval to Treat the 100-B-28 Chromium Contaminated Soil in Accordance with the "TREATMENT PLAN AND PROTOCOL FOR TREATMENT OF CHROMIUM-CONTAMINATED SOILS, WCH-284, Rev. 1"

This approval applies to the approximately 100 tons of chromium contaminated soil from the 100-B-28 waste site as described under waste profile WP100B28003. The waste matrix consists of chromium contaminated soil. Sample# J18LR4 had a high of 130 mg/L TCLP chromium.

The waste is similar to the material treated in *"TREATMENT PLAN AND PROTOCOL FOR TREATMENT OF CHROMIUM-CONTAMINATED SOILS, WCH-284, Rev. 1"*.

This approval allows treatment of this waste using the recipe described in Table 1, *Bench-Scale Test Results for the 100-D-56 Site* of the treatment plan under Mixture 2, which limits the TCLP chromium to 278 mg/L.

Laura Buelow — 5/28/09

Laura Buelow — **Date**
U.S. Environmental Protection Agency

Tom Post — 5/28/2009

Tom Post — **Date**
U.S. Department of Energy

Approval to Treat the 100-B-28 Chromium Contaminated Soil in Accordance with the "TREATMENT PLAN AND PROTOCOL FOR TREATMENT OF CHROMIUM-CONTAMINATED SOILS, WCH-284, Rev. 1"

This approval applies to the chromium contaminated soil/absorbent from the 100-B-28 waste site as described under waste profile WP100B28003. The waste matrix consists of chromium contaminated soil. Sample# J18LR6 had a high of 990 mg/L TCLP chromium.

The waste is similar to the material treated in *"TREATMENT PLAN AND PROTOCOL FOR TREATMENT OF CHROMIUM-CONTAMINATED SOILS, WCH-284, Rev. 1".*

This approval allows treatment of this waste using the recipe described in Table 1, *Bench-Scale Test Results for the 100-D-56 Site* of the treatment plan under Mixture 2, which limits the TCLP chromium to 278 mg/L. Although Mixture 2 limits the TCLP chromium to 278 mg/L, WCH-284 demonstrates that Mixture 2 provides treatment with a reduction factor over 100:1, which would provide compliant treatment of this waste. This approval applies only to the material contained in 2 drums (PINs 100B-09-0047 and 100B-09-0058) which will be treated with other chromium contaminated soil from 100-B-28.

Laura Buelow
U.S. Environmental Protection Agency

6/8/09
Date

John Neath
U.S. Department of Energy

6/8/09
Date

Attachment 10

APPROVAL PAGE

Title: Air Monitoring Plan for Nonintrusive Characterization of the 618-10 and 618-11 Burial Grounds, dated May 2009

Approval:

DC Smith
U.S. Department of Energy
Richland Operations Office

Signature _____ Date 5/18/09

DR Einan
U.S. Environmental Protection Agency

Signature _____ Date 20 May 09

AIR MONITORING PLAN FOR NONINTRUSIVE CHARACTERIZATION OF THE 618-10 and 618-11 BURIAL GROUNDS
May 2009

1.0 INTRODUCTION

Nonintrusive characterization of the 618-10 and 618-11 Burial Grounds has the potential to emit radioactive particulates. This activity is being conducted under the *Comprehensive Environmental Response, Compensation, and Liability Act* of 1980 (CERCLA), the associated *Remedial Design Report/Remedial Action Work Plan for the 300 Area* (DOE/RL-2001-47, Rev. 1), and *Sampling and Analysis Plan for 618-10 and 618-11 Nonintrusive Sampling* (DOE/RL 2008-27). Implementing best available radionuclide control technology (BARCT) and air monitoring have been identified as substantive requirements (i.e., applicable or relevant and appropriate requirements) for the remedial action. These substantive requirements are according to *Washington Administrative Code* (WAC) 246-247-040. This plan presents compliance with those requirements.

The 618-10 Burial Ground consists of 12 trenches and 94 vertical pipe units (VPUs). The trenches range in size from 320 ft (97 m) long by 70 ft (21 m) wide by 25 ft (7.6 m) deep to 50 ft (15 m) long by 40 ft (12m) wide by 25 ft (7.6 m) deep. The VPUs are 22-in. (65-cm) diameter, 15-ft (4.6-m) long waste receptacles constructed by welding five 55-gallon bottomless drums together end-to-end and burying them vertically. The 610-10 burial ground was covered in soil when it was closed.

