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Please distribute to the following:

100/300 AREA UNIT MANAGER MEETING
ATTENDANCE AND DISTRIBUTION

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Hadley, Karl A	karl.hadley@wch-rcc.com	H4-21	WCH

166967

100/300 AREA UNIT MANAGERS MEETING
APPROVAL OF MEETING MINUTES

July 12, 2012

APPROVAL: _____ Date 8/9/12
Mark French, DOE/RL (A3-04)
River Corridor Project Manager

APPROVAL: _____ Date 8/9/12
Brian Charboneau, DOE/RL (A6-33)
Groundwater Project Manager

APPROVAL: _____ Date 8/9/12
Nina Menard, Ecology (H0-57)
Environmental Restoration Project
Manager

APPROVAL: _____ Date 8/9/12
Laura Buelow, Rod Lobos, or Christopher
Guzzetti, EPA (B1-46)
100 Area Project Manager

APPROVAL: _____ Date 8-9-12
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

July 12, 2012

ADMINISTRATIVE

- Next Unit Manager Meeting (UMM) – The next meeting will be held August 9, 2012, 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 June 14, 2012, 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 not held by RL, EPA, and Ecology prior to the July 12, 2012, UMM.

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

Attachment 1 provides status and information for groundwater. Attachment 2 provides status and information for Field Remediation activities. Attachments 3, 4, and 5 provide the Field Remediation Schedules for IU-2/6, 100-F, and Miscellaneous Restoration. No issues were identified and no agreements or action items were documented.

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

Attachment 1 provides status and information for groundwater. Attachment 2 provides status and information for Field Remediation activities. Attachment 6 provides the Field Remediation Schedule for 100-D&H Subcontract Procurement. No issues were identified.

Action 1: DOE will determine if the ISRM Pond had been incorporated into the Waste Information Data System (WIDS) database, and if not, to finalize a discovery site checklist and get the site into WIDS via the MP-14 process.

Agreement 1: Attachment 7 provides Ecology's approval to "Treat the 100-D-100 Chromium Contaminated Soil in Accordance with the 'Treatment Plan and Protocol for Treatment of Chromium-Contaminated Soils, WCH-284, Rev.2.'" (The area to be excavated is primarily represented by sample number J1P276-A and may be treated using the Mixture 3 recipe.)

Agreement 2: Attachment 8 provides Ecology's approval to "Treat the 100-D-100 Chromium Contaminated Soil in Accordance with the 'Treatment Plan and Protocol for Treatment of

Chromium-Contaminated Soils, WCH-284, Rev.2.'" (The area to be excavated is primarily represented by sample number J1P280-A and may be treated using the Mixture 2 recipe.)

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

Attachment 1 provides status and information for groundwater. Attachment 2 provides status and information for Field Remediation activities. Attachment 9 provides status and information for D4/ISS activities at 100-N. Attachment 10 provides the 100-N Area D4 Schedule. No issues were identified and no action items were documented.

Agreement 1: Attachment 11 provides a 100-N Ancillary Facilities Removal Action Sampling Determination Form for Building 1908-N.

Agreement 2: Attachment 12 provides a 100-N Ancillary Facilities Removal Action Sampling Determination Form for Building 151-N.

Agreement 3: Attachment 13 provides a 100-N Ancillary Facilities Removal Action Sampling Determination Form for Buildings 182-N.

Agreement 4: Attachment 14 provides a 100-N Ancillary Facilities Removal Action Sampling Determination Form for Buildings 186-N and 1902-N/1902-N81.

Agreement 5: Attachment 15 provides a 100-N Ancillary Facilities Removal Action Sampling Determination Form for Building 107-N, 1909-N, and 1607-N3.

Agreement 6: Attachment 16 provides a 100-N Ancillary Facilities Removal Action Sampling Determination Form for Buildings 181-N, 181-NA, 181-NB, 181-NE, and 1908-NE.

Agreement 7: Attachment 17 provides a 100-N Ancillary Facilities Removal Action Sampling Determination Form for Building 105-NE (also referred to as 1305-N).

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

Attachment 1 provides status and information for groundwater. Attachment 2 provides status and information for Field Remediation activities. Attachment 18 provides a schedule for Field Remediation 100-K Area TPA Milestone M-16-145 (12-31-12). Attachment 19 provides a status of the 100-K Sludge Treatment Project and the 100-K Facility Demolition and Soil Remediation projects. No issues were identified and no agreements or action items were documented.

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

Attachment 1 provides status and information for groundwater. Attachment 2 provides status and information for Field Remediation activities. Attachment 20 provides a schedule for Field Remediation at 100-B/C Area. Attachment 21 provides a photo of 100-C-7. No issues were identified and no action items were documented.

Agreement 1: Attachment 22 provides EPA's concurrence for a 180 day extension for the staging pile areas supporting 100-C-7:1.

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

Attachment 1 provides status and information for groundwater. Attachment 23 provides a schedule for Field Remediation at the 618-10 Burial Ground. No issues were identified and no agreements or action items were documented.

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

Attachment 1 provides status and information for groundwater. Attachment 24 provides status of the 300 Area Closure Project activities. No issues were identified and no agreements were documented.

> Action 1: DOE will determine if placing inert demolition debris in excavations as backfill triggers any landfill closure requirements.

REGULATORY CLOSEOUT DOCUMENTS OVERALL SCHEDULE

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

MISSION COMPLETION PROJECT

Attachment 25 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.

Attachment A

100/300 AREA UNIT MANAGER MEETING
ATTENDANCE AND DISTRIBUTION
July 12, 2012

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Attachment B

100/300 Area UMM
Action List
July 12, 2012

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:
O	100-192	RL	J. Hanson	100-D	DOE will provide Ecology with a briefing on the wells damaged by the flooding at 100-D.	Open: 12/8/11; Action:
O	100-193	RL	M. Thompson	100-N	At the next UMM, DOE will discuss the potential sources of total organic carbon detected at well 199-N-165 down-gradient from the 1324-N/NA treatment, storage, and/or disposal units.	Open: 1/12/12; Action:
O	100-194	RL	M. Thompson	100-K	DOE will provide EPA and Ecology with the references to support the assumptions regarding the number of years required for habitat reestablishment.	Open: 4/12/12; Action:

Attachment C

100/300 Area Unit Manager Meeting
July 12, 2012
Washington Closure Hanford Building
2620 Fermi Avenue, Richland, WA 99354
Room C209; 2:00p.m.

Administrative:

- Approval and signing of previous meeting minutes (June 14, 2012)
- Update to Action Items List
- Next UMM (8/9/2012, Room C209)

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/Elwood Glossbrenner)
- 100-N Area (Joanne Chance, Rudy Guercia, Mike Thompson)
- 100-K Area (Jim Hanson, Jamie Zeisloft, Tom Teynor)
- 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)

Special Topics/Other

- 5-Year Record of Decision Action Item Update (Jim Hanson)

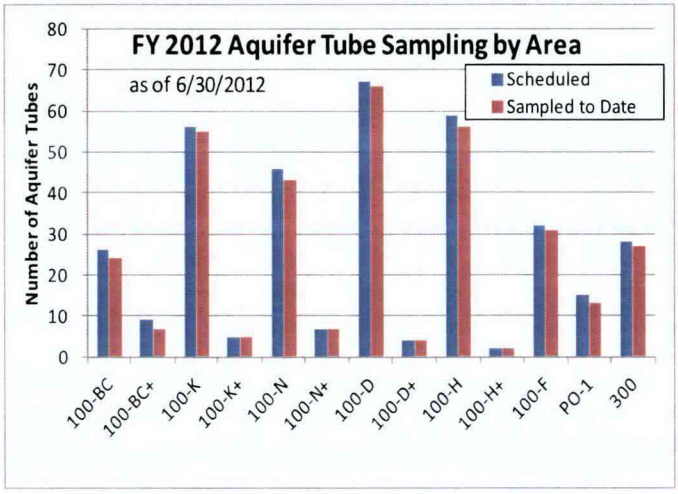
Adjourn

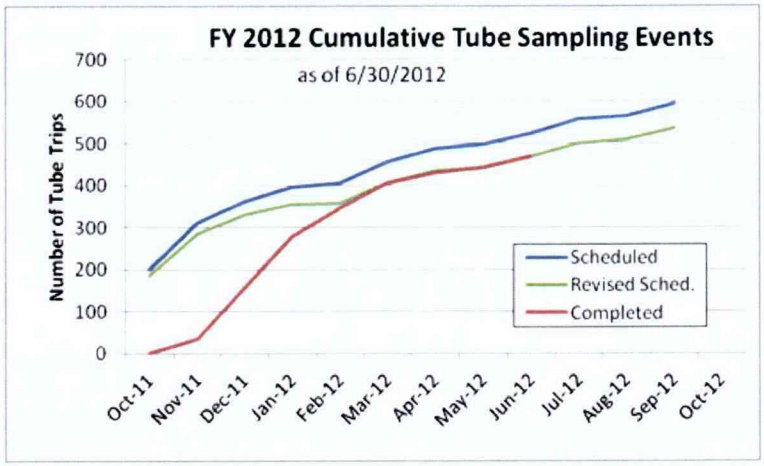
Attachment 1

100/300 Areas Unit Managers Meeting
July 12, 2012

General information on Aquifer Tube Sampling

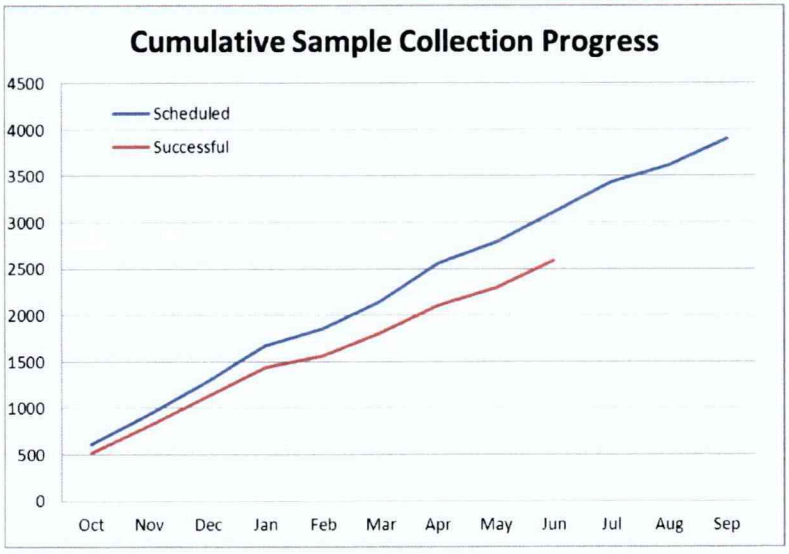
Aquifer tube sampling remained on schedule in June. The graph on the left shows numbers of individual aquifer tubes scheduled and sampled in each shore segment. The graph on the right shows the total number of aquifer tube sampling *events* (some tubes are sampled multiple times in a year). Some tube sampling events have been cancelled (e.g., missed monthly samples; plugged tubes needing maintenance before attempting next quarter). The green line on the graph on the right shows the revised schedule. A "+" symbol indicates aquifer tubes not related to the aquifer tubes SAP, but sample in support of the OU.





General information on Groundwater Sampling

The wells completed successfully are reported in a table on the last page of this handout. June sample progress is described in the table below. Three hundred nine samples scheduled for collection in June, 277 samples were collected. Of the 32 uncollected samples, 24 were not attempted, while 8 were missed for the following reasons in the table below. Samplers continue to work overtime in order to recover schedule, and sampling is being prioritized to collect samples required by approved SAPs and monitoring plans. .



100/300 Areas Unit Managers Meeting
July 12, 2012

Program	Sampling Projects	Year To Date Progress			June Progress		
		Scheduled	Successful	% Complete	Scheduled	Successful	Completed
AEA	11	191	115	60%	11	0	0%
CERCLA	17	2641	1907	72%	238	219	92%
DOH	1	40	29	73%	5	4	80%
OTHER	2	2	2	100%	2	2	100%
RCRA	26	650	479	74%	53	52	98%
WAC	3	68	57	84%	0	0	0%
Totals	60	3592	2589	72%	309	277	90%

Breakdown of June missed samples:

2	well required maintenance
1	samples were dry
2	scheduling errors
2	wells were not configured for sampling
0	sampling schedule changes were made(optimization)
1	Aquifer tube samples were not reachable due to high river stage
24	Were not attempted due to high river, fire restrictions, or other external factors

Hexavalent Chromium Groundwater Plumes in 100 Area – David Dooley / Lorna Dittmer

(M-016-110-T01, DOE shall take actions necessary to contain or remediate hexavalent chromium groundwater plumes in each of the 100 Area NPL operable units such that ambient water quality standards for hexavalent chromium are achieved in the hyporheic zone and river water column.)
Schedule Status – On schedule.

100-FR-3 Groundwater Operable Unit – Bert Day / 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 – Behind schedule. The new planned delivery date for the 100-F/IU Draft A RI/FS Report to the regulators is December 28, 2012 (see attached CERCLA Decision Documents schedule).

- CERCLA Process Implementation: RI/FS report development continues. The team held a status workshop with EPA on May 3, 2012. The workshop focused on draft groundwater model results, exposure point concentration approach and application across the remediation process, and technology/alternatives discussions.

- Groundwater monitoring: Nothing to report. No additional groundwater monitoring scheduled for the remainder of FY 2012.

100-HR-3 Groundwater Operable Unit – Bert Day / 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 – Behind schedule. The new planned delivery date for the 100-D/H Draft A RI/FS Report to the regulators is December 15 (see attached CERCLA Decision Documents schedule).

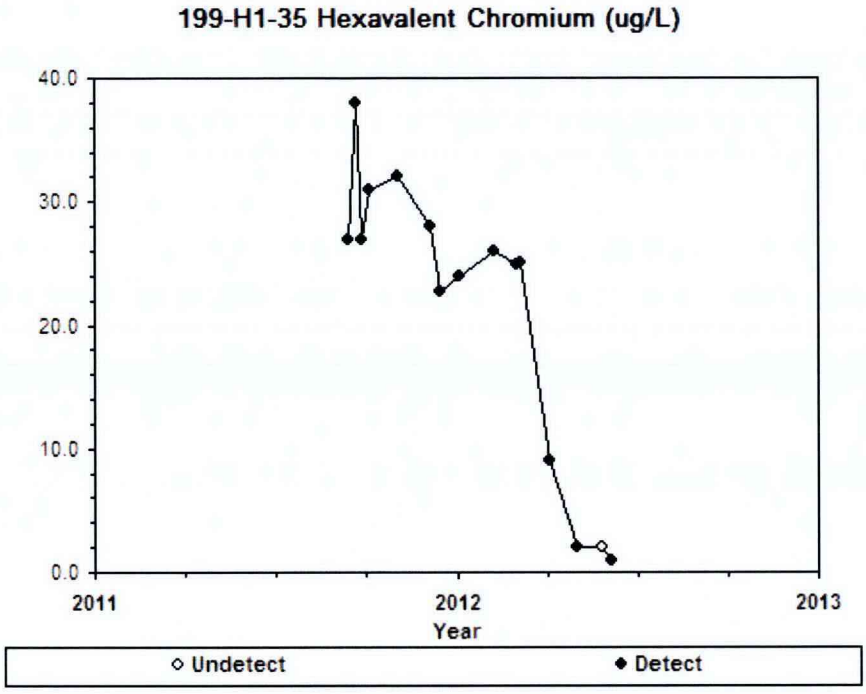
- Conducted RI/FS and general status meeting with Ecology on June 28, 2012. This RI/FS meeting objective was to discuss content and timing for the upcoming series of meetings. The general status reviewed groundwater monitoring results (100-D-100, 128-H-1, and the 183-H Solar Evaporation Basins), well realignments, and provided information on wells impacted due to high water from the 2011 runoff.

100/300 Areas Unit Managers Meeting
July 12, 2012

- CERCLA Process Implementation: RI/FS & PP preparation continues. The team is incorporating the applicable 100-K resolutions into the document for consistency. The internal connectivity review started July 9, 2012.

- Remedial Actions:
  - Operations continue at DX and HX pump-and treat system. Four injection wells at DX were impacted due to high river flows resulting from work on the spillway at Priest Rapids Dam (the same four wells that were impacted in 2011). It does not appear damage has been done since the modifications made last year have anchored the HDPE pipe between concrete blocks as shown in the photograph below taken in late June of this year. June 1 through 30, 2012 performance:
    - The systems treated 45 million gallons (~1,040 gpm).
    - The system removed 38 kg of hexavalent chromium

- Monitoring & Reporting: Concentrations of hexavalent chromium continue to drop in the Horn Area along the Columbia River north of 100-H Area as a result of HX pumping. Well 199-H1-35 is representative of wells in this area where a zone of the groundwater plume that had concentrations of 40-100 µg/L or greater is being cleaned up to below the aquatic standard. Well 199-H1-35 is on the north edge of this zone.



100-NR-2 Groundwater Operable Unit – Marty Doornbos / Deb Alexander

(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 (petroleum remediation) and will identify a preferred alternative in accordance with CERCLA requirements.
Schedule Status – Behind schedule. The new planned delivery date for the 100-NR-2 OU Draft A RI/FS Report to the regulators is currently scheduled for late-December to accommodate comments from the 100-K documents.

- RI/FS Activities
  - Work continues on preparation of the RI/FS report. The conceptual site model has been updated to incorporate the new data from the RI. The groundwater flow model for the 100-N area has been completed and is based on the 100 Area integrated model. Contaminant transport modeling of the groundwater COCs (Sr-90, nitrate, and diesel) has been completed. This new model incorporates the available hydrologic, geologic, and geochemical data including the new RI/FS data. The model also takes into consideration the apatite permeable reactive barrier as installed. The FS is underway with the preliminary screening of technologies and early identification of remedial alternatives, which has been shared with Ecology (see below).
  - Meetings were held with Ecology on June 6 and June 28, 2012 to discuss the preliminary screening of technologies and to introduce the preliminary remedial alternatives. A follow-on meeting has been scheduled for July 10, 2012 to continue the discussion on development of the remedial alternatives.

- Performance Monitoring - Apatite Permeable Reactive Barrier (PRB)
  - Samples have been collected from the following wells and aquifer tubes to evaluate PRB performance::
    - Wells: 199-N-96A, 199-N-347, 199-N-348, 199-N-349, 199-N-123, 199-N-146, 199-N-122, 199-N-147, 199-N-350, 199-N-351, 199-N-352, and 199-N-353.

  - Aquifer Tubes: 116mArray-1A, 116mArray-2A, APT-1, 116mArray-3A, 116mArray-4A, NVP2-116.0m, 116mArray-6A, APT-5, C7881 (replacement for 116mArray-7A), and 116mArray-8A.
- The data from this sampling event is being compiled and will be presented in the next UMM.

