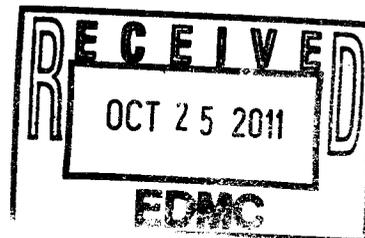


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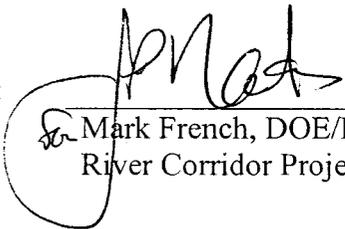
## 100/300 AREA UNIT MANAGER MEETING ATTENDANCE AND DISTRIBUTION

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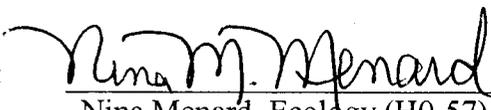


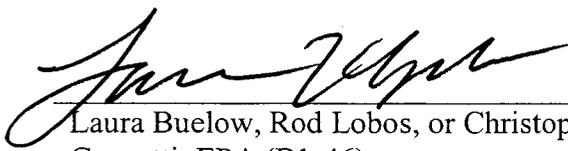
100/300 AREA UNIT MANAGERS MEETING  
APPROVAL OF MEETING MINUTES

September 8, 2011

APPROVAL:  Date 10/13/11  
for Mark French, DOE/RL (A3-04)  
River Corridor Project Manager

APPROVAL:  Date 10/13/11  
Briant Charboneau, DOE/RL (A6-33)  
Groundwater Project Manager

APPROVAL:  Date 10-13-11  
Nina Menard, Ecology (H0-57)  
Environmental Restoration Project  
Manager

APPROVAL:  Date 10-13-11  
Laura Buelow, Rod Lobos, or Christopher  
Guzzetti, EPA (B1-46)  
100 Area Project Manager

APPROVAL:  Date 10-13-11  
Laura Buelow for. Larry Gadbois, 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); Field Remediation (FR); and Mission Completion**

**September 8, 2011**

**ADMINISTRATIVE**

- Next Unit Manager Meeting (UMM) – The next meeting will be held October 13, 2011, 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.
- Approval of Minutes – The August 11, 2011, 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 – The status of action items was reviewed and updates were provided (see Attachment B).
- Agenda – Attachment C is the meeting agenda.

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

An Executive Session was held by RL, EPA, and Ecology prior to the September 8, 2011, UMM. Attachment D is the meeting agenda. Attachment 1 is a presentation that was provided on the Stewardship Information System relative to the Waste Information Data System (WIDS).

**GENERAL**

The groundwater, D4, FR, and Mission Completion presentations were provided in advance of the UMM. This allowed the presentation to be discussed “by exception.” This practice will be continued for future UMMs.

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

Attachment 2 provides status and information for groundwater. Attachment 3 provides status and information for Field Remediation activities. No issues were identified and no action items were documented.

Agreement 1: Attachment 4 provides EPA’s concurrence that a legacy diesel stained area near the old 100-F operations trailer (that was demolished about a year ago) doesn’t need to be included as an orphan or discovery site and can be backfilled since the cleanup standards of the Model Toxics Control Act of 2007 have been met.

Agreement 2: Attachment 5 provides an agreement to excavate the staging area (SPA-7) at 100-F-62 site an additional 2 to 4 meters.

Agreement 3: Attachment 6 provides an agreement to excavate the staging area (SPA-7) at 100-F-62 site an additional meter.

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

Attachment 2 provides status and information for groundwater. Attachment 3 provides status and information for Field Remediation activities. No issues were identified.

Action Item 1: DOE will provide Ecology with the decommissioning schedule for the ISRM Pond by October 17, 2011.

Action Item 2: DOE will provide Ecology with information for filling the 182-D reservoir or an update at the October 2011 UMM.

Agreement 1: Attachment 7 provides EPA's approval to send four test specimens that were found in the 118-D-3 burial ground at 100-D to the Central Waste Complex for storage and ultimate disposal at the Waste Isolation Pilot Plant.

Agreement 2: Attachment 8 provides Ecology's agreement to extend the use of the 118-D-3:2 Anomaly Staging Area in its current capacity until November 30, 2011.

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

Attachment 2 provides status and information for groundwater. Attachment 3 provides status and information for Field Remediation activities. Attachment 9 provides status and information for D4/ISS activities at 100-N. No issues were identified and no action items were documented.

Agreement 1: Ecology and DOE reached agreement on the well design for 199-N-187 (Attachment 10 provides the schematic.)

Agreement 2: Attachment 11 provides TPA Change Notice TPA-CN-474, revising DOE/RL-2010-29, *Design Optimization Study for Apatite Permeable Reactive Barrier Extension for the 100-NR-2 Operable Unit*, Rev. 0, to reflect updates to sampling frequencies, sample locations, sample analyses, description of pump, clarification of sample filtering, and examples of field observations and readings to be recorded.

Agreement 3: Attachment 12 provides Ecology's concurrence to defer portions of 116-N-4 to 100-N-64 remediation and close out.

Agreement 4: Attachment 13 provides Ecology's concurrence to add four sites (100-N-28, 100-N-62, 100-N-68, and 100-N-79) to the existing 100-N Air Monitoring Plan.

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

Attachment 2 provides status and information for groundwater. Attachment 3 provides status and information for Field Remediation activities. No issues were identified and no action items were documented.

Agreement 1: Attachment 14 provides EPA's approval to send two additional pieces of spent nuclear fuel at 118-K-1 to K Basins and ultimately the Canister Storage Building.

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

Attachment 2 provides status and information for groundwater. Attachment 3 provides status and information for Field Remediation activities. No issues were identified and no agreements or action items were documented.

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

Attachment 2 provides status and information for groundwater. No issues were identified and no agreements or action items were documented.

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

Attachment 2 provides status and information for groundwater. Attachment 15 provides status of the 300 Area Closure Project activities. No issues were identified and no agreements or action items were documented.

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

No issues were identified and no agreements or action items were documented.

### **MISSION COMPLETION PROJECT**

Attachment 16 provides status and information regarding the Orphan Sites Evaluations, Long-Term Stewardship, River Corridor Baseline Risk Assessment, the Remedial Investigation of Hanford Releases to the Columbia River, and a Document Review Look-Ahead. No issues were identified and no agreements or action items were documented.

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

No changes were reported to the status of the CERCLA Five-Year Review action Items. No issues were identified and no agreements or action items were documented.

### **ANNUAL INSTITUTIONAL CONTROLS EVALUATION**

Attachment 17 provides the “2011 Annual Sitewide Institutional Controls (IC) Review” for the River Corridor Contractor (RCC) source units. No issues were identified and no agreements or action items were documented.

# Attachment A

100/300 AREA UNIT MANAGER MEETING

ATTENDANCE AND DISTRIBUTION

September 8, 2011

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# Attachment B

100/300 Area UMM  
Action List  
September 8, 2011

Open (O)/ Closed (X)	Action No.	Co.	Actionee	Project	Action Description	Status
O	100-181	RL	J. Hanson	100-HR	DOE will provide Ecology with a briefing on the applicability and status of bioremediation of chromium and the associated feasibility studies.	Open: 4/14/11; Action:
X	100-187	Ecology	N. Menard	All	DOE has deleted RAO 6 - Ecology will review remaining RAOs for concurrence.	Open: 6/9/11; Action: Closed 9/8/11
X	100-188	RL	J. Hanson	100-HR	DOE will provide Ecology with a maintenance schedule for any wells impacted by the high water levels	Open: 6/9/11; Action: Closed 9/8/11
O	100-189	RL	J. Hanson	100-HR	DOE will provide Ecology with the decommissioning schedule for the ISRM Pond by October 17, 2011.	Open: 9/8/11; Action:
O	100-190	RL	J. Hanson	100-D	DOE will provide Ecology with a information for filling the 182-D reservoir or an update at the October 2011 UMM.	Open: 9/8/11; Action:

# Attachment C

100/300 Area Unit Manager Meeting  
September 8, 2011  
Washington Closure Hanford Building  
2620 Fermi Avenue, Richland, WA 99354  
Room C209; 1:30-4:30 p.m.

1:30 - 1:45 p.m.

Administrative:

- Approval and signing of previous meeting minutes (August 2011)
- Update to Action Items List
- Next UMM (10/13/2011, Room C209)

1:45 - 4:00 p.m.

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

- 100-F & 100-IU-2/6 Areas (Greg Sinton/Tom Post/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 (Jamie Zeisloft)
- 300 Area (Mike Thompson/Rudy Guercia)
- Regulatory Closeout Documents Overall Schedule (John Neath, Mike Thompson)
- Mission Completion Project (John Sands)

4:00 - 4:15 p.m.

Special Topics/Other

- 5-Year Record of Decision Action Item Update (Jim Hanson)
- Annual Institutional Controls Evaluation (Jamie Zeisloft)

4:15 - 4:30 p.m.

Adjourn

# Attachment D

100/300 Area Executive Session  
Tri-Parties Only  
September 8, 2011  
Washington Closure Hanford Building  
2620 Fermi Avenue, Richland, WA 99354  
Room C209; 1:00-1:30 p.m.

1:00 - 1:30 p.m.

Executive Session (Tri-Parties Only):

- Stewardship Information System relative to the Waste Information Data System (WIDS)
- Next Executive Session (10/13/2011, Room C209)

# Attachment 1

**UMM Executive Session**  
**Stewardship Information System (SIS)**

September 8, 2011

**WCH Project Database Application**

- Supports RCC contract deliverables related to closure and LTS
- Compilation of existing records and information
- River Corridor geographical area (including pre-RCCC cleanup work)
- Integrated with River Corridor GIS database
- Provides read only user interface for viewing information by WCH

**Primary Components of SIS**

- Facilities
- Waste Sites
- Orphan Sites Evaluations
  - Miscellaneous restoration items
  - Stewardship elements

**Typical Information Available through SIS interface**

- Operational and/or release history
- Current status
- Location and mapping functions
- Cleanup actions and as-left conditions
- Sample locations and results supporting cleanup
- Images (photos, drawings)
- References as embedded documents
- Summary reports (formatted similar to WIDS layout)

**Interaction with TPA Hanford Site Databases**

- Waste site summary report information and CVPs available to CHPRC through share area for updates to WIDS
- Sample data supporting waste site reclassification uploaded to HEIS weekly through access to materialized views and CHPRC automated script
- River Corridor GIS shapefiles available to MSA through share area for updates to HGIS

**End of Contract Path Forward**

- Turnover application and system documentation to RL to support post-RCCC land management activities

## WCH Stewardship Information System (SIS)

The WCH SIS database is a project specific database that was created for the specific purpose of supporting transition of information from WCH to RL. The WCH SIS database is composed of three primary components used to capture waste site, facility, and debris removal information within the River Corridor and include the following.

**Waste Sites.** The waste sites component of the database is similar to WIDS and contains summary information related to the type (e.g., crib, effluent pond, pipeline, landfill/burial ground, dump site, spill, or release), history, location, cleanup, as-left conditions, and institutional controls for each waste site within the River Corridor.

Tools available within this component include viewing the sample locations and analytical results that were used to support cleanup verification and represent the post-cleanup soil concentrations of contaminants of concern. Pre- and post- photographs are also included for each waste site.

In addition, an extensive list of references including the WSRF, associated clean up documentation, and other relevant documents that describe the history, cleanup process, and closeout are available for viewing or download for each waste site.

**Facilities.** The facilities component of the database contains summary information related to the operation, location, process history, cleanup (demolition), and as-left site conditions for each Hanford-numbered facility within the River Corridor. A facility status change form is included in the database to document removal activities for facilities completed by WCH. Selected photographs and/or drawings that depict the operational or cleanup aspects of a given facility are also included in this component of the SIS database. In addition, an extensive list of references to relevant documents is provided for each facility. The database generally excludes information associated with temporary facilities (e.g., construction offices, change trailers).

**Miscellaneous Restoration (MR) Items.** The MR component of the database contains summary information related to the removal of surface debris items identified during the orphan sites evaluations. A description of the item, location, date of removal, and selected before/after photographs are included in this component of the SIS database.

**Stewardship Elements.** The stewardship component of the database contains information associated with features observed during the field walkdown activities that were not identified for removal (e.g., pre-Hanford debris, concrete slabs or foundations, physical hazards). Stewardship elements also include historical research features that were evaluated and determined to never exist. A description of the element, location, and selected photographs are included in this component of the SIS database.

The database is also directly linked with associated spatial data stored in the WCH GIS databases, enabling access to information on cleanup activities and institutional controls based on geographic location within the River Corridor.

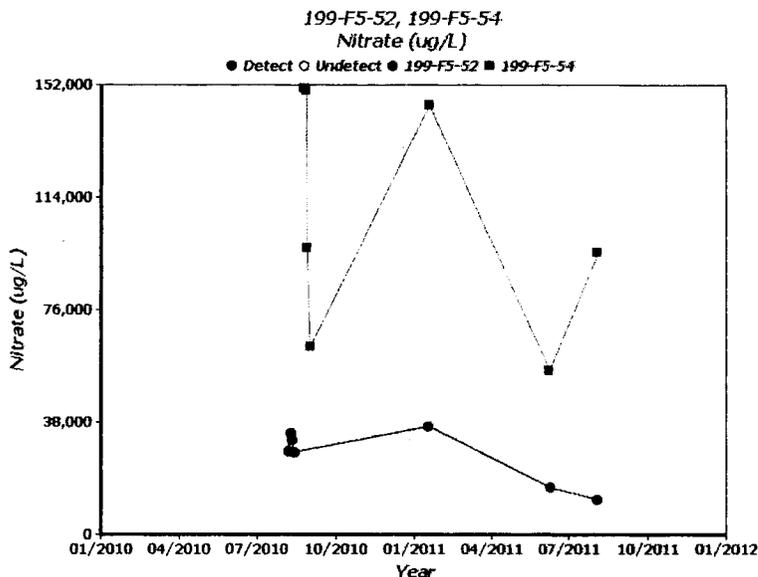
# Attachment 2

100/300 Areas Unit Managers Meeting  
September 8, 2011

**100-FR-3 Groundwater Operable Unit – Nathan Bowles / Mary Hartman**

(M-015-64-T01, 12/17/2011, Submit CERCLA RI/FS Report and Proposed 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.)

*Schedule Status - On schedule to meet the TPA milestone. Field investigations are complete and the Decisional Draft was provided to DOE/RL on August 25, 2011, for a 30-day review.*



All of the samples scheduled for April 2011 have been collected; the latest was RUM well 199-F5-53, delayed until June 22. The sample events scheduled for July were completed in early August and data were recently loaded into HEIS. The comprehensive groundwater sampling event is scheduled for October. The paragraphs below discuss recent groundwater sampling results.

Nitrate concentration decreased in both of the new water-table wells sampled in June. This trend was mirrored by specific conductance, indicating inflow of river water. These wells are located near the river. The aquifer in this portion of 100-F responds to rising river stage rapidly.

Cr(VI) continued to be near or below the detection limit in the new wells.

Sr-90 was detected at low levels in new well F5-54 in June and August (maximum was  $5.8 \pm 3.4$  pCi/L). The results are consistent with previous data. This well is adjacent to the Sr-90 plume at 8 pCi/L, so the low detections are expected. Reported Sr-90 detections in well 199-F5-52 are within analytical error bars and levels in RUM well 199-F5-53 are below detection limits.

Carbon tetrachloride was undetected ( $<1 \mu\text{g/L}$ ) in the new wells in June and August. It had been detected in January, which may have been associated with a rash of blanks detections. TCE and other organics were undetected in the new wells in June and August.

The three new wells will complete one year of quarterly sampling, as required by the RI SAP, in October. We propose decreasing the sampling frequency to annual after that.

The two "vadose" boreholes that were completed as wells were added to the sampling schedule beginning in October. They are scheduled for semiannual sampling. Well 199-F5-56 (C7972) is located near the reactor building. Characterization groundwater samples contained Sr-90 above the DWS. Well 199-F5-55 (C7970) is located near the 116-F-14 trench. There are no other monitoring wells located adjacent to this trench. Characterization groundwater samples contained Sr-90 concentrations over 200 pCi/L.

**100/300 Areas Unit Managers Meeting  
September 8, 2011**

**100-HR-3 Groundwater Operable Unit – Fred Biebesheimer / John Smoot**

(M-15-70-T01, 11/24/2011, Submit feasibility study report and proposed plan for the 100-HR-1, 100-HR-2, 100-HR-3, 100-DR-1 and 100-DR-2 operable units for groundwater and soil.)

*Schedule Status - On schedule to meet the TPA milestone. Drilling and sampling are complete with the exception of on replacement RI/FS well at the 100-D-12 waste site (a TPA change notice is being prepared to support the drilling and sampling of this well).*

- HR-3 Treatment System
  - For the period August 1 through 31, 2011:
  - The HR-3 system has been placed in cold standby.
  - Rebound monitoring of water levels and hexavalent chromium is nearly complete.
- DR-5 Treatment System
  - For the period August 1 through 31, 2011:
  - The DR-5 shut down is complete.
- DX Pump and Treat system
  - For the period August 1 through 31, 2011:
  - The DX pump and treat system is operating.
  - Total average flow through the system is 500 gpm.
  - The average influent hexavalent chromium concentration was 535 µg/L.
  - The DR-5 well network is online. The concentrations for the hot spot wells (D5-39 and D5-104) remain between 3000 and 4000 ppb. This is a decrease from the concentration of near 5000 ppb when the wells were added to the DX network.
  - Design modifications are being prepared to protect the four wells on the flood plain from damage in future high water events. Evaluations have been conducted of the surface equipment at each well, and wiring and piping will need to be repaired or replaced. A down hole inspection of these wells will be completed in October and a schedule developed to bring the wells back on line.
  - Performance monitoring is ongoing.
- HX Pump and Treat System,
  - Construction of the facility is complete; Construction Acceptance Testing is complete, and acceptance testing has commenced.
  - Acceptance Testing is 65% complete, and scheduled for completion in September 2011.
  - Contaminated water has been pumped into the influent tanks as part of the test activities, but no water will be treated until the chemical addition system has been started.
  - Acid was added to the chemical addition system on August 30<sup>th</sup>. Caustic was added to the chemical addition system on August 31<sup>st</sup>.
  - Operational Testing is scheduled from October through December 2011.
  - Performance monitoring will be initiated concurrently with Operational Testing.
- ISRM Pond Sealing
  - The ISRM pond is largely dry.
  - CHPRC is evaluating decommissioning path forward. Upon completion of the evaluation a meeting will be held to present recommendations.
  - An ISRM pond decommissioning schedule will be added to the RD/RA WP revision. An IAMIT agreement calls for the pond decommissioning to be complete by 12/31/2011.
- RI/FS Activities
  - Fieldwork is complete, with the exception of the replacement well to be installed at the 100-D-12 waste site location (well R5). Drilling is expected to begin in September.
  - Two TPA change requests have been submitted to accommodate the installation of the D-12 replacement well.

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**100-NR-2 Groundwater Operable Unit – Nathan Bowles / Deb Alexander**

(M-015-60 - Six months after the ROD amendment [03/29/2011], if an amendment to the 100-NR-1/2 Record of Decision for Interim Action is issued, DOE shall submit an RD/RA Work Plan.)

*Schedule Status - TPA milestone met by DOE/RL submittal of Rev. 1 Draft A document to Ecology on March 25, 2011. The submitted document was reviewed by Ecology, and the resulting Ecology comments were informally provided to DOE-RL on August 3<sup>rd</sup>, and formal transmission of the comments was on August 16<sup>th</sup>. These comments are currently under evaluation for incorporation.*

(M-015-62-T01, 9/17/2012, Submit a Feasibility Study [FS] Report and Proposed Plan [PP] for the 100-NR-1 and 100-NR-2 Operable Units including groundwater and soil. The FS Report and PP will evaluate the permeable reactive barrier technology and other alternatives and will identify a preferred alternative in accordance with CERCLA requirements.)