The 618-11 Burial Ground consists of 3 slope-sided trenches, 3 to 5 large caissons, and 50 VPUs. The trenches are 270 m (900 ft) long by 15 m (50 ft) wide and 7.6 m (25 ft) deep. The VPUs were constructed with five 209 L (55 gal) bottomless drums, like those in the 618-10 burial ground. The caissons were constructed of 2.4 m (8 ft-) diameter corrugated metal pipe, 3 m (10 ft) long, with the top of the caisson being 4.6 m (15 ft) below grade, and connected to the surface by an offset 91 cm (36 in.-) diameter pipe with a dome cap lid. These units were buried with about 4.6 m (15 ft) of space between them. The caissons are also open to the soil at the bottom. The number of caissons (three to five) is questionable due to contradictions in site documentation. The burial ground received a minimum of 0.6 m (2 ft) of soil when it was closed. This was in addition to the soil cover used to close the trenches. An additional 0.6 m (2 ft) of topsoil was added to the site for surface stabilization in 1983.

1.1 PLANNED ACTIVITIES

The planned activities associated with nonintrusive characterization of 618-10 and 618-11 include geophysical delineation, in situ radionuclide characterization using a multidetector probe (MDP) assembly, and soil sampling from **adjacent to and below** select vertical pipe units (VPUs). (NOTE: no soil/waste samples will be taken from the trenches). For the purposes of this plan, the term "nonintrusive" is meant to indicate that the VPUs, caissons, and trenches will

not be opened or exposed in a manner in which the contents of these features will be accessible to personnel or the surface environment.

1.1.1 Geophysical Surveys

The first step in performing characterization activities within the 618-10 and 618-11 Burial Grounds will consist of performing geophysical surveys to delineate the VPUs and caissons so direct-push probe points can be located as close to the perimeter of the VPU units as possible. Geophysical surveys have already been completed for the trenches. Geophysical surveys are a surface activity that **does not** involve disturbing the burial ground.

1.1.2 Direct-push Probe Installation of Multidector Probes

Direct-push probe points are to be installed at the perimeter of the VPUs and lengthwise along the centerline of the trenches. These probe points will be used to access the subsurface of the 618-10 and 618-11 Burial Grounds with a MDP to collect in situ radiological characterization data from the burial ground structures.

The probe points are to be installed using a direct-push method. Unlike conventional drilling methods, direct-push methods allow for the installation of probe rods without having to drill and remove soil to make a path for the rods. Each probe point will consist of a string of threaded rods that will be driven or pushed into the ground using truck-mounted equipment. A conical shaped steel tip will be threaded onto the down-hole end of the rod string to help facilitate the advancement of and seal the down-hole end of the rods. The probe rods will accommodate the MDP logging tool.

The probing rods are advanced by fitting a conical tip to the down-hole end of the initial rod(s) and a drive cap to the upper end of the rod string. The initial rod is positioned beneath the drive head of the probe equipment, checked to verify that it is plumb, and pushed into the ground using the drive head until another section of rod must be added to advance the string further.

During the installation of the probe points it is possible that obstructions will prevent the advancement of the rods to the target depths (refusal). Should the operator encounter refusal, the project engineer will determine if the depth achieved at refusal is acceptable or if the probe point needs to be repositioned to achieve the desired depth.

The upper end of the rods will be temporarily sealed. The probe points will remain in place until further characterization or remediation activities take place.

1.1.3 VPU and Caisson Soil Sampling

Sampling of soils will be performed outside of and beneath the VPUs and caissons. This sampling is expected to provide indications of plumes and some characterization data. A separate rod will be pushed outside of approximately 15 (but potentially up to 40) VPUs. The total volume of soil removed as samples will be <0.5 cubic meters. Two soil samples using separate rods will be collected for each caisson with a total volume of soil removed <0.2 cubic meters.

The direct-push sampling tool consists primarily of a sample barrel that is lined with a removable plastic liner. The down-hole end of the barrel is fitted with a removable tip and cutting shoe and the upper end of the tool is attached to the direct-push rods. The tool will be pushed to the top of the desired sampling interval; the tip will be pulled to open the cutting shoe; the sample barrel installed; and the sampling tool advanced to fill the sampling barrel. The direct-push equipment operator will use care not to overdrive the device. The sample material recovered in the barrel is then removed from the cased hole and cut open to containerize the sample media. If an insufficient quantity of material is obtained for the analysis required, a new liner is placed in the sample barrel and the process is repeated.