- RCRA Monitoring – 1324-N
  - Sampling has been completed for the five RCRA wells (199-N-165, 199-N-71, 199-N-72, 199-N-73, and 199-N-74) and wells 199-K-151 and 199-K-152 for the expanded analyte list: Field parameters (pH, specific conductance, temperature, dissolved oxygen, and oxidation-reduction potential), Metals (filtered and unfiltered), Anions, VOCs, SVOAs, PAHs, Total coliform, TPH-Diesel and Gasoline, and Alkalinity. All these analytes were collected with the exception of the TOC for the 100 K wells, which has been added to the October sampling event. Once the data is evaluated, a meeting will be scheduled with Ecology to discuss these results and identify a path forward.

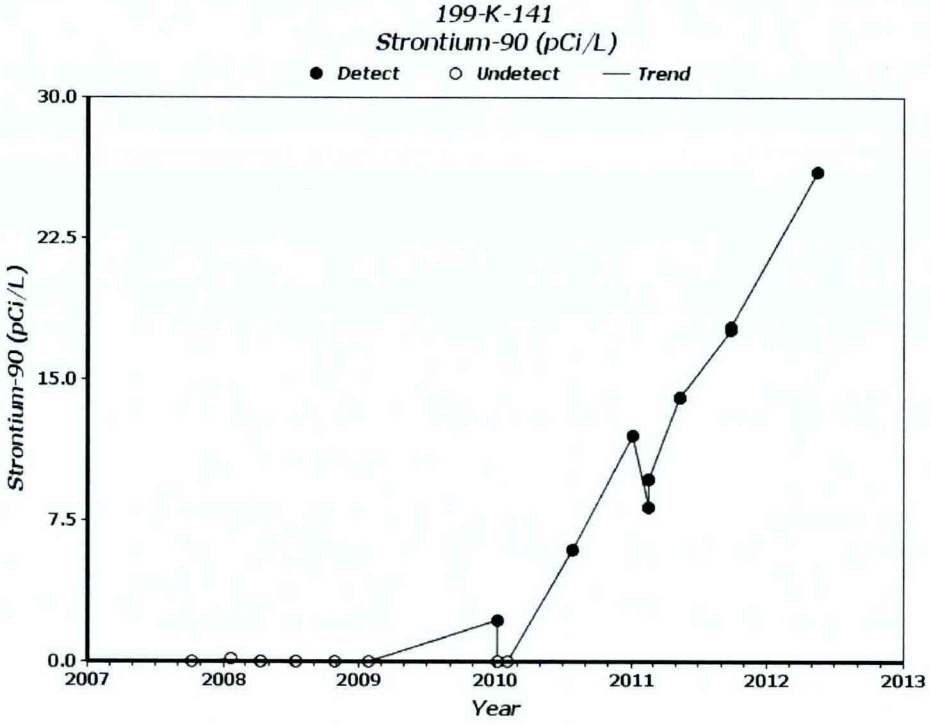
100-KR-4 Groundwater Operable Unit – Bert Day / Chuck Miller

- CERCLA Process Implementation:
  - RI/FS: A redline/strikeout and clean copy of the Draft Rev. 0 100-K RI/FS Chapters 1 – 10 was delivered to EPA on June 5, 2012. Meetings are scheduled with EPA the week July 9 and July 16, 2012 to review EPA comment resolutions and identify any additional major changes.
  - Proposed Plan: EPA comments (local and Region 10 legal) comments were provided and discussed during meetings held at the EPA offices in late June and July 2, 2012. A clean copy of the Proposed Plan, incorporating all the comments resolutions agreed to during the above meetings, was provided electronically to EPA on July 3, 2012.
  - Advance Notice, Upcoming Public Comment Period on the Proposed Plan for Cleanup of Hanford's 100-K Area along the Columbia River, was sent via listserver on June 28, 2012.

- Remedial Actions:
  - Cultural Resource Monitoring: June KR4 pump-and-treat monitoring was performed on June 29, 2012. RL sent the 7-day notification for monitoring on June 25, 2012. Joseph Seelatsee (Wanapum) and Dana Miller (Yakama Nation Environmental Restoration/Waste Management) participated in the monitoring of the KR4 Pump and Treat system. All necessary well locations were visited. No evidence of off road driving was observed at any of the well locations during this monitoring visit.
  - Operations continue at KX, KR4, and KW pump-and-treat systems. The KR4 system is mid-transition to SIR-700 (see discussion below). All three systems are operating with SIR-700 resin with two vessels in each train. June 1 through 30, 2012 performance:
    - The systems treated 37 million gallons (~860 gpm).
    - The system removed 4 kg of hexavalent chromium

- Monitoring and Reporting:
  - Strontium-90 concentration in extraction well 199-K-141, located downgradient of 105-KE Reactor, continued to increase with the most recent measurement of 26 pCi/L (from sample collected on 14 May 2012), up from last measurement of 17.8. Other downgradient wells have not exhibited increases this spring. These include Aquifer Tube 19M (2.8 pci/L in February 2012, down from 7.5 in September 2011); Well 199-K-33A (2.1 pCi/L in April 2012, about the same as 1.9 pci/L in Oct 11); and Well 199-K-178 (2.4 pCi/L in May 2012,

about the same as 2.1 pCi/L in May 2011). The trend plot for 199-K-141 is shown below; Sr-90 has exhibited a consistent rate of increase for the past 2 years. This well, located on the west side of the inferred Sr-90 plume that originated at the 116-KE-3 Fuel Storage Basin Overflow Crib, is expected to continue to capture a portion of that plume and may exhibit higher concentrations in the future.



- Modifications & Expansions
    - SIR-700 transition at KR4: Two vessels in all three trains are operating fully on the new resin as of the week of June 7, 2012.
- Issues and Conditions Observed
    - None to report.

100-BC-5 Groundwater Operable Unit – Bert Day/ 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.)

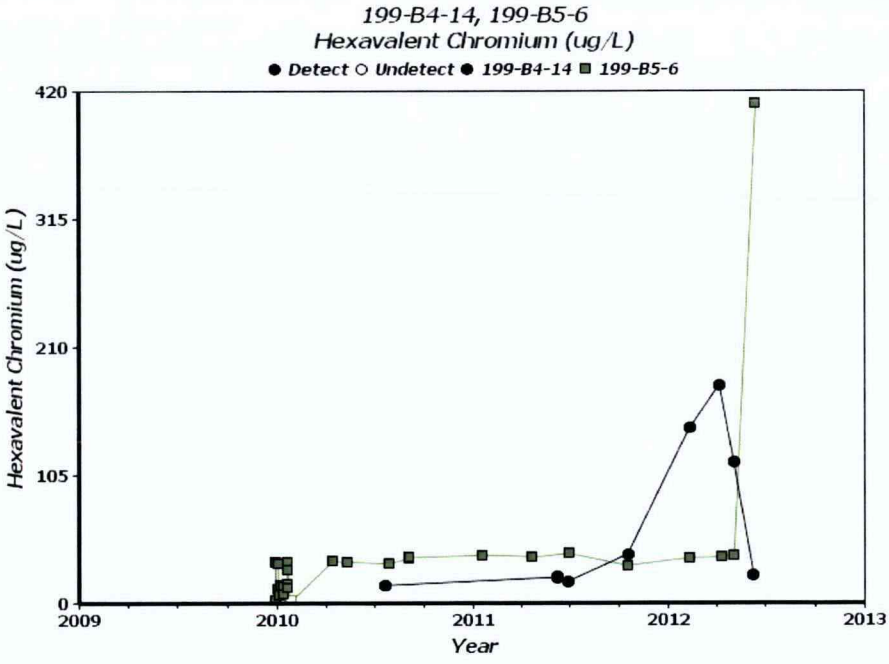
Schedule Status – Behind schedule. The new planned delivery date for the 100-BC Draft A RI/FS Report to the regulators is December 12, 2012 (see attached CERCLA Decision Documents schedule).

- CERCLA Process Implementation:
    - RI/FS report development continues. The team held a status workshop with EPA on May 3, 2012. The workshop focused on draft groundwater model results, exposure point concentration approach and application across the remediation process, and technology/alternatives discussions.
- Monitoring & Reporting

- The June 2012 hexavalent chromium results from wells downgradient of 100-C-7:1 are available. The concentration in the well screened at the base of the aquifer (199-B5-6; Ringold unit E) increased to 410 µg/L. There is a relatively strong downward hydraulic gradient in the unconfined aquifer in southern 100-BC, which explains the contamination moving downward. The vertical gradient is 1 to 2 orders of magnitude greater than the horizontal gradient, which could explain why concentrations are higher in the deeper well.

  The contamination took longer to travel to the deeper well because the hydraulic conductivity of Ringold unit E is lower than that of the Hanford formation. However, the estimated travel time was expected to be longer, based on the low horizontal hydraulic gradient at the top of the aquifer. (Gradient cannot be measured in the deep part of the aquifer because only one well in southern 100-BC is screened at that depth.)

  The concentration in shallow well 199-B4-14 (Hanford formation) dropped to pre-spike levels in June. One explanation for the fleeting spike would be that a "slug" of contamination passed the well. Another is that it's a narrow plume and the direction shifted (horizontally or vertically).



  Wells 199-B4-14 and 199-B5-6 will continue to be sampled monthly, so we can see if the concentrations persist. In addition, in July, other nearby top of aquifer wells B4-7, B5-1, and B8-9 will be sampled. We have three other monitoring wells in 100-BC that are screened in the lower part of the unconfined aquifer, located 700 to 1000 m from 199-B5-6. We will continue to evaluate adjusting sampling frequency in these and other wells as results come in.

- C-7:1 Excavation Groundwater Monitoring and Tracer Study – See attached summary.

300-FF-5 Groundwater Operable Unit – Marty Doornbos/Virginia Rohay

M-015-72-T01 (due December 31, 2011) "Submit CERCLA RI/FS Report and Proposed Plan for the 300-FF-2 and 300-FF-5 Operable Units for groundwater and soil."

- M-015-72-T01 milestone was completed on December 27, 2011.
- RI/FS report (DOE/RL-2011-99) Draft A delivered to EPA and Ecology on December 27, 2011.
- Proposed Plan (DOE/RL-2011-47) Draft A delivered to EPA and Ecology on December 27, 2011.

- EPA comments on these documents were received on February 13, 2012. Progress continues on incorporation of the comments into the Draft Rev. 0 RI/FS & PP.

- The 300-FF-5 Groundwater OU includes the groundwater impacted by releases from waste sites associated with three geographic subregions: 300 Area Industrial Complex, 618-11 Burial Ground, and 618-10 Burial Ground/316-4 Cribs. Principal controlling documents are:
  - 300-FF-5 OU operations and maintenance plan (DOE-RL-95-73, Rev. 1, 2002)
  - 300-FF-5 OU sampling and analysis plan (DOE/RL-2002-11, Rev. 2, 2008)
  - 300 Area RI/FS work plan (DOE/RL-2009-30, Rev. 0, 2010)
  - 300 Area RI/FS sampling and analysis plan (DOE/RL-2009-45, Rev. 0, 2010).

- 300 Area Industrial Complex — During the March 2012 UMM, information was provided regarding the unusually high uranium concentrations that were noted at numerous 300 Area wells in samples collected in June 2011 during the period of seasonal high water table conditions. Of particular note was the concentration detected in the sample from well 399-1-17A, which is approximately 30 m south of the 300 Area Process Trenches and 20 m southwest of the 300-15 process sewer spur that conveyed effluents to the process trenches. The positive correlation between water-table elevation and uranium concentration is consistent with the conceptual site model where uranium remains in the lower portion of the vadose zone and is available to be remobilized during periods of high water-table conditions. Since June 2011, these anomalously high concentrations have declined to their more typical seasonal values (Figure 300FF5-1 below, updated through April 2012). Well 399-1-17A was sampled on June 4th and is being scheduled for additional sampling in response to the high flows in the Columbia River.

  On May 16, a water line was discovered to be leaking south of the 324 Building. Repairs were completed on May 18. An estimated 20,000 gallons of water was released to the soil column. A plan to monitor the nearest downgradient wells for potential impacts was approved by DOE and EPA on May 17. The nearest well, 399-4-15, was sampled on May 30. The analytical results for gross beta (20 pCi/L) and gross alpha (23 pCi/L) at well 399-4-15 do not indicate any groundwater impacts (Figure 300FF5-2 below). Well 399-3-20 was sampled on May 15th, the day before the leak was discovered. Results for gross beta (21 pCi/L) and gross alpha (20 pCi/L) at well 399-3-20 are similar to the results at well 399-4-15. Results are not yet available for three wells further downgradient (399-4-9, 399-4-10, 399-4-14) that were sampled on May 21 and 22. Monthly sampling of well 399-4-15 is planned for 6 months to monitor for potential impacts of the leak.

- 618-11 Burial Ground — Tritium and nitrate results for the sample collected on May 3rd at well 699-13-3A, next to the eastern fence line of the Burial Ground, are consistent with previous trends.

- 618-10 Burial Ground/316-4 Crib — Groundwater data from March 2012 at well 699-S6-E4L near the 618-10 burial ground show increased concentrations of uranium and of magnesium, a soil fixative (Figure 300FF5-3 below). These data may indicate impacts from excavation activities that began in March 2011 at some of the trenches in the burial ground. The monitoring frequency for uranium was increased to monthly at well 699-S6-E4L, and the monitoring frequency for metals (calcium and magnesium, which also are soil fixatives) was increased to quarterly at wells 699-S6-E4K and 699-S6-E4L to accommodate excavation and dust control activities as they occur at the burial ground. The increased sampling frequency will be performed for a period of six months. Well 699-S6-E4L was sampled on May 10, 2012 and indicates a significant increase in the uranium concentrations (Figure 300FF5-3 below).

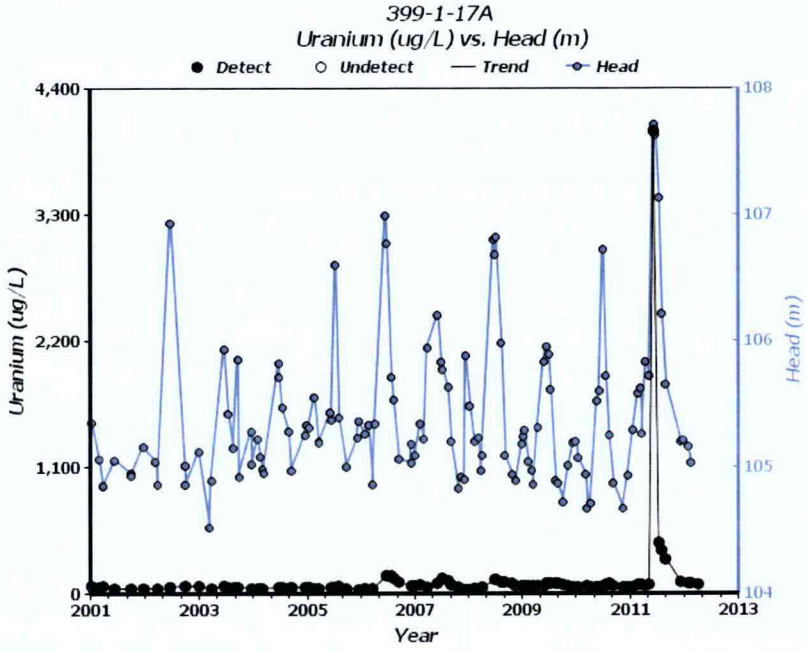


Figure 300FF5-1. Uranium Trend Plot for Well 399-1-17A near the 300 Area Process Trenches and North Process Pond.

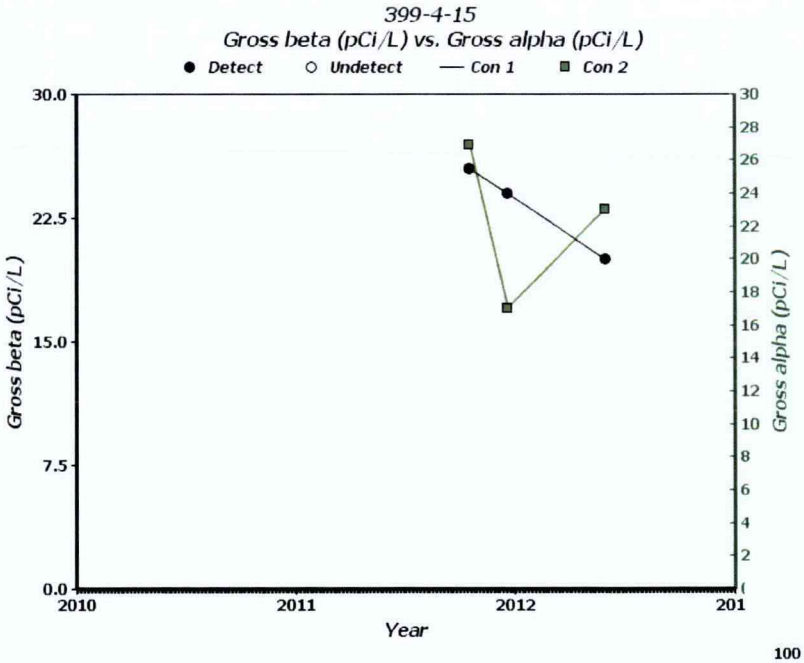
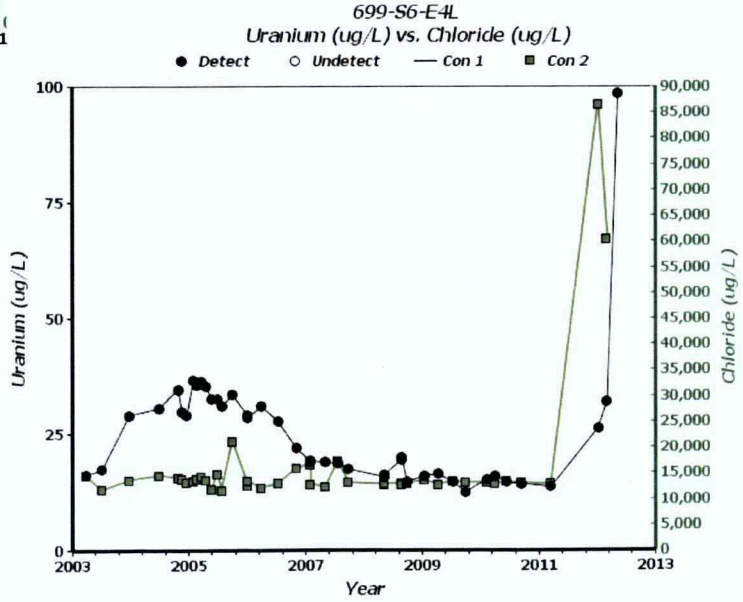


Figure 300FF5-2. Gross Beta and Gross Alpha Trends at Well 399-4-15 near the 324 Building.

Figure 300FF5-3. Uranium and Chloride Trends at Well 699-S6-E4L at the 618-10 Burial Ground.