*Schedule Status – On schedule. The due date for this TPA Target Date changed to September 17, 2012 under TPA CN M-015-11-1, approved on March 12, 2011. Field investigations are underway with only well-drilling/sampling work remaining to be completed (discussed further below).*

• **RI/FS Activities**

– **Well drilling/sampling:**

- 199-N-183 (C8185/#2), 199-N-185 (C8187/#R2), and 199-N-189 (C8191/#6) – Field activities were completed in previous months.
- 199-N-182 (C8184/#R1) – Ringold Upper Mud (RUM) well down-gradient of 1301-N and in the Sr-90 hot spot – Well construction was completed on August 12<sup>th</sup>.
- 199-N-186 (C8188 #3) – Well at the former head works of the remediated 1301-N Trench – Well reached total depth of 97.3 ft bgs on August 17<sup>th</sup> and the well design was approved by both RL and Ecology on August 18<sup>th</sup>. Well construction began on August 19<sup>th</sup> and completed on August 30<sup>th</sup>.
- 199-N-187 (C8189/#4) – Well within the remediated 1301-N Trench – Well drilling and sampling are continuing as planned in the SAP. Borehole depth at 81 ft bgs as of August 30<sup>th</sup>.
- 199-N-188 (C8190/#5) – Well at the former head works of the remediated 1301-N Trench – Well drilling and sampling are continuing as planned in the SAP. Borehole depth at 71 ft as of August 30<sup>th</sup>.
- 199-N-184 (C8186/#1) – Well down-gradient of 1301-N and in the Sr-90 hot spot and paired with 199-N-182 – Well drilling and sampling began and are continuing as planned in the SAP. Borehole depth at 62.5 ft bgs as of August 30<sup>th</sup>.

- **100-N Integrated Groundwater Sampling and Analysis Plan** – The Draft A document was submitted to Ecology by RL on June 2, 2010, and Ecology review of this document is now complete. Ecology informally provided comments to RL on August 3<sup>rd</sup> alongside comments on the draft revision to the RD/RA Work Plan (discussed above), and formal transmission of the comments was on August 16<sup>th</sup>. These comments are currently under evaluation for incorporation.

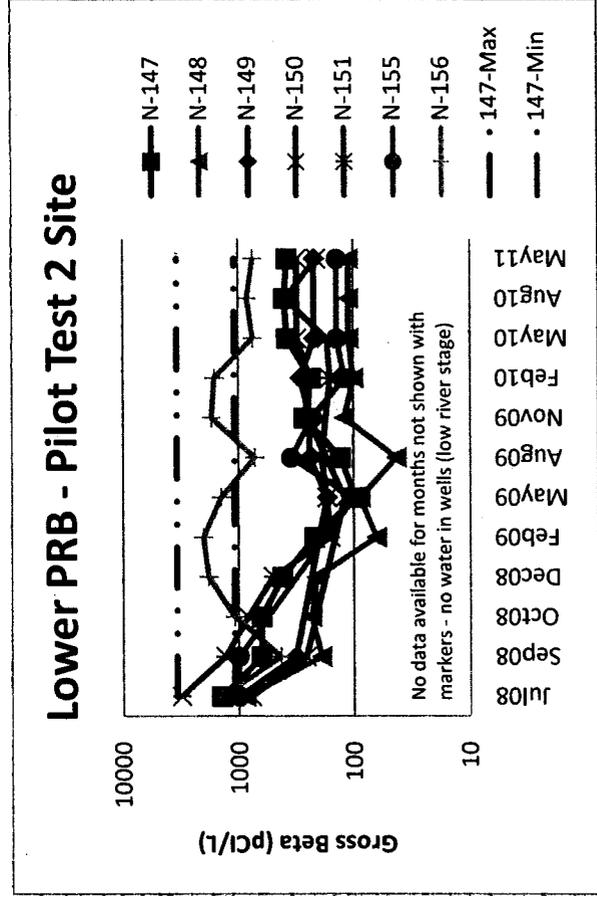
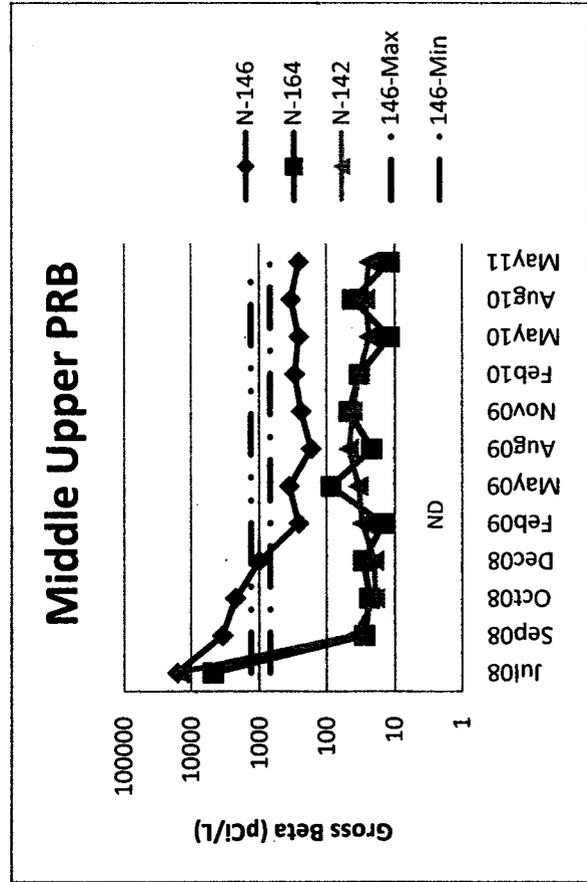
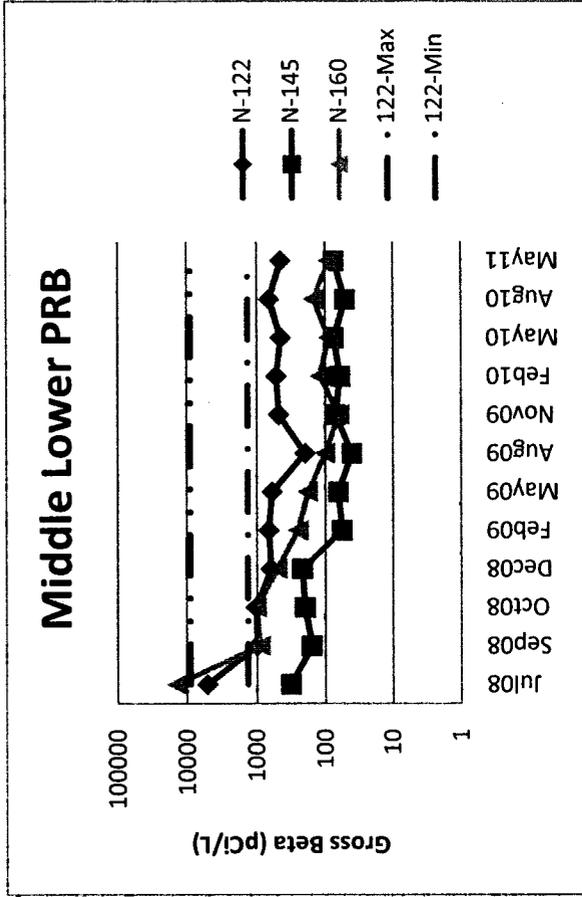
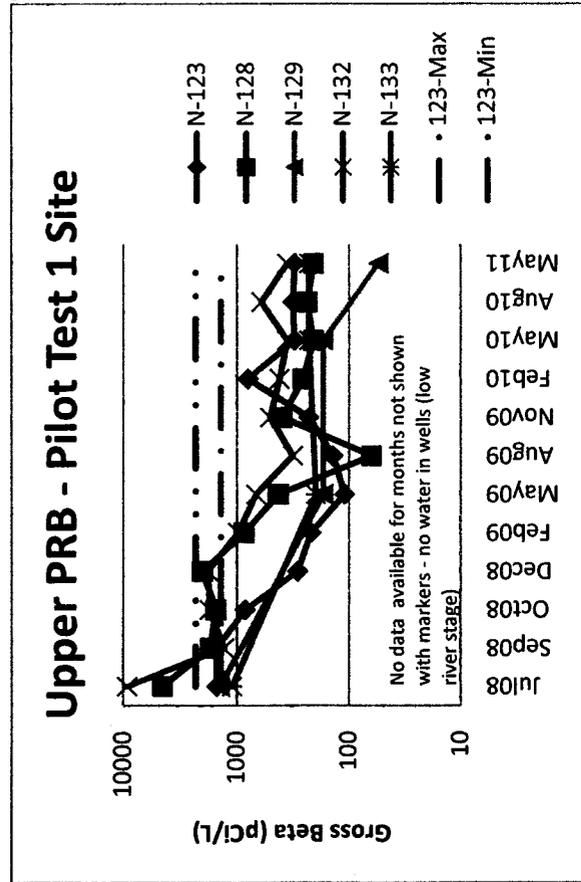
• **Apatite PRB Extension**

Efforts are underway to implement the *Design Optimization Study for Apatite Permeable Reactive Barrier Extension for the 100-NR-2 Operable Unit* (DOE/RL-2010-29), as modified by approved TPA-CN-474 on August 18, 2011. These efforts are expected to result in an additional 600 feet of barrier (300 feet upriver and 300 feet downriver of the existing 300-foot barrier) for Sr-90 removal from groundwater entering the Columbia River.

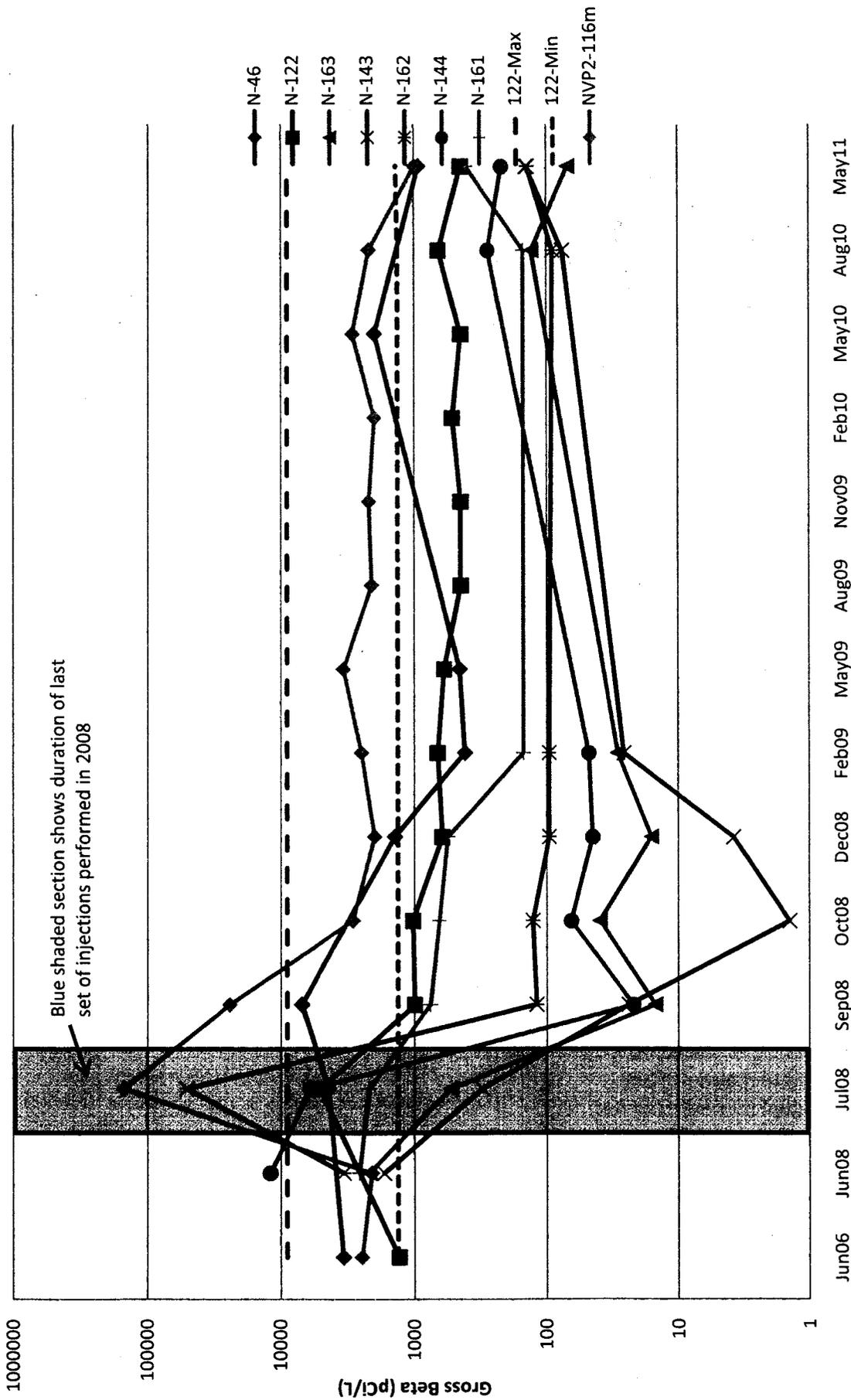


**100/300 Areas Unit Managers Meeting  
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concentrations are still below the minimum pre-injection values for each of the four sections and (2) wells are still showing a 90% or greater decrease in concentration from pre-injection levels.



### High Sr-90 Concentration Portion of PRB



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The last graph shows the section of the apatite PRB where the highest concentrations of Sr-90 existed before injections began in 2006 (green dashed rectangle on location map). This section of the barrier has seen the biggest drop in concentrations because of the high initial concentrations. Wells 199-N-122 (monitoring well), 199-N-143, and 199-N-144 (injection wells) are screened across both the Hanford fm. and Ringold Fm. Wells 199-N-161, 199-N-162, and 199-N-163 (injection wells) are screened in the Ringold Fm. only. Well 199-N-46 is a monitoring well inland from (behind) the apatite PRB and is screened in the Ringold Fm. It has a long monitoring history and has had a fairly consistent level of Sr-90 until recently. Both this well (which is behind the barrier) and aquifer tube NVP2-116.0m (which is in front of the barrier) have been affected by apatite PRB injections. We saw an increase in concentrations immediately following the last set of injections in 2008, but overall concentrations are decreasing. All of the wells shown are affected by changes in river level, but the overall trends in Sr-90 concentration have been decreasing. And the effects of the barrier are being seen behind the emplacement as well as in front of the emplacement. With the exceptions of well 199-N-46 and aquifer tube NVP2-116.0m, all of the wells shown are still below the minimum 199-N-122 pre-injection concentration.

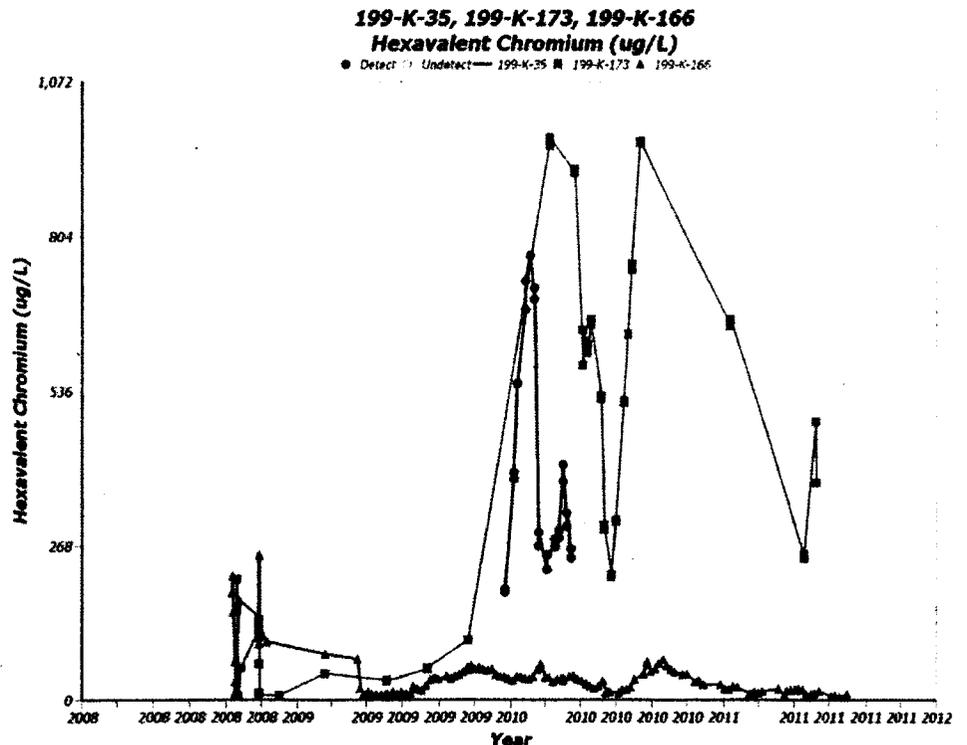
**100-KR-4 Groundwater Operable Unit – Bert Day/Dave Erb**

- CERCLA Process Implementation:
  - Remedial Investigation/Feasibility Study for the 100-KR-1, 100-KR-2, and 100-KR-4 Operable Units: Finalizing document for transmittal to EPA as Draft A.
  - Proposed Plan for Remediation of the 100-KR-1, 100-KR-1, and 100-KR-4 Operable Units: Finalizing document for transmittal to EPA as Draft A.

- Remedial Actions:
  - KR-4, KX, and KW pump and treat systems are operating normally. The KW system was shut down on 8/25 due to the SIR-700 resin modifications (see discussion below). KW Train A was restarted on August 31; the resin in Train B will be replaced next week to complete the change. The following provides data from 8/1/2011 – 8/31/2011:

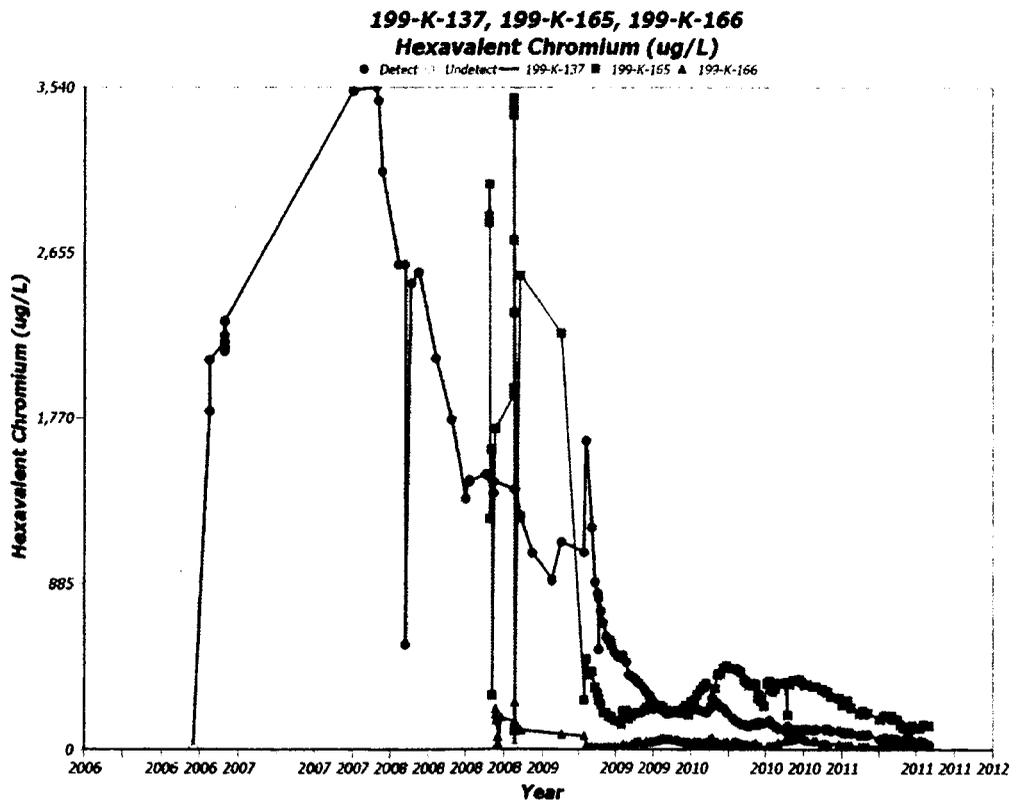
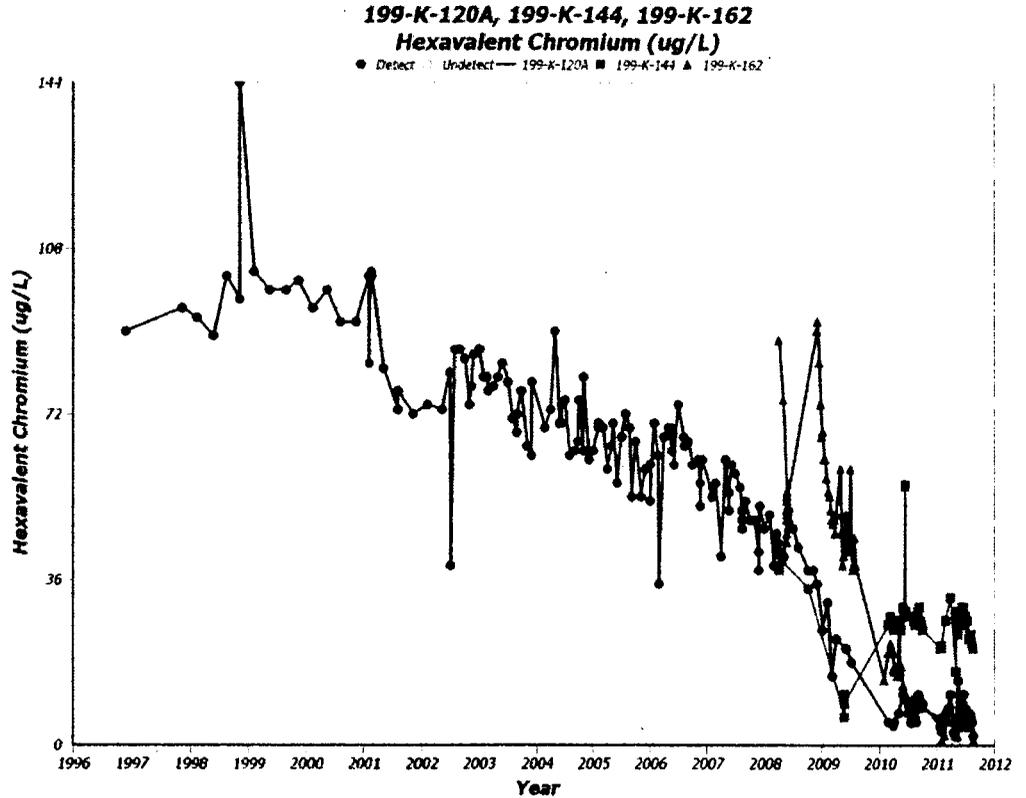
Process Status by System	KR4	KW	KX
Average Flow Rates, gpm	99	154	481
Cr(VI) Removed, lbs	0.8	3.2	5.6
Average Influent Cr(VI) concentration, ppb	27	59	33