Sample material and equipment removed from the direct-push hole will be contained using plastic sleeving. Initial sample handling and processing will be performed in a table-mounted glovebag following the radiological controls established by the project radiological engineer. Final sample handling and processing may be performed outside the glovebag if the radiological engineer determines that glovebag containment is not necessary based on field instrument readings. Glovebags will be exhausted using a HEPA filtered vacuum.

After soil sampling activities are complete, the rods will be filled with bentonite, capped at the surface and left in place. The drive rod for the removable tip and core sample, the glove bag, PPE, and excess soil from sampling will be placed in barrels and transported to the Environmental Restoration Disposal Facility for disposal.

2.0 AIRBORNE SOURCE INFORMATION

Significant radiological inventory exists within the burial ground trenches, caissons, and the VPUs. Geophysical surveying and direct- push probe installation will not result in a potential to emit radionuclides. Soil sampling from under the VPUs and caissons does have the potential to emit radionuclides. However, the sampling will not occur from within the VPUs and caissons, and the sample volume will be very small (<0.7 cubic meters total). As such, the potential dose to a maximally exposed individual (MEI) is anticipated to be insignificant, several order of magnitude below 0.1 mrem/year. Because of the insignificant amount of potentially contaminated material that may be handled and brought to the surface during characterization activities, no TEDE calculation was prepared.

3.0 BEST AVAILABLE RADIONUCLIDE CONTROL TECHNOLOGY

As noted in previous sections, the direct-push technology eliminates that need to drill/remove soil in order to access the trenches and the area next to the VPUs and caissons. Only a very small volume of soil will be removed from the areas adjacent to some of the VPUs and the caissons. The sample material and equipment removed from the direct-push hole will be contained in plastic sleeving. The sample material may be handled in a glovebag as deemed necessary based on radiological surveys and the judgement of the radiological control engineer. The glovebag will be exhausted using a HEPA filtered vacuum or exhauster. The direct push rods will be capped and left in place.

3.1 HEPA FILTERS

The use of HEPA filters has been generally accepted as BARCT. HEPA filters shall have efficiency testing performed upon installation and on an annual basis thereafter and must be demonstrated to 99.95% removal efficiency.

4.0 MONITORING

The potential emissions from the 618-10 and 618-11 characterization activities are anticipated to be negligible due to the small volumes of contaminated material being brought to the surface and the handling methods that will be employed. Therefore, no ambient air monitoring is proposed for this activity.

Exhaust points from HEPA filters (and any ductwork, seams, or other potential release locations from enclosures) will be monitored on a routine basis for potential radionuclide releases and results recorded (e.g., post survey results negative). Any positive survey results will require appropriate maintenance on the facility, exhauster, or vacuum to ensure that continued releases do not occur. Records of routine monitoring and necessary maintenance will be provided to EPA staff upon request. EPA will be informed in a timely manner of any abnormal radiological conditions.

5.0 REFERENCES

Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 601, et seq.

DOE/RL, 2004, *Remedial Design Report/Remedial Action Work Plan for the 300 Area,* DOE/RL-2001-47, Rev. 1, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL, 2008, *Sampling and Analysis Plan for 618-10 and 618-11 Nonintrusive Sampling,* DOE/RL-2008-27, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

WAC 246-247-040, "Radiation Protection-Air Emissions," *Washington Administrative Code,* as amended.

3.1 HEPA FILTERS

The use of HEPA filters has been generally accepted as BARCT. HEPA filters shall have efficiency testing performed upon installation and on an annual basis thereafter and must be demonstrated to 99.95% removal efficiency.

4.0 MONITORING

The potential emissions from the 618-10 and 618-11 characterization activities are anticipated to be negligible due to the small volumes of contaminated material being brought to the surface and the handling methods that will be employed. Therefore, no ambient air monitoring is proposed for this activity.

Exhaust points from HEPA filters (and any ductwork, seams, or other potential release locations from enclosures) will be monitored on a routine basis for potential radionuclide releases and results recorded (e.g., post survey results negative). Any positive survey results will require appropriate maintenance on the facility, exhauster, or vacuum to ensure that continued releases do not occur. Records of routine monitoring and necessary maintenance will be provided to EPA staff upon request. EPA will be informed in a timely manner of any abnormal radiological conditions.