100/300 Areas Unit Managers Meeting
July 12, 2012

Wells sampled in May 2012

Summary of Wells & Aquifer Tubes Sampled in the River Corridor Areas During June 2012						
Week	**100-BC**	**100-K**	**100-N**	**100-D/H**	**100-F**	**300 Area**
01-02 June 12		199-K-111A 199-K-142 199-K-110A 199-K-11	199-K-149			
04-10 June 12	199-B4-14	199-K-189 199-K-119A 199-K-13 199-K-124A 199-K-108A 199-K-187 199-K-197 199-K-125A 199-K-32A 199-K-196 199-K-34 199-K-18 199-K-194 199-K-37 199-K-201 Unsuccessful 199-K-157 199-K-192 199-K-184 199-K-191 199-K-193 199-K-185 199-K-190 199-K-186 199-K-173 199-K-36 199-K-106A 199-K-107A 199-K-181 199-K-200	199-K-151	199-D5-119 199-D5-40 199-D5-144 199-D6-3 199-H4-6 199-H2-1 199-D5-34 199-D4-19 199-D5-13 199-D4-62 199-D4-14 199-D5-36 199-D5-99 699-99-41 199-D5-38		399-1-10A 399-1-10B 399-1-17A 399-3-18 399-1-16A 399-1-18A 399-1-16B

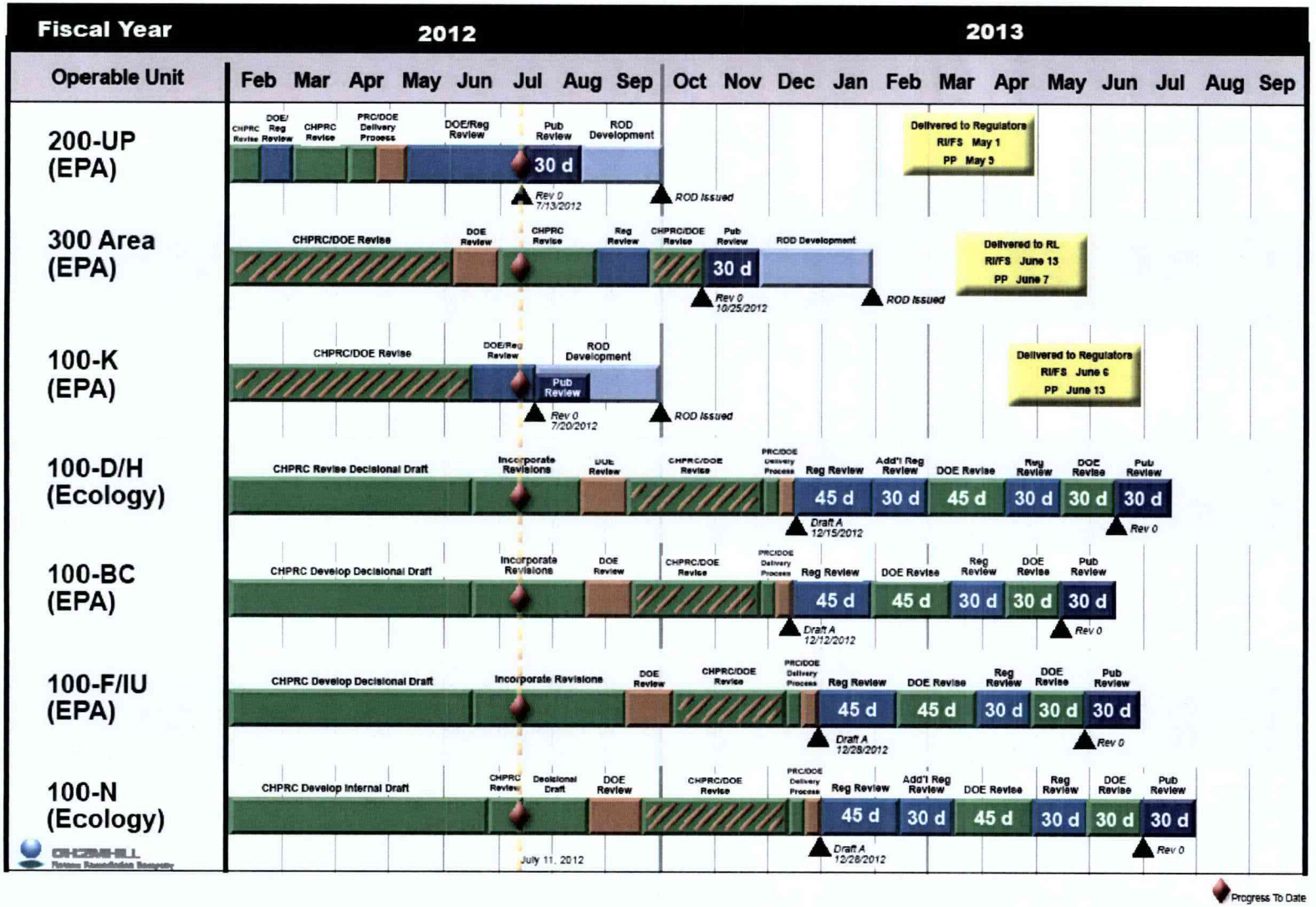
100/300 Areas Unit Managers Meeting
July 12, 2012

Summary of Wells & Aquifer Tubes Sampled in the River Corridor Areas During June 2012						
Week	**100-BC**	**100-K**	**100-N**	**100-D/H**	**100-F**	**300 Area**
11-17 June 12	199-B5-6	199-K-114A 199-K-144 199-K-127 199-K-162 199-K-116A 199-K-120A 199-K-145 199-K-115A 199-K-113A 199-K-19 199-K-22 199-N-187	N116mArray-12A N116mArray-11A N116mArray-15A N116mArray-10A Unsuccessful N116mArray-9A	199-H4-76 199-H1-39 199-H1-40 199-H1-42 199-H1-43 199-H1-38 199-H1-1 199-H1-25 199-H1-27 199-H1-32 199-H1-33 199-H4-12C 199-H3-2C 199-H1-2 199-H4-77 199-D3-5 199-D5-33 199-D5-33 199-D5-14 199-D5-93 199-D5-37 199-D5-36 199-D4-19 199-D8-101 199-D8-4 199-D5-142 199-D5-97 199-D4-86 199-H4-6		399-1-18B 699-12-2C 399-1-17B 699-S11-E12AP 699-S6-E4L 399-1-62

100/300 Areas Unit Managers Meeting
July 12, 2012

Summary of Wells & Aquifer Tubes Sampled in the River Corridor Areas During June 2012						
Week	**100-BC**	**100-K**	**100-N**	**100-D/H**	**100-F**	**300 Area**
18-24 June 12		199-K-166 199-K-141 199-K-168 199-K-178 199-K-23 199-K-117A 199-K-20 199-K-21	NVP1-4 NVP2-116.3 NVP2-116.0 NVP2-115.7 NVP2-115.4 N116mArray-6A NVP2-115.1 N116mArray-8A C7881 N116mArray-8.5A NVP1-1 NVP1-2 NVP1-3 NVP1-5 N116mArray-0A N116mArray-1A N116mArray-2A N116mArray-4A N116mArray-3A	199-D5-125 199-D5-123 199-D5-121 199-D5-120 199-D4-23 199-D5-126 199-D5-43 199-D5-98 199-D4-14 199-D4-22 199-D4-62 199-D5-38 199-D8-5		699-S6-E4A 399-4-12 399-4-11
25-29 June 12		199-K-130 199-K-133 199-K-199 199-K-198 199-K-135 199-K-134 199-K-136 199-K-126	C6132 C6135	199-H3-4 199-H1-40 199-H1-42 199-H1-6 199-H1-43 199-D5-97 199-D5-122 199-H4-49 199-H1-45 199-D8-6 199-D5-107 199-D5-110 Unsuccessful		399-4-15

CERCLA Decision Documents



Attachment 2

July 12, 2012 Unit Manager's Meeting
Field Remediation Status

100-B/C

- Continued load-out activities
  - Truck and pup, 510,800 tons, truck and pup load-out complete
  - ERDF cans, 203,300 tons
  - LDR material, 66,700 tons, LDR complete

- MSA continued power pole removal and disposal

100-D

- Continued load-out at 100-D-77
- Commenced load-out at 100-D-73, 100-D-76 and 100-D-78

100-F

- Additional remediation at failed stockpile sample failure location complete
- All 100-F samples have been received with no additional remediation indicated

100-H

- Began sampling underneath the 126-H-2 Clearwell

100-K

- Began receiving close-out sample data at 118-K-1
- Continued discussion on path forward for tritium plume at trench N
- Preparing for offsite shipment of nitric acid and oil containers

100-N

- No field activities being conducted at 100-N at this time
- Continued discussion on content of Operations and Maintenance Manual and Test/Performance Monitoring Plan for in-situ bioremediation at UPR-100-N-17
- Notice to Proceed issued to subcontractor in June for procurement of in-situ bioremediation system
- Continued preparation of closure documents and conducting verification sampling

618-10 Trench Remediation

- Continued loadout of soil waste to ERDF
- Continued excavation of trench
- Initiated shipment of concrete drums to ERDF
- Processing of potentially pyrophoric drums through the DPF's is still on hold.
- Sand Hopper on DPF #2 has been refilled.
- Plan and complete processing of reactive drum in South Trench
- Plan recovery and troubleshooting of DPF #1
- Complete clean-up and gain approval to place DPF #2 back in service

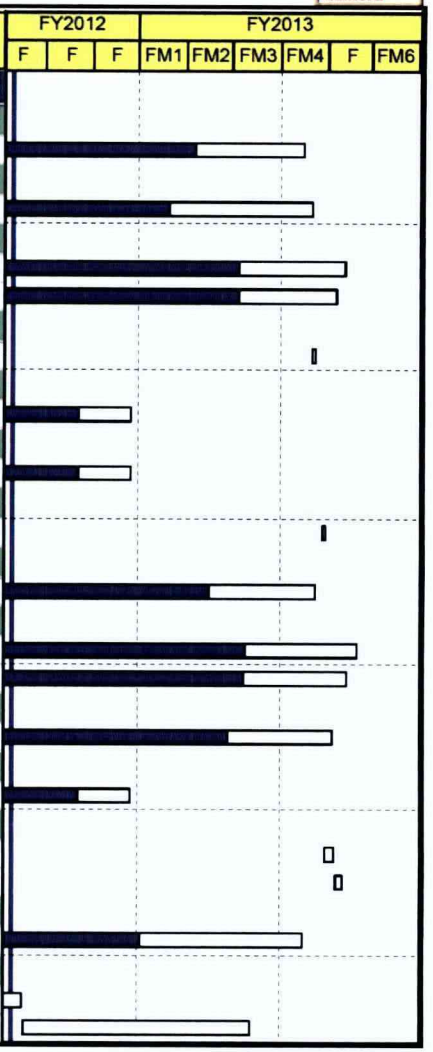
100-IU-2/6

- All field work has been completed for this fiscal year
- All close-out samples have been taken from remediated sites
- Work on closeout reports has begun

Attachment 3

Field Remediation
IU-2/6

Activity ID	Activity Name	% Comp.	Rem Dur	Start	Finish	Delta from Last Week	TPA (?)
Not in SPIF							
600-298 - Stained/Burned Soil							
RU1U264190	Excavate/Loadout Area #4	75%	3.0	09-Apr-12 A	16-Jan-13	0	Y
600-299 - Batteries							
RU1U264070	Excavate/Loadout Area #2	75%	3.0	16-Jan-12 A	21-Jan-13	0	Y
600-300 - Miscellaneous Debris							
RU1U264250	Excavate/Loadout Area #11	75%	3.0	09-May-12 A	12-Feb-13	0	Y
RU1U264560	Excavate/Loadout Area #1	75%	3.0	29-May-12 A	06-Feb-13	0	Y
600-303 - Vertical Pipes							
RU1U265210	Excavate/Loadout Area #1	0%	3.0	22-Jan-13*	24-Jan-13	0	Y
600-306 - Burn Site #1							
FR2030	Prepare Closure Document 600-306	76%	43.0	09-May-12 A	25-Sep-12	0	Y
600-307 - Burn Site #2							
FR2100	Prepare Closure Document 600-307	76%	43.0	09-May-12 A	25-Sep-12	0	Y
600-316 - Dry Cell Batteries							
RU1U264720	Excavate/Loadout Area #4	0%	3.0	28-Jan-13*	30-Jan-13	0	Y
600-318 - Wet Cell Batteries							
RU1U264270	Excavate/Loadout Area #3	75%	3.0	25-Apr-12 A	23-Jan-13	0	Y
600-320 - Oil Stains							
RU1U264810	Excavate/Loadout Area #3	75%	3.0	07-May-12 A	20-Feb-13	0	Y
RU1U264880	Excavate/Loadout Area #9	75%	3.0	23-May-12 A	13-Feb-13	0	Y
600-321 - Suspect ACM Sites							
RU1U264870	Excavate/Loadout Area #1	75%	3.0	10-May-12 A	04-Feb-13	0	Y
600-325 - Burnt Roofing Material							
FR3150	Prepare Closure Document 600-325	76%	43.0	09-May-12 A	25-Sep-12	0	Y
600-326 - Black Material							
RU1U265200	Excavate/Loadout Area #1	0%	3.0	31-Jan-13*	05-Feb-13	0	Y
RU1U265230	Excavate/Loadout Area #2	0%	3.0	06-Feb-13*	11-Feb-13	0	Y
600-328 - Lead Slag							
RU1U264090	Excavate/Loadout Area #1	70%	3.0	31-Jan-12 A	16-Jan-13	0	Y
600-386 - Segment 5 Battery Site							
RU1U265180	Closeout Sampling	50%	4.0	30-May-12 A	17-Jul-12	3	Y
RU1U265190	Closeout Documentation	0%	82.0	18-Jul-12	12-Dec-12	3	Y



Activity /Actions Supporting Schedule

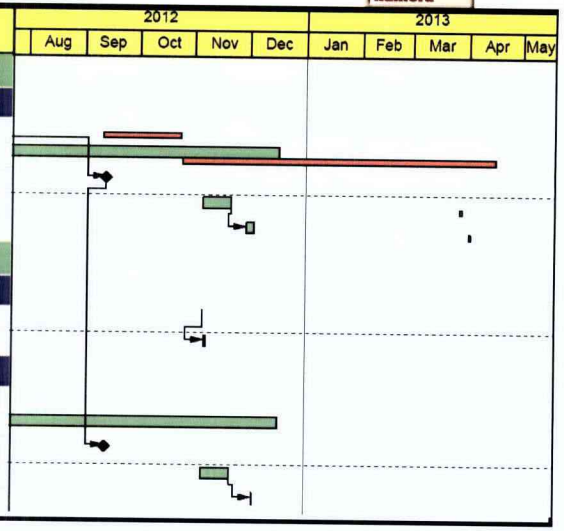
- Work suspended until FY13.
- Pending REAs will create additional waste sites for remediation.

ISSUE / CONCERNS

Attachment 4

Field Remediation
100-F

Activity ID	Activity Name	RD	% Cmp	Start	Finish	Duration Delta	TPA (?)
In SPIF		88		22-May-12 A	17-Dec-12	98	
100-F-57		88		22-May-12 A	17-Dec-12	98	
FB712C	Closure Sampling 100-F-57:2 (REA-103)	1	90%	22-May-12 A	11-Jul-12	18	N
FB712G	Prepare RSVP (REA-103)	87	0%	12-Jul-12	17-Dec-12	18	N
FB712G20	Backfill Concurrence 100-F-57:2	0	0%		12-Sep-12	18	N
FB712H	100-F-57 Backfill (REA-103)	10	0%	05-Nov-12*	20-Nov-12	0	N
FB712I	100-F-57 Revegetation (REA-103)	1	0%	29-Nov-12	03-Dec-12	44	N
Not in SPIF		88		22-May-12 A	17-Dec-12	148	
100-F-64		2		05-Nov-12	06-Nov-12	48	
FAREA103B49	100-F-64 Backfill	1	0%	05-Nov-12*	05-Nov-12	24	N
FAREA103B59	Revegetation	1	0%	06-Nov-12	06-Nov-12	24	N
100-F-65		88		22-May-12 A	17-Dec-12	100	
FAREA103B99	Closeout Sampling	1	90%	22-May-12 A	11-Jul-12	18	N
FAREA103BX20	Prepare RSVP	87	0%	12-Jul-12	17-Dec-12	18	N
FAREA103BX30	Backfill Concurrence 100-F-65	0	0%		12-Sep-12	18	N
FAREA103B109	100-F-65 Backfill	10	0%	05-Nov-12*	20-Nov-12	25	N
FAREA103B119	Revegetation	1	0%	03-Dec-12	03-Dec-12	21	N



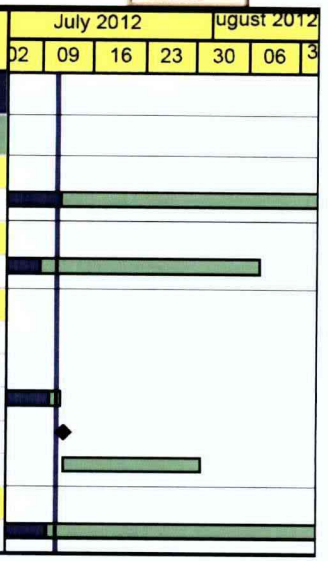
Activity / Actions Supporting Schedule

ISSUE / CONCERNS

Attachment 5

Field Remediation
Miscellaneous Restoration

Activity ID	Activity Name	% Comp	Rem Dur	Start	Finish	Delta from Last Week	TPA (?)
Not in SPIF							
MR DEBRIS							
Debris 300-Area							
MR100F73	Eco/Cultural Review CRR #2011-300-044 - ON HOLD	53%	158	23-Aug-11 A	24-Apr-13	-15	N
Debris Segment 4							
MR100SG51	Eco/Cultural Review SEG 4 Gable Mountain CRR #2011-600-042	94%	16	31-Mar-11 A	07-Aug-12	-12	N
Debris Segment 5							
MR100DH141	Review submittals	100%	0	18-Jun-12 A	28-Jun-12 A	0	N
MR100DH121	Prepare PSR Checklist	100%	0	18-Jun-12 A	28-Jun-12 A	0	N
MR100DH151	PSR Approval	85%	1	02-Jul-12 A	11-Jul-12	-6	N
MR100DH161	NTP for remediation	0%	0	12-Jul-12		-6	N
MR100DH171	Remediation	0%	10	12-Jul-12	30-Jul-12	0	N
Debris 100-N							
MR100F93	Eco/Cultural Review CRR #2011-100-104	87%	33	13-Jun-11 A	06-Sep-12	-12	N



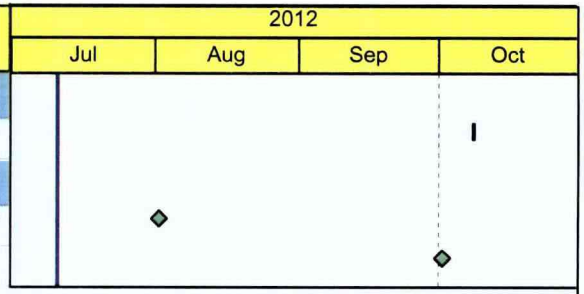
ACTIVITIES / ACTIONS SUPPORTING SCHEDULE

- CRR #2011-300-044 on hold pending scope decision from DOE-RL.
- PSR nearly complete
- Anticipate remediation will begin July 12th

ISSUE / CONCERNS

Attachment 6

Activity Name	% cmpl	Start	Finish
Non Site Specific Support		08-Oct-12	08-Oct-12
Contractor Mobilization	0%	08-Oct-12*	08-Oct-12*
Procurement		01-Aug-12	01-Oct-12
Subcontractor Procurement - Bids Due	0%		01-Aug-12*
Subcontractor Procurement - Award Subcontract	0%		01-Oct-12*



Actual Work
Remaining Work
Actual Critical Work
Critical Remaining Work
Remaining Lev...
Critical LOE

Data Date: 11-Jul-12

100-D&H Subcontract Procurement

Attachment 7

166329

Approval to Treat the 100-D-100 Chromium Contaminated Soil in Accordance with the "TREATMENT PLAN AND PROTOCOL FOR TREATMENT OF CHROMIUM-CONTAMINATED SOILS, WCH-284, Rev. 2"

This approval applies to approximately 1,000 m3 of chromium contaminated soil described under waste profile WP100D100005. The soil will be excavated from the floor of the staging pile area that was used for 100-D-100 above contamination level (ACL) waste. The area to be excavated is primarily represented by sample number J1P276-A, that had a result of 39.9 mg/L TCLP chromium. Excavation and treatment of a similar sized area under the same profile number, but represented by sample number J1P280-A that had a result of 94.1 mg/L TCLP chromium, will be authorized under a separate approval letter.