- Monitoring & Reporting:
  - Cultural resources monitoring occurred on 8/19 with participation of one individual representing the Yakama Nation. The results yielded not issues.
  - Routine Monitoring:



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- Three wells were sampled in August at 100-K and a total of 12 samples were collected for analysis. Four aquifer tubes were sampled in August with one sample collected per well. Hex chrome concentrations in newly connected KX P&T well 199-K-152 were at 65 to 77 µg/L in August field sampling. Concentrations at downgradient wells 199-K-130 and 199-K-148 remain very near to 20 µg/L, likely due to river stage influences. Concentrations at extraction well 199-K-131 has rebounded slightly from a July low of 11 µg/L to an August value of 15 µg/L, possibly reflecting river stage influence. Shallow downgradient extraction wells (199-K-132, K-138, K-139, K-140) at the KW P&T exhibit Cr6+ concentrations at or below the 20 µg/L AWQS. The deeper downgradient extraction well, 199-K-168, trended between 30 - 40 µg/L over summer 2011. Upgradient wells 199-K-137 and 199-K-165, at 26 and 127 µg/L respectively, remain above the AWQS, while extraction well 199-K-166 has declined to 9 µg/L. Hex chrome contamination levels at the KR4 and KX P&T systems around the 116-K-2 trench remain well below the AWQS at concentrations less than 10 µg/L based on field analyses. Hex



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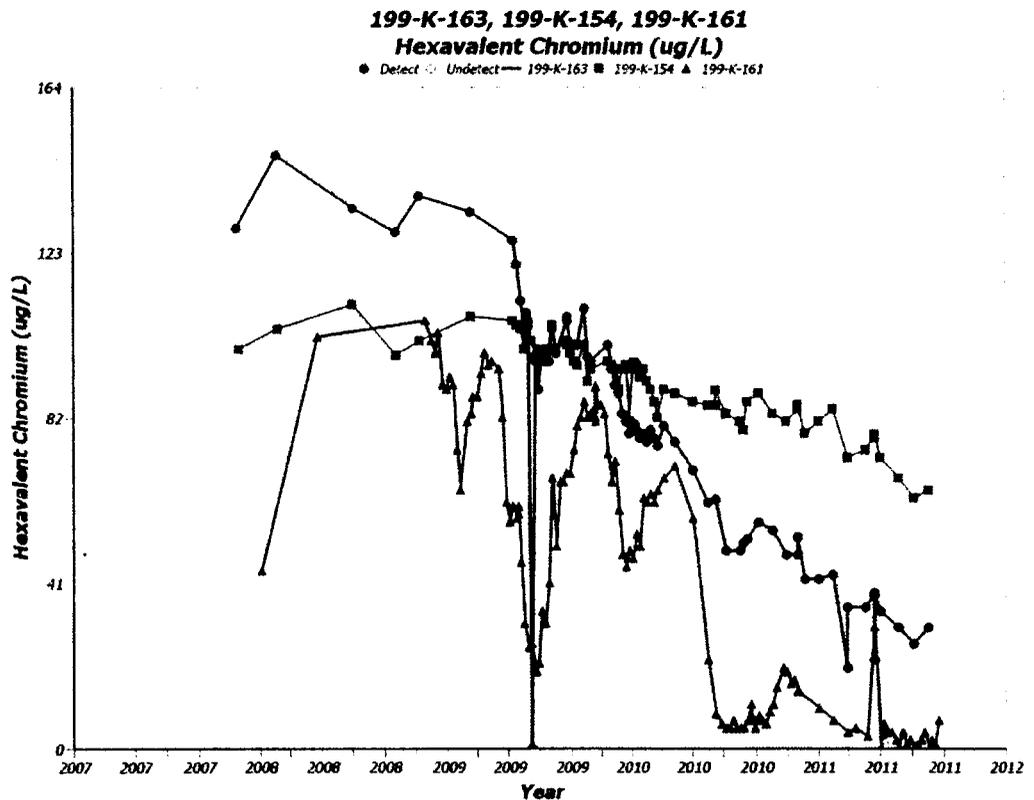
chrome concentrations at new temporary RI well 199-K-201, located at the NE end of the K-2 trench was on trend at 125 µg/L.

- The other new RI temporary well at the SW end of the 116-K-2 trench was on trend at 29.4 µg/L. Hex chrome at associated extraction wells 199-K-120A and 199-K-162 remain well below the AWQS in field analyses.

Nearby crows-gradient wells 199-K-144 and 199-K-145 remain just above the 20 µg/L AWQS at field analyses values of 20-30 µg/L.

- Wells 199-K-108A, 199-K-125A, and 199-K-150 were sampled during August. Results at K-108A, K-125A and K-150 indicate continuing trends of non-detect values [2 (U)] Hex chrome at Well

199-K-32A increased from 9.5 µg/L in April to 14.7 µg/L in July 2011 sampling.



- **Modifications & Expansions**

- Phase 3 Realignment: The pre-cast concrete well pads were installed at wells 199-K-197, 199-K-198, and 199-K-199. Drilling of well 199-K-196 north of 105-KW is in progress. The well is currently at 34.5 ft bgs. We just received initial vadose zone sample results and have initiated data evaluation.
- ResinTech SIR-700: The Train A Dowex resin was removed and replaced with SIR-700 resin. Train A was restarted on Wednesday, 8/31. Both trains are running at 100 gpm. The system will be evaluated on Thursday and Friday to determine if we will continue to run over the long weekend. Replacement of Train B resin is scheduled for next week.

- **Milestones:**

- M-015-66-T01: Submit CERCLA RI/FS Report and PP for the 100-KR-1, 100-KR-2, and 100-KR-4 Operable Units for groundwater and soil, due 9/21. Submittal of both documents is on schedule.

**100-BC-5 Groundwater Operable Unit – Nathan Bowles / Mary Hartman**

(M-015-68-T01, 11/30/2011, Submit CERCLA RI/FS Report and Proposed Plan for the 100-BC-1, 100-BC-2 and 100-BC-5 Operable Units for groundwater and soil.)

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*Schedule Status - On Schedule to meet TPA milestone. Field investigations are complete and the Decisional Draft was provided to DOE/RL on July 28, 2011, for a 30-day review.*

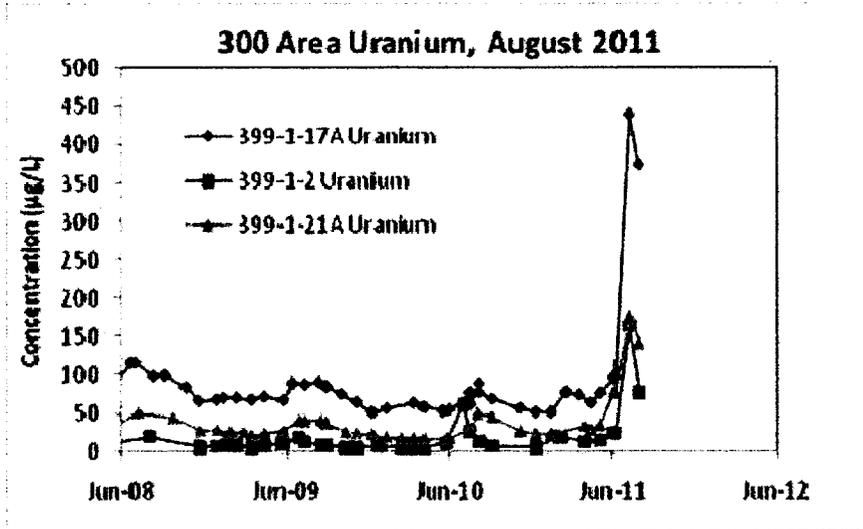
Five of eight wells scheduled for July sampling were sampled in late June; two more sampled so far in August; one well, 199-B2-16, is yet to be done. The delays were caused by electrical grounding concerns associated with pumps, or access issues related to high fire danger. There are no significant, new results to report.

The new wells are next scheduled for sampling in October. They will complete the required one year of quarterly sampling in October or January, depending on the well. Recommendations for future sampling frequency will be developed in the coming months.

**300-FF-5 Groundwater Operable Unit – Mark Kemner / Kelly Johnson**

(M-015-72-T01, 12/31/2011, Submit CERCLA RI/FS Report and Proposed Plan for the FF-5 Operable Units for groundwater and soil.)

- Schedule Status - On Schedule to meet TPA milestone. All field investigations are complete.
- *300 Area RI/FS Report:* Internal review is ongoing. Meetings with RL are scheduled to preview chapters of the report prior to submission of Draft A.
- 300-FF-5 Operations and Maintenance Plan Activities (DOE/RL-95-73, Rev. 1, 2002)
- 300 Area Subregion:

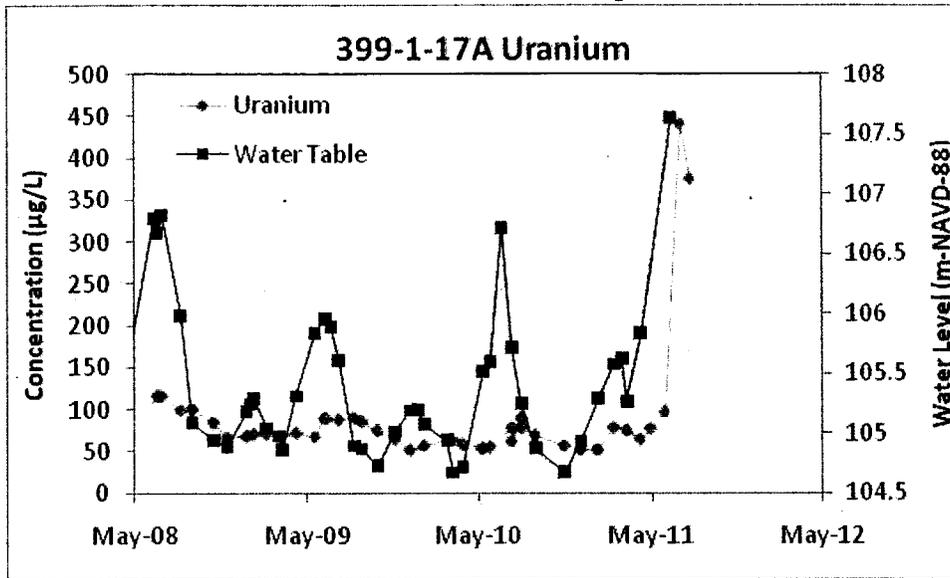


- The most recent analytical results are for samples collected in August 2011. There were significant changes in groundwater conditions due to the unusually high water table conditions. Uranium concentrations are significantly elevated at several wells (see graph), with the largest increases occurring in the vicinity of the 300 Area Process Trenches and Ponds. Gross

alpha and gross beta measurements confirm these higher values. Several inland wells, located away from the liquid waste disposal sites, also show an increase that correlates with the water table, but at much lower concentrations. Following the decrease in water table elevations (not shown), the

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uranium concentrations started to decrease as expected.



- Special sampling near the 618-1 Burial Special sampling Ground/Acid Neutralization Pit remediation site: The most recent sampling at two wells that monitor conditions downgradient of these remediation sites took place in August. Increased uranium concentrations were observed in both 399-1-21A and 399-1-2 (see Figure above), however, those increased concentrations are attributed to the unusually high water table conditions. Monthly sampling continues at wells 399-1-2 and 399-1-21A, although remediation activities are essentially complete at these waste sites.
- 326 Pipeline Leak: On 7-17-2011, a potable water pipeline failed and released an estimated 100,000 gallons of water near the southeast corner of the 326 building. The monitoring of wells nearby have been adjusted to the following, based on a monitoring response plan submitted to RL and EPA on and approved on 7/20/2011:
  - 399-3-2 and 399-3-3 will be monitored every 10 days for one month for gross alpha, gross beta, and field parameters and within one month for uranium, major cation, and major anion concentrations. Note: 399-3-2 was sampled on 8-4-11.
  - 399-3-6 will be sampled as soon as possible for the currently scheduled sample (uranium, major cations, anions, etc).
  - 399-6-5 will be sampled as soon as possible as a baseline well.
  - Based on the gross alpha, gross beta, and field parameters results, CHPRC will determine which wells are best fit for monthly sampling for the duration of four months.
  - Initial Results: Gross alpha and gross beta concentrations are within the normal range for these wells.
- 324 Building issue: No new information since the April unit manager meeting. The most recent sampling of a well that monitors conditions near the building took place in May. To date, monitoring results do not reveal evidence of groundwater impacts from releases at the building.
- 618-11 Burial Ground Subregion: No new information to report since the March and April 2011 unit manager meetings. The most recent results are for samples collected in May 2011.
- 618-10 Burial Ground/316-4 Cribs Subregion: The most recent analytical results are from two wells situated adjacent to the burial ground that was sampled in May 2011. Concentrations for waste indicator constituents remain consistent with historical trends and below their respective drinking water standards.

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**Annual Reports**

- Groundwater Annual Report - The 2010 site-wide annual groundwater report issued on August 26, and transmitted to RL on August 30, 2011.

**General Discussion**

The Stop work for the use of dedicated submersible pumps has been lifted. The well access list was revised to include the electrical bonding requirements for each well. Additionally, the groundwater sampling procedure was revised to require the use of a temporary grounding strap pending permanent electrical bonding of the wells.

# Attachment 3

September 8, 2011 Unit Manager's Meeting  
Field Remediation Status

**100-B/C**

- Continued remediation efforts at 100-C-7 & 100-C-7:1
  - 100-C-7, 209,646 bank cubic meters removed, excavation depth 55 feet
  - 100-C-7:1, 408,096 bank cubic meters removed, excavation depth 47 feet
- Continued load-out activities
  - Truck and pup, 84,956 tons
  - ERDF cans, 17,260 tons
  - LDR material, 8,400 tons

**100-D**

- Continued demo, processing and load-out at 100-D-30, 100-D-50:6, 100-D-65 and 100-D-100
- Continued demo, processing and stockpiling at 100-D-104
- Continued chasing plume at 100-D-73
- Continued anomaly processing at 118-D-3

**100-F**

- Completed excavation and load-out of all waste sties with exception of 100-F-57
- Continued demolishing and loading the western deeper portion of 100-F-57
- Awaiting approved VWI to close-out sample 100-F-61

**100-H**

- Preparing for remediation of 100-H-28:2 and :4
- Preparing for demolition and load-out of 100-H excess trailers
- Continued miscellaneous restoration activities
- Completed stockpiling backhauled material from ERDF

**100-K**

- Continued excavation and load-out at trench I
- Conducting final cleanup activities (downposting/surveying/sampling/spot removal) at trenches O, K, N and J/L
- Starting mobilization activities for orphan site cleanup work

**100-N**

- Completed 90% phase II design for UPR-100-N-17, insitu bioremediation site

- Continued excavation, processing and load-out of 100-N-61, 100-N-63 and 100-N-64
- Continued load-out of miscellaneous debris at UPR-100-N-19, 21, 22, 23, 42 and 36
- Continued truck and pup load-out of south stockpile

### **618-10 Trench Remediation**

- Completed excavation of an enlarged Surge Trench 3
- Continued excavation and sorting operation in Surge Trench 3
- Continued procurement of equipment and materials to support load-out operations
- Repairing the door closure ram to Drum Penetration Facility No. 2 and then will start the acceptance testing .

### **100-IU-2/6 (milestone sites)**

- 600-176 (White Bluffs Paint Disposal Area)
  - Site is closed, backfill and recontouring complete
- 600-120 (White Bluffs Spare Parts Burn Pit)
  - Site is closed, backfill complete
- 600-109 (Hanford trailer camp Landfill)
  - Site is closed, backfill complete
- 600-124 (White Bluffs Burn Site & Paint Disposal Area)
  - Site is closed, backfill complete.
- 600-127 (White Bluffs Loading Docks & Fuel Storage Area)
  - Site is closed, backfill complete.
- 600-125 (White Bluffs Waste Disposal Trench 1)
  - Site is closed, backfill and re-vegetation complete
- 600-5 (White Bluffs Waste Oil Dump)
  - Site is closed, backfill and re-vegetation complete
- 600-182 (White Bluffs Asbestos Pipe Lagging)
  - Site is closed, backfill complete
- 600- 3 (Hanford Townsite Excess Material Storage Yard, Paint Pit)
  - Continuing the closure process
- 600- 280 (Hardened Tar Site)
  - Site is closed
- 600-188 (White Bluffs Waste Disposal Trench 2)
  - Site is closed, backfill complete
- 600- 205 (Hanford Townsite Landfill 2)
  - Site is closed
- 600- 202 (Hanford Townsite Burn and Burial Pits)
  - Site is closed, backfill continues
- 600-108 (Pu-Vaults)
  - Continued the closure process, backfill complete.

- 600-178 (Guard House Toilet Pit)
  - Continued the closure process, backfill complete
- 600-146 (Steel Structure on the Northwest side of Gable Mountain)
  - Site is closed and re-vegetated
- 600-100 (White Bluffs Landfill)
  - Site is closed and re-vegetated
- 600-149:1 (Small Arms range - UXO)
  - Continued the closure process
- 600-186 (Hanford Construction Camp Septic and Pipelines)
  - Continued the closure process

NOTE: All remediation for IU-2/6 (M-16-56) is complete

**100-IU-2/6 (non-milestone sites)**

- (PNL Mounds)
  - Site is closed and backfill is complete
- 600-328 (Hanford townsite area sub site 1)
  - Began and complete remediation.
  - Remaining waste needs approval to treat prior to shipment

# Attachment 4

## **^WCH Document Control**

---

**From:** Saueressig, Daniel G  
**Sent:** Monday, August 29, 2011 10:39 AM  
**To:** ^WCH Document Control  
**Subject:** FW: LEGACY DIESEL STAIN AT 100-F

**Attachments:** J01168\_Leg Diesel Spill(3).pdf



J01168\_Leg Diesel  
Spill(3).pdf...

Please provide a chron number (and include the attachment). This email documents a regulatory approval.

Thanks,

Dan Saueressig  
521-5326

-----Original Message-----

**From:** Guzzetti.Christopher@epamail.epa.gov [mailto:Guzzetti.Christopher@epamail.epa.gov]  
**Sent:** Monday, August 29, 2011 10:19 AM  
**To:** Post, Thomas C  
**Cc:** Saueressig, Daniel G; Landon, Roger J; Wilkinson, Stephen G  
**Subject:** RE: LEGACY DIESEL STAIN AT 100-F

I concur as well.

Christopher J. Guzzetti  
U.S. EPA Region 10  
Hanford Project Office  
Phone: (509) 376-9529  
Fax: (509) 376-2396  
Email: guzzetti.christopher@epa.gov

**From:** "Post, Thomas" <Thomas.Post@rl.doe.gov>  
**To:** "Saueressig, Daniel G" <dgsauere@wch-rcc.com>, Christopher Guzzetti/R10/USEPA/US@EPA  
**Cc:** "Wilkinson, Stephen G" <sgwilkin@wch-rcc.com>, "Landon, Roger J" <rjlandon@wch-rcc.com>  
**Date:** 08/29/2011 09:53 AM  
**Subject:** RE: LEGACY DIESEL STAIN AT 100-F

Dan,

I concur that this stain has been addressed.