5.0 REFERENCES

Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 601, et seq.

DOE/RL, 2004, *Remedial Design Report/Remedial Action Work Plan for the 300 Area,* DOE/RL-2001-47, Rev. 1, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL, 2008, *Sampling and Analysis Plan for 618-10 and 618-11 Nonintrusive Sampling,* DOE/RL-2008-27, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

WAC 246-247-040, "Radiation Protection-Air Emissions," *Washington Administrative Code,* as amended.

Attachment 11

Mission Completion
Sample Design and Cleanup Verification
June 2009 UMM

AREA	DOE-RL/REGULATOR DELIVERABLE	START	FINISH
100-B/C Area			
	RL/Regulator Review Draft A WI for 100-B-25	6/23/2009	8/6/2009
	RL/Regulator Sign Rev. 0 WI for 100-B-25	8/24/2009	8/31/2009
	RL/Regulator Review Draft A WI for 100-B-19	7/28/2009	9/10/2009
	RL/Regulator Review Draft A WI for 100-B-22:2	8/5/2009	9/18/2009
	RL/Regulator Review Draft A WI for 100-B-27	8/11/2009	9/24/2009
100-D Area			
	Regulator Sign Rev. 0 WI for 100-D-31:1&2	1/21/2009 (A)	6/25/2009
	RL/Regulator Review Draft A WI for 116-DR-10	5/13/2009 (A)	6/26/2009
	RL/Regulator Sign Rev. 0 WI for 116-DR-10	7/14/2009	7/21/2009
	Regulator Sign Rev. 0 WI for 116-D-10	5/20/2009 (A)	6/11/2009
	RL/Regulator Review Draft A Closure Document for 100-D-61	6/1/2009 (A)	7/15/2009
	RL/Regulator Sign Rev. 0 Closure Document for 100-D-61	8/10/2009	8/17/2009
	RL/Regulator Rev. Draft A Closure Document for 100-D-31:5	6/1/2009 (A)	7/15/2009
	RL/Regulator Sign Rev. 0 Closure Document for 100-D-31:5	8/10/2009	8/17/2009
	RL/Regulator Review Draft A WI for 100-D-15	6/9/2009	7/23/2009
	RL/Regulator Sign Rev. 0 WI for 100-D-15	8/10/2009	8/13/2009
	RL/Regulator Sign Rev. 0 Closure Document for 120-D-2	6/15/2009	6/22/2009
	RL/Regulator Sign Rev. 0 Closure Document for 100-D-31:6	6/15/2009	6/22/2009
	RL/Regulator Review Draft A Closure Document for 100-D-32	6/16/2009	7/30/2009
	RL/Regulator Sign Rev. 0 Closure Document for 100-D-32	8/24/2009	8/31/2009
	RL/Regulator Sign Rev. 0 WI for 600-30	6/29/2009	7/7/2009
	RL/Regulator Review Draft A WI for 100-D-1	7/1/2009	8/14/2009
	RL/Regulator Sign Rev. 0 WI for 100-D-1	8/31/2009	9/3/2009
	RL/Regulator Review of Draft A WI for 100-D-63	7/6/2009	8/19/2009
	RL/Regulator Sign Rev. 0 WI for 100-D-63	9/3/2009	9/14/2009
	RL/Regulator Review Draft A WI for 116-D-5	7/7/2009	8/20/2009
	RL/Regulator Sign Rev. 0 WI for 116-D-5	9/3/2009	9/14/2009
	RL/Regulator Review Draft A Closure Document for 100-D-47	7/8/2009	8/20/2009
	RL/Regulator Review Draft A WI for 628-3	7/28/2009	9/10/2009
	RL/Regulator Review Draft A Closure Document for 100-D-42	8/3/2009	9/16/2009
	RL/Regulator Review Draft A Closure Document for 100-D-45	8/3/2009	9/16/2009
	RL/Regulator Review Draft A Closure Document for100-D-43	8/3/2009	9/16/2009
	RL/Regulator Review Draft A WI for 116-DR-5	8/5/2009	9/18/2009
	RL/Regulator Review Draft A Closure Document for 1607-D-2:2	8/10/2009	9/23/2009
	RL/Regulator Review Draft A Closure Document for 118-D-4	8/13/2009	9/26/2009
	RL/Regulator Review Draft A WI for 118-D-6:4	8/18/2009	10/1/2009
	RL/Regulator Review Draft A WI for 100-D-31:7	8/24/2009	10/7/2009
	RL/Regulator Review Draft A WI for 100-D-31:8	8/24/2009	10/7/2009
	RL/Regulator Review Draft A WI for 100-D-31:3/4	8/24/2009	10/7/2009
	RL/Regulator Review Draft A Closure Document for 116-DR-8	9/8/2009	10/22/2009
100-F Area			
	RL/Regulator Review Draft A Phase 2 100-F-53 Closure Document	6/22/2009	8/5/2009
	Finalize Rev. 0 Ph 2 100-F-53 Clos Doc	8/27/2009	9/3/2009
100-H Area			
	RL/Regulator Review Draft A WI for 116-H-9	5/18/2009 (A)	6/30/2009
	RL/Regulator Sign Rev. 0 WI for 116-H-9	7/20/2009	7/27/2009
	RL/Regulator Review Draft A WI for 100-H-55	5/28/2009 (A)	7/11/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-55	7/27/2009	8/3/2009
	RL/Regulator Sign Rev. 0 100-H-8 Closure Document	6/15/2009	6/22/2009
	RL/Regulator Sign Rev. 0 Closure Document for 100-H-28:1	6/15/2009	6/22/2009
	RL/Regulator Sign Rev. 0 Closure Document for 100-H-28:6	6/15/2009	6/22/2009
	RL/Regulator Sign Rev. 0 100-H-7 Closure Document	6/15/2009	6/22/2009
	RL/Regulator Review Draft A WI for 100-H-47	6/15/2009	7/29/2009