The waste is similar to the material treated in "*TREATMENT PLAN AND PROTOCOL FOR TREATMENT OF CHROMIUM-CONTAMINATED SOILS, WCH-284, Rev. 2".*

This approval allows for the treatment of soil using the recipe described in Table 1, *Bench-Scale Test Results for the 100-D-56 and 100-C-7* of the treatment plan under Mixture 3. Mixture 3 has been demonstrated to be effective in treating 100-C-7 soil containing up to 52.6 mg/L chromium. The 100-D-100 staging pile area soil is not unlike the 100-C-7 chromium contaminated soil. The approval to treat soil containing up to 52.6 mg/L chromium allows flexibility should in-process or post excavation sampling reveal chromium up to 52.6 mg/L remaining in the ground. Any soil containing more that 52.6 mg/L chromium will be treated by Mixture 2 under the separate approval mentioned above.

Nina M. Menard

Nina Menard
State of Washington Department of Ecology

6/15/12
Date

Tom C Post

Tom Post
U.S. Department of Energy

6/12/2012
Date

Attachment 8

166328

Approval to Treat 100-D-100 Chromium Contaminated Soil in Accordance with the "TREATMENT PLAN AND PROTOCOL FOR TREATMENT OF CHROMIUM-CONTAMINATED SOILS, WCH-284, Rev. 2"

This approval applies to approximately 1,000 m3 of chromium contaminated soil described under waste profile WP100D100005. The soil will be excavated from the floor of the staging pile area that was used for 100-D-100 chromium contaminated material. The area to be excavated is represented by sample number J1P280-A that had a result of 94.1 mg/L TCLP chromium.

The waste is similar to the material treated in "*TREATMENT PLAN AND PROTOCOL FOR TREATMENT OF CHROMIUM-CONTAMINATED SOILS, WCH-284, Rev. 2*".

This approval allows for the treatment of chromium contaminated soil using the recipe described in Table 1, *Bench-Scale Test Results for the 100-D-56 and 100-C-7* of the treatment plan under Mixture 2. Mixture 2 can be used on soil containing up to 278 mg/L chromium.

Tom Post — 6/12/2012

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

Nina M. Menard — 6/15/12

Nina Menard — **Date**
State of Washington Department of Ecology

Attachment 9

100 Area D4/ISS Status
July 12, 2012

100-N

River Structures: All structures 100% complete. Currently planning activities to re-contour leading edges of benches to a 4:1 grade and, at the request of DOE, preparing proposal to demolish and load out concrete anchor blocks at the points south and north of the former 181-N River Pumphouse.

1908-N Reactor Outfall: 100% complete.

182-N High Lift Pumphouse: 100% complete.

105-N Fuel Storage Basin (FSB): 100% complete pending characterization (sampling and analysis) of soil that was under the former fuel storage basin.

105-N/109-N Reactor/Heat Exchanger Buildings (ISS): Continuing with the placement of pour backs, patching of concrete and installation of steel plates to seal openings. Completion of ISS now expected by end of this month. Below-grade air duct (~20 feet long by 7 feet diameter) that had been under the shop/offices floor slab northeast of Reactor Building has been demolished and loaded out.

107-N Basin Recirculating/Cooling Facility: Demolition 70% complete. Load out 60% complete.

1303-N Spacer Silos: 100% complete.

1900-N Water Supply Tanks – Demolition of tank foundations 100% complete. Load out 60% complete. Completion scheduled for end of this week.

1120-N Storage and Training Building – Facility is cold and dark. Hazmat removal activities began two weeks ago and are continuing. Requested and received approval from Ecology and EPA to abate asbestos containing material (concrete asbestos board) inside building prior to demolition. Demolition has been slightly delayed to protect nearby nesting birds. Expected start date near end of this month.

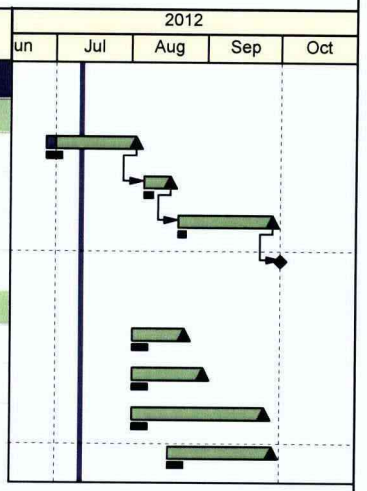
100-N Mobile Offices – MO-415, MO-100, MO-425, MO-426 and MO-427 are cold and dark. Hazmat removal has been completed. Demolition is scheduled to begin with MO-415 (1103-N) however, MO-415 currently has nesting birds so the start is being delayed until the chicks have fledged.

Other Activities

Two crews from 100-N were recently transferred to 300 Area to assist with D4 activities at that location. 100 Area D4 personnel are making arrangements to move operations from 100-N to 100-D near end of August.

Attachment 10

Activity ID	Activity Name	Remaining Duration	Physical % Complete	Start	Finish
Procurement		45		27-Jun-12 A	01-Oct-12
Procurement		45		27-Jun-12 A	01-Oct-12
CULTREV70	RFP	14	10%	27-Jun-12 A	02-Aug-12
CULTREV80	WCH Review/Award	8	0%	06-Aug-12	16-Aug-12
CULTREV130	Mobilization	23	0%	20-Aug-12	27-Sep-12
CULTREV140	NTP - Excavation/Loadout	0	0%	01-Oct-12	
Submittals		33		01-Aug-12	27-Sep-12
CULTREV100	PSR - Design	13	0%	01-Aug-12*	22-Aug-12
CULTREV110	PSR - Mobilization	18	0%	01-Aug-12*	30-Aug-12
CULTREV120	PSR - Excavation/Loadout	30	0%	01-Aug-12*	24-Sep-12
CULTREV90	Submittals/Approve	24	0%	16-Aug-12*	27-Sep-12



Current Bar Labels % Complete

Milestone Project Baseline ...

Attachment 11

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number
SDF-100N-027

A. INSTRUCTIONS

This form must be completed to: 1) document existing data in order to determine if current data is suitable to prove completion of 100-N Ancillary Facilities, or 2) document that site-specific sampling and analyses are needed to provide completion for 100-N Ancillary Facilities.

B. GENERAL INFORMATION

Building Name: Seal Well (Outfall) Building Number: 1908-N (WIDS Site 1908-N)

WIDS Sites Associated or Adjacent:
100-N-61:1, 100-N-61:3, 100-N-77, 100-N-79, 100-N-84:2, and 1908-N

- All WIDS sites listed above are classified as Accepted-

Other:
The 1908-N facility was a concrete-reinforced weir box that received raw cooling water. Facility effluent discharged to the Columbia River via a pipeline and a spillway (DOE/RL-90-22 pg. 2-58 & WIDS General Summary Reports for 100-N-77, 100-N-79, and 1908-N). The footprints of the effluent pipeline and spillway have been incorporated into respective WIDS sites 100-N-77 and 100-N-79 (WIDS General Summary Report for 100-N-77 & 100-N-79).

The Field Remediation organization (FR) will be responsible for the closeout of the 1908-N facility footprint, which is WIDS site 1908-N.

C. INFORMATION SOURCES

Available information (list document number for each if applicable):

Historical Site Assessment: N/A	Site Walkdown: Ecology's Approval to Leave a Small Portion of the 1908-N Wall Stuck in a Below Grade Corner of the Monolith: CCN 165819
IH Characterization Report: N/A	Radiological Survey: Global Positioning Environmental Radiological Surveyor (GPERS): ESR-FRM-120085C (results included in CCN 168519)
IHC/FHC Document: N/A	WIDS/SIS: • Waste Information Data System (WIDS) General Summary Report for 100-N-77, 100-N-79, and 1908-N • RCC Stewardship Information System (SIS) Site Summary Report for 1908-N
PDSR: N/A	Facility Inspection: 100 Area River Effluent Pipeline Site Visit Notes: CCN 112489
Waste Characterization Checklist: N/A	Summary Report: N/A

Other:
- 100N Facility Endpoint Criteria and Turnover Documentation 1908-N Seal Well: CCN 521171
- 1908-N Approval to Leave Concrete Monolith: CCN 166186
- Asbestos Inspection & Sampling Report for the 181-NE and 1908 N: CCN 128835
- Engineering Evaluation/Cost Analysis for the 100-N Area Ancillary Facilities and Integration Plan, Rev. 1: DOE/RL-97-22
- Explanation of Significant Differences for the 100-NR-1 and 100-NR-2 Operable Units Interim Remedial Action Record of Decision, March 2011
- RCRA Facility Investigation/Corrective Measures Study Work Plan for the 100-NR-1 Operable Unit, Rev. 0: DOE/RL-90-22
- "Pre-Existing" Conditions Survey of Hanford Site Facilities Phase II, Rev. 0: BHI-00221
- Radiological Survey Record: RSR-100N-10-2229
- Photographs of the 1908-N Facility Pre-Demolition, Time-Stamped: SIS Site Summary Report for 1908-N pg. 7 (11/8/1961) & pg. 8 (2/7/2005), CCN 112489 pgs. 12-13 (2/7/2005)
- Photographs of the 1908-N Facility Pre-Demolition, No Time Stamp: SIS Site Summary Report for 1908-N pgs. 4-6
- Photographs of the 1908-N Facility Post-Demolition, No Time Stamp: CCN 168519 pgs. 4-7 & CCN 166186 pg. 5

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number
SDF-100N-027

D. HAZARDOUS SUBSTANCES

Check all that apply:

☒ None ☐ Asbestos containing material ☐ Lead ☐ PCBs/PCB Articles ☐ Oils/Greases

☐ Chemicals List: _____

☐ Radiological Contamination ☐ Mercury/Mercury Devices

☐ Other: _____

References/Comments:
There is no record of any hazardous substance having been located within the 1908-N facility.

Asbestos containing material: No potential asbestos containing material was identified during the asbestos inspection at the 1908-N facility (CCN 128835 pg. 1).

Liquids: ☒ Yes ☐ No

If yes, describe source and nature of liquids:
The 1908-N facility received water that had been used to cool the secondary cooling loop of the circulating raw water system (WIDS General Summary Reports for 1908-N). The water was not radiologically contaminated and contained no hazardous substances. It is reported that the facility received more than 2 million cubic meters of raw water daily (WIDS General Summary Report for 1908-N pg. 1). Prior to 1999 the facility was registered as Outfall 009, a National Pollutant Discharge Elimination System point source to allow discharge to the Columbia River via an effluent pipeline and a spillway (WIDS General Summary Reports for 100-N-77, 100-N-79, and 1908-N pg. 1).

Were the hazardous substances removed from the facility prior to demolition? ☐ Yes ☒ No

As verified by what documentation:
As detailed elsewhere in Part D of this form, there were no hazardous substances to remove from the 1908-N facility.

Was there potential for hazardous substances to be introduced into the soils during facility operations or demolition? ☐ Yes ☒ No ☐ N/A

References/Comments:
There is no indication that any hazardous substance was located within the 1908-N facility during its operation. Furthermore, there is no indication that any hazardous substance was released into either the facility or the underlying soil during demolition.

List any hazardous materials left in the building for demolition:
N/A

Does review of historical records and process knowledge indicate a potential for radiological or chemical contamination to be present in the facility?
The 1908-N facility footprint has been classified as WIDS site 1908-N. However, neither historical records nor process knowledge indicate potential for either radiological or chemical contamination to be present within the facility footprint.

Radioactive contamination was expected to be present within the facility as a result of the facility's association with the secondary cooling loop system of the 105-N/109-N reactor (DOE/RL-97-22 pgs. 2-15 & 2-26). However, multiple pages in the 1908-N facility turnover documentation state that the facility did not contain radiological contamination (CCN 521171 pgs. 11, 16, and 58). Health physics radiological readings were reported to have historically been 80 times the background level at the facility, but documentation addressing these elevated readings was amended to remove radiological contamination as a point of concern for the 1908-N facility prior to facility turnover to Bechtel Hanford, Inc. (BHI-00221 pg. 3-118 & CCN 521171 pg. 8).

Radiological surveys at the location of the 1908-N facility did not identify radiological contamination (RSR-100N-10-2229 & ESR-FRM-120085C). Based on process knowledge the facility did not receive any chemical with contamination potential.

Comments:
N/A

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number
SDF-100N-027

E. FIELD OBSERVATIONS

Visual Inspection

Were any stained soils/anomalies discovered during or after demolition of the facility? ☒ Yes ☐ No

References/Comments:
A concrete monolith was discovered during demolition of the below grade of the 1908-N and was left within the facility footprint following facility demolition (CCN 166186 pg. 2 & CCN 165819 pg. 2). A sample of the concrete was analyzed and it was subsequently determined that the monolith did not contain any contaminant in sufficient concentration to threaten the groundwater or the Columbia River (CCN 166186 pgs. 2-7). As a result of this analysis and determination, the Washington State Department of Ecology provided approval of leaving the monolith in place (CCN 166186 pg. 2 & CCN 165819 pg. 1).
Pertinent design drawings include H-1-30573, Rev. 5 and H-1-45007, Sheet 31.

No other stained soils or anomalies were discovered within the 1908-N facility footprint (CCN 168519 pg. 1).

Were samples taken of the stained soils/anomalies? ☒ Yes ☐ No ☐ N/A

References/Comments:
Sample (HEIS) Numbers J1P170 & J1P171

Do results of the samples indicate that chemical contamination exists? ☐ Yes ☒ No ☐ N/A

References/Comments:
A sample of the concrete was analyzed and it was subsequently determined that the monolith did not contain any contaminant in sufficient concentration to threaten the groundwater or the Columbia River (CCN 166186 pgs. 2-7).

Is the area potentially a discovery site? ☐ Yes ☒ No

References/Comments:
N/A

Radiological Surveys

Did radiological surveys (GPERS or equivalent) identify contamination? ☐ Yes ☒ No

References/Comments:
ESR-FRM-120085C (GPERS) & RSR-100N-10-2229 (Routine Work Progress Survey)

Were samples taken of the radiologically contaminated soils? ☐ Yes ☐ No ☒ N/A

References/Comments:
This question is not applicable because radiological contamination was not discovered within the 1908-N facility footprint.

Is the area potentially a discovery site? ☐ Yes ☒ No

References/Comments:
Radiological contamination was not discovered within the facility footprint.

Were the contaminated materials removed? ☐ Yes ☐ No ☒ N/A

References/Comments:
This question is not applicable because radiological contamination was not discovered within the facility footprint.

F. WIDS SITES

Were there any WIDS sites affected by D4 activities? ☒ Yes ☐ No

If yes, list the WIDS sites:
1908-N

Were the WIDS site(s) completely removed? ☒ Yes ☐ No

References/Comments:
With the removal of the 1908-N facility, the 1908-N WIDS site was also removed because there is no indication that any portion of the facility or underlying soil was ever contaminated. The facility footprint is included as WIDS site 1908-N in the March 2011 Explanation of Significant Differences for the 100-NR-1 and 100-NR-2 Operable Units Interim Remedial Action Record of Decision (pg. 18). Accordingly, FR is responsible for final closeout of the facility footprint, for which

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number
SDF-100N-027

deferral will not be necessary. The analytical results of the sample taken from the residual concrete monolith will be sufficient to support closeout of the 1908-N WIDS site. See Part D and Part G of this form for sample details.

Will the Ancillary Facility Footprint be deferred to FR to be closed out with a co-located Waste Site? ☐ Yes ☒ No

References/Comments:
N/A

G. COPCs FOR SOILS AND STRUCTURES REMAINING AFTER DEMOLITION

What are the potential contaminants of concern for the remaining below-grade soil?

☒ None ☐ SVOC ☐ VOC ☐ Metals ☐ TPH ☐ Rad ☐ PCBs

☐ Other (Specify): _____

Comments:
There is no record of any hazardous substance having been located within the 1908-N facility.

Summary of in-process soil sampling requirements:
N/A

Constituents detected / concentrations / rationale
Consult Sample Collection Summary below

Sample Collection Summary
Concrete monolith at 1908-N: Sample (HEIS) Numbers J1P170 & J1P171
-Analysis results are detailed in CCN 166186 pgs. 4-7.

The analysis results indicate that no contaminant was present in sufficient concentration to threaten the groundwater or the Columbia River.

H. NOTES / ADDITIONAL INFORMATION

☐ Check here if additional information / data / maps / sketches are attached to this form.

If checked, list the attachment(s):
N/A

I. SAMPLING

Are soil samples required to demonstrate that remaining structure or below-grade soils meet cleanup standards? ☐ Yes ☒ No

Based on the above information it was determined that sampling: ☐ will ☒ will not be required in order to demonstrate that cleanup criteria have been met.

The individual below acknowledges that the review of this facility has been completed. He or she also commits to provide to the Department of Energy (DOE) and the Washington State Department of Ecology (Ecology) any available information that could alter the sampling decision established in this form.

Information Reviewer Signature	Printed Name	Date
David Warren	David Warren	6.28.12

The regulatory representative below agrees with the decision outlined in section I of this form for the indicated facility and supports implementation of that decision based on the information currently available.