Thanks.

Tom

**From:** Saueressig, Daniel G  
**Sent:** Monday, August 29, 2011 7:12 AM  
**To:** Guzzetti.Christopher@epamail.epa.gov; Post, Thomas

Cc: Wilkinson, Stephen G; Landon, Roger J  
Subject: LEGACY DIESEL STAIN AT 100-F

Chris/Tom, as you both know, we found a legacy diesel stained area near the old 100-F operations trailer (D4 demolished the trailer a year or so ago). We believe this area was used to stage a light plant during a previous Field Remediation campaign at 100-F. We decided to excavate the contaminated soil without making the area a new waste site in hopes of removing the affected soil to below MTCA 2007 levels. After numerous hand excavation and sampling campaigns (targeting the highest concentration areas), we believe we have removed all contaminated soil to below MTCA 2007 levels. The last sample of the area (attached) confirms the remaining soil meet the cleanup levels of MTCA 2007.

Based on these sample results, we'd like your concurrence that this area doesn't need to be included as an orphan or discovery site and can be backfilled since the cleanup standards of MTCA 2007 have been met.

Thanks and give me a call if you have any questions.

Dan Saueressig  
FR Environmental Project Lead  
Washington Closure Hanford  
521-5326

<<J01168\_Leg Diesel Spill(3).pdf>>

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Denver  
4955 Yarrow Street  
Arvada, CO 80002  
Tel: (303)736-0100

TestAmerica Job ID: 280-18025-1  
TestAmerica Sample Delivery Group: J01168  
Client Project/Site: SAF# RC-182

For:  
Washington Closure Hanford  
2620 Fermi Avenue  
Richland, Washington 99354

Attn: Joan H Kessner



Authorized for release by:  
07/29/2011 01:51:51 PM

Kae Yoder  
Project Manager II  
kae.yoder@testamericainc.com

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

## CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Report Number: 280-18025-1

SDG #: J01168

SAF#: RC-182

Date SDG Closed: July 14, 2011  
Data Deliverable: 15 Day / Summary

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>ANALYSES REQUESTED</u>	<u>ANALYSES PERFORMED</u>
J1K4M8	280-18025-1	6010/7471/NWTPH-D+/WTPH-G/8270A/ 8310/8082	6010B/7471A/NWTPH-Dx/NWTPH-Gx/8270C/ 8310/8082

I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed in this Case Narrative. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the signature on the Report Cover.

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted. Calculations are performed before rounding to avoid round-off errors in calculated results.

This report includes reporting limits (RLs) less than TestAmerica Denver's practical quantitation limits. These reporting limits are being used specifically at the client's request to meet the needs of this project. Please note that data are not normally reported to these levels without qualification, since they are inherently less reliable and potentially less defensible than required by the current NELAC standards.

The results, RLs and MDLs included in this report have been adjusted for dry weight, as appropriate.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### RECEIPT

The sample was received on 7/14/2011; the sample arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 5.4 C.

### GC/MS SEMIVOLATILES - SW846 8270C

No anomalies were encountered.

### GC VOLATILES - NWTPH-Gx - GRO

Low levels of Gasoline are present in the method blank associated with batch 280-76756. Because the concentration in the method blank is not present at a level greater than half the reporting limit, corrective action is deemed unnecessary. Associated sample results present above the MDL and/or RL have been flagged with a "B".

No other anomalies were encountered.

### GC SEMIVOLATILES - SW846 8082 - PCBs

No anomalies were encountered.

### GC SEMIVOLATILES - NWTPH-Dx - DRO

Low levels of C10-C36 and C10-C28 are present in the method blank associated with batch 280-76678. Because the concentrations in the method blank are not present at levels greater than half the reporting limit, corrective action is deemed unnecessary. Associated sample results present above the MDL and/or RL have been flagged with a "B".

The MS aliquot of the MS/MSD performed on sample J1K4M8 exhibited spike compound recoveries outside the control limits, and the associated sample results have been flagged "N". The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

**HPLC - SW846 8310 - PAHs**

No anomalies were encountered.

**TOTAL METALS - SW846 6010B/7471A**

It can be noted that the sample amount was greater than four times the spike amount for Aluminum, Iron and Manganese in the Matrix Spike performed on sample J1K4M8; therefore, control limits are not applicable.

No other anomalies were encountered.



## Definitions/Glossary

Client: Washington Closure Hanford  
Project/Site: SAF# RC-182

TestAmerica Job ID: 280-18025-1  
SDG: J01168

### Qualifiers

#### GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Analyzed for but not detected.

#### GC/MS Semi VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.

#### GC VOA

Qualifier	Qualifier Description
B	Analyte was found in the associated method blank as well as in the sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### GC Semi VOA

Qualifier	Qualifier Description
B	Analyte was found in the associated method blank as well as in the sample.
N	MS, MSD: Spike recovery exceeds upper or lower control limits.
U	Analyzed for but not detected.

#### HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Analyzed for but not detected.

#### Metals

Qualifier	Qualifier Description
B	Estimated result. Result is less than the RL, but greater than MDL
U	Analyzed for but not detected.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
⊛	Listed under the "D" column to designate that the result is reported on a dry weight basis.
EPA	United States Environmental Protection Agency
ND	Not Detected above the reporting level.
MDL	Method Detection Limit
RL	Reporting Limit
RE, RE1 (etc.)	Indicates a Re-extraction or Reanalysis of the sample.
%R	Percent Recovery
RPD	Relative Percent Difference, a measure of the relative difference between two points.

# Client Sample Results

Client: Washington Closure Hanford  
Project/Site: SAF# RC-182

TestAmerica Job ID: 280-18025-1  
SDG: J01168

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: J1K4M8  
Date Collected: 07/11/11 08:15  
Date Received: 07/14/11 10:00

Lab Sample ID: 280-18025-1  
Matrix: Solid  
Percent Solids: 99.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	10	U	330	10	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Acenaphthylene	17	U	330	17	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Anthracene	17	U	330	17	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Benzo[a]anthracene	20	U	330	20	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Benzo[a]pyrene	20	U	330	20	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Benzo[b]fluoranthene	26	U	330	26	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Benzo[ghi]perylene	16	U	330	16	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Benzo[k]fluoranthene	40	U	330	40	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Bis(2-chloroethoxy)methane	23	U	330	23	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Bis(2-chloroethyl)ether	16	U	330	16	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
bis (2-chloroisopropyl) ether	23	U	330	23	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Bis(2-ethylhexyl) phthalate	46	U	330	46	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
4-Bromophenyl phenyl ether	19	U	330	19	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Butyl benzyl phthalate	43	U	330	43	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Carbazole	36	U	330	36	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
4-Chloroaniline	81	U	330	81	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
4-Chloro-3-methylphenol	65	U	330	65	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
2-Chloronaphthalene	9.9	U	330	9.9	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
2-Chlorophenol	21	U	330	21	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
4-Chlorophenyl phenyl ether	21	U	330	21	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Chrysene	27	U	330	27	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Dibenz(a,h)anthracene	19	U	330	19	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Dibenzofuran	20	U	330	20	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
1,2-Dichlorobenzene	22	U	330	22	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
1,3-Dichlorobenzene	12	U	330	12	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
1,4-Dichlorobenzene	13	U	330	13	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
3,3'-Dichlorobenzidine	89	U	650	89	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
2,4-Dichlorophenol	9.9	U	330	9.9	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Diethyl phthalate	26	U	330	26	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
2,4-Dimethylphenol	65	U	330	65	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Dimethyl phthalate	23	U	330	23	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Di-n-butyl phthalate	29	U	330	29	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
4,6-Dinitro-2-methylphenol	330	U	650	330	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
2,4-Dinitrophenol	330	U	820	330	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
2,4-Dinitrotoluene	65	U	330	65	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
2,6-Dinitrotoluene	28	U	330	28	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Di-n-octyl phthalate	14	U	330	14	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Fluoranthene	36	U	330	36	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Fluorene	18	U	330	18	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Hexachlorobenzene	29	U	330	29	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Hexachlorobutadiene	9.9	U	330	9.9	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Hexachlorocyclopentadiene	49	U	330	49	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Hexachloroethane	21	U	330	21	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Indeno[1,2,3-cd]pyrene	22	U	330	22	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Isophorone	17	U	330	17	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
2-Methylnaphthalene	19	U	330	19	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
2-Methylphenol	13	U	330	13	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
3 & 4 Methylphenol	33	U	330	33	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1
Naphthalene	31	U	330	31	ug/Kg	*	07/14/11 19:30	07/19/11 16:56	1

# Client Sample Results

Client: Washington Closure Hanford  
Project/Site: SAF# RC-182

TestAmerica Job ID: 280-18025-1  
SDG: J01168

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: J1K4M8  
Date Collected: 07/11/11 08:15  
Date Received: 07/14/11 10:00

Lab Sample ID: 280-18025-1  
Matrix: Solid  
Percent Solids: 99.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	49	U	330	49	ug/Kg	☼	07/14/11 19:30	07/19/11 16:56	1
3-Nitroaniline	72	U	330	72	ug/Kg	☼	07/14/11 19:30	07/19/11 16:56	1
4-Nitroaniline	72	U	330	72	ug/Kg	☼	07/14/11 19:30	07/19/11 16:56	1
Nitrobenzene	22	U	330	22	ug/Kg	☼	07/14/11 19:30	07/19/11 16:56	1
2-Nitrophenol	9.9	U	330	9.9	ug/Kg	☼	07/14/11 19:30	07/19/11 16:56	1
4-Nitrophenol	96	U	650	96	ug/Kg	☼	07/14/11 19:30	07/19/11 16:56	1
N-Nitrosodi-n-propylamine	31	U	330	31	ug/Kg	☼	07/14/11 19:30	07/19/11 16:56	1
N-Nitrosodiphenylamine	21	U	330	21	ug/Kg	☼	07/14/11 19:30	07/19/11 16:56	1
Pentachlorophenol	330	U	650	330	ug/Kg	☼	07/14/11 19:30	07/19/11 16:56	1
Phenanthrene	28	J	330	17	ug/Kg	☼	07/14/11 19:30	07/19/11 16:56	1
Phenol	18	U	330	18	ug/Kg	☼	07/14/11 19:30	07/19/11 16:56	1
Pyrene	24	J	330	12	ug/Kg	☼	07/14/11 19:30	07/19/11 16:56	1
1,2,4-Trichlorobenzene	28	U	330	28	ug/Kg	☼	07/14/11 19:30	07/19/11 16:56	1
2,4,5-Trichlorophenol	9.9	U	330	9.9	ug/Kg	☼	07/14/11 19:30	07/19/11 16:56	1
2,4,6-Trichlorophenol	9.9	U	330	9.9	ug/Kg	☼	07/14/11 19:30	07/19/11 16:56	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	3400	N J	ug/Kg	☼	3.36		07/14/11 19:30	07/19/11 16:56	1
Unknown	210	N J	ug/Kg	☼	7.40		07/14/11 19:30	07/19/11 16:56	1
Unknown	210	N J	ug/Kg	☼	7.46		07/14/11 19:30	07/19/11 16:56	1
Pentadecane	690	N J	ug/Kg	☼	7.66	629-62-9	07/14/11 19:30	07/19/11 16:56	1
Decane, 3,8-dimethyl-	180	N J	ug/Kg	☼	7.94	17312-55-9	07/14/11 19:30	07/19/11 16:56	1
Hexadecane	980	N J	ug/Kg	☼	8.09	544-76-3	07/14/11 19:30	07/19/11 16:56	1
Decane	220	N J	ug/Kg	☼	8.34	124-18-5	07/14/11 19:30	07/19/11 16:56	1
Unknown	190	N J	ug/Kg	☼	8.40		07/14/11 19:30	07/19/11 16:56	1
Unknown	200	N J	ug/Kg	☼	8.56		07/14/11 19:30	07/19/11 16:56	1
Unknown	400	N J	ug/Kg	☼	8.64		07/14/11 19:30	07/19/11 16:56	1
Unknown	200	N J	ug/Kg	☼	8.67		07/14/11 19:30	07/19/11 16:56	1
Tetradecane	180	N J	ug/Kg	☼	8.71	629-59-4	07/14/11 19:30	07/19/11 16:56	1
Cyclopentane, 1-butyl-2-pentyl-	220	N J	ug/Kg	☼	8.75	61142-52-7	07/14/11 19:30	07/19/11 16:56	1
Octadecane	1200	N J	ug/Kg	☼	8.84	593-45-3	07/14/11 19:30	07/19/11 16:56	1
Dodecane, 2,6,10-trimethyl-	700	N J	ug/Kg	☼	8.87	3891-98-3	07/14/11 19:30	07/19/11 16:56	1
Unknown	240	N J	ug/Kg	☼	9.14		07/14/11 19:30	07/19/11 16:56	1
Nonadecane	940	N J	ug/Kg	☼	9.17	629-92-5	07/14/11 19:30	07/19/11 16:56	1
Unknown	840	N J	ug/Kg	☼	9.48		07/14/11 19:30	07/19/11 16:56	1
Heneicosane	580	N J	ug/Kg	☼	9.78	629-94-7	07/14/11 19:30	07/19/11 16:56	1
Docosane	460	N J	ug/Kg	☼	10.06	629-97-0	07/14/11 19:30	07/19/11 16:56	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	79		50 - 120	07/14/11 19:30	07/19/11 16:56	1
2-Fluorophenol	70		53 - 120	07/14/11 19:30	07/19/11 16:56	1
Nitrobenzene-d5	67		50 - 120	07/14/11 19:30	07/19/11 16:56	1
Phenol-d5	74		52 - 120	07/14/11 19:30	07/19/11 16:56	1
Terphenyl-d14	88		55 - 120	07/14/11 19:30	07/19/11 16:56	1
2,4,6-Tribromophenol	79		51 - 120	07/14/11 19:30	07/19/11 16:56	1

## Client Sample Results

Client: Washington Closure Hanford  
Project/Site: SAF# RC-182

TestAmerica Job ID: 280-18025-1  
SDG: J01168

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Client Sample ID: J1K4M8  
Date Collected: 07/11/11 08:15  
Date Received: 07/14/11 10:00

Lab Sample ID: 280-18025-1  
Matrix: Solid  
Percent Solids: 99.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	350	J B	1200	320	ug/Kg	☒	07/15/11 11:01	07/18/11 17:05	1
<b>Surrogate</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
a,a,a-Trifluorotoluene	95		77 - 123				07/15/11 11:01	07/18/11 17:05	1

### Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: J1K4M8  
Date Collected: 07/11/11 08:15  
Date Received: 07/14/11 10:00

Lab Sample ID: 280-18025-1  
Matrix: Solid  
Percent Solids: 99.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	2.8	U	10	2.8	ug/Kg	☒	07/14/11 22:10	07/19/11 11:09	1
Aroclor 1221	8.0	U	16	8.0	ug/Kg	☒	07/14/11 22:10	07/19/11 11:09	1
Aroclor 1232	2.0	U	10	2.0	ug/Kg	☒	07/14/11 22:10	07/19/11 11:09	1
Aroclor 1242	4.6	U	10	4.6	ug/Kg	☒	07/14/11 22:10	07/19/11 11:09	1
Aroclor 1248	4.6	U	10	4.6	ug/Kg	☒	07/14/11 22:10	07/19/11 11:09	1
Aroclor 1254	2.6	U	10	2.6	ug/Kg	☒	07/14/11 22:10	07/19/11 11:09	1
Aroclor 1260	2.6	U	10	2.6	ug/Kg	☒	07/14/11 22:10	07/19/11 11:09	1
<b>Surrogate</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Decachlorobiphenyl	92		59 - 130				07/14/11 22:10	07/19/11 11:09	1
Tetrachloro-m-xylene	57		53 - 128				07/14/11 22:10	07/19/11 11:09	1

### Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Client Sample ID: J1K4M8  
Date Collected: 07/11/11 08:15  
Date Received: 07/14/11 10:00

Lab Sample ID: 280-18025-1  
Matrix: Solid  
Percent Solids: 99.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C36	98000	B N	3800	940	ug/Kg	☒	07/14/11 18:16	07/19/11 12:55	1
C10-C28	95000	B N	3800	640	ug/Kg	☒	07/14/11 18:16	07/19/11 12:55	1
<b>Surrogate</b>	<b>% Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
o-Terphenyl	92		49 - 115				07/14/11 18:16	07/19/11 12:55	1

### Method: 8310 - PAHs (HPLC)

Client Sample ID: J1K4M8  
Date Collected: 07/11/11 08:15  
Date Received: 07/14/11 10:00

Lab Sample ID: 280-18025-1  
Matrix: Solid  
Percent Solids: 99.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	10	U	100	10	ug/Kg	☒	07/14/11 20:00	07/18/11 20:25	1
Acenaphthylene	9.0	U	100	9.0	ug/Kg	☒	07/14/11 20:00	07/18/11 20:25	1
Anthracene	3.1	U	20	3.1	ug/Kg	☒	07/14/11 20:00	07/18/11 20:25	1
Benzo[a]anthracene	3.2	U	15	3.2	ug/Kg	☒	07/14/11 20:00	07/18/11 20:25	1
Benzo[a]pyrene	6.4	U	15	6.4	ug/Kg	☒	07/14/11 20:00	07/18/11 20:25	1

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## Client Sample Results

Client: Washington Closure Hanford  
Project/Site: SAF# RC-182

TestAmerica Job ID: 280-18025-1  
SDG: J01168

### Method: 8310 - PAHs (HPLC) (Continued)

Client Sample ID: J1K4M8  
Date Collected: 07/11/11 08:15  
Date Received: 07/14/11 10:00

Lab Sample ID: 280-18025-1  
Matrix: Solid  
Percent Solids: 99.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	4.2	U	15	4.2	ug/Kg	☒	07/14/11 20:00	07/18/11 20:25	1
Benzo[g,h,i]perylene	7.2	U	30	7.2	ug/Kg	☒	07/14/11 20:00	07/18/11 20:25	1
Benzo[k]fluoranthene	4.0	U	15	4.0	ug/Kg	☒	07/14/11 20:00	07/18/11 20:25	1
Chrysene	4.9	U	40	4.9	ug/Kg	☒	07/14/11 20:00	07/18/11 20:25	1
Dibenzo[a,h]anthracene	11	U	30	11	ug/Kg	☒	07/14/11 20:00	07/18/11 20:25	1
Fluoranthene	13	U	40	13	ug/Kg	☒	07/14/11 20:00	07/18/11 20:25	1
Fluorene	14	J	30	5.3	ug/Kg	☒	07/14/11 20:00	07/18/11 20:25	1
Indeno[1,2,3-cd]pyrene	12	U	30	12	ug/Kg	☒	07/14/11 20:00	07/18/11 20:25	1
Naphthalene	12	U	100	12	ug/Kg	☒	07/14/11 20:00	07/18/11 20:25	1
Phenanthrene	12	U	40	12	ug/Kg	☒	07/14/11 20:00	07/18/11 20:25	1
Pyrene	12	U	40	12	ug/Kg	☒	07/14/11 20:00	07/18/11 20:25	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (SUR)	96		72 - 115	07/14/11 20:00	07/18/11 20:25	1

### Method: 6010B - Metals (ICP)

Client Sample ID: J1K4M8  
Date Collected: 07/11/11 08:15  
Date Received: 07/14/11 10:00

Lab Sample ID: 280-18025-1  
Matrix: Solid  
Percent Solids: 99.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	6150		4.3	1.3	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Antimony	0.32	U	0.51	0.32	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Arsenic	2.2		0.85	0.56	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Barium	52.3		0.43	0.065	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Beryllium	0.16	B	0.17	0.028	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Boron	1.3	B	1.7	0.84	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Cadmium	0.053	B	0.17	0.035	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Calcium	5080		42.6	12.0	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Chromium	10.1		0.17	0.049	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Cobalt	5.7		0.85	0.085	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Copper	12.4		0.85	0.19	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Iron	15300		4.3	3.2	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Lead	3.9		0.43	0.23	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Magnesium	3910		17.1	3.2	mg/Kg	☒	07/19/11 06:45	07/20/11 14:36	1
Manganese	239		0.85	0.085	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Molybdenum	0.22	B	1.7	0.22	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Nickel	10.8		3.4	0.10	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Potassium	816		256	35.0	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Selenium	0.73	U	0.85	0.73	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Silicon	257		8.5	4.8	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Silver	0.14	U	0.17	0.14	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Sodium	198		102	50.3	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Vanadium	39.6		1.7	0.080	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1
Zinc	31.1		0.85	0.34	mg/Kg	☒	07/19/11 06:45	07/19/11 18:20	1

# Client Sample Results

Client: Washington Closure Hanford  
Project/Site: SAF# RC-182

TestAmerica Job ID: 280-18025-1  
SDG: J01168

## Method: 7471A - Mercury (CVAA)

Client Sample ID: J1K4M8  
Date Collected: 07/11/11 08:15  
Date Received: 07/14/11 10:00

Lab Sample ID: 280-18025-1  
Matrix: Solid  
Percent Solids: 99.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0052	U	0.016	0.0052	mg/Kg	*	07/22/11 14:45	07/22/11 17:43	1



# Attachment 5

**^WCH Document Control**

**From:** Saueressig, Daniel G  
**Sent:** Thursday, September 01, 2011 6:29 AM  
**To:** ^WCH Document Control  
**Subject:** FW: 100-F-62

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

Thanks,

Dan Saueressig  
 FR Environmental Project Lead  
 Washington Closure Hanford  
 521-5326

-----Original Message-----

**From:** Guzzetti.Christopher@epamail.epa.gov [mailto:Guzzetti.Christopher@epamail.epa.gov]  
**Sent:** Wednesday, August 31, 2011 3:29 PM  
**To:** Post, Thomas C  
**Cc:** Jakubek, Joshua E; Fancher, Jonathan D (Jon); Saueressig, Daniel G; Smith, Erin M  
**Subject:** RE: 100-F-62

Josh - got your message. I also concur.