All Data is Based on FY09/10 CPP with May 2009 Month End Status

Mission Completion
Sample Design and Cleanup Verification
June 2009 UMM

AREA	DOE-RL/REGULATOR DELIVERABLE	START	FINISH
100-H Area (continued)			
	RL/Regulator Sign Rev. 0 WI for 100-H-47	8/13/2009	8/20/2009
	RL/Regulator Sign Rev. 0 Closure Document for 128-H-2	6/18/2009	7/9/2009
	RL/Regulator Sign Rev. 0 Closure Document for 128-H-3	6/18/2009	7/9/2009
	RL/Regulator Review Draft A WI for 100-H-39	6/18/2009	7/31/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-39	8/17/2009	8/24/2009
	RL/Regulator Review Draft A WI for 100-H-48	6/23/2009	8/6/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-48	8/24/2009	8/31/2009
	RL/Regulator Review Draft A WI for 100-H-49	6/23/2009	8/6/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-49	8/24/2009	8/31/2009
	RL/Regulator Review Draft A WI for 100-H-52	6/23/2009	8/6/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-52	8/24/2009	8/31/2009
	RL/Regulator Review Draft A WI for 118-H-4	7/1/2009	8/14/2009
	RL/Regulator Review Draft A WI for 116-H-5	7/15/2009	8/28/2009
	RL/Regulator Sign Rev. 0 WI for 116-H-5	9/15/2009	9/22/2009
	RL/Regulator Review Draft A WI for 118-H-1	8/5/2009	9/18/2009
	RL/Regulator Review Draft A WI for 118-H-2	8/5/2009	9/18/2009
	RL/Regulator Review Draft A WI for 118-H-3	8/5/2009	9/18/2009
	RL/Regulator Review Draft A WI for 118-H-6:4	8/11/2009	9/24/2009
	RL/Regulator Review Draft A WI for 100 H-36	8/18/2009	10/1/2009
	RL/Regulator Review Draft A WI for 100-H-46	6/29/2009	8/12/2009
	RL/Regulator Review Draft A WI for 100-H-45	7/1/2009	8/14/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-45	8/31/2009	9/3/2009
	RL/Regulator Review Draft A WI for 100-H-40	7/6/2009	8/19/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-40	9/3/2009	9/10/2009
	RL/Regulator Review Draft A WI for 100-H-41	7/6/2009	8/19/2009
	RL/Regulator Sign Rev. 0 WI for 100-H-41	9/3/2009	9/10/2009
	RL/Regulator Review Draft A WI for 100-H-44	7/15/2009	8/27/2009
	RL/Regulator Review Draft A WI for 100-H-42	7/23/2009	9/8/2009
	RL/Regulator Review Draft A WI for 100-H-43	7/23/2009	9/8/2009
	RL/Regulator Review Draft A WI for 100-H-35	7/23/2009	9/8/2009
	RL/Regulator Review Draft A WI for 100-H-51	8/5/2009	9/18/2009
	RL/Regulator Review Draft A WI for 100-H-53	8/5/2009	9/18/2009
	RL/Regulator Review Draft A WI for 100-H-50	8/5/2009	9/18/2009
100-K Area			
	RL/Regulator Review Draft A WI for 100-K-78	6/25/2009	8/8/2009
	RL/Regulator Sign Rev. 0 WI for 100-K-78	8/24/2009	8/31/2009
	RL/Regulator Review Draft A WI for 600-29	7/6/2009	8/19/2009
	RL/Regulator Sign Rev. 0 WI for 600-29	9/3/2009	9/10/2009
100-IU-2/100-IU-6			
	618-10/11 Comment/Tech Edit/RL-EPA Sign SAP R-0	8/19/2008 (A)	6/4/2009
100 Area			
	RL Issue 100-A Draft ESD for Public Review	7/20/2009	9/3/2009
	RL Approve & Issue Rev. 0 of 100-A RDR	7/20/2009	7/27/2009
	RL Approve & Issue Rev. 0 of 100-A SAP	7/20/2009	7/27/2009
300 Area			
	RL/Regulator Review Draft A Closure Document 300-275	7/1/2009	8/14/2009
	RL/Regulator Review Draft A WI for 300-259	7/28/2009	9/10/2009
	RL/Regulator Review Draft A WI for 300-274	8/5/2009	9/18/2009
	RL/Regulator Review Draft A WI for UPR-300-17	8/5/2009	9/18/2009
	RL Approve 300 Area ESD (FR-158)	8/12/2009	8/17/2009