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM		Determination Number SDF-100N-027
DOE Signature	Printed Name RF Guercia	Date 6/28/12
Ecology Signature	Printed Name Nina M. Menard	Date 7/2/12

Attachment 12

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number
SDF-100N-004

A. INSTRUCTIONS

This form must be completed to: 1) document existing data in order to determine if current data is suitable to prove completion of 100-N Ancillary Facilities, or 2) document that site-specific sampling and analyses are needed to provide completion for 100-N Ancillary Facilities.

B. GENERAL INFORMATION

Building Name: Electrical Substation Building Number: 151-N

WIDS Sites Associated or Adjacent:
100-N-54 & 100-N-86

Other:
The 151-N Building proper was previously removed by D4 in 2005/2006 and the excavation was backfilled with clean soil. The portion of the transformer pedestals (100-N-86 WIDS site) that were adjacent and to the North of the 151-N building, were demolished to a level 3 feet below grade in April of 2012. Future actions will be required by FR for remediation of the 100-N-54 and 100-N-86 WIDS sites, which lie within the 151-N switchyard.

C. INFORMATION SOURCES

Available information (list document number for each if applicable):

Historical Site Assessment:	N/A	Site Walkdown:	Visual Inspection of the 151-N transformer pedestals excavation soils. CCN 166159
IH Characterization Report:	N/A	Radiological Survey:	Radiological Survey Record: RSR-IFSM-06-0192 (Downposting) Radiological Survey Records: RSR-IFSM-06-0009 / 0112 / 0176 / 0185 / 0188 Global Positioning Environmental Radiological Surveyor (GPERS) Survey Record: ESFRM120079C
IHC/FHC Document:	N/A	WIDS/SIS:	RCC Stewardship Information System Facility Summary Report: 151-N, 100-N-54, and 100-N-86
PDSR:	Post-Demolition Summary Report for the 151-N Electrical Substation CCN 127176	Facility Inspection:	N/A
Waste Characterization Checklist:	N/A	Summary Report:	Characterization Summary Report for the 151-N and 153-N Electrical Substations, 119-N Exhaust and 119-N Stack Air Monitoring Buildings, 1313-N Change Control Building, and 181-NC Sample Shack CCN 122923

Other:
Radiological Survey Record: RSR-IFSM-06-0192 (Downposting)
Radiological Survey Records: RSR-IFSM-06-0009 / 0112 / 0176 / 0185 / 0188
Global Positioning Environmental Radiological Surveyor (GPERS) Survey Record: ESFRM120079C
Asbestos Summary Report: CCN 125283
Transformers at 153-N and 151-N: CCN 124396
D4 Project Soils and/or Below Grade Structures Completion Form 151-N Electrical Substation: D4-100N-0002
Sampling and Analysis Instruction to Support Demolition of the 151-N and 153-N Facilities: WCH-35
100-N-86, 151-N Substation Transformer and Oil Circuit Breakers Remove, Treat, and Dispose Report (CCN 154748)
Work Package: 2005-09-20-005 A: 100 Area Building and Structure Demolition
Work Package: 2005-09-20-003 A: 100 Area TSI Asbestos Abatement
Work Package: 2005-09-20-002 A: 100 Area Hazardous Material Removal
Photographs of 151-N Post-Demolition, Time-Stamped 03/09/2006: CCN 127176-Figure 2

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number SDF-100N-004

D. HAZARDOUS SUBSTANCES

Check all that apply:

☐ None ☒ Asbestos containing material ☒ Lead ☒ PCBs/PCB Articles ☒ Oils/Greases

☒ Chemicals List: Inductively coupled plasma (ICP) metals (CCN 154748 pg. 4) for Transformer pedestals (100-N-86 WIDS site)

☒ Radiological Contamination ☒ Mercury/Mercury Devices

☐ Other: _____

References/Comments:
Asbestos: CCN 125283 pgs. 2-3, and Appendices B & D
Lead: Work Package 2005 09 20 005 A WCH Task Instruction pg. 1
PCBs/PCB Articles: WCH-35 pg. 1 & CCN 124396
Oils/Greases: WCH-35 pg. 1 & CCN 124396
Radiological Contamination: Work Package 2005 09 20 005 A WCH Task Instruction pg. 1
Mercury/Mercury Devices: Work Package 2005 09 20 005 A WCH Task Instruction pg. 1

Liquids: ☒ Yes ☐ No

If yes, describe source and nature of liquids:
The 151-N facility transformers contained oil. The oil consisted of 220 ppm PCBs until it was replaced with non PCB oil in 1992 (WCH-35 pg. 1). Oil remained in the transformer until at least 10/25/2005 (CCN 124396). Demolition did not begin until 12/1/2005 (WCH-35, pg. 1, CCN 127176 pg. 1), following draining and removal of the transformers.

Were the hazardous substances removed from the facility prior to demolition? ☒ Yes ☐ No

As verified by what documentation:
All hazardous materials listed on the Hazmat Removal Checklist were removed from the facility prior to demolition (Work Package 2005 09 20 002 A WCH Task Instruction pg. 1).

Was there potential for hazardous substances to be introduced into the soils during facility operations or demolition? ☒ Yes ☐ No ☐ N/A

References/Comments:
The 151-N building contained the potential to either be contaminated, or had the potential to release hazardous materials to the environment during its demolition (CCN 122923 pg. 2).

List any hazardous materials left in the building for demolition:
None.

Does review of historical records and process knowledge indicate a potential for radiological or chemical contamination to be present in the facility?
While no Global Positioning Environmental Radiological Surveyor (GPERS) survey was conducted for the 151-N building excavation footprint directly, there was one performed for the transformer pedestal directly adjacent the building (100-N-86 WIDS site), and no contamination was identified (ESFRM120079C). Additionally, there appeared to be no potential for the presence of radiological contamination as indicated by no detectable radiation levels identified in the downposting radiological survey (RSR-IFSM-06-0192). In addition, none of the work progress surveys for the facility resulted in detectable levels of radiological contamination (RSR-IFSM-06-0009 / 0112 / 0176 / 0185 / 0188).

One document states that there were no processes within the 151-N building that could have led to contamination of surrounding soils (CCN 127176, pg. 1). However, the facility discharged liquid into an adjacent French drain, which became waste site 100-N-54 (CCN 127176 pg. 2). Samples were taken from the drain's underlying soils and the results indicated that actionable levels of chemical contamination were present (CCN 127176 pg. 2 and Attachment 1). There is no indication of any additional waste site in the soils underlying the former 151-N building (D4-100N-0002 pg.1 & WCH-35 pg. 3). While soils within the excavation area of the facility appeared darker than surrounding soils, sample results demonstrated that no contaminants were present above the Remedial Action Goals (RAGs) (CCN 127176 pg. 3).

Oil leaked from the transformer immediately north of the 151-N building (WCH-35 pg. 1). The transformer's concrete pedestals became part of waste site 100-N-86 (WCH-35 pg. 1 & CCN 154748 pg. 1). While no evidence of this leak was present on the pedestals, the underlying soil is stated to be potentially contaminated (WCH-35 pg. 3 & CCN 154748 pg. 1). D4 removed a portion of the transformer pedestal (100-N-86 WIDS site) that was adjacent and to the North of the

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number
SDF-100N-004

151-N building. The structure was removed to a level three feet below grade and the excavation was left open for FR to perform the remainder of the work activities associated with remediation of the 100-N-86 WIDS site.

Comments:
Waste site 100-N-86 has been recommended for Remove, Treat, and Dispose (RTD) (CCN 154748 pg. 1). There is currently no approved Verification Instruction or excavation design, thus the specifics of the remediation have yet to be determined. The waste site includes concrete transformer pedestals; a concrete oil circuit breaker pad; and underlying soils, which are potentially contaminated (CCN 154748 pg. 1). None of these items have ever existed within the boundary of the 151-N building. Additionally, none of the processes associated with these items would have introduced hazardous substances into the footprint of the 151-N building. Accordingly, the condition of the waste site is not indicative of potential soil conditions within the 151-N building footprint.

E. FIELD OBSERVATIONS

Visual Inspection

Were any stained soils/anomalies discovered during or after demolition of the facility? ☒ Yes ☐ No

References/Comments:
CCN 127176 Appendix 1

Were samples taken of the stained soils/anomalies? ☒ Yes ☐ No ☐ N/A

References/Comments:
CCN 127176 Appendix 1

Do results of the samples indicate that chemical contamination exists? ☐ Yes ☒ No ☐ N/A

References/Comments:
N/A

Is the area potentially a discovery site? ☐ Yes ☒ No

References/Comments:
N/A

Radiological Surveys

Did radiological surveys (GPERS or equivalent) identify contamination? ☐ Yes ☒ No

References/Comments:
Downposting survey RSR-IFSM-06-0192, and GPERS survey ESFRM120079C did not identify contamination.

Were samples taken of the radiologically contaminated soils? ☐ Yes ☐ No ☒ N/A

References/Comments:
This question is not applicable surveys did not identify radiological contamination.

Is the area potentially a discovery site? ☐ Yes ☒ No

References/Comments:
N/A

Were the contaminated materials removed? ☐ Yes ☐ No ☒ N/A

References/Comments:

F. WIDS SITES

Were there any WIDS sites affected by D4 activities? ☒ Yes ☐ No

If yes, list the WIDS sites:
100-N-54 (CCN 127176 pg. 2) and 100-N-86 (CCN 166159).

Were the WIDS site(s) completely removed? ☐ Yes ☒ No

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number
SDF-100N-004

References/Comments:
Complete remediation of 100-N-54 was outside the D4 scope and residual soil was returned to the excavation (CCN 127176 pg. 2).

The 100-N-86 Transformer pedestal immediately adjacent and north of the 151-N building was demolished to a level three feet below grade. The excavation was visually inspected for signs of staining and none was observed (CCN 166159). The excavation was left open for FR to complete the remainder of their work activities.

Will the Ancillary Facility Footprint be deferred to FR to be closed out with a co-located Waste Site? ☐ Yes ☒ No

References/Comments:

G. COPCs FOR SOILS AND STRUCTURES REMAINING AFTER DEMOLITION

What are the potential contaminants of concern for the remaining below-grade soil?

☒ None ☐ SVOC ☐ VOC ☐ Metals ☐ TPH ☐ Rad ☐ PCBs

☐ Other (Specify): _____

Comments:
N/A

Summary of in-process soil sampling requirements:
N/A

Constituents detected / concentrations / rationale
Consult Sample Collection Summary below.

Sample Collection Summary
Asbestos: CCN 125283 Appendix B (for sample numbers) and Appendix D (for sample results)-Sample (HEIS) Number J10F04 is the only sample with detectable asbestos levels.
Silica Sand: Sample (HEIS) Numbers J10W38 and J10W41 (CCN 127176 Attachment 1)
Stained soil below 100-N-54: Sample (HEIS) Numbers J10W39, J10W40, J10W42, J10W43 (CCN 127176 Attachment 1) - The results of this sample exceeded the Remedial Action Goals (RAGs). The site will require further remediation by FR.
151-N Excavation Stained Soil: Sample (HEIS) Number J118T5. The lab results for this sample revealed no unusual parameters for the parameters tested (Metals, semi-volatile organics, and diesel range organics).

H. NOTES / ADDITIONAL INFORMATION

☐ Check here if additional information / data / maps / sketches are attached to this form.

If checked, list the attachment(s):

I. SAMPLING

Are soil samples required to demonstrate that remaining structure or below-grade soils meet cleanup standards? ☐ Yes ☒ No

Based on the above information it was determined that sampling: ☐ will ☒ will not be required in order to demonstrate that cleanup criteria have been met.

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number
SDF-100N-004

The individual below acknowledges that the review of this facility has been completed. He or she also commits to provide to the Department of Energy (DOE) and the Washington State Department of Ecology (Ecology) any available information that could alter the sampling decision established in this form.

Information Reviewer Signature	Printed Name	Date
David Warren	David Warren	7/9/12

The regulatory representative below agrees with the decision outlined in section I of this form for the indicated facility and supports implementation of that decision based on the information currently available.

DOE Signature	Printed Name R. F. Guercia	Date 7/3/12
Ecology Signature	Printed Name Nina M. Menard	Date 7/3/12

Attachment 13

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number
SDF-100N-024

A. INSTRUCTIONS

This form must be completed to: 1) document existing data in order to determine if current data is suitable to prove completion of 100-N Ancillary Facilities, or 2) document that site-specific sampling and analyses are needed to provide completion for 100-N Ancillary Facilities.

B. GENERAL INFORMATION

Building Name: High-Lift Pump House Building Number: 182-N

WIDS Sites Associated or Adjacent:
100-N-61:4, 100-N-84 (colon sites 1, 2, 3, 4, 5, 6, and 7), and 124-N-2 (through connection to 100-N-84:5)
All sites have been classified as Accepted

Note: a Verification Sampling Work Instruction has been written for 124-N-2 (0100N-WI-G0039). Accordingly, its closeout will be handled by Field Remediation separately from that of the 182-N facility. Verification sampling has been performed for all 100-N-84 colon sites listed above with the exception of 100-N-84:6, which will be sampled at a later date.

Other:
The 182-N facility was a concrete and steel building that contained various water supply system pumps and tanks and associated supply lines (WCH-111 pgs. 1-4 & HW-69000). The facility had a reinforced concrete basement with a slab 24 feet below grade, extending to 32 feet below grade with foundational structures (WCH-111 pg. 1).

The 182-N facility demolition was completed on 05-11-2012. The basement floor and walls were left in place with Ecology approval following floor perforation and demolition of the top of the walls to three feet below grade (CCN 165761 pgs. 1-2).

C. INFORMATION SOURCES

Available information (list document number for each if applicable):

Historical Site Assessment: N/A

Site Walkdown: Ecology's Approval to Leave in Place the Basement Walls and Floor of the 182-N High Lift Pumphouse: CCN 165761

IH Characterization Report: N/A

Radiological Survey: Global Positioning Environmental Radiological Surveyor (GPERS): ESR-FRM-120080C

IHC/FHC Document: N/A

WIDS/SIS: RCC Stewardship Information System (SIS) Facility Summary Reports: 182-N

PDSR: N/A

Facility Inspection: N/A

Waste Characterization Checklist: N/A

Summary Report: N/A

Other:
- 100-N Area Technical Baseline Report: WHC-SD-EN-TI-251
- 100-N Technical Manual, Volume 2, Systems Descriptions: HW-69000
- Asbestos Inspection & Sampling Report for the 182 N Building: CCN 130365
- Asbestos Inspection & Sampling Report for the 182-N High Lift Pump House: CCN 136047
- Construction Completion Report CAI-816, 100-N Reactor Plant: HW-83918
- Demolition Plan for the 182-N High Lift Pump House: WCH-111
- Disposal of >499 PPM PCB Waste Oil and Solids From 100N Transformers: CCN 128962
- "Pre-Existing" Conditions Survey of Hanford Site Facilities, Phase II: BHI-00221
- Radiological Survey Records: RSR-IFSM-05-0411, RSR-IFSM-05-0454, RSR-IFSM-05-0484, and N-0013
- Work Package for 100 Area Characterization and Sampling: 2005-09-20-001 I
- Work Package for 182N Class I Asbestos Removal: 100-07-08-21-001 C
- Work Package for 182N Class II Asbestos Removal: 100-07-08-27-002 B
- Work Package for 182-N Characterization: 100-07-08-16-001 O
- Work Package for 182-N: Perform Hazardous Material Removal: 100-07-10-02-001
- Work Package for Asbestos Removal at 182N: 100-09-12-30-064
- Work Package for Characterization at 182N Sump: 100-07-08-16-001 H
- Verification Sampling Work Instruction for 124-N-2: 0100N-WI-G0039

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- Photographs of the 182-N Facility Pre-Demolition, Time-Stamped: SIS Facility Summary Report for 182-N pg. 5 (11/1/2005) & pg. 6 (11/3/2005), WCH-111 pg 3 (11/1/2005)
- Photographs of the 182-N Facility Pre-Demolition, No Time Stamp: SIS Facility Summary Report for 182-N pg. 3 & WCH-111 pg. 6
- Photographs of the 182-N Facility Post-Demolition, Time-Stamped: CCN 165761 pgs. 3-6 (5/16/2012 & 5/18/2012)

D. HAZARDOUS SUBSTANCES

Check all that apply:

☐ None ☒ Asbestos containing material ☒ Lead ☒ PCBs/PCB Articles ☒ Oils/Greases

☒ Chemicals List:
- Chlorine: exterior storage tank and liquid container storage area (HW-83918 pg. 23, WHC-SD-EN-TI-251 pg. 2-20, HW-69000 pgs. 6.1.1-2 through 6.1.4-2, 100-07-08-21-001 C WCH Task Instruction pg. 3, and 100-07-10-02-001 WCH Task Instruction pg. 6)
- Sodium Sulfite: mixing system, injection system, and dry chemical storage (HW-83918 pg. 23 & HW-69000 pg. 6.7-2)
- Refrigerants: air conditioning systems (100-07-08-21-001 C WCH Task Instruction pg. 2)

☒ Radiological Contamination ☒ Mercury/Mercury Devices

☒ Other:
- Unnamed acid from small acid vessel inside the 182-N facility (100-07-08-21-001 C WCH Task Instruction pg. 2)

References/Comments:
- Asbestos containing material: pipe and component insulation, floor tiles, and accumulator and water storage tank exteriors (BHI-00221 pg. 3-67, WCH-111 pg. 4, HW-69000 pg. 1.2.3-2, and 100-07-08-21-001 C WCH Task Instruction pgs. 1-2). The quantities of asbestos in the 182-N facility were said to have been significant (100-07-08-21-001 C WCH Task Instruction pg. 2, 100-07-10-02-001 WCH Task Instruction pg. 5, CCN 130365, and CCN 136047)
- Lead: fuses and potentially in construction materials such as caulking, flashing, and paint primer (100-07-08-21-001 C WCH Task Instruction pg. 2 and 100-07-10-02-001 WCH Task Instruction pgs. 6 & 17)
- PCBs/PCB Articles: PCB oils in transformers and door actuators and potentially in fluorescent light ballasts (CCN 128962, WCH-111 pg. 9, HW-69000 pg. 12.3-2, 100-07-08-21-001 C WCH Task Instruction pg. 2, and 100-07-10-02-001 Attachment A)
- Oils/Greases: canned oils and cleaners; diesel fuel, lubricating oil, bearing oil, and hydraulic fluid used in facility pumps and motors (BHI-00221 pg. 3-67, WCH-111 pg. 4, 100-07-08-21-001 C WCH Task Instruction pg. 3, and 100-07-10-02-001 WCH Task Instruction pgs. 6 & 17)
- Radiological Contamination: elevated removable beta/gamma radiological level on roof flashing mud dauber nests, elevated fixed beta/gamma radiological levels in the facility basement, and multiple motors and monitors marked as internally contaminated (RSR-IFSM-05-0411, RSR-IFSM-05-0454, RSR-IFSM-05-0484, N-0013, and BHI-00221 pg. 3-67)
- Mercury/Mercury Devices: thermometers, thermostat switches, mercury light bulbs, and potentially in fire alarm pull boxes (BHI-00221 pg. 3-67, 100-07-08-21-001 C WCH Task Instruction pg. 2, 100-07-10-02-001 WCH Task Instruction pgs. 6, 17, and 18)

Liquids: ☒ Yes ☐ No

If yes, describe source and nature of liquids:

Water:

The 182-N facility contained multiple water supply systems of various output capacities and purposes (HW-83918 pgs. 20-24 & BHI-00221 pg. 3-67). These systems utilized raw, demineralized, and filtered water (HW-83918 pgs. 20-24 & BHI-00221 pg. 3-67). Multiple water supply tanks existed south of the facility (BHI-00221 pg. 3-67 & HW-69000 pgs. 1.2.3-2 through 3.1.3-2).