Christopher J. Guzzetti  
 U.S. EPA Region 10  
 Hanford Project Office  
 Phone: (509) 376-9529  
 Fax: (509) 376-2396  
 Email: guzzetti.christopher@epa.gov

-----"Post, Thomas" <Thomas.Post@rl.doe.gov> wrote: -----

=====  
**To:** "Jakubek, Joshua E" <jejakube@wch-rcc.com>, Christopher Guzzetti/R10/USEPA/US@EPA  
**From:** "Post, Thomas" <Thomas.Post@rl.doe.gov>  
**Date:** 08/31/2011 02:31PM  
**Cc:** "Fancher, Jonathan D (Jon)" <jdfanche@wch-rcc.com>, "Saueressig, Daniel G" <dgsauere@wch-rcc.com>, "Smith, Erin M" <emsmith@wch-rcc.com>  
**Subject:** RE: 100-F-62  
 =====

I concur. Go Forth! Chris?

Tom

**From:** Jakubek, Joshua E  
**Sent:** Wednesday, August 31, 2011 1:36 PM  
**To:** Guzzetti.Christopher@epamail.epa.gov; Post, Thomas  
**Cc:** Fancher, Jonathan D (Jon); Saueressig, Daniel G; Smith, Erin M  
**Subject:** 100-F-62

Gentlemen, we received the verification sample back for the staging area (SPA-7) at F-62 which we just re-dug. The sample failed again for benzo(a)pyrene. Last time we took another meter off. We would like to take 2 to 4 meters off of that area depending on what the soil looks like as we go down. Since we are up against the ARRA clock we would like to dig this tomorrow morning so I am hoping to hear back from you before our 12:30 meeting tomorrow. Please feel free to call with any questions.

Thanks,

Josh Jakubek  
Washington Closure Hanford  
Resident Engineer  
509-942-4703

160856

"Safety, Productivity & Quality Achieved by Integrity & Teamwork."

# Attachment 6

**^WCH Document Control**

160744

**From:** Saueressig, Daniel G  
**Sent:** Tuesday, August 23, 2011 8:07 AM  
**To:** ^WCH Document Control  
**Subject:** FW: 100-F-62 Plume Chase:

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

Dan Saueressig  
521-5326

-----Original Message-----

**From:** Post, Thomas [mailto:Thomas.Post@rl.doe.gov]  
**Sent:** Monday, August 22, 2011 12:44 PM  
**To:** Guzzetti.Christopher@epamail.epa.gov; Jakubek, Joshua E  
**Cc:** Saueressig, Daniel G; Smith, Erin M; Fancher, Jonathan D (Jon)  
**Subject:** RE: 100-F-62 Plume Chase:

I concur.

Tom

-----Original Message-----

**From:** Guzzetti.Christopher@epamail.epa.gov [mailto:Guzzetti.Christopher@epamail.epa.gov]  
**Sent:** Monday, August 22, 2011 12:36 PM  
**To:** Jakubek, Joshua E  
**Cc:** Saueressig, Daniel G; Smith, Erin M; Fancher, Jonathan D (Jon); Post, Thomas  
**Subject:** Re: 100-F-62 Plume Chase:

I concur.

Christopher J. Guzzetti  
U.S. EPA Region 10  
Hanford Project Office  
Phone: (509) 376-9529  
Fax: (509) 376-2396  
Email: guzzetti.christopher@epa.gov

**From:** "Jakubek, Joshua E" <jejakube@wch-rcc.com>  
**To:** Christopher Guzzetti/R10/USEPA/US@EPA, "Post, Thomas C" <thomas.post@rl.doe.gov>  
**Cc:** "Smith, Erin M" <emsmith@wch-rcc.com>, "Fancher, Jonathan D (Jon)" <JDFANCHE@wch-rcc.com>, "Saueressig, Daniel G" <dgsauere@wch-rcc.com>  
**Date:** 08/22/2011 12:33 PM  
**Subject:** 100-F-62 Plume Chase:

Gentlemen, we received the verification results for the 100-F-62/55 sites after the plume chase campaign. Everything looks good except for SPA-7, which barely fails DE RAGs for Benzo(a)pyrene. The sample came back as .140mg/kg and we need to get that area below .137mg/kg. I would like to propose excavating that area an additional 1m deep and re-sample for PAH and SVOA's. We are still waiting for the sample results from the area in the very south of the excavation where we added the sample to the design. (The area we ended up digging to the initial design (further south.)) Please let me know if you have any questions and if you concur with this approach.

Thanks,



# Attachment 7

**^WCH Document Control**

160718

**From:** Saueressig, Daniel G  
**Sent:** Thursday, August 18, 2011 1:39 PM  
**To:** ^WCH Document Control  
**Subject:** FW: FW: OFFSITE APPROVAL REQUEST FOR TRANSURANIC WASTE FROM 100-D TO CWC

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

Thanks,

Dan Saueressig  
FR Environmental Project Lead  
Washington Closure Hanford  
521-5326

-----Original Message-----

**From:** Einan.David@epamail.epa.gov [mailto:Einan.David@epamail.epa.gov]  
**Sent:** Thursday, August 18, 2011 11:51 AM  
**To:** Saueressig, Daniel G  
**Subject:** Re: FW: OFFSITE APPROVAL REQUEST FOR TRANSURANIC WASTE FROM 100-D TO CWC

Dan--

You are good to go for CWC. Sorry for missing your earlier email.

Dave Einan  
EPA Region 10  
Hanford/INL Project Office  
309 Bradley Blvd, Ste 115  
Richland, WA 99352  
509-376-3883

**From:** "Saueressig, Daniel G" <dgsauere@wch-rcc.com>  
**To:** David Einan/R10/USEPA/US@EPA  
**Date:** 08/17/2011 08:52 AM  
**Subject:** FW: OFFSITE APPROVAL REQUEST FOR TRANSURANIC WASTE FROM 100-D TO CWC

Dave, I don't believe I ever received a reply from you on this request. Is this something you can get to soon? We will need to send this material to CWC in September.

Thanks and give me a call if you have any questions.

Dan Saueressig  
FR Environmental Project Lead  
Washington Closure Hanford  
521-5326

>  
> **From:** Saueressig, Daniel G  
> **Sent:** Wednesday, June 22, 2011 12:23 PM  
> **To:** 'Einan.David@epamail.epa.gov'  
> **Cc:** 'Welsch, Kim (ECY)'; Boyd, Alicia

> Subject: OFFSITE APPROVAL REQUEST FOR TRANSURANIC WASTE FROM  
> 100-D TO CWC

> Dave, I'd like to request your approval in accordance with Section  
> 4.3.4 of the 100 Area RDR/RAWP (DOE/RL-96-17) to send 4 test specimens  
> that were found in the 118-D-3 burial ground at 100-D to the CWC for  
> storage and ultimate disposal at the Waste Isolation Pilot Plant.  
> These pieces went through the suspect spent nuclear fuel  
> characterization process and will be managed as transuranic waste.

> Let me know if you concur with sending this waste to CWC for storage  
> pending ultimate disposal at WIPP.

> Thanks and give me a call if you have any questions.

> Dan Saueressig  
> FR Environmental Project Lead  
> Washington Closure Hanford  
> 521-5326

> [attachment "winmail.dat" deleted by David Einan/R10/USEPA/US] [attachment  
> "message\_body.rtf" deleted by David Einan/R10/USEPA/US]

# Attachment 8

**^WCH Document Control**

160796

**From:** Saueressig, Daniel G  
**Sent:** Monday, August 29, 2011 7:13 AM  
**To:** ^WCH Document Control  
**Subject:** FW: REQUEST FOR EXTENSION OF THE 118-D-3:2 ANOMALY STAGING AREA

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

Thanks,

Dan Saueressig  
FR Environmental Project Lead  
Washington Closure Hanford  
521-5326

-----Original Message-----

**From:** Kapell, Arthur (ECY) [mailto:akap461@ECY.WA.GOV]  
**Sent:** Thursday, August 25, 2011 3:41 PM  
**To:** Saueressig, Daniel G  
**Cc:** Boyd, Alicia; Menard, Nina; Post, Thomas C; Wilkinson, Stephen G; Landon, Roger J; Curcio, Joseph P; Varljen, Robin  
**Subject:** RE: REQUEST FOR EXTENSION OF THE 118-D-3:2 ANOMALY STAGING AREA

Dan,

Thanks for taking the time to ferry me around the D area today. It was good to have an overview of the site, and especially useful to have seen the proposed treatment setup for the NaK. As we discussed, I'd like to start regular visits to the D and H area, and if you have time next week I'll come out for an overview of the H area.

With regard to the 118-D-3:2 Anomaly Staging Area, Ecology agrees to extend its use as a staging area in its current capacity until the end of November, 11/30/11.

Artie Kapell  
Nuclear Waste Program  
Washington State Department of Ecology  
(509) 372-7972  
(509) 372-7971 Fax

-----Original Message-----

**From:** Saueressig, Daniel G [mailto:dgsauere@wch-rcc.com]  
**Sent:** Tuesday, August 23, 2011 4:24 PM  
**To:** Kapell, Arthur (ECY)  
**Cc:** Boyd, Alicia (ECY); Menard, Nina (ECY); Post, Thomas C; Wilkinson, Stephen G; Landon, Roger J; Curcio, Joseph P  
**Subject:** REQUEST FOR EXTENSION OF THE 118-D-3:2 ANOMALY STAGING AREA

Artie, we need to request your approval for a short extension for the anomaly staging area to finish characterization and disposition of the remaining items in this area. As you know, we currently have 2 test specimens that contain NaK along with irradiated uranium that need to be treated to neutralize the NaK. We're currently trying to disposition comments that were received by Ecology and the Department of Health to treat the NaK contained in these test specimens and reaching closure on these comments and receiving approval from Ecology on the treatment plan has caused delays that will not allow removal of this waste by the time the extension below expires. In addition, there are 2 acetylene cylinders staged in this area and it is possible one of the cylinders is not empty and contains acetylene. If this cylinder contains acetylene, we'll need additional time to safely disposition the material according to industry standards. The last anomaly is a 30 gallon drum with material resembling burnt paint that needs additional characterization.

160796

We'd like to request your approval to extend the use of the 118-D-3:2 anomaly staging area through the end of November 2011.

Thanks and give me a call if you have any questions.

Dan Saueressig  
FR Environmental Project Lead  
Washington Closure Hanford  
521-5326

-----Original Message-----

From: Buelow.Laura@epamail.epa.gov [mailto:Buelow.Laura@epamail.epa.gov]  
Sent: Wednesday, March 16, 2011 9:55 AM  
To: Welsch, Kim (ECY)  
Cc: Boyd, Alicia; Saueressig, Daniel G; Martin, David W; Seiple, Jacqueline; Proctor, Megan L; Post, Thomas C  
Subject: Re: FW: REQUEST FOR EXTENSION OF THE 118-D-3:2 ANOMALY STAGING AREA

EPA concurs with extension of the staging pile.

Laura Buelow, Environmental Scientist  
U.S. Environmental Protection Agency  
Hanford Project Office  
309 Bradley Blvd, Suite 115  
Richland, WA 99352  
Phone: 509 376-5466  
Fax: 509 376-2396  
E-mail: buelow.laura@epa.gov

From: "Welsch, Kim (ECY)" <KIWE461@ECY.WA.GOV>  
To: "Saueressig, Daniel G" <dgsauere@wch-rcc.com>  
Cc: "Boyd, Alicia (ECY)" <aboy461@ecy.wa.gov>, "Post, Thomas C" <thomas.post@rl.doe.gov>, <dwmartin@wch-rcc.com>, "Proctor, Megan L" <mlprocto@wch-rcc.com>, Laura Buelow/R10/USEPA/US@EPA, "Seiple, Jacqueline (ECY)" <jash461@ecy.wa.gov>  
Date: 03/16/2011 06:48 AM  
Subject: FW: REQUEST FOR EXTENSION OF THE 118-D-3:2 ANOMALY STAGING AREA

Dan,

It was enjoyable meeting with you and some of your co-workers yesterday during Robin's 'Round Robin' tour. After seeing the 118-D-3:2 Anomaly Staging Area, Ecology agrees to a 6 month extension from 3/18/11 for this staging area to be used in its current capacity. Have a great day!

Kim Welsch

WA State Dept. of Ecology  
Nuclear Waste Program

3100 Port of Benton Blvd

Richland, WA 99354-1670

160796

MSIN: H0-57

(509) 372-7882

kim.welsch@ecy.wa.gov

---

From: Saueressig, Daniel G [mailto:dgsauere@wch-rcc.com]  
Sent: Wednesday, March 09, 2011 6:44 AM  
To: Buelow.Laura@epamail.epa.gov  
Cc: Boyd, Alicia (ECY); Varljen, Robin (ECY); Post, Thomas C  
Subject: REQUEST FOR EXTENSION OF THE 118-D-3:2 ANOMALY STAGING AREA

Hi Laura, I'd like to request an operating term extension for the 118-D-3:2 anomaly staging area approved in March 2009 (see attached approval). Per Section 4.5.2 of the RDR/RAWP (DOE/RL-96-17, Revision 6), a staging pile must not operate for more than 2 years, except when the EPA grants an operating term extension. In accordance with the RDR/RAWP and 40 CFR 264.554(i), WCH would like to request a 6 month extension for this staging area. The original approval of this staging area was granting on 3/18/09, and this extension request is needed to finish characterization activities for the anomalous waste remaining in the area to support final disposition of the waste. I sent Alicia Boyd an email letting her know I would be requesting this extension, so hopefully Ecology concurs with allowing this extension.

Thanks, let me know if you approve this request and I'll document the approval at the next GMM.

Dan Saueressig

FR Environmental Project Lead

Washington Closure Hanford

521-5326

<<100-D ANOMALY AREA APPROVAL.pdf>> [attachment "100-D ANOMALY AREA APPROVAL.pdf" deleted by Laura Buelow/R10/USEPA/US]

# Attachment 9

# 100 Area D4/ISS Status

September 8, 2011

## D4 (WCH)

**100-N River Structures (181-N, 181-NE, 1908-NE):** Sediment removal complete. All sediment from 181-NE and 1908-NE has been loaded out to the ERDF. Liner containing sediment from 181-N has not yet been loaded out. After unsuccessful attempts to secure turbidity curtains and nets in front of river structures, NMFS approved use of an acoustical barrier system to deter fish from entering work area. System installed and tested prior to beginning bench construction. Daily surveys for fish indicate the systems function as needed. Meeting being planned for this week with NMFS and USFWS to review data and determine if daily frequency of fish surveys can be reduced. DOE issued authorization to proceed with bench construction, which began on August 19, 2011. Several exceedances of turbidity standard, of which Ecology was notified, since then triggered a request for a short-term modification per WAC 173-201A-410 to the *aquatic life turbidity criteria* in WAC 173-201A-200(1)(e). Ecology has verbally indicated a short-term modification will be granted and expressed interest in visiting job site. Plans for Ecology to visit the site have been tentatively planned for late this week. Project is awaiting short-term modification.

**182-N High Lift Pumphouse:** Asbestos abatement expected to be complete this month.

**105-N Fuel Storage Basin (FSB):** Demolition of the 8-foot thick layer of grout at the bottom of the FSB continues with a change in approach to reduce radiological exposure to D4 personnel. The grout is now being removed in layers from east to west. Grout removal has not yet reached the floor. WDOH is periodically being updated with the schedule to facilitate air sample collection once floor demolition activities commence.

**117-N Exhaust Air Filter House:** Tunnels and most of floor have been demolished. After completion of floor, demolition activities likely to skip tunnels (connecting the 105-NE Fission Product Trap) in favor of beginning demolition of 105-NE Fission Products Trap, possibly later this month. The tunnels, which would be used to support a temporary access road for D4 to access the Fuel Storage Basin, would facilitate FR activities to remove TSD piping west of the 116-N excavation.

**105-N Reactor Building:** ISS (Dickson/Intermech) concentrating activities on roof and siding. Roof and siding scheduled to be complete mid October.

## Other Areas

**400 Area:** To date, ten buildings (i.e., 4791TC, 4843, and 4831, 4760, 4814, 4719, 4727, 4706, 4726, and 4722B), including slabs, have been demolished and removed from the 400 Area. Building 4734D is currently being demolished and schedule for completion this week.

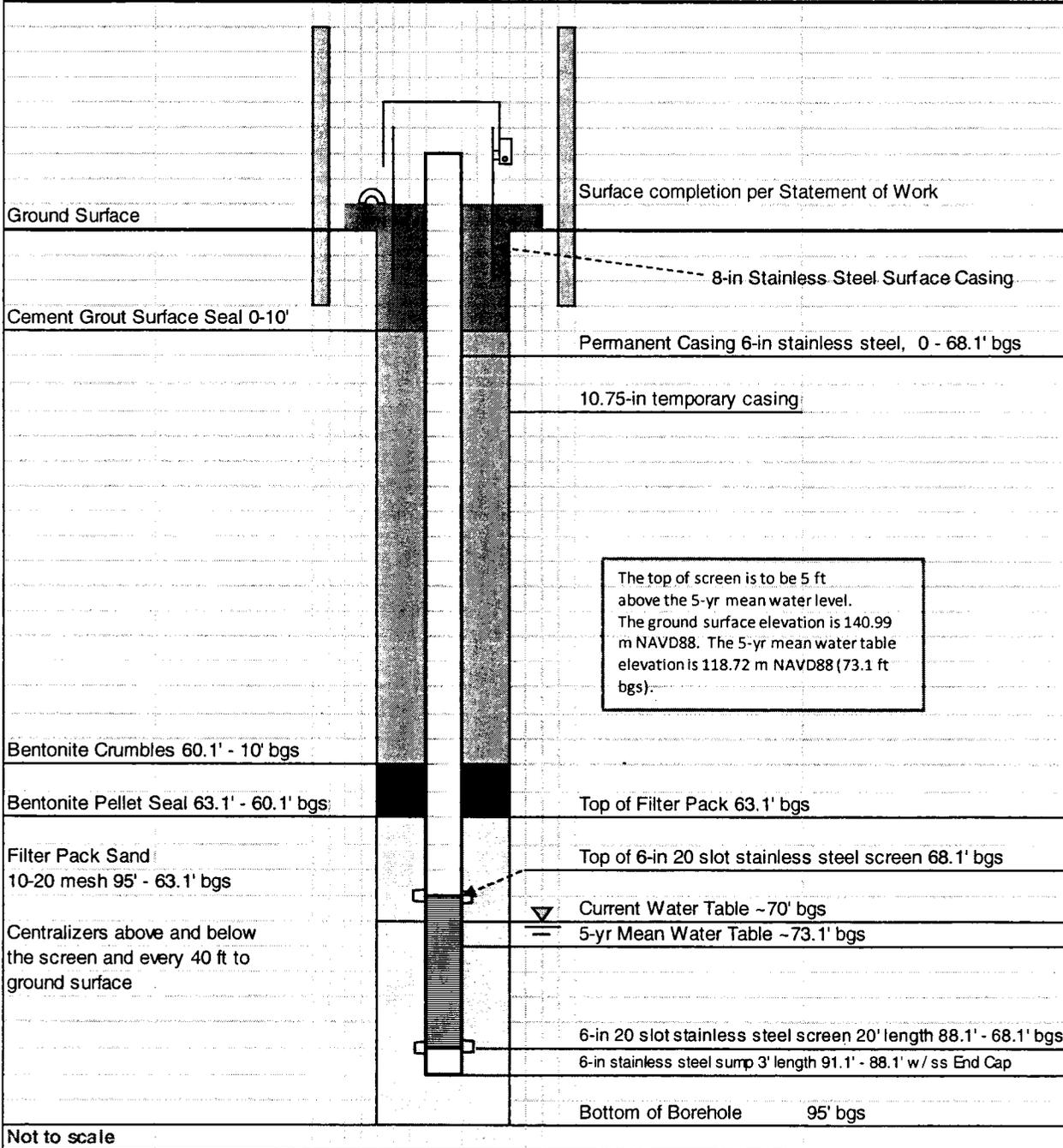
**D Area:** Construction of 114-D Bat Tower recently commenced and expected to be complete within two weeks.