All Data is Based on FY09/10 CPP with May 2009 Month End Status

Attachment 12

Environmental Protection Mission Completion Project
June 11, 2009

Orphan Sites Evaluations

- Transmitted 100-N Orphan Sites Evaluation Report Draft A to RL on June 8, 2009.
- Briefed EPA on findings of orphan site evaluation for Inter-Areas Segment 1 on May 28, 2009.
- Continue orphan site evaluation for Inter-Areas Segment 2.
- Continued orphan site evaluation for the 400 Area.
- Began planning and will initiate field investigation phase for the 300-FF-2 orphan site evaluation later in June.

Long-Term Stewardship

- Began drafting 100-FR-2 Operable Unit Remedial Action Report at the request of RL and EPA.

River Corridor Baseline Risk Assessment

- Continue to develop Draft B report to reflect disposition of regulator comments from informal reviews of Volume 1 (ecological) and Volume 2 (human health). Perform calculations and integrate results from DOE tribal scenario into Volume 2.

Remedial Investigation of Hanford Releases to Columbia River

- Continue planning for Phase IIb groundwater upwelling surveys (indicator contaminant screening). Briefings with Tri-Parties scheduled June 30 and July 1. Field work anticipated to begin early August, 2009.
- Spring sampling campaign anticipated to be complete June 11.
- Continue walleye collection. Sturgeon collection anticipated to begin in July. Remaining fish collection planned for late summer/fall 2009.

Document Review Look-Ahead

Document	Regulator Review Start	Duration
100-N Area Orphan Sites Evaluation Report	June 8, 2009	45 days
Inter-Areas Segment 1 Orphan Sites Evaluation Report	August 2009	45 days
River Corridor Baseline Risk Assessment Report	September 2009	45 days

Attachment 13

(13)

Tri-Party Agreement

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

Change Number	Document Submitted Under Tri-Party Agreement Milestone	Date:
TPA-CN-284	NA	June 11, 2009

Document Number and Title:	Date Document Last Issued:
DOE/RL 2008-11, Rev. 0. "Remedial Investigation Work Plan for Hanford Site Releases to the Columbia River"	September, 2008

Originator:	Phone:
John Sands	372-2282

Description of Change: Additional sampling and analyses of sturgeon.

A workshop was held on February 26, 2009 to discuss and finalize the components of a sturgeon sampling program included as part of the scope associated with the *Remedial Investigation Work Plan for Hanford Site Releases to the Columbia River* (DOE/RL-2008-11). Attachment 1 provides an itemized list of the additional sturgeon related sampling and analysis scope that is approved by DOE.