Non-Water Liquids:

The 182-N facility also contained emergency diesel pumps connected to three diesel tanks north of the facility, a liquid chlorine storage area, an exterior chlorine storage tank, and a sodium sulfite mixing and injection system (HW-83918 pgs. 23-24, BHI-00221 pg. 3-67, WHC-SD-EN-TI-251 pg. 2-20, HW-69000 pgs. 1.2.1-1 through 11.4.1-2, and 100-07-08-21-001 C WCH Task Instruction pg. 3).

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The basement of the 182-N facility had a drain which was registered as Outfall 006, a National Pollutant Discharge Elimination System point source (WCH-111 pg. 7 & 100-07-10-02-001 WCH Task Instruction pg. 6). There were 20 other drains identified within the 182-N facility (100-07-10-02-001 WCH Task Instruction pg. 17). All identified drains were isolated with foam sealant prior to demolition (100-07-10-02-001 WCH Task Instruction pgs. 9, 15, and 19).

Were the hazardous substances removed from the facility prior to demolition? ☒ Yes ☐ No

As verified by what documentation:

- Chlorine: chlorine residue in facility piping was removed from the Chlorine House of the 182-N facility prior to demolition (100-07-10-02-001 WCH Task Instruction pg. 15), the chlorine storage tank on the facility's exterior was reportedly removed prior to demolition (100-07-08-21-001 C WCH Task Instruction pg. 3)
- Sodium Sulfite: free liquids were removed from the 182-N facility prior to demolition (100-07-10-02-001 WCH Task Instruction pgs. 15 & 28); hazardous material removal documents for the 182-N facility do not indicate that dry sodium sulfite, which was historically stored at the facility in 100-pound bags, was present during D4 activities at this facility
- Refrigerants: refrigerants were removed from facility air conditioning systems during deactivation (100-07-08-21-001 C WCH Task Instruction pg. 2)
- Unnamed acid from small acid vessel: containerized and free liquids were removed from the 182-N facility prior to demolition (100-07-10-02-001 WCH Task Instruction pgs. 15 & 28)
- Asbestos containing material: Class 1 ACM was removed from the 182-N facility using various control measures including negative pressure enclosures, encapsulating/fixing affected facility surfaces following ACM removal, double-bagging removed ACM, and wet-wiping equipment for decontamination purposes (100-09-12-30-064 WCH Task Instruction pgs. 3-15), Class II ACM was removed prior to demolition (100-07-08-27-002 B)
- Lead: lead fuses were either identified for segregation or removed from the 182-N facility prior to demolition (100-07-10-02-001 WCH Task Instruction pg. 28)
- PCBs/PCB Articles: door actuators and two transformers were drained and flushed of PCB oils prior to demolition (CCN 128962, WCH-111 pg. 9, and 100-07-10-02-001 WCH Task Instruction pgs. 15, 28, and Attachment A)
- Oils/Greases: containerized oils/greases and free liquids were removed from the 182-N facility prior to demolition (100-07-10-02-001 WCH Task Instruction pgs. 15 & 28), fuel and oil were drained from all pumps and motors (WCH-111 pg. 4), there was a potential to encounter residual oil and grease during demolition (WCH-111 pg. 4)
- Radiological Contamination: radiological contamination was stabilized prior to demolition as required (100-07-10-02-001 WCH Task Instruction pg. 28)
- Mercury/Mercury Devices: mercury switches and mercury light bulbs were removed from the 182-N facility prior to demolition (100-07-10-02-001 WCH Task Instruction pgs. 15 & 28), there is no indication of thermometer removal prior to demolition

Additionally, water, light ballasts, fluorescent light bulbs, sodium light bulbs, batteries and capillary tubes were removed from the 182-N facility prior to demolition (100-07-10-02-001 WCH Task Instruction pgs. 15 & 28).

Was there potential for hazardous substances to be introduced into the soils during facility operations or demolition? ☒ Yes ☐ No ☐ N/A

References/Comments:
The 182-N facility was designed to receive large amounts of liquid and to store various chemicals. There was the potential for many of these substances to have leaked within the facility during its operation. However, a pathway for introduction of these chemicals to the underlying soil was not present. Additionally, this is not likely to have happened, because as identified above, chemicals were removed from the facility and all identified floor drains were sealed prior to demolition.

List any hazardous materials left in the building for demolition:
No document was found to verify that mercury thermometers were removed from the 182-N facility prior to demolition. Also, there was a potential to encounter residual oil and grease during demolition, despite fuel, oil, greases, and free liquids having been removed from the facility prior to demolition (WCH-111 pg. 4 & 100-07-10-02-001 WCH Task Instruction pgs. 15 & 28). None of these materials were likely to have been present in a sufficient quantity, nor was there a pathway present that would allow migration beyond the basement floor of the facility as all drains were plugged prior to demolition.

Does review of historical records and process knowledge indicate a potential for radiological or chemical contamination to be present in the facility?
Radiological:

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Three radiological surveys detected elevated levels of radiological contamination at the 182-N facility (RSR-IFSM-05-0411, RSR-IFSM-05-0454, and N-0013). Additionally, two radiological survey records document the presence of internally contaminated motors within the 182-N facility (RSR-IFSM-05-0454 & RSR-IFSM-05-0484). However, the GPERS survey of the facility footprint following demolition did not detect radiological contamination (ESR-FRM-120080C).

Chemical:

Several instances of staining were documented prior to facility demolition. Petroleum stains were identified on the facility floor that were presumably caused by an overhead crane and an unknown amount of pump and motor leakage (100-07-08-21-001 C WCH Task Instruction pg. 1). Acid residue was identified on the facility floor and was presumably caused by a leak from a small acid-containing vessel stored within the facility (100-07-08-21-001 C WCH Task Instruction pg. 2). The type of acid is unknown. After demolition, staining was found on concrete pedestals in the basement of the facility (CCN 165761). The pedestals were subsequently scabbled to remove the stained concrete (CCN 165761 pg. 1).

The two PCB oil-immersed transformers at the facility were constructed with oil-tight steel cases, pressure relief devices, and heat resistant gaskets that would have minimized any oil discharge (HW-69000 pg. 12.3-2). No document was found to suggest that either transformer discharged oil to the underlying soil.

Comments:
Pertinent design drawings include H-1-29953; H-1-45007, Sheets 1, 9, 16, 17, and 23; H-1-52000, Sheets 1 and 2; and H-1-52002, Sheet 1. Additional pertinent design drawings are listed in Appendix A of WCH-111.

E. FIELD OBSERVATIONS

Visual Inspection

Were any stained soils/anomalies discovered during or after demolition of the facility? ☐ Yes ☒ No

References/Comments:
Neither stained soils nor anomalies appear to have been discovered during or after facility demolition. As addressed above, the only stains discovered were found on the facility floor.

Were samples taken of the stained soils/anomalies? ☐ Yes ☐ No ☒ N/A

References/Comments:
Neither stained soils nor anomalies were identified, so this question is not applicable.

Do results of the samples indicate that chemical contamination exists? ☐ Yes ☐ No ☒ N/A

References/Comments:
Neither stained soils nor anomalies were identified, so this question is not applicable.

Is the area potentially a discovery site? ☐ Yes ☒ No

References/Comments:
Neither stained soils nor anomalies were identified.

Radiological Surveys

Did radiological surveys (GPERS or equivalent) identify contamination? ☒ Yes ☐ No

References/Comments:
Four radiological survey records document the presence of radiological contamination within the 182-N facility (RSR-IFSM-05-0411, RSR-IFSM-05-0454, RSR-IFSM-05-0484, and N-0013). However, fixed radiological contamination on the east interior basement wall of the facility was scabbled and removed and the GPERS survey of the facility footprint following demolition did not detect radiological contamination (ESR-FRM-120080C).

Were samples taken of the radiologically contaminated soils? ☐ Yes ☐ No ☒ N/A

References/Comments:
None of the contamination identified in the radiological survey records was contained in soil. Multiple samples taken at the 182-N facility were analyzed for radioactive constituents. The list of samples taken at the 182-N facility is contained in the Sample Collection Summary in part G of this form.

Is the area potentially a discovery site? ☐ Yes ☒ No

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References/Comments:
The GPERS survey of the facility footprint did not detect radiological contamination (ESR-FRM-120080C).

Were the contaminated materials removed? ☒ Yes ☐ No ☐ N/A

References/Comments:
Radiological contamination was only discovered prior to demolition and loadout. The GPERS survey of the facility footprint was performed after demolition and loadout and did not detect radiological contamination (ESR-FRM-120080C). Accordingly, all contaminated material was removed from the facility footprint during D4 activities.

F. WIDS SITES

Were there any WIDS sites affected by D4 activities? ☒ Yes ☐ No

If yes, list the WIDS sites:
The 124-N-2 WIDS site was removed by D4. The excavation required for removal of the 124-N-2 has been left open. Verification sampling associated with closure of this WIDS site will be performed by the FR organization at a later date.

Were the WIDS site(s) completely removed? ☒ Yes ☐ No

References/Comments:
The 124-N-2 WIDS site was removed by D4. The excavation required for removal of the 124-N-2 has been left open. Verification sampling associated with closure of this WIDS site will be performed by the FR organization at a later date.

Will the Ancillary Facility Footprint be deferred to FR to be closed out with a co-located Waste Site? ☐ Yes ☒ No

References/Comments:
N/A

G. COPCs FOR SOILS AND STRUCTURES REMAINING AFTER DEMOLITION

What are the potential contaminants of concern for the remaining below-grade soil?

☒ None ☐ SVOC ☐ VOC ☐ Metals ☐ TPH ☐ Rad ☐ PCBs

☐ Other (Specify): _____

Comments:
As addressed above, all hazardous substances were either removed from the facility prior to, or during, demolition and loadout.

Summary of in-process soil sampling requirements:
N/A

Constituents detected / concentrations / rationale
Consult Sample Collection Summary below.

Sample Collection Summary
- Acoustic ceiling panel at 182-N: Sample (HEIS) Number J13H77 (2005-09-20-001 I & CCN 130365)
- Concrete at 182-N: Sample (HEIS) Numbers J11XY4 & J11XY5 (2005-09-20-001 I)
- Filter material at 182-N: Sample (HEIS) Number J13H76 (CCN 130365)
- Insulation at 182-N: Sample (HEIS) Numbers J12Y68, J12Y69, J12Y70, J13H76, and J14KN0 and 85 other samples from Logbook EL-1516-11 (2005-09-20-001 I, CCN 130365, and CCN 136047)
- Mastic and wallboard at 182-N: Sample (HEIS) Numbers J13H78, J13H79, and J13H80 (2005-09-20-001 I & CCN 130365)
- Oil from oil/grease drum at 182-N: Sample (HEIS) Number J172T9 (100-07-08-16-001 O)
- Scale by basement water lines at 182-N: Sample (HEIS) Number J126X0 (2005-09-20-001 I)
- Sump water at 182-N: Sample (HEIS) Numbers J16MM2 & J12NT1 (100-07-08-16-001 H)
- Water from drums at 182-N: Sample (HEIS) Numbers J172T5, J172T6, J172T7, and J172T8 (100-07-08-16-001 O)

H. NOTES / ADDITIONAL INFORMATION

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Determination Number
SDF-100N-024

☐ Check here if additional information / data / maps / sketches are attached to this form.

If checked, list the attachment(s):

I. SAMPLING

Are soil samples required to demonstrate that remaining structure or below-grade soils meet cleanup standards? ☐ Yes ☒ No

Based on the above information it was determined that sampling: ☐ will ☒ will not be required in order to demonstrate that cleanup criteria have been met.

The individual below acknowledges that the review of this facility has been completed. He or she also commits to provide to the Department of Energy (DOE) and the Washington State Department of Ecology (Ecology) any available information that could alter the sampling decision established in this form.

Information Reviewer Signature	Printed Name	Date
David Warren	David Warren	6/19/12

The regulatory representative below agrees with the decision outlined in section I of this form for the indicated facility and supports implementation of that decision based on the information currently available.

DOE Signature	Printed Name RF Guercia	Date 6/19/12
Ecology Signature Nina M. Menard	Printed Name NINA M. MENARD	Date 6/20/12

Attachment 14

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number
SDF-100N-011

A. INSTRUCTIONS

This form must be completed to: 1) document existing data in order to determine if current data is suitable to prove completion of 100-N Ancillary Facilities, or 2) document that site-specific sampling and analyses are needed to provide completion for 100-N Ancillary Facilities.

B. GENERAL INFORMATION

Building Name: Water Treatment Plant & Export Water Tie-In Building and Valve Pit

Building Number: 186-N and 1902-N/1902-N81

WIDS Sites Associated or Adjacent:
Associated or Adjacent WIDS Sites:
- 100-N-61 (colon sites 1 & 2)
- 100-N-62
- 100-N-84 (colon sites 1, 3, 4, 5, 6)

Other:
The above grade portions of the 186-N and 1902-N were demolished by D4 in March of 2011. The below grade portions of the facilities were removed by Field Remediation in September of 2011. 1902-N81 was a below grade valve pit to 1902-N. Waste derived from demolition activities was disposed of at the ERDF.

C. INFORMATION SOURCES

Available information (list document number for each if applicable):

Historical Site Assessment: Historical Site Assessment for 186-N, 1902-N, and 1902-N81: CCN 131390

Site Walkdown: N/A

IH Characterization Report: N/A

Radiological Survey: RSR-100SMT-06-0484

IHC/FHC Document: Preliminary Hazard Classification Documentation Form: PHC-2002-0013

WIDS/SIS: RCC Stewardship Information System (SIS) Facility Summary Reports: 186-N &1902-N/1902-N81

PDSR: Post Demolition Summary Report for 186-N Potable Water Plant CCN 164007

Facility Inspection: N/A

Waste Characterization Checklist: N/A

Summary Report: N/A

Other:
- IH Baseline for 186N, 1902N, and 1902N-81, Water Treatment Plant: CCN 130704
- Figure 1 GIS Site Tool 186-N, 1902-N/1902-N81: (attached to this Form)
- Figure 2 Design Drawing # 0100N-00-00295 (attached to this Form)
- Photographs of 1902-N and 186-N Facilities Pre-Demolition, With Time Stamp: SIS Facility Summary Report for 1902-N pg. 5 (11/2/2005) & pg. 6 (10/26/2006), SIS Facility Summary Report for 186-N pg. 5 (11/2/2005), and CCN 131390 pg. 2 (10/28/2008)
- Photographs of 1902-N and 186-N Facilities Pre-Demolition, No Time Stamp: SIS Facility Summary Report for 1902-N pgs. 3 & 4
- Global Positioning Environmental Radiological Surveyor (GPERS) survey ESFRM120062

D. HAZARDOUS SUBSTANCES

Check all that apply:

☐ None ☒ Asbestos containing material ☒ Lead ☒ PCBs/PCB Articles ☒ Oils/Greases

☒ Chemicals List: Water treatment chemicals in laboratory quantities (CCN 131390 pg. 5).

☒ Radiological Contamination ☒ Mercury/Mercury Devices

☒ Other: Refrigerants: Air conditioning unit outside of 186-N (CCN 131390 pg. 4). Refrigerator in 1902-N (CCN 131390 pg. 4).

References/Comments:
- Asbestos Containing Material: Presumed ACM in the pit behind 1902-N (CCN 131390 pg. 4). Presumed ACM on piping at 1902-N81 (CCN 131390 pg. 4).
- Lead: Possibly present in caulking on cast iron drain pipe fittings, emergency lighting, incandescent light bulbs,

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batteries, and lead-based paint (CCN 131390 pg. 4).
- PCBs/PCB Articles: Possibly present in oils, greases, door actuators, and fluorescent light ballasts (CCN 131390 pg. 4).
- Oils/Greases: Possibly present in the generator on the west side of 186-N, in addition to other equipment (CCN 131390 pg. 4).
- Radiological Contamination: Potential radiological contamination from mud dauber nests (CCN 131390 pg. 1). Caissons were connected to the 105-N Reactor Raw Water System, which had the potential to be radiologically contaminated (CCN 131390 pg. 3).
- Mercury/Mercury Devices: Mercury switches in fire alarm pull boxes, thermostats, and fluorescent lights (CCN 131390 pg. 4).
- Work Package 100-10-09-20-036: Hazardous Material Removal and demolition of the 1902-N and 186-N

Liquids: ☒ Yes ☐ No

If yes, describe source and nature of liquids:
The 1902-N/1902-N81 facility received raw water from the export water line running between the 100-B and 100-D Areas (CCN 131390 pg. 1). The water then passed through a filtering system and into the 186-N facility (CCN 131390 pg. 1). Together, these facilities supplied the water for all domestic uses at the 100-N area (CCN 131930 pg. 2). Adjacent caissons were built to support the isolation of the raw water system from 105-N (CCN 131390 pg. 1). After operations began, heavy concentrations of particulates in the water caused disruptions in the process. A pre-filtration system, located in 1902-N, was added in 2002 to alleviate this problem. The system produced potable water which met the State's water treatment rule requiring that potable water produced by the plant be 99.9% free of disease-producing organisms (CCN 131390 pg. 2).

Were the hazardous substances removed from the facility prior to demolition? ☒ Yes ☐ No

As verified by what documentation:
Work Package 100-10-09-20-036: Hazardous Material Removal and demolition of the 1902-N and 186-N.

Any potential for residual hazardous substances within the footprints of the 186-N and 1902-N/1902-N81 facilities were removed by the Field Remediation organization as part of the remediation of the adjacent WIDS sites, primarily during removal of the 100-N-61 series pipelines. Consult GIS Site Tool Figure 1 and FR Excavation Design Drawing 0100N-DD-C0295 (attached to this form).

Was there potential for hazardous substances to be introduced into the soils during facility operations or demolition? ☒ Yes ☐ No ☐ N/A

References/Comments:
These facilities did have the potential to be contaminated by site operations and processes (CCN 131390 pg. 1). This, however, was not attributable to the activities or processes undertaken within these facilities . Accordingly, there was very little potential for hazardous substance introduction into the underlying and adjacent soils.