**B Area:** Fence restoration around Reactor Building expected to be complete this week.

# Attachment 10

## Well Design: 100-NR-2 Monitoring Well

Drilling Method:	Cable Tool	Well Name:	199-N-187
Drilling Fluid:		Well I.D.:	C8189
Drillers name:		State Coordinates:	
Drilling Company:		Start Card #:	N.D.
Date Started:	7/19/2011	Elevation Ground Surface:	N.D.
Design Doc:	SGW-48469 & DOE/RL-2009-42		



# Attachment 11



## 5 Equipment and Materials

This section describes the site utilities, monitoring equipment, analytical equipment, injection equipment, and the integration of these components into the operational systems required to conduct the barrier extension at the 100-NR-2 OU located along the Columbia River. Access to the emplacement construction zone will be provided along the existing ramp and gravel access road near the Columbia River. Construction activities will be limited by the width of the bench, which in some areas is only 5 m (15 ft). It is assumed that no modification will be needed to permit truck and equipment access to the construction area. Injection equipment will be built to support the injections for aqueous emplacement of the additional lengths of the apatite barrier upstream and downstream of the existing barrier.

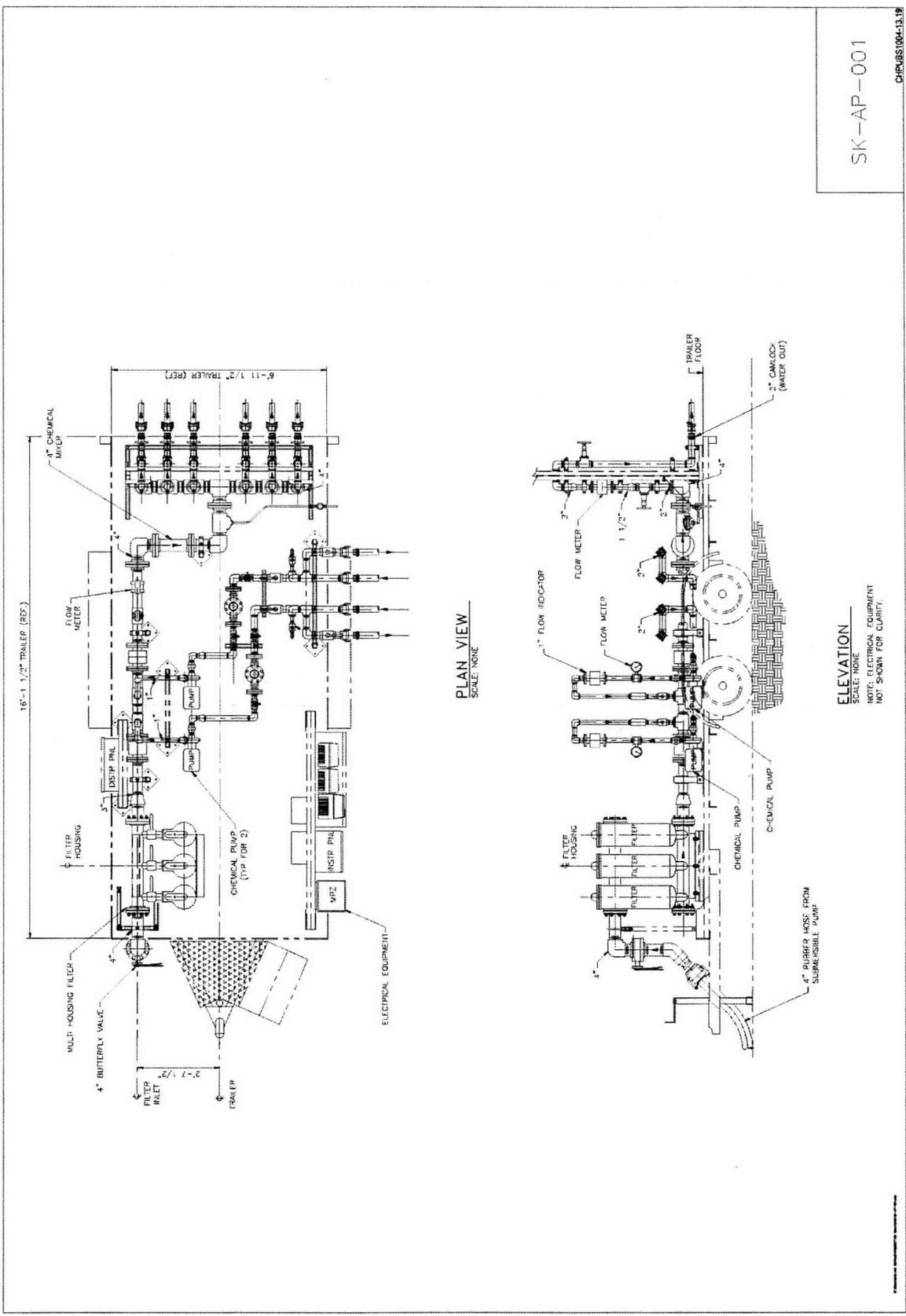
### 5.1 Site Utilities

Site utility requirements for this apatite injection include a generator and water supply. A substantial amount of water is needed to make up the injection solutions. Columbia River water will be used to dilute the high-concentration calcium-citrate-phosphate solution. A diesel generator will be used to operate the site facilities, the injection/monitoring equipment, and ancillary equipment.

### 5.2 Injection Equipment

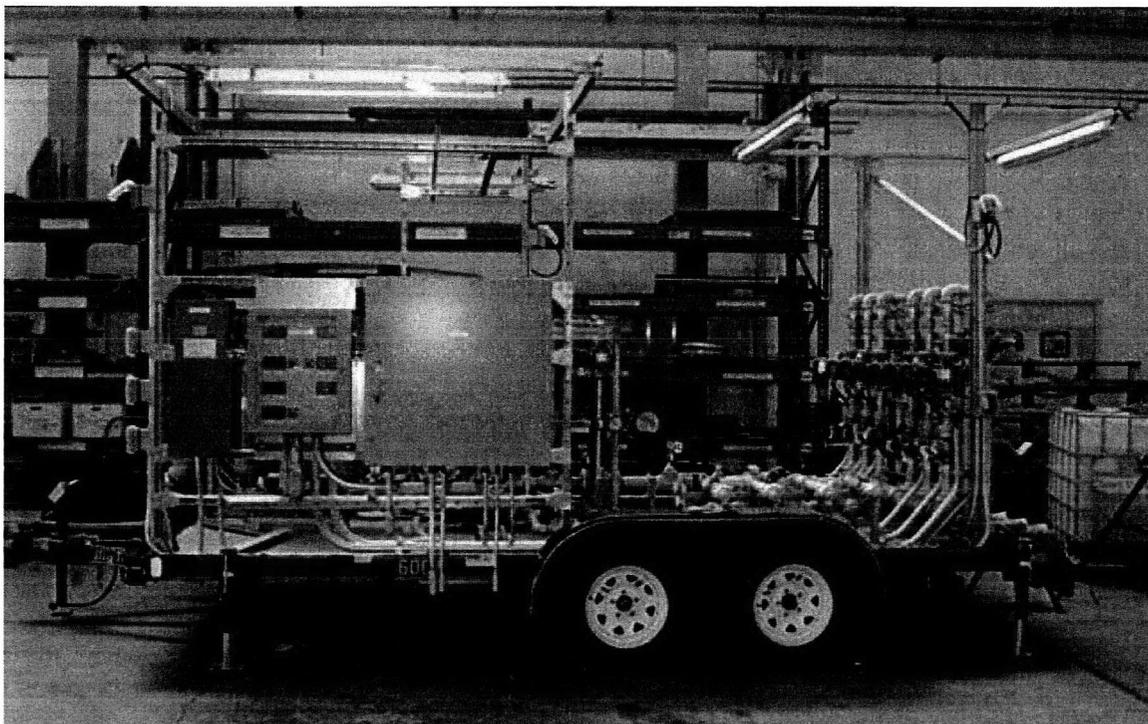
Previous calcium-citrate-phosphate injections have been performed using injection skids to mix a dilute solution of river water and concentrated chemicals for injection. The previous injection skids had a limited capacity (injection limited to two wells at a time), which is considered insufficient to implement the larger-scale treatability study proposed in this design optimization study. Two new injection skids have been designed and are being constructed to inject aqueous solution of chemical and river water through injection wells to expand the existing 100-NR-2 apatite barrier. CH2M HILL Plateau Remediation Company (CHPRC) Soil and Groundwater Remediation Project (S&GRP) engineering (licensed professional engineers) designed the new injection systems in accordance their design procedures and standard design criteria. The new injection skids have been designed to increase the coverage area and decrease the time required for each injection. The new injection system will include skids that are each capable of injecting chemicals into six wells simultaneously. Figure 23 provides a generalized schematic of the injection system and Figure 24 shows a photograph of a completed injection skid. Upon completion of the injection system fabrication, the systems will undergo acceptance testing including but not limited to leak testing, flow testing and calibration, and National Electric Code inspection.

Each treatment skid is capable of pumping chemicals from tanker trucks or tanks and river water to form an injection solution for distribution to well heads. Flow meters and sample ports are provided on each injection skid to monitor and collect samples of pre-mixed chemical solution. Pumps with fish screened intakes extract water from the Columbia River to the injection skid where it will be filtered prior to mixing with the chemical in a static in-line mixing chamber. Following mixing, a 2-in. transfer hose will distribute the dilute chemical solution to a manifold for distribution at up to six individual wells. A sample port is provided for sample collection of the dilute chemical prior to the manifold.



SK-AP-001

CHKUBS1004.13.19



**Figure 24. Injection Skid**

The volume of dilute chemical for injection will likely range from 944,607 to 4,540,000 L (25,000 to 120,000 gal) per well. The injection system is capable of injecting chemical solution at a flow rate from 37 to 189 L/min (10 to 50 gpm) per well with a total capacity for each injection skid of up to 1,135 L/min (300 gpm). Actual injection volumes will be determined and presented in the test instructions. Injection chemicals remaining at the site following completion of the upriver and downriver extension injection campaigns may be injected into a well or wells within the current 300-ft barrier to enhance areas where less effective treatment appears to be occurring. Selection of the appropriate wells will be based on current barrier performance monitoring results. Sampling related to this additional injection effort, if undertaken, will be included in routine sampling that is not specified in this study.

Following completion of an injection cycle, the injection systems will be flushed with river water and the systems will be prepared for storage. The injection systems will be stored in a protected area, under cover, between injection cycles.

## 6 Sampling and Analysis

Sampling and analysis requirements for the high-concentration calcium-citrate-phosphate solution injections include chemical make-up sampling, injection flow rate and volume monitoring, groundwater and aquifer tube sampling, and some potential soil sampling after injections are complete. Field test instructions will be prepared prior to the injections, which will include sampling requirements, along with a detailed set of operational parameters and procedures. Sampling will occur in a number of monitoring wells and aquifer tubes located within the potential area of injection influence, along the 100-N shoreline before, during, and after treatment. Field observations, including observations (odor, sheen, etc.) of potential contamination, will be recorded in logbooks or data forms during injection and sampling activities. In addition, field instrument readings, including industrial health measurements, obtained as part of well access will be recorded.

The objectives of this Design Optimization Sampling and Analyses effort are to determine the following information:

- The COC response of the injected PRB precursors (primarily by Sr-90 level reduction and conductivity).
- The extent of the PRB precursor travel within the vadose zone and effective Sr-90 reduction or apatite barrier establishment.
- If additional PRB precursors are needed in general, or within specific locations of the expanded apatite areas.

All sampling frequencies for groundwater, aquifer tubes, and soil cores are based on these criteria.

## 6.1 Sampling Frequency

Sample frequency detail is provided in Table 2.

## 6.2 Injection Skid Sampling, Flow Rate, and Volume

Samples will be collected from the injection skid periodically to ensure that the apatite precursors are being injected at the correct concentrations. Flow rates and pressure within the injection skid system will be monitored during injections and any flow adjustments made as necessary. Injection skid sampling frequency is provided in Table 2.

## 6.3 Groundwater Sampling and Analysis

Groundwater samples will be collected from wells located within the potential area of injection influence. Groundwater samples will be collected using either a peristaltic pump or 12-V electric submersible pump. Field parameters will be measured for each sample using portable field instruments. Specific conductance, oxidation reduction potential, temperature, dissolved oxygen, and pH will all be measured in the field. Aqueous samples for analyses of other parameters will be collected. Table 2 provides groundwater sample frequency. Table 3 lists the analytic sampling requirements for the parameters, container volume, and preservation methods required for offsite analyses; Table 4 lists parameters, analytic methods, and detection limits for aqueous analytes (including aquifer tube samples).

## 6.4 Aquifer Tube Sampling

Aquifer tube samples will be collected from aquifer tubes located within the potential area of injection influence. Table 2 provides aquifer tube sample frequency. Previous work for the low-concentration injections (PNNL-17429) have shown that if elevated Sr-90 and other metal concentrations occur, the aquifer stabilizes within a few weeks following injections. Gross beta analysis will initially be used for estimating Sr-90 concentrations to provide a quicker turnaround on analytical results. Aquifer tube samples will be collected in accordance with the Sampling and Analysis Plan for Aquifer Sampling Tubes (DOE/RL-2000-59) and this design optimization study.

## 6.5 Core Sampling and Analysis

Continuous core samples will be collected after a minimum of one year following the completion of injections if the groundwater and aquifer tube monitoring data show a 90 percent reduction in Sr-90 flux to the river. If no considerable reduction is shown, re-injection will be implemented and soil cores will not be collected. Core samples will be collected from locations to determine the vertical and radial extent of calcium-citrate-phosphate injection into the soil column and to determine the degree of apatite formation. A determination of the amount of strontium and Sr-90 incorporated in the apatite matrix, adsorbed to apatite material by ion-exchange, and sorbed to sediments may be completed later. Continuous soil cores will be collected following the procedures outlined in the TTP Addendum 3 (DOE/RL-2005-96-ADD3, *100-NR-2 Apatite Treatability Test Plan Implementation*) and this design optimization study.

**Table 2. Approximate Sampling Locations and Frequency**

Sample Purpose	Sampling Locations	Approximate Sampling Frequency	Analytes
Injection Monitoring	Injection stream	Field parameters every 4 hours, aqueous samples daily	Cations, anions, field parameters
Injection Arrival Monitoring	Nearby monitoring wells/aquifer tubes	Field parameters continuously <i>in situ</i> from wells, <sup>a</sup> aqueous samples at end of each injection campaign from both wells and aquifer tubes (upriver and downriver)	Cations, anions, gross beta, TPH-diesel range <sup>b</sup> , field parameters
Performance Monitoring	Nearby monitoring wells/aquifer tubes	Two and four weeks after end of each injection campaign (upriver and downriver)	Cations, anions, gross beta, TPH-diesel range <sup>b</sup> , field parameters

- a. For injection arrival monitoring, probes will be placed in 2 upriver wells during upriver injection and 2 downriver wells during downriver injection. Probes will be placed in 1 upriver and 1 downriver well for performance monitoring.
- b. TPH-diesel range organic analysis conducted on samples collected from upriver monitoring wells/aquifer tubes.

**Table 3. Sampling Requirements**

Parameter	Media/Matrix	Volume/Container	Preservation	Hold Time
Major Cations/Metals: Al, As, Ba, Ca, Co, Cr <sup>a</sup> , Fe, K, Mg, Mn, Ni, Zn, P, Sr, Na, Sb	Water	250 mL poly bottle	Filter (0.45 µm) <sup>b</sup> , HNO <sub>3</sub> to pH <2	60 days
Anions: Cl <sup>-</sup> , SO <sub>4</sub> <sup>-</sup> , PO <sub>4</sub> <sup>-</sup> , NO <sub>2</sub> <sup>-</sup> , NO <sub>3</sub> <sup>-</sup>	Water	120 mL poly bottle	Cool 4°C	45 days
TPH-diesel range	Water	3 x 1 L amber glass bottle	HCl to pH <2	14/40 days <sup>c</sup>
Gross Beta	Water	500 mL poly bottle	Filter (0.45 µm) <sup>b</sup> , HNO <sub>3</sub> to pH <2	60 days
Apatite <sup>d</sup>	Sediment	1L/liner	Cool	N/A
Phosphate <sup>d</sup>	Sediment	1L/liner	Cool	N/A
Sr-90 <sup>d</sup>	Sediment	1L/liner	Cool	N/A
pH	Water	Field measurement	N/A	N/A
Specific Conductance	Water	Field measurement	N/A	N/A
Dissolved Oxygen	Water	Field measurement	N/A	N/A
Oxidation-Reduction Potential	Water	Field measurement	N/A	N/A
Temperature	Water	Field measurement	N/A	N/A

- a. Filtered Cr is representative of Cr+6.
- b. If sample turbidity is greater than 5 NTU, samples will be filtered (0.45 µm) for increased sample quality and to aid in the laboratory's ability to analyze the samples.
- c. Holding times are 14 days from collection to extraction and 40 days from extraction to analysis.
- d. Sediment core sampling contingent on barrier performance will be conducted after minimum of one year after completion of injections.
- N/A = Not Applicable

Table 4. Analytical Performance Requirements

Chemical Abstract Service Number	Analyte	Matrix	Analytical Method	Required Detection Limit <sup>a</sup>	Accuracy Requirement (% Recovery) <sup>b</sup>	Precision Requirement (Relative % Difference) <sup>b</sup>
<b>Radiological Constituents</b>						
12587-47-2	Gross Beta	Water	Gross beta	4 pCi/L	80-120%	≤20%
<b>Nonradiological Constituents</b>						
7440-90-5	Aluminum	Water	ICP Metals – 6010	50 µg/L	80-120%	≤20%
7440-36-0	Antimony	Water	ICP Metals – 6010	60 µg/L	80-120%	≤20%
7440-38-2	Arsenic	Water	ICP Metals – 6010	100 µg/L	80-120%	≤20%
7440-39-3	Barium	Water	ICP Metals – 6010	20 µg/L	80-120%	≤20%
7440-43-9	Cadmium	Water	ICP Metals – 6010	5 µg/L	80-120%	≤20%
7440-70-2	Calcium	Water	ICP Metals – 6010	1,000 µg/L	80-120%	≤20%
7440-47-3	Chromium	Water	ICP Metals – 6010	10 µg/L	80-120%	≤20%
7440-48-4	Cobalt	Water	ICP Metals – 6010	20 µg/L	80-120%	≤20%
7440-50-8	Copper	Water	ICP Metals – 6010	10 µg/L	80-120%	≤20%
7439-89-6	Iron	Water	ICP Metals – 6010	50 µg/L	80-120%	≤20%
7439-92-1	Lead	Water	ICP Metals – 6010	50 µg/L	80-120%	≤20%
7439-95-4	Magnesium	Water	ICP Metals – 6010	750 µg/L	80-120%	≤20%
7439-96-5	Manganese	Water	ICP Metals – 6010	5 µg/L	80-120%	≤20%
7439-98-7	Molybdenum	Water	ICP Metals – 6010	20 µg/L	80-120%	≤20%
7440-02-0	Nickel	Water	ICP Metals – 6010	40 µg/L	80-120%	≤20%
7440-09-7	Potassium	Water	ICP Metals – 6010	4,000 µg/L	80-120%	≤20%
7440-22-4	Silver	Water	ICP Metals – 6010	10 µg/L	80-120%	≤20%

Table 4. Analytical Performance Requirements

Chemical Abstract Service Number	Analyte	Matrix	Analytical Method	Required Detection Limit <sup>a</sup>	Accuracy Requirement (% Recovery) <sup>b</sup>	Precision Requirement (Relative % Difference) <sup>b</sup>
7440-23-5	Sodium	Water	ICP Metals – 6010	500 µg/L	80-120%	≤20%
7440-24-6	Strontium	Water	ICP Metals – 6010	10 µg/L	80-120%	≤20%
7440-62-2	Vanadium	Water	ICP Metals – 6010	25 µg/L	80-120%	≤20%
7440-66-6	Zinc	Water	ICP Metals – 6010	10 µg/L	80-120%	≤20%
16887-00-6	Chloride	Water	Anions by IC – 300.0	200 µg/L	80-120%	≤20%
16984-48-8	Fluoride	Water	Anions by IC – 300.0	500 µg/L	80-120%	≤20%
NO2-N	Nitrogen in nitrate	Water	Anions by IC – 300.0	75 µg/L	80-120%	≤20%
NO3-N	Nitrogen in nitrite	Water	Anions by IC – 300.0	75 µg/L	80-120%	≤20%
PO4-P	Phosphorus in phosphate	Water	Anions by IC – 300.0	500 µg/L	80-120%	≤20%
14808-79-8	Sulfate	Water	Anions by IC – 300.0	100 µg/L	80-120%	≤20%
68334-30-5	TPH-diesel range <sup>c</sup>	Water	WTPH-D	500 µg/L	70 -130%	≤30%
<b>Field Measurements</b>						
pH – 150.1	pH	Water	150.1 – pH-Field	0.1 pH unit	d	d
Temp – 170.1	Temperature (°C)	Water	170.1 – Temperature-Field	0.1 °C	d	d
Cond – 120.1	Specific conductance (µS/cm)	Water	120.1 – Conductivity-Field	0.1 µS/cm	d	d
Oxygen – 360.1	Dissolved oxygen (mg/L)	Water	360.1 – Oxygen-Field	0.1 mg/L	d	d
REDOX_FLD	Oxidation-Reduction Potential (mV)	Water	Redox_Probe_Field	±1 mV	d	d
<b>PNNL Apatite Formation Testing<sup>e</sup></b>						
14265-44-2	Phosphate, Apatite	Sediment	XRD	N/A	f	f

Table 4. Analytical Performance Requirements

Chemical Abstract Service Number	Analyte	Matrix	Analytical Method	Required Detection Limit <sup>a</sup>	Accuracy Requirement (% Recovery) <sup>b</sup>	Precision Requirement (Relative % Difference) <sup>c</sup>
14265-44-2	Phosphate, Apatite	Sediment	SEM/EDS	N/A	f	f
14265-44-2 Rad-Sr	Phosphate, Sr-90	Sediment	Acid dissolution of sediment and phosphate measurement	N/A	f	f
N/A	Apatite	Sediment	Fluorescence of substituted apatites	N/A	f	f

a. Project specific detection limits—actual laboratory detection limits are laboratory specific and may be lower.

b. Accuracy criteria for associated batch matrix spike percent recoveries. Evaluation based on statistical control of laboratory control samples is also performed. Precision criteria for batch laboratory replicate matrix spike analyses or replicate sample analyses.

c. TPH-diesel range organic analysis to be conducted on samples collected from upriver monitoring wells and aquifer tubes.

d. This method has no quantitative requirements beyond adherence to the field measurement methodology.

e. Sediment core sampling contingent on barrier performance.

f. PNNL laboratory procedures and QA plan will apply to all analyses performed by PNNL.