Justification and Impacts of Change:
The additional scope discussed in Attachment 1 will provide useful information to the upcoming Columbia River risk assessment. Regulators and interested parties may also build upon the information obtained in this study for external assessments of sturgeon and/or human health exposure assessments.

Approvals:

Mark Freed RL Unit Manager*	6/11/09 Date	✓ Approved	__ Disapproved	
[illegible] EPA Unit Manager*	6/11/09 Date	✓ Approved	__ Disapproved	
[illegible] Jones Ecology Unit Manager*	6/11/9 Date	✓ Approved	__ Disapproved	

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

6/8/09

Sturgeon scope changes to DOE/RL-2008-11

A workshop was held on February 26, 2009 to discuss and finalize the components of a sturgeon sampling program included as part of the scope associated with the *Remedial Investigation Work Plan for Hanford Site Releases to the Columbia River* (DOE/RL-2008-11). The following changes to the sturgeon sampling and analysis have been approved by DOE:

1. Increase sturgeon catch from 20 to 30 animals. The total number of sturgeon for the study sub-areas (100 Area, 300 Area, and Lake Wallula) was increased by 10. Fishing locations for these samples will be dispersed throughout the three study sub-areas rather than requiring a specific sample number to be collected from each sub-area. The number of sturgeon to be collected in the control (upriver) sub-area will remain at five.
2. Upriver fishing to be performed upriver of Wanapum Dam. Due to the small population of sturgeon in the Priest Rapids pool, this area will not be used to supply fish for this study. The five sturgeons for the control sub-area will be caught upriver of the Wanapum Dam.
3. The kidney and liver from each sturgeon will be processed and analyzed separately instead of being combined.
4. Sturgeon should be collected in as many different places within the study area(s) of interest as reasonably possible, as opposed to collecting multiple fish from the same fishing spot. The original conditions of the Washington Department of Fish and Wildlife (WDFW) collection permit had sought to "orient and correlate sites where white sturgeon are collected with concentrations of freshwater clams/mussels". However, WDFW has amended the collection permit to remove this direction.
5. All sturgeon that are caught will be scanned for a pit tag, measured for total and fork length, and examined for anomalies in the lateral scute pattern. This information will be recorded and those fish that are outside the size range for the study will then be released.
6. Histological samples of gonads, liver, kidney, and gill from each sturgeon will be collected by a histological tissue preparation specialist and sent for histopathology analysis. A United States Fish and Wildlife Service histologist will examine the tissues. Histological samples for sturgeon require collection on the fishing boat immediately after the fish is euthanized. Histological samples will be prepared by a specialist in histological specimen preparation.
7. Sturgeon stomachs will be removed and analyzed to determine the percent of sediment present. The subcontractor (EAS) will provide a method for sediment determination. EAS will write a draft of the proposed method to determine stomach sediment content for sturgeon and develop the associated laboratory analysis procedure. Draft will be distributed to Tri-Parties and/or other interested parties and sturgeon experts by WCH for comments. WCH will collect comments and submit to EAS. EAS will resolve review comments and submit a final procedure for the stomach sediment content analysis to WCH.
8. A subset of sturgeon samples will be analyzed for methyl mercury. The fillet and carcass samples from six (6) sturgeon will be analyzed for methyl mercury.
9. Sturgeon samples will be sampled for hexavalent chromium. The fillet and carcass samples from all sturgeon will be analyzed for hexavalent chromium.
10. Speciate arsenic only in consumable tissues, specifically the fillets and carcass samples.

11. Offal material from all sturgeon will be collected and frozen. A subset of offal samples (6 samples total) will be analyzed for all chemical and radiological analyses (except methyl mercury and inorganic arsenic).
12. A pectoral fin will be collected from each sturgeon to determine sturgeon age. This method of age determination will be used instead of using otoliths.
13. The color of the fat seen in each sturgeon will be recorded. Fat will not be analyzed separately but its color (yellow or white) will be reported.
14. A Tribal-caught commercial sturgeon will be obtained and used for practice of various analytical methods. This will allow refinement of sampling techniques in advance of actual sampling.
15. Excess sturgeon sample material will be stored by EAS but will be discarded at the end of their contract (December, 2009). Parties interested in acquiring sturgeon sample material will need to request tissues by November 5, 2009 and arrange to obtain the sample material by December 10, 2009. Sturgeon tissue samples not slated to be sent to other parties will be discarded, beginning December 1, 2009.