List any hazardous materials left in the building for demolition:
Any residual hazardous materials within the footprints of the 186-N and 1902-N/1902-N81 facilities were removed by the Field Remediation organization as part of the remediation of the adjacent WIDS sites and disposal at the ERDF. Consult GIS Site Tool Figure 1 (attached to this form).

Does review of historical records and process knowledge indicate a potential for radiological or chemical contamination to be present in the facility?
There was potential for radiological contamination to be present in and around these facilities as a result of mud dauber nests and the nearby caissons that were connected to the 105-N Reactor Raw Water System (CCN 131390 pgs. 1 & 3). A radiological scoping survey performed at these facilities did not yield detectable levels of radiological contamination (RSR-100SMT-06-0484).

As detailed above, there was potential for multiple types of chemical contamination to be present at these facilities.

Comments:
The Field Remediation organization will close out the footprints of these facilities in conjunction with the closeout of the adjacent WIDS sites. A listing of these WIDS sites is provided in section B of this form. Consult GIS Site Tool Figure 1 and FR Excavation Design Drawing 0100N-DD-C0295 (attached to this Form).

E. FIELD OBSERVATIONS

Visual Inspection

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Were any stained soils/anomalies discovered during or after demolition of the facility? ☐ Yes ☒ No

References/Comments:
No historical evidence was found that would indicate that a chemical spill had occurred at the location of the 186-N and 1902-N/1902-N81 facilities (CCN 130704). Neither stained soils nor anomalies were identified during review of documentation relating to these facilities.

Were samples taken of the stained soils/anomalies? ☐ Yes ☐ No ☒ N/A

References/Comments:
Neither stained soils nor anomalies were identified, so this question is not applicable.

Do results of the samples indicate that chemical contamination exists? ☐ Yes ☐ No ☒ N/A

References/Comments:

Is the area potentially a discovery site? ☐ Yes ☒ No

References/Comments:

Radiological Surveys

Did radiological surveys (GPERS or equivalent) identify contamination? ☐ Yes ☒ No

References/Comments:
GPERS surveys performed following removal of various sections of WIDS sites (various pipelines) by FR, which encompass the footprints of these facilities, did not identify radiological contamination (ESFRM120062). Additionally, radiological scoping surveys performed at these facilities prior to demolition did not yield detectable levels of radiological contamination (RSR-100SMT-06-0484).

Were samples taken of the radiologically contaminated soils? ☐ Yes ☐ No ☒ N/A

References/Comments:

Is the area potentially a discovery site? ☐ Yes ☒ No

References/Comments:
Radiological contamination was not identified.

Were the contaminated materials removed? ☐ Yes ☐ No ☒ N/A

References/Comments:

F. WIDS SITES

Were there any WIDS sites affected by D4 activities? ☐ Yes ☒ No

If yes, list the WIDS sites:
No WIDS sites were affected by D4 during removal of the above grade structures. FR removed the remaining below grade structures of the 186-N and 1902-N/1902-N81 in conjunction with removal of various WIDS pipelines, primarily the 100-N-61 series.

Were the WIDS site(s) completely removed? ☐ Yes ☒ No

References/Comments:
No WIDS sites were removed by D4. FR removed the below grade components of the 186-N and 1902-N/1902N-81 in conjunction with removal of various sections of WIDS pipelines, primarily the 100-N-61 series. Those WIDS will be closed out by FR accordingly.

Will the Ancillary Facility Footprint be deferred to FR to be closed out with a co-located Waste SIte? ☐ Yes ☒ No

References/Comments:
The footprints of the 186-N and 1902-N/1902-N81 facilities will, by default, be closed out with various sections of WIDS pipelines (primarily 100-N-61 series). Such closeout will be performed by the Field Remediation Organization during closure of collocated waste sites, as displayed in GIS Site Tool Figure 1 (Attached to this Form).

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G. COPCs FOR SOILS AND STRUCTURES REMAINING AFTER DEMOLITION

What are the potential contaminants of concern for the remaining below-grade soil?

☒ None ☐ SVOC ☐ VOC ☐ Metals ☐ TPH ☐ Rad ☐ PCBs

☐ Other (Specify): _____

Comments:

Summary of in-process soil sampling requirements:
N/A

Constituents detected / concentrations / rationale
Consult results from the samples identified below.

Sample Collection Summary
• TSI fiberglass at 186-N: Sample (HEIS) Numbers J1CY24, J1CY31, and J1CY32. Results negative for asbestos containing material.

H. NOTES / ADDITIONAL INFORMATION

☒ Check here if additional information / data / maps / sketches are attached to this form.

If checked, list the attachment(s):
GIS Site Tool Figure 1
FR Excavation Design Drawing 0100N-DD-C0295

I. SAMPLING

Are soil samples required to demonstrate that remaining structure or below-grade soils meet cleanup standards? ☐ Yes ☒ No

Based on the above information it was determined that sampling: ☐ will ☒ will not be required in order to demonstrate that cleanup criteria have been met.

The individual below acknowledges that the review of this facility has been completed. He or she also commits to provide to the Department of Energy (DOE) and the Washington State Department of Ecology (Ecology) any available information that could alter the sampling decision established in this form.

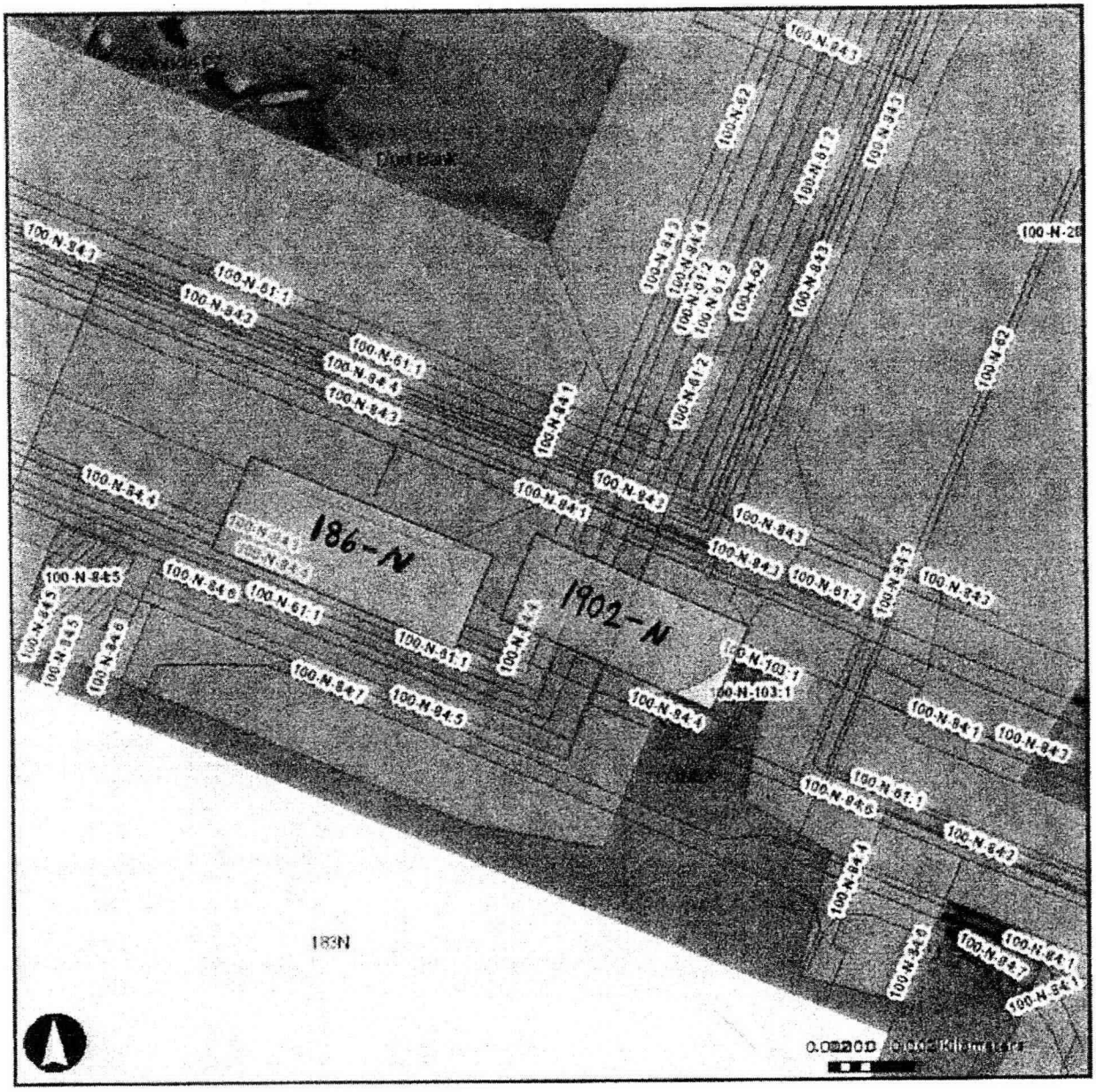
Information Reviewer Signature	Printed Name	Date
David Warren	David Warren	6/19/12

The regulatory representative below agrees with the decision outlined in section I of this form for the indicated facility and supports implementation of that decision based on the information currently available.

DOE Signature	Printed Name RF Guercia	Date 6/19/12
Ecology Signature Nina M. Menard	Printed Name NINA M. MENARD	Date 6/20/12

Figure 1
GIS Site Tool
186-N, 1902-N/1902-N81

Map



Buildings

Buildings

WasteSitePoints

- Sitecode Missing in SIS
- Accepted,
- Accepted, Closed Out
- Accepted, Consolidated

WasteSitesLine (continued)

- Accepted, Interim Closed Out
- Accepted, No Action
- Accepted, Rejected
- Discovery,
- Not Accepted,

WasteSitePolys

- Sitecode Missing in SIS

Waste Polygon Labels

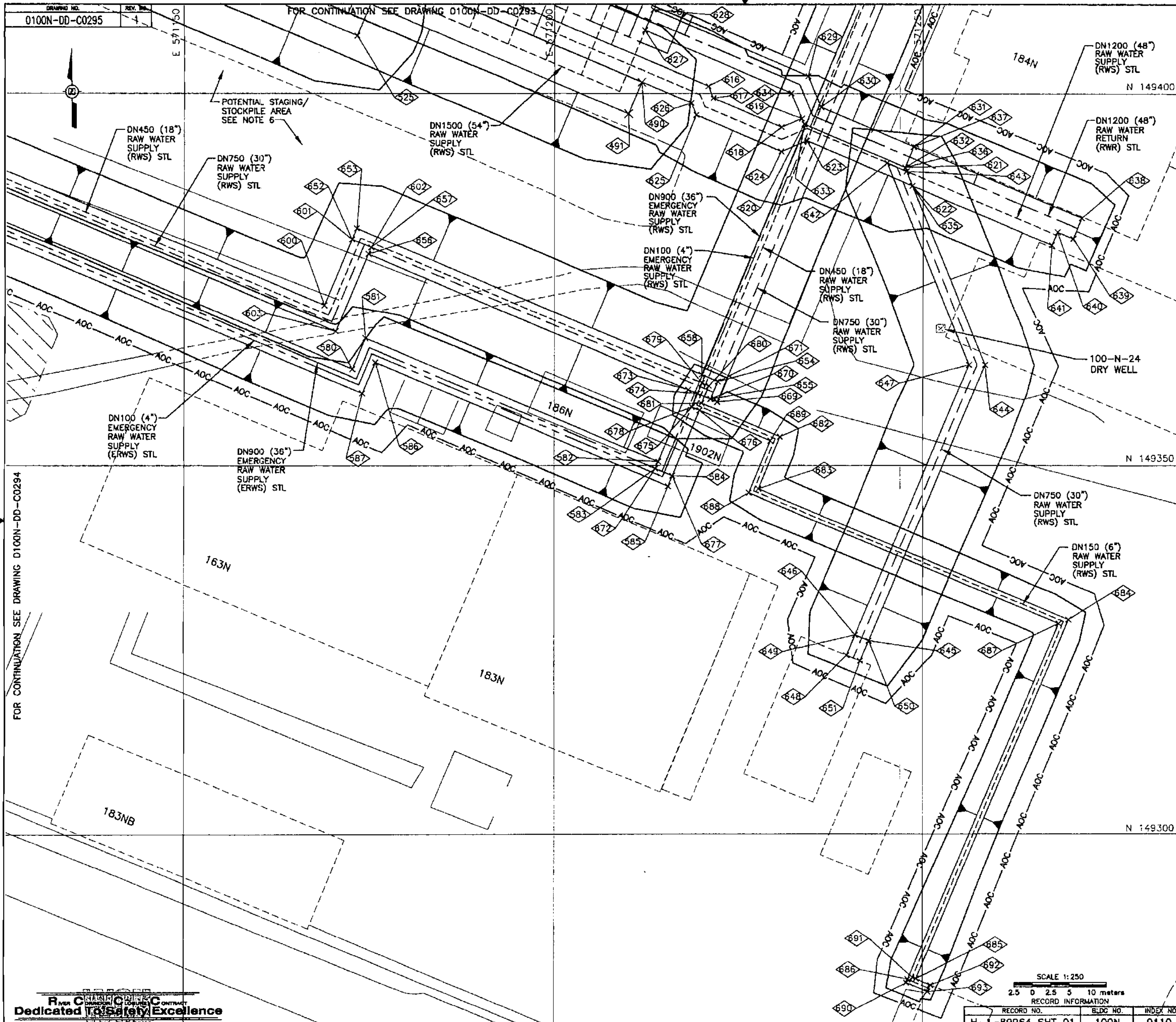
Waste Line Labels

Waste Point Labels

N_EXC_Toe

N_EXC_Daylight

Figure 2. Design Drawing #0100N-DD-00295



NOTES

1. SEE DRAWING 0100N-DD-G0023 FOR GENERAL ABBREVIATIONS AND SYMBOLS LIST.
2. LOCATION, GROUND SURFACE AND DIMENSIONS PROVIDED WERE TAKEN FROM HANFORD SITE RECORDS AND DRAWINGS, H-1-45007, SHEET 1 THROUGH 83, COMPOSITE UNDERGROUND LINES, ESSENTIAL DRAWING. GEOPHYSICAL SITE INVESTIGATIONS, GI#0579926, GI#0579929, GI#0580014, GI#0580015, GI#0580016, GI#0580017, GI#0580019, AND GI#0580104. ACTUAL LOCATIONS AND DIMENSIONS SHALL BE VERIFIED BY THE SUBCONTRACTOR. AS-BUILT CONSTRUCTION MAY VARY FROM NEAT-LINES SHOWN ON DRAWINGS.
3. ALL ELEVATIONS AND DIMENSIONS ARE IN METERS EXCEPT AS SPECIFICALLY SHOWN.
4. LIMITS OF EXCAVATION ARE SHOWN ASSUMING A 1.5 H:1.0 V CUT SLOPE. ACTUAL EXCAVATION LIMITS SHALL BE THE RESPONSIBILITY OF THE SUBCONTRACTOR. EXCAVATIONS SHALL COMPLY WITH ALL REQUIREMENTS OF 0100N-SP-C0043 CIVIL SPECIFICATION.
5. CONTOUR INTERVAL IS 0.5 METERS.
6. STAGING OF MATERIAL SHALL OCCUR WITHIN THE AOC/WASTE SITE BOUNDARY UNLESS DIRECTED BY CONTRACTOR. STAGING OF MATERIAL OUTSIDE THE AOC/WASTE SITE BOUNDARY, SHALL HAVE PRIOR APPROVAL IN WRITING BY THE CONTRACTOR.
7. CONTAMINATED AREA (ACL), CLEAN AREA (BCL), WIDTH, AND DEPTH OF PIPE EXCAVATIONS CALCULATED INCOMPLIANCE WITH 0100N-CA-C0057 REV. 0. VOLUME ESTIMATE FOR 100-N AREA WASTE SITES.
8. VERTICAL EXCAVATION FACE ALLOWED NEXT TO INTACT STRUCTURES (181-N PUMPHOUSE AND 1908-N SEAL WELL).
9. LOCATION, ELEVATIONS, AND DIMENSIONS PROVIDED WERE TAKEN FROM HANFORD SITE RECORDS AND DRAWINGS: H-1-45007 SHT 21, REV 7, SHT 22, REV 6, AND SHT 23 REV 5, 4/15/85. ACTUAL LOCATIONS AND DIMENSIONS SHALL BE VERIFIED BY THE SUBCONTRACTOR. AS-BUILT CONSTRUCTION MAY VARY FROM NEAT-LINES SHOWN ON DRAWINGS.
10. SEE DRAWING NO. 0100N-DD-C0305, 0100N-DD-C0306, OR 0100N-DD-C0307 FOR WASTE SITE SURVEY CONTROL DESIGN COORDINATE TABLES.
11. REMAINS OF DEMOLISHED BUILDINGS ARE IN THE VICINITY OF REMEDIAL ACTION WASTE SITES, AND MAY CONSIST OF SUBGRADE STRUCTURES (e.g., BASEMENTS, DEMOLITION DEBRIS). SUCH REMAINS MAY BE REMOVED DURING PERFORMANCE OF WORK SCOPE AS DIRECTED BY CONTRACTOR.

DOCUMENT CONTROL m.s.c. 3/24/10

REV.	DATE	DESCRIPTION	DRAWN BY	DRAFT CHK	DSGN/ DATE	CHECK CHK	DS DATE	PROJ DATE
1	3/23/10	ISSUED FOR AWARD	JAW	[illegible]	JMB	SWC	NA	[illegible]
0	11/05/09	ISSUED FOR BID	JAW	BAC	TMB	SWC	NA	DFO

SCALE: AS SHOWN

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

WASHINGTON CLOSURE HANFORD LLC.
RICHLAND, WASHINGTON

100 N AREA
100 N WASTE SITE REMEDIATION DESIGN
100-N-61 TREATMENT PIPELINES CIVIL PLOT PLAN 4

WCH JOB NO.	DOE CONTRACT NO.	CADD FILENAME
14655	DE-AC06-05RL-14655	1NDC0295.DWG

TASK	DRAWING NO.	REV. NO.
100N	0100N-DD-C0295	1

Attachment 15

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number
SDF-100N-014

A. INSTRUCTIONS

This form must be completed to: 1) document existing data in order to determine if current data is suitable to prove completion of 100-N Ancillary Facilities, or 2) document that site-specific sampling and analyses are needed to provide completion for 100-N Ancillary Facilities.