EDS = energy dispersive X-ray spectroscopy  
ICP = inductively coupled plasma  
PNNL = Pacific Northwest National Laboratory  
QA = quality assurance  
SEM = scanning electron microscope  
TPH = total petroleum hydrocarbon  
XRD = X-ray diffraction  
WTPH-D = Washington total petroleum hydrocarbon – diesel range

# Attachment 12

160759

**^WCH Document Control**

**From:** Faust, Toni L  
**Sent:** Tuesday, August 23, 2011 2:06 PM  
**To:** ^WCH Document Control  
**Cc:** Saueressig, Daniel G; Chance, Joanne C  
**Subject:** FW: 116-N-4 revised North end deferral info  
**Attachments:** 116-N-4 north side deferral information.doc

Please chron the below regulatory agreement concurrence and attached document for the 116-N-4 waste site "hot spot" deferral. Please provide electronic distribution to Dan Saueressiq and myself.

Thanks toni.

---

**From:** Varljen, Robin (ECY) [mailto:RVAR461@ecy.wa.gov]  
**Sent:** Tuesday, August 23, 2011 1:54 PM  
**To:** Faust, Toni L  
**Cc:** Walker, Jeffrey L; Menard, Nina  
**Subject:** RE: 116-N-4 revised North end deferral info

Thank you for the updated plan and drawings. This e-mail serves as Ecology's concurrence with your plan to defer portions of 116-N-4 to 100-N-64 remediation and close out. Please provide an updated WIDs for both to add to the file. Please record this agreement in a future UMM at your convenience.

Thank you,  
Robin Varljine

---

**From:** Faust, Toni L [tifaust@wch-rcc.com]  
**Sent:** Monday, August 15, 2011 11:09 AM  
**To:** Varljen, Robin (ECY)  
**Cc:** Walker, Jeffrey L  
**Subject:** 116-N-4 revised North end deferral info

Robin

Based on our last meeting I have updated the 116-N-4 "hot spots" deferral information document (see attached). I also have printed and will drop off this afternoon copies of the Phoenix's remediation design drawings so you can see how the work on the north side that is already planned fits in. Please let me know if Ecology is in concurrence with the deferral.

Thanks toni

## 116-N-4 Waste Site Deferral of North End.

The 116-N-4 waste site was remediated based on design drawings listed in Table 1. Contaminated material (debris and soil) was disposed of at the ERDF. A Global Positioning Environmental Radiological Surveyor (GPERS) survey on June 3, 2011 showed two gamma radiologically contaminated "hot spots" (2376-5000 net cpm, gamma) located on the north side of the 116-N-4 excavation. An in-process sample was collected and analyzed for gamma emitting radionuclides only. In-process soil sample (HEIS # J1K3T1) results show that cobalt-60 and cesium-137 contamination above the direct exposure remedial action goals (RAGs) and indicate a possible plume or adjacent contamination source to the 116-N-4 wastes site. The complete list of analytes and the results for this sample are listed in Table 2. These "hot spots" locations are at the base of the 116-N-4 north excavation slope. The extent of the contamination is not known at this time; however it is expected to laterally continue northward into the excavation slope toward the 100-N-64 pipeline and possibly the fuel storage basin (FSB). OSHA requires a 1.5:1 slope and safety bench for excavations greater than 20 feet. The 116-N-4 excavation is approximately 8 m (26 feet) deep on the north end. To meet the OSHA requirements for personnel safety until D4 has made further progress on the FSB and removed a stub wall at the top of the 116-N-4 north slope and removed the 100-N-64 pipe (lowering the excavation depth) (see Figure 1) remediation on the north side of the 116-N-4 wastes site can not be completed to address these "hot spots." D4 is expecting to complete removal of the FSB and the area adjacent to the north side of the 116-N-4 waste site in November 2011. Therefore WCH will be deferring remediation on the "hot spots" plume at the north end of the 116-N-4 waste site to occur during the excavation of the collocated 100-N-64 and UPR-100-N-7 wastes sites. The 100-N-64 remediation design (0100N-DD-C0650) includes the UPR-100-N-7 waste site along with the unplanned release wastes sites 100-N-31, 100-N-32 and 100-N-38 also located in the current excavation side slope. This excavation will be extended to include the north side of 116-N-4 and the "hot spots" as shown in Figure 2. Excavation in "hot spots" area will continue until contamination levels for the COPCs are below the appropriate RAGs. The 100-N-64 pipe line design drawing will be redlined in the field to include remediation of the "hot spots." The final excavation depth of the "hot spots" will be based on GPERS, and in-process sampling results used to guide the excavation prior to being included in the 100-N-64 verification sampling work instructions for interim closure.

**Table 1. 116-N-4 Remediation Design Drawing List**

Design Drawing Number (revision)	Title	Comment
0100N-DD-C0573 rev 0	100N Area 100N Waste Sites Remediation Design 116-N-4 Emergency Dump Basin Civil Survey	Pre remediation site civil.
0100N-DD-C0262, rev 1	100N Area 100N Waste Sites Remediation Design 116-N-4 Emergency Dump Basin Civil Pilot Plan	Washington Closure Hanford design approved by Ecology
0100N-DD-C0638 rev A	100N Area 100N Waste Sites Remediation Design 116-N-4 Emergency Dump Basin Civil Pilot Plan	Basically the same as 0100N-DD-C0262 rev 1. after a few clarifications were made.
0100N-DD-C0650 rev 1	100N Area 100N Waste Sites Remediation Design 116-N-4 and 100-N-57 Area Excavation Design	Shows the northern end of the 116-N-4 and adjacent waste sites planned remediation design. Top of Slope.
0100N-DD-C0652 rev 0	100N Area 100N Waste Sites Remediation Design 116-N-4 and 100-N-57 Area Excavation Design	Profile views to go with 0100N-DD-C0650 drawing.
0100N-DD-C0653 rev 0	100N Area 100N Waste Sites Remediation Design 116-N-4 and 100-N-57 Area Excavation Design	Additional profile views to go with 0100N-DD-C0650 drawing.
0100N-DD-C0655 rev 1	100N Area 100N Waste Sites Remediation Design 116-N-4 and 100-N-57 area excavation design	More profile views to go with 0100N-DD-C0650 drawing.

Verification sampling and analysis of the 116-N-4 waste site will not include the northern portion of the excavation within its verification sample decision unit. The 116-N-4 verification work instruction and remaining sites verification package will refer to the 100-N-64 waste site and the deferral of the "Hot Spots" remediation. The potential contaminants of concern (COPCs) for the 100-N-64 include hexavalent chromium, chromium, lead and cobalt-60. The COPCs for the

### 116-N-4 Waste Site Deferral of North End.

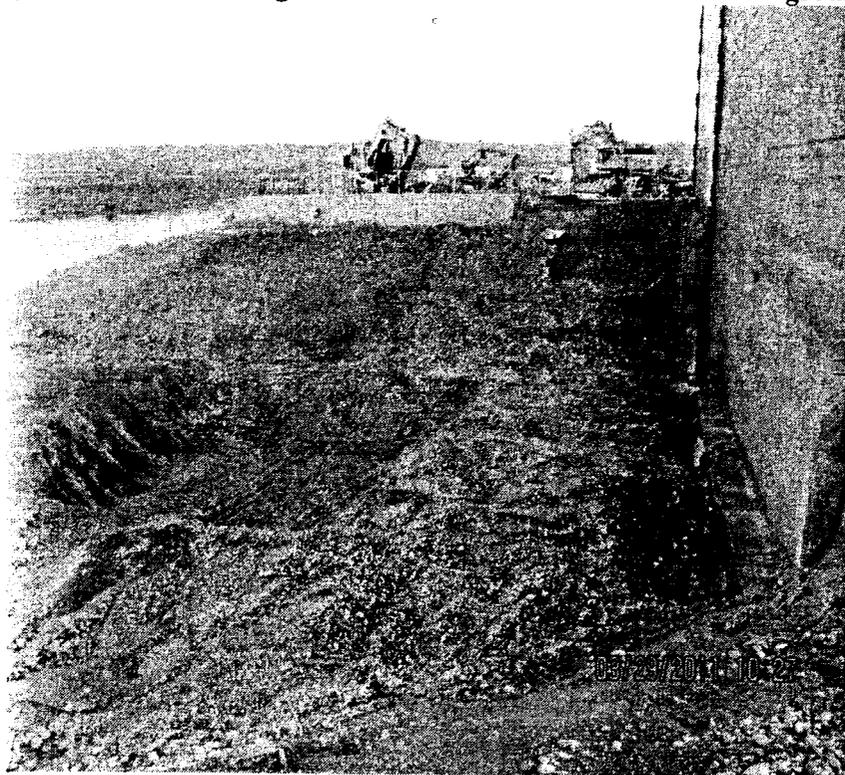
116-N-4 emergency pump basin are: tritium, cobalt-60, strontium-90, cesium-124, cesium-137, plutonium-239/240, antimony-125, ruthenium-106 and zirconium-95. Antimony-125, ruthenium-106 and zirconium-95 have half-lives of less than 3 years and therefore will not be sampled for. The cumulative COPC list to support clean up of the "hot spots" plume will be hexavalent chromium, chromium, lead, tritium, cobalt-60, strontium-90, cesium-124, cesium-137, and plutonium-239/240. Other COPCs may be added based on future in-process sampling during the remediation of the "hot spots," and waste sites within the current 100-N-64 remediation design.

The 116-N-4, 100-N-64, UPR-100-N-7, 100-N-31, 100-N-32 and 100-N-38 are all TPA milestone M-16-55 listed waste site. This milestone requires remediation, reclassification "interim closed," backfill and revegetation of these sites by December 31, 2012. Although verification sampling for interim closure of the 116-N-4 waste site is expected to be completed prior to that of the verification sampling of the "hot spots," 100-N-64, UPR-100-N-7, 100-N-31, 100-N-32 and 100-N-38 waste sites, backfill and revegetation of the 116-N-4 wastes site will not be completed until the other sites have also been reclassified as interim closed.

Upon Ecology's agreement with the above the Waste Information Data System for 116-N-4, 100-N-64 and UPR-100-N-7 will be updated to reflect this agreement.

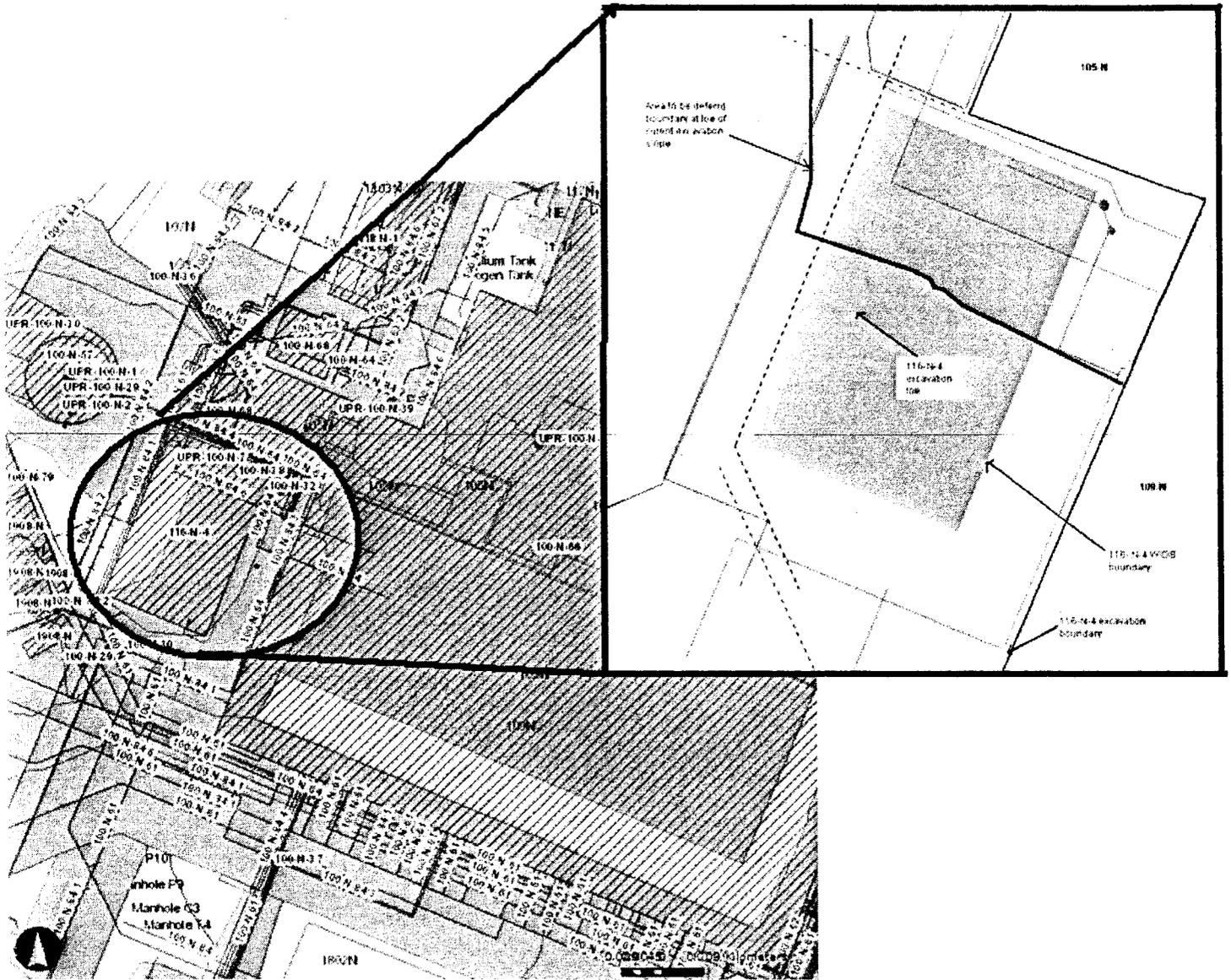
<b>Contaminant</b>	<b>Result (pCi/g) and Qualifier</b>
Americium-241	-0.0153 U
Cobalt-60	8.02
Cesium-137	6.28
Europium-152	-0.0453 U
Europium-154	0.00419 U
Europium-155	-0.0215 U
Radium-226	0.333 U

**Figure 1. View Looking North with 116-N-4 Excavation in Foreground**



# 116-N-4 Waste Site Deferral of North End.

## Figure 2. Planned Extension of 100-N-64 Waste Site Remediation



# Attachment 13

**^WCH Document Control****160909**

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**From:** Saueressig, Daniel G  
**Sent:** Tuesday, September 06, 2011 1:37 PM  
**To:** ^WCH Document Control  
**Subject:** FW: REQUEST FOR ADDITION OF 4 SITES TO 100-N AIR MONITORING PLAN  
Please provide a chron number. This email documents a regulatory approval.

Thanks,

Dan Saueressig  
FR Environmental Project Lead  
Washington Closure Hanford  
521-5326

---

**From:** Varljen, Robin (ECY) [mailto:RVAR461@ecy.wa.gov]  
**Sent:** Tuesday, September 06, 2011 11:29 AM  
**To:** Saueressig, Daniel G; Chance, Joanne C  
**Cc:** Buckmaster, Mark A; Boyd, Alicia; Menard, Nina  
**Subject:** RE: REQUEST FOR ADDITION OF 4 SITES TO 100-N AIR MONITORING PLAN

Dan, Ecology concurs with the addition of the four sites to the existing AMP.

Ecology has previously commented and questioned the AMP language changes that would allow a wider variety of characterization sampling to occur without the need to edit the PTE and TEDE calculation. While I can concur this language change is a practical approach, the potential to add characterization sampling with a greater potential to emit is possible. This allows for the possibility that the statement "**Characterization sampling (e.g., confirmatory sampling, remedial investigation sampling) at radiological contaminated sites is included in the scope of this plan since the emissions from these activities (e.g., surface sampling, potholing) will generate negligible emissions.**" could be wrong if the actual radiological concentrations were significant and not reviewed. I do not believe this is your intention but we must look at all this issue to ensure this addressed.

I will be discussing this issue with my management this week for resolution but am open to suggestions. If there is quick and easy solution I am open!

Otherwise, please ensure the addition of 4 waste sites is included in the upcoming revision of the 100-N Air Monitoring Plan.

Thank you!  
Robin

---

**From:** Saueressig, Daniel G [mailto:dgsauere@wch-rcc.com]  
**Sent:** Wednesday, August 03, 2011 4:13 PM

9/6/2011

160909

**To:** Chance, Joanne C; Varljen, Robin (ECY)

**Cc:** Buckmaster, Mark A

**Subject:** RE: REQUEST FOR ADDITION OF 4 SITES TO 100-N AIR MONITORING PLAN

Joanne, these are usually approved at your and Robins level and I document the approval via email at the UMM. Thanks for your approval, once Robin has reviewed and approved, we can document at the next UMM.

Dan

---

**From:** Chance, Joanne [mailto:Joanne.Chance@rl.doe.gov]

**Sent:** Wednesday, August 03, 2011 3:55 PM

**To:** Saueressig, Daniel G; Varljen, Robin

**Cc:** Buckmaster, Mark A

**Subject:** FW: REQUEST FOR ADDITION OF 4 SITES TO 100-N AIR MONITORING PLAN

Dan and Robin,

I concur with the modifications summarized below. Have we been getting signatures or e-mail approvals from Nina Menard and Mark French in similar instances for the UMM records? Thanks.

Joanne C. Chance  
U.S. Department of Energy  
Office of Assistant Manager for the River Corridor  
825 Jadwin Ave / MSIN A3-04  
Richland, WA 99352  
(509) 376-0811

**From:** Saueressig, Daniel G

**Sent:** Thursday, July 21, 2011 7:21 AM

**To:** Varljen, Robin; Chance, Joanne

**Cc:** Buckmaster, Mark A

**Subject:** REQUEST FOR ADDITION OF 4 SITES TO 100-N AIR MONITORING PLAN

Robin/Joanne, I'd like to request your approval to add 4 sites (100-N-28, 100-N-62, 100-N-68 and 100-N-79) to the existing air monitoring plan for 100-N. I've attached the Total Effective Dose Equivalent (TEDE) calculation documenting the low TEDE to the maximally exposed individual (2.691E-03 mrem/yr). I've also included the approved air monitoring plan for your information.

Also, I'd like to propose a couple minor modifications to the text of the existing air monitoring plan to make it consistent with the 100-D and 100-H plans.

The following sentence (**bold**) is proposed to be inserted into the 100-N AMP and will replace the second sentence of the fourth paragraph of Section 1.1 which states "Confirmatory sampling at radiological contaminated sites is included in the scope of this plan since the emissions from these activities (surface sampling, potholing, etc.) will generate negligible emissions."

**"Characterization sampling (e.g., confirmatory sampling, remedial investigation sampling) at radiological contaminated sites is included in the scope of this plan since the emissions from these activities (e.g., surface sampling, potholing) will generate negligible emissions."** This sentence is the first sentence of the fourth paragraph of section 1.1 of the 100-D AMP and the first sentence of the fifth paragraph of section 1.1 of the 100-H AMP.

9/6/2011

Also, the following sentence (**bold**) is proposed to be inserted into the 100-N AMP and will replace the first sentence of the second paragraph of Section 4.0 which states "Characterization (e.g., testing pitting and trenching or surface soil sampling) may be conducted prior to the start of remediation or as part of confirmatory sampling."

**"Characterization (e.g., test pitting and trenching, or surface soil sampling) may be conducted prior to the start of remediation, or as needed to support confirmatory or risk assessment activities."** This sentence is the first sentence of the sixth paragraph of Section 4.0 of the 100-D AMP and the first sentence of the seventh paragraph of Section 4.0 of the 100-H AMP.

Let me know if you concur with adding these sites to the existing air monitoring plan and modifying the text of the plan to make it consistent with the 100-D and 100-H plans and I'll document the agreement at the next UMM.

Thanks and give me a call if you have any questions.

Dan Saueressig  
FR Environmental Project Lead  
Washington Closure Hanford  
521-5326

<<100-N TEDE 6-11.pdf>> <<100-N AMP.pdf>>

# Attachment 14

**^WCH Document Control**

160717

**From:** Saueressig, Daniel G  
**Sent:** Thursday, August 18, 2011 1:38 PM  
**To:** ^WCH Document Control  
**Subject:** FW: FW: REQUEST FOR APPROVAL TO SEND SNF FROM 118-K-1 TO K BASINS

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

Thanks,

Dan Saueressig  
FR Environmental Project Lead  
Washington Closure Hanford  
521-5326

-----Original Message-----

**From:** Einan.David@epamail.epa.gov [mailto:Einan.David@epamail.epa.gov]  
**Sent:** Thursday, August 18, 2011 11:53 AM  
**To:** Saueressig, Daniel G  
**Cc:** Guzzetti.Christopher@epamail.epa.gov; Zeisloft, Jamie  
**Subject:** Re: FW: REQUEST FOR APPROVAL TO SEND SNF FROM 118-K-1 TO K BASINS

Dan--

As long as K-Basins is still accepting the SNF, you are fine. They had stated that they were no longer accepting SNF, so check with them.

Dave Einan  
EPA Region 10  
Hanford/INL Project Office  
309 Bradley Blvd, Ste 115  
Richland, WA 99352  
509-376-3883

**From:** "Saueressig, Daniel G" <dgsauere@wch-rcc.com>  
**To:** David Einan/R10/USEPA/US@EPA  
**Cc:** Christopher Guzzetti/R10/USEPA/US@EPA, "Zeisloft, Jamie"  
<jamie.zeisloft@rl.doe.gov>  
**Date:** 08/17/2011 08:48 AM  
**Subject:** FW: REQUEST FOR APPROVAL TO SEND SNF FROM 118-K-1 TO K  
BASINS

Dave, we found 2 additional pieces of SNF at 118-K-1 and I'd like to request your approval to send these pieces to K Basins and ultimately the Canister Storage Building. Shipment is tentatively scheduled for mid-September, but could happen in late August if CHPRC allows shipment later this month.

Let me know if you approve and give me a call if you have any questions.

Thanks,

Dan Saueressig  
FR Environmental Project Lead  
Washington Closure Hanford  
521-5326

-----Original Message-----

From: Guzzetti.Christopher@epamail.epa.gov  
 [mailto:Guzzetti.Christopher@epamail.epa.gov]  
 Sent: Thursday, June 23, 2011 11:12 AM  
 To: Saueressig, Daniel G  
 Cc: Einan.David@epamail.epa.gov; Zeisloft, Jamie  
 Subject: RE: REQUEST FOR APPROVAL TO SEND SNF FROM 118-K-1 TO K BASINS

Dan -

Dave is on vacation this week so I talked to Rod and others and you can consider this email your approval.

Christopher J. Guzzetti  
 U.S. EPA Region 10  
 Hanford Project Office  
 Phone: (509) 376-9529  
 Fax: (509) 376-2396  
 Email: guzzetti.christopher@epa.gov

-----"Saueressig, Daniel G" <dgsauere@wch-rcc.com> wrote: -----

=====  
 To: David Einan/R10/USEPA/US@EPA  
 From: "Saueressig, Daniel G" <dgsauere@wch-rcc.com>  
 Date: 06/20/2011 06:57AM  
 Cc: Christopher Guzzetti/R10/USEPA/US@EPA, "Zeisloft, Jamie"  
 <jamie.zeisloft@rl.doe.gov>  
 Subject: RE: REQUEST FOR APPROVAL TO SEND SNF FROM 118-K-1 TO K BASINS  
 =====

Hi Dave, have you had a chance to evaluate this request?

Thanks,

Dan Saueressig  
 FR Environmental Project Lead  
 Washington Closure Hanford  
 521-5326

>  
 > From: Saueressig, Daniel G  
 > Sent: Thursday, June 09, 2011 3:36 PM  
 > To: Einan, David R  
 > Cc: Guzzetti, Christopher; Zeisloft, Jamie  
 > Subject: REQUEST FOR APPROVAL TO SEND SNF FROM 118-K-1 TO K  
 > BASINS

> Hi Dave, we have 2 pieces of SNF stored at the 118-K-1 and I need your

> approval per section 4.3.3 of the 100 Area RDR (DOE/RL-96-17) to send  
 > this material to K Basins and ultimately to the Canister Storage  
 > Building.

> Shipment of this material is scheduled for June 27, 2011. Let me know

> if you approve and give me a call if you have any questions.

> Thanks,

> Dan Saueressig  
 > 521-5326

[attachment(s) "winmail.dat", "message\_body.rtf" removed by Christopher  
 Guzzetti/R10/USEPA/US] [attachment "winmail.dat" deleted by David Einan/R10/USEPA/US]

[attachment "message\_body.rtf" deleted by David Einan/R10/USEPA/US]

160717

# Attachment 15

300 Area Closure Project Status  
September 8, 2011  
100/300 Area Combined Unit Manager Meeting

**Ongoing Activities**

- 324 – Received preliminary data for two of 300-296 waste site soil samples beneath 324. Initial review determined no unexpected contaminants for contamination levels. It is anticipated soils will be eligible for disposal at ERDF when ready for retrieval.
- 309 – Removing remainder of containment structure to grade, site to be turned over to Subcontractor for reactor removal preparations.
- 308 – Completing final demolition preparations, completing above-grade demolition of 308-A.
- 340 – Completed stabilization of piping, vaults, vault tanks and 340-A tanks. Initiated demolition of 340-B Building.
- Completed above-grade demolition and initiated below-grade demolition of the 320 Building.
- Engineering evaluation of 300 Area “hot” piping in support of stabilization and remediation is ongoing.
  - Evaluating options for potential residual Hg in pipelines
- Retained Facility Waste Sites Evaluation Study: internal draft in review
  - Utility interferences evaluation in process

**Current Demolition Preparations & Activities**

- Complete 308-A above-grade demolition, finalize 308 demolition preparations.
- Continue preparations for 309 reactor core removal.
- Continue 320 building demolition.
- Continue above-grade demolition of all 340 Complex buildings.
- Prepare for 337-B CRCTA vessel removal.
- Prepare and mobilize subcontractor for waste site remediation south of Apple St.

**60-Day Project Look Ahead**

- Continue evaluation/characterization of source-term beneath 324 Building, evaluation of remediation technique and technologies.
- Complete 308-A demolition, initiate demolition of 308. Finalize engineering for TRIGA reactor removal.
- Continue balance of 320 Building demolition, finalize preparations for 329 Building demolition.
- Resume 300 Area field remediation activities
  - 321 & 3706: November
  - 340: January, 2012
- Resume and complete 327 below-grade demolition.
- Issue Request for Qualifications for Remaining 300 FR Sites

# Attachment 16

**Environmental Protection Mission Completion Project**  
September 8, 2011

**Orphan Sites Evaluations**

- The 100-F/IU-2/IU-6 Area – Segment 4 Orphan Sites Evaluation Report was transmitted to RL for review and subsequent submittal to EPA/Ecology for review on 7/20/11.
- The 100-F/IU-2/IU-6 Area – Segment 5 Orphan Sites Evaluation report will be transmitted to RL for review and subsequent transmittal to EPA in late-September.

**Long-Term Stewardship**

- The consolidated Rev. 0, 100-F/IU-2/IU-6 - Segment 1 turnover and transition package is currently being finalized for transmittal to RL.
- The 100-F/IU-2/IU-6 Segment 1 Interim Remedial Action Report was submitted to RL on 5/24/11.
- The Rev. 0, 100-BC-1 OU Interim Remedial Action Report was transmitted to RL for subsequent submittal to EPA on 9/1/11.

**River Corridor Baseline Risk Assessment**

- The Draft C Ecological Risk Assessment report (Volume I) is being processed for transmittal to the regulators for review.
- The Rev. 0 Human Health Risk Assessment report (Volume II) has been approved by RL and is being distributed.

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

- The Draft A screening level ecological risk assessment is being finalized to reflect RL comments.
- The Draft A human health risk assessment is being developed to reflect RL comments.

**Document Review Look-Ahead**

<b>Document</b>	<b>Regulator Review Start</b>	<b>Duration</b>
100-F/IU-2/IU-6 Area – Segment 1 Interim Remedial Action Report	TBD	30 days
100-F/IU-2/IU-6 - Segment 4 Orphan Sites Evaluation Report	July 25, 2011	30 days
100-F/IU-2/IU-6 - Segment 5 Orphan Sites Evaluation Report	September 29, 2011	30 days
River Corridor Baseline Risk Assessment – Ecological Risk Assessment Report (DOE/RL-2007-21, Draft C, Volume I)	September 19, 2011	45 days
Columbia River Component Risk Assessment – Screening Level Ecological Risk Assessment Report (DOE/RL-2010-117, Volume I)	September 30, 2011	45 days
Columbia River Component Risk Assessment – Baseline Human Health Risk Assessment Report (DOE/RL-2010-117, Volume II)	December 2011	45 days

# Attachment 17

# 2011 Annual Sitewide Institutional Controls (IC) Review

River Corridor Contractor (RCC)

# 2011 RCC Annual IC Review

- **Basis**
- ***Sitewide Institutional Controls Plan for Hanford CERCLA Response Actions (DOE/RL-2001-41, Rev. 4)***
  - Requires annual IC effectiveness review
  - Results to be reported in September UMM

# 2011 RCC Annual IC Review

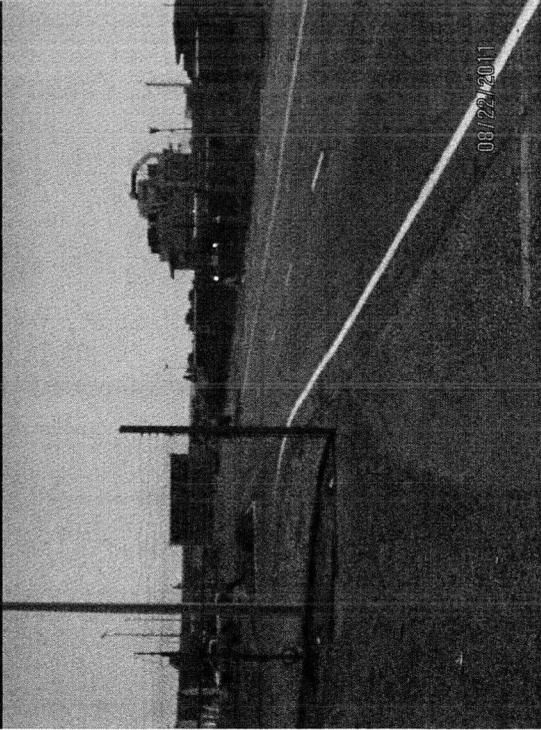
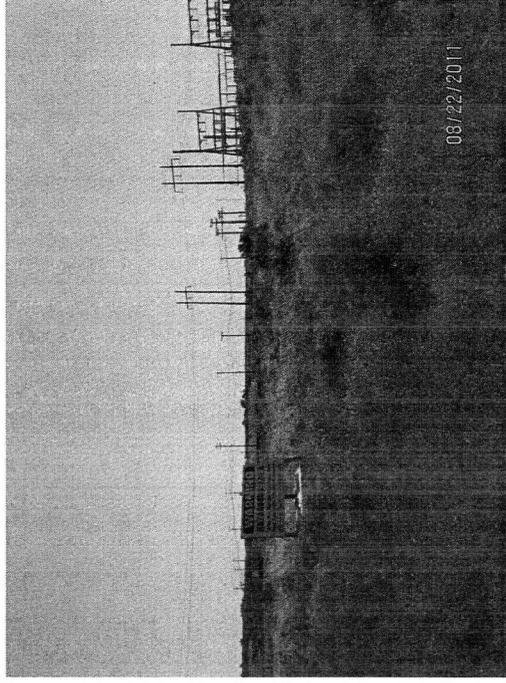
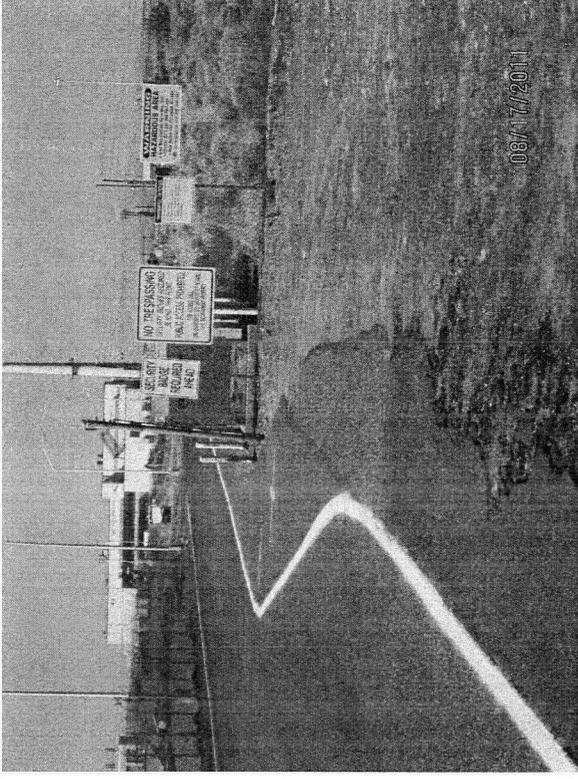
## Scope of Review

- This portion of review addressed only river corridor source waste sites, and included evaluation of:
  - **Trespass events during CY 2010**
  - **Access control/entry restrictions**
  - **Excavation control**
  - **Field inspection of ICs**
    - Required signage on entrances to active waste sites in 100-IU-2/-6 areas
    - Required signage on entrance to 300 Area main industrial complex and 618-10
    - Shoreline signage at 100-B/C, 100-K, 100-N, 100-D, 100-F, 100-H, 300 Area

# 2011 RCC Annual IC Review

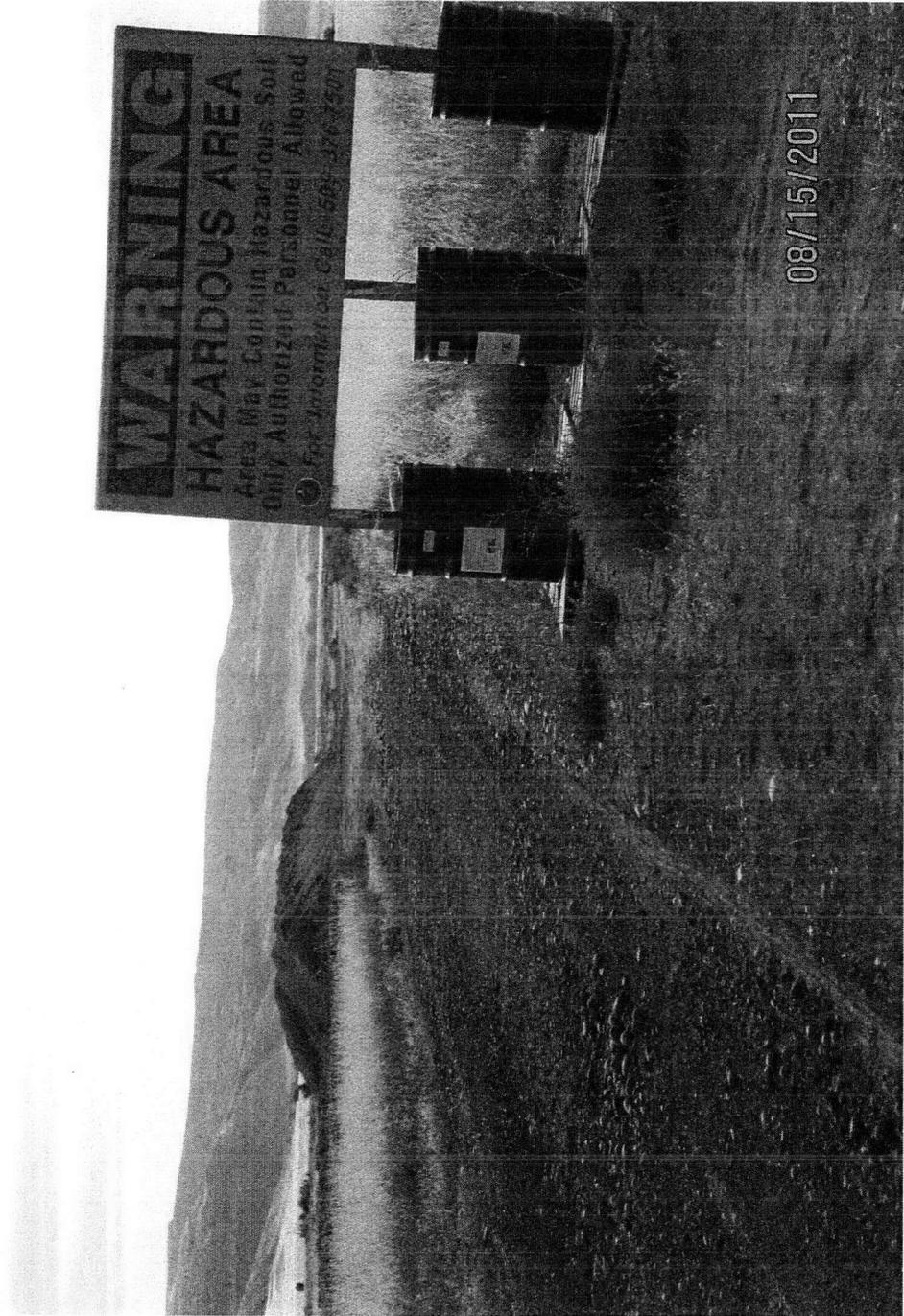
- Results
  - No public trespass events on WCH managed projects during CY 2010
  - Badging system (access controls) in place and active
  - Approved Excavation Permits in place for all remediation activities checked at 100-B/C, 100-D, 100-F, 100-H, 100-K, 100-H, 100-D, 100-N, 100-IU-2, 100-IU-6, and 300 Area waste sites (approx. 60 sites checked)
  - Warning signs in place at roadway entrances to waste sites within 300 Area main industrial complex and 618-10; additional sign to be installed
  - Some temporary signage used at 100-IU-2/-6 waste sites; more permanent signs will be installed at main roadways
  - Shoreline signage checked during September 2011 annual Columbia River RCRA inspection; signs at 100-K appear to have been removed

# 2011 RCC Annual IC Review



**Roadway Signage at 300 Area Main Industrial Complex Entrance**

# 2011 RCC Annual IC Review



Roadway Signage within 100-IU-6 Near 600-202

# 2011RCC Annual IC Review



100-IU-6 Small Waste Site Excavation