B. GENERAL INFORMATION

Building Name:	Basin Recirculation Facility and Water Disposal Valve Pit (also includes the 107-N Pad and nearby pipe tunnel)	Building Number:	107-N, 1909-N, and 1607-N3 (AKA 124-N-3 WIDS site)

WIDS Sites Associated or Adjacent:
100-N-36 (107-N Pad), 100-N-63:2, 100-N-64:3, 100-N-66, 100-N-68, 100-N-72, 100-N-84 (colon sites 1, 3, 5, and 6), 118-N-1, 124-N-3 (1607-N3), and UPR-100-N-7

Other:
The above grade portion of the 107-N facility was demolished in 2009 (WCH-410 pg. 4). The 1909-N facility was demolished in 2010 (CCN 156288 pg. 1). The D4 organization is currently removing the remainder of the 107-N facility below grade along with the removal of waste sites 100-N-36 (107-N Pad), 100-N-64:3 (within the pipe tunnel), and 100-N-84:3 (within the pipe tunnel). The D4 organization will also remove waste site 124-N-3 and portions of the 100-N-63:2 and 100-N-84:5 pipelines, all of which are North of the 107-N facility. 124-N-3 is located approximately 65 feet North of the 107-N and the portion of 100-N-63:2 Piping that remains runs from the North end of the 107-N to approximately 400 feet North of the 107-N where the remaining section was removed by FR. Verification sampling of these waste sites will, in consult with Ecology, be grouped by geographical area with other waste sites on the west side of the 105-N reactor building.

C. INFORMATION SOURCES

Available information (list document number for each if applicable):

Historical Site Assessment:	N/A	Site Walkdown:	N/A
IH Characterization Report:	N/A	Radiological Survey:	N/A
IHC/FHC Document:	Final Hazard Categorization and Auditable Safety Analysis for the 107-N Decontamination and Decommissioning Activities: BHI-01725	WIDS/SIS:	RCC Stewardship Information System (SIS) Facility Summary Reports: 107-N,1909-N, 1607-N3 (124-N-3 WIDS)
PDSR:	Post-Demolition Summary Report for the 1909-N Waste Disposal Valve Pit: CCN 156288	Facility Inspection:	N/A
Waste Characterization Checklist:	N/A	Summary Report:	N/A

Other:
- Radiological Survey Records: RSR-100N-09-1415 (for 107-N)
- Radiological Survey Records: RSR-100N-10-2158 / 2165 / 2183 (for 1909-N)
- 100 Area D4 Project Building Completion Report: WCH-410
- 100 Area D4 Project Building Completion Report: WCH-473
- 107-N Hazardous Waste Removal Work Package: 100 07 12 12 001
- 107-N Hazardous Material Removal Work Package: 100 08 07 15 002 (i)
- 107-N Basin Recirculation Building Deferral of Underlying Soils and WIDS Sites: CCN 120515
- Approval of Disposition of Fluorescent Lamps and PCB Ballasts for 107-N: CCN 137407 & CCN 138135 Attachment 12
- Asbestos Inspection and Sampling Report for the 107-N Basin Recirculation/Cooling Facility: CCN 145273
- Final Hazard Classification and Auditable Safety Analysis for Building 107-N: BHI-01095
- GIS Site Tool Figure 1: (attached to this Form)
- Photograph of the 107-N and 1909-N Facilities Pre-Demolition, Time-Stamped: SIS Facility Summary Report for 1909-N pg. 3 (8/28/2006)
- Photographs of the 107-N and 1909-N Facilities Pre-Demolition, No Time Stamp: SIS Facility Summary Report for 107-N pgs. 3-8, SIS Facility Summary Report for 1909-N pg. 4, and CCN 156288 pg. 5
- Photographs of the 107-N and 1909-N Facilities Post-Demolition, No Time Stamp: SIS Facility Summary Report for 1909-N pg. 5 & CCN 156288 pg. 7

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D. HAZARDOUS SUBSTANCES

Check all that apply:

☐ None ☒ Asbestos containing material ☒ Lead ☒ PCBs/PCB Articles ☒ Oils/Greases

☒ Chemicals List: sodium hydroxide, sulfuric acid, and hydrogen peroxide (BHI-01095 pg. 2-1 & BHI-01725 pg. 2-6)

☒ Radiological Contamination ☒ Mercury/Mercury Devices

☐ Other:

References/Comments:
- Asbestos containing material: CCN 145273 Attachment 2
- Lead: BHI-01095 pg. 2-9 & BHI-01725 pg. 4-7
- PCBs/PCB Articles: BHI-01725 pg. 4-7
- Oils/Greases: CCN 120515 pg. 1
- Radiological Contamination: CCN 120515 pg. 1, BHI-01095 pg. 2-5, and BHI-01725 pg. 4-1
- Mercury/Mercury Devices: BHI-01725 pg. 4-7

Liquids: ☒ Yes ☐ No

If yes, describe source and nature of liquids:
The 107-N facility was part of the system that cooled and filtered water from the 105-N fuel storage basin (SIS Facility Summary Report for 107-N pg. 1). The primary nature of the liquid in the 107-N facility was water that contained dissolved and/or suspended solids (SIS Facility Summary Report for 107-N pg. 1). Multiple vessels, including ion exchange and sand filter vessels, associated with water storage and processing were located within the facility (BHI-01095 pg. 2-1 & BHI-01725 pg. 2-6).

The 1909-N facility was a valve pit that housed multiple pipelines, mainly radioactive drain lines associated with WIDS site 100-N-63 (SIS Facility Summary Report for 1909-N pg. 1).

The 1607-N3 (124-N-3 WIDS site) was a cesspool that received sanitary sewage from the 107-N Facility (SIS Facility Summary Report for 1607-N3 pg. 1).

Were the hazardous substances removed from the facility prior to demolition? ☒ Yes ☐ No

As verified by what documentation:
Hazardous substances were removed from the facilities prior to demolition with the exception of 107-N as explained in the paragraph below.

Due to their inaccessibility, some PCB articles (light ballasts) do not appear to have been removed prior to demolition (CCN 137407 & CCN 138135 Attachment 12). Additionally, fluorescent light bulbs containing mercury do not appear to have been removed prior to demolition. Not all Radiological contamination was removed prior to demolition. However, tanks/vessels within the facility that held significant radiological inventory, were removed from the facility prior to demolition.
Oils and greases were removed from the 107-N facility prior to demolition by (BHI-01725 pg. 4-8). Chemicals (sodium hydroxide, sulfuric acid, and hydrogen peroxide) were removed from the 107-N facility prior to demolition (BHI-01725 pgs. 4-7, 4-8, A-3, and A-6). This includes residual chemicals in facility piping (BHI-01725 pg. 4-7).

Various piping associated with the 1909-N valve pit were drained prior to demolition of the facility.

No hazardous substances were removed from the 1607-N3 cesspool prior to demolition. The facility is identified as WIDS site 124-N-3 and will be verification sampled by FR at a later date.

Was there potential for hazardous substances to be introduced into the soils during facility operations or demolition? ☒ Yes ☐ No ☐ N/A

References/Comments:
The 107-N facility and components contained large quantities of multiple hazardous substances during its' operation. The most notable of which were sodium hydroxide, sulfuric acid, and radiological contamination, as referenced above. In addition, other hazardous substances, in presumably less quantity, were not removed from the facility prior to demolition. These included PCB ballasts, and fluorescent lighting containing mercury.

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The 1909-N facility was a valve pit that housed multiple pipelines, mainly radioactive drain lines associated with WIDS site 100-N-63. As with most piping, there is a potential for systems to leak that would result in a release to the environment. However, there was no historical information that suggests that the 1909-N ever had a leak or release.

The 1607-N3 (124-N-3 WIDS site) was a cesspool that received sanitary sewage from the 107-N Facility. The potential for the soils adjacent/beneath the cesspool warranted the facility to be addressed as WIDS site 124-N-3, which is identified for remediation and verification sampling. The 124-N-3 was removed by D4 but will be verification sampled by FR at a later date.

List any hazardous materials left in the building for demolition:

- PCBs/PCB Articles 107-N
  - PCB existence was due solely to its presence in light ballasts (BHI-01725 pgs. 4-7 & A-3). With approval from Ecology (CCN 137407 & CCN 138135 Attachment 12), some light ballasts containing PCBs were also left in the building for demolition.
- Radiological Contamination 107-N
  - Radiological contamination is expected to be present in the 107-N facility footprint soil (BHI-01725 pg. A-2). However, such contamination is expected to exist in low levels because the building was designed to contain spilled liquid (BHI-01725 pg. A-2).
- Mercury/Mercury Devices 107-N
  - Mercury existence was due solely to its presence in switches, instrumentation, and fluorescent tubes (BHI-01725 pgs. 4-7 & A-3). With approval from Ecology (CCN 137407 & CCN 138135 Attachment 12), some Fluorescent light bulbs containing mercury were left in the building for demolition.

NOTE: The removal of PCBs and mercury from the 107-N facility is addressed in two work packages. One of these work packages indicates that all sources of these materials were to have been removed in accordance with the contained task instruction (100 07 12 12 001 pgs. 1, 10, and 17). However, this work package does not appear to certify that these materials were removed as planned. The second pertinent work package indicates that neither PCBs nor mercury were encountered within the 107-N facility, yet it also indicates that PCB ballasts were either removed or drained as part of the work package's activities (100 08 07 15 002 (i) pgs. 1 & 2). Accordingly, the removal of PCBs and mercury from the 107-N facility prior to demolition cannot be verified.

The Department of Ecology approved the decision to leave at least some of the PCBs and mercury within the 107-N facility for demolition (CCN 137407 & CCN 138135 Attachment 12). This decision was based on the comparatively low percentage of PCB and mercury components within the facility, as well as the industrial hazards associated with accessing such components (CCN 137407 & CCN 138135 Attachment 12). This decision applies to at least some, and possibly all, of the PCB and mercury material within the 107-N facility (BHI-01725 pg. 4-7, CCN 137407, and CCN 138135 Attachment 12). This agreement is not applicable to mercury-containing thermostats, gauges, and other small equipment. These items were identified within the 107-N facility(BHI-01725 pg. 4-7), and accordingly should have been removed prior to demolition.

Does review of historical records and process knowledge indicate a potential for radiological or chemical contamination to be present in the facility?
Yes.

107-N facility removal has not been completed and accordingly no GPERS survey had been conducted. No GPERS survey was conducted at the 1909-N facility because this location was included in future excavation of the 105-N Fuel Storage Basin (CCN 156288 pg. 2). Considerable sources of radioactive material were present in the 107-N facility during its operation (BHI-01095 pg. 2-5 & CCN 120515 pg. 1). These sources consisted of principal components of the facility, which received radioactive liquid and/or sediment from 105-N (BHI-01095 pg. 2-5).

The 107-N facility contained a sodium hydroxide tank (3,225 gallon capacity), a sulfuric acid tank (1,525 gallons capacity), and a hydrogen peroxide tank (275 gallon capacity) (SIS Facility Summary Report for 107-N pg. 1 & BHI-01095 pg. 2-1). These constituents were removed prior to demolition (BHI-01725 pgs. 4-7, 4-8, A-3, and A-6), however, they could have been a potential source of contamination during facility operations.

The 1607-N3 (124-N-3 WIDS site) was a cesspool that received sanitary sewage from the 107-N Facility. The potential for the soils adjacent/beneath the cesspool warranted the facility to be addressed as WIDS site 124-N-3, which is

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identified for remediation and verification sampling. The 124-N-3 was removed by D4 but will be verification sampled by FR at a later date.

Comments:
The above grade portion of the 107-N facility was demolished in 2009 (WCH-410 pg. 4). The 1909-N facility was demolished in 2010 (CCN 156288 pg. 1). The D4 organization is currently removing the remainder of the 107-N facility below grade along with the removal of waste sites 100-N-36 (107-N Pad), 100-N-64:3 (within the pipe tunnel), and 100-N-84:3 (within the pipe tunnel). To date the D4 organization has removed the 124-N-3 waste site (1607-N3) and portions of the 100-N-63:2 and 100-N-84:5 pipelines, all of which are North of the 107-N facility. 124-N-3 is located approximately 65 feet North of the 107-N and the portion of 100-N-63:2 Piping that remains runs from the North end of the 107-N to approximately 400 feet North, where the remaining section was removed by FR. Verification sampling of these waste sites will, in consult with Ecology, be grouped by geographical area with other waste sites on the west side of the 105-N reactor building. The 1909-N facility, 107-N Pad, 107-N facility, and the adjoining pipe tunnel will be focused sampled as part of verification sampling performed for these nearby waste sites.

Drawing H-1-45007 sheet 38 pertains to the 107-N facility (SIS Facility Summary Report for 107-N pg. 1). Drawings H-1-30524, H-1-45007 sheet 37, and H-1-45007 sheet 38 pertain to the 1909-N facility (SIS Facility Summary Report for 1909-N pg. 1).

E. FIELD OBSERVATIONS

Visual Inspection

Were any stained soils/anomalies discovered during or after demolition of the facility? ☐ Yes ☒ No

References/Comments:
It was not determined during documentation review if an anomaly was discovered at the 107-N or 1607-N3 facilities. No anomaly was discovered at the 1909-N facility (CCN 156288 pg. 3). No reviewed documentation indicated the presence of a stained soil.

Were samples taken of the stained soils/anomalies? ☐ Yes ☐ No ☒ N/A

References/Comments:
Neither stained soils nor anomalies were identified during documentation review. However, multiple samples were taken at these facilities for waste site characterization/disposal purposes as detailed in part G, Sample Collection Summary, of this form.

Do results of the samples indicate that chemical contamination exists? ☐ Yes ☐ No ☒ N/A

References/Comments:
Research of the information sources referenced in this form indicate that soil samples were not taken for chemical contamination concerns.

Is the area potentially a discovery site? ☐ Yes ☒ No

References/Comments:
The history of these facilities and the areas surrounding them indicate that chemical contamination could potentially be present in the footprints' soils. Visual surveys and verification sampling have not been performed at this location because removal of the facilities have not been completed as of yet. Accordingly, the potential for a discovery site has not been negated. However, the potential for chemical contamination to be present in the soil is expected to be low because the 107-N building was designed to contain spilled liquid (BHI-01725 pg. A-2).

Radiological Surveys

Did radiological surveys (GPERS or equivalent) identify contamination? ☐ Yes ☒ No

References/Comments:
No GPERS surveys have been performed at this location. One partial downposting survey was reviewed for the 107-N facility, and it did not result in detectable radiological contamination levels (RSR-100N-09-1415). One work progress survey and two partial downposting surveys were reviewed for the 1909-N facility, and none resulted in detectable contamination levels (RSR-100N-10-2158 / 2165 / 2183).

Were samples taken of the radiologically contaminated soils? ☐ Yes ☐ No ☒ N/A

References/Comments:
Research of the information sources referenced in this form indicate that soil samples were not taken for radiological contamination concerns.

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Is the area potentially a discovery site? ☐ Yes ☒ No

References/Comments:
The history of these facilities and the areas surrounding them indicate that elevated radiological levels could potentially be present in the footprints' soils. GPERS surveys have not been performed at this location because removal of the facilities have not been completed as of yet. Accordingly the potential for a discovery site has not been negated. However, the potential for radiological contamination to be present in the soil is expected to be low because the 107-N building was designed to contain spilled liquid (BHI-01725 pg. A-2).

Were the contaminated materials removed? ☐ Yes ☒ No ☐ N/A

References/Comments:
Removal of the 107-N facility had not fully been completed as of May 11, 2012. During removal of the below grade portion of the 107-N facility, there is a potential for soil to to become radiologically contaminated. Radiological controls will be implemented for removal of the remaining below grade structures and final radiological surveys will be performed. Removal of the 1607-N3 had been completed at this time, however, verification sampling won't be conducted until the remaining D4 work scope in this area has been conducted.

F. WIDS SITES

Were there any WIDS sites affected by D4 activities? ☒ Yes ☐ No

If yes, list the WIDS sites:
- 100-N-36 (107-N Pad)
- 100-N-64:3 (within the pipe tunnel)
- 100-N-84:3 (within the pipe tunnel)
- 124-N-3 was completely removed by D4 during removal of the 107-N below grade structures.

Were the WIDS site(s) completely removed? ☐ Yes ☒ No

References/Comments:
Demolition and removal of the 107-N facility is not complete. Accordingly, portions of the indicated WIDS waste sites could be present at this location. However, 124-N-3 has been completely removed.

Will the Ancillary Facility Footprint be deferred to FR to be closed out with a co-located Waste SIte? ☒ Yes ☐ No

References/Comments:
Deferral of the footprints of the 107-N and 1909-N facilities will result in the facility footprints being focused sampled as part of verification sampling performed for waste sites 124-N-3 and 100-N-84:5.

G. COPCs FOR SOILS AND STRUCTURES REMAINING AFTER DEMOLITION

What are the potential contaminants of concern for the remaining below-grade soil?

☐ None ☐ SVOC ☐ VOC ☐ Metals ☐ TPH ☒ Rad ☒ PCBs

☒ Other (Specify): Lead, PCBs, and Mercury (BHI-01725 pgs. 4-7 & A-3)

Comments:
These COPCs were selected because they were not entirely removed from the facilities prior to demolition, as detailed in part D, Hazardous Substances, of this form.

Summary of in-process soil sampling requirements:
N/A

Constituents detected / concentrations / rationale
Consult Sample Collection Summary below.

Sample Collection Summary
- Various Media at 107-N (for Waste Characterization): Sample (HEIS) Numbers B0JYF0, B0JYF1, B0JYF4, B0JYF5, B0JYF6, J01Y84, J01Y85, J024T2, J02FX6-J02FX8, J02HX5-J02HY0, J03WK1, J03WK2, J11230, and J11JB1 (SIS Facility Summary Report for 107-N pg. 2).
- Various Media at 107-N (Asbestos Detected): Sample (HEIS) Numbers J026X1-J026X3, J16294, J16296, J168T3, J18LN1, J18LN3, J18LR1, and J18LR2

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- Various Media at 107-N (No Asbestos Detected): Sample (HEIS) Numbers J022D8, J022D9, J022F0, J022F1, J022F2, J022F3, J022F4, J02HX5, J02HX6, J02HX7, J02HX8, J02HX9, J02HY0, J03XF8, J03XF9, J03XH0, J03XH1, J03XH2, J03XH3, J16293, J16295, J16297, J168T4, J168T5, J186T6, J186T7, J18LN2, and J18LR3
- Piping Water at 1909-N: Sample (HEIS) Number J1B8W4
- Piping at 1909-N: Sample (HEIS) Numbers J1CFK2, J1CFK3, J1CFK4, J1CFK5, and J1CFK6

H. NOTES / ADDITIONAL INFORMATION

☒ Check here if additional information / data / maps / sketches are attached to this form.

If checked, list the attachment(s):
Figure 1, GIS Site Tool for 107-N

I. SAMPLING

Are soil samples required to demonstrate that remaining structure or below-grade soils meet cleanup standards? ☐ Yes ☒ No

Based on the above information it was determined that sampling: ☐ will ☒ will not be required in order to demonstrate that cleanup criteria have been met.

The individual below acknowledges that the review of this facility has been completed. He or she also commits to provide to the Department of Energy (DOE) and the Washington State Department of Ecology (Ecology) any available information that could alter the sampling decision established in this form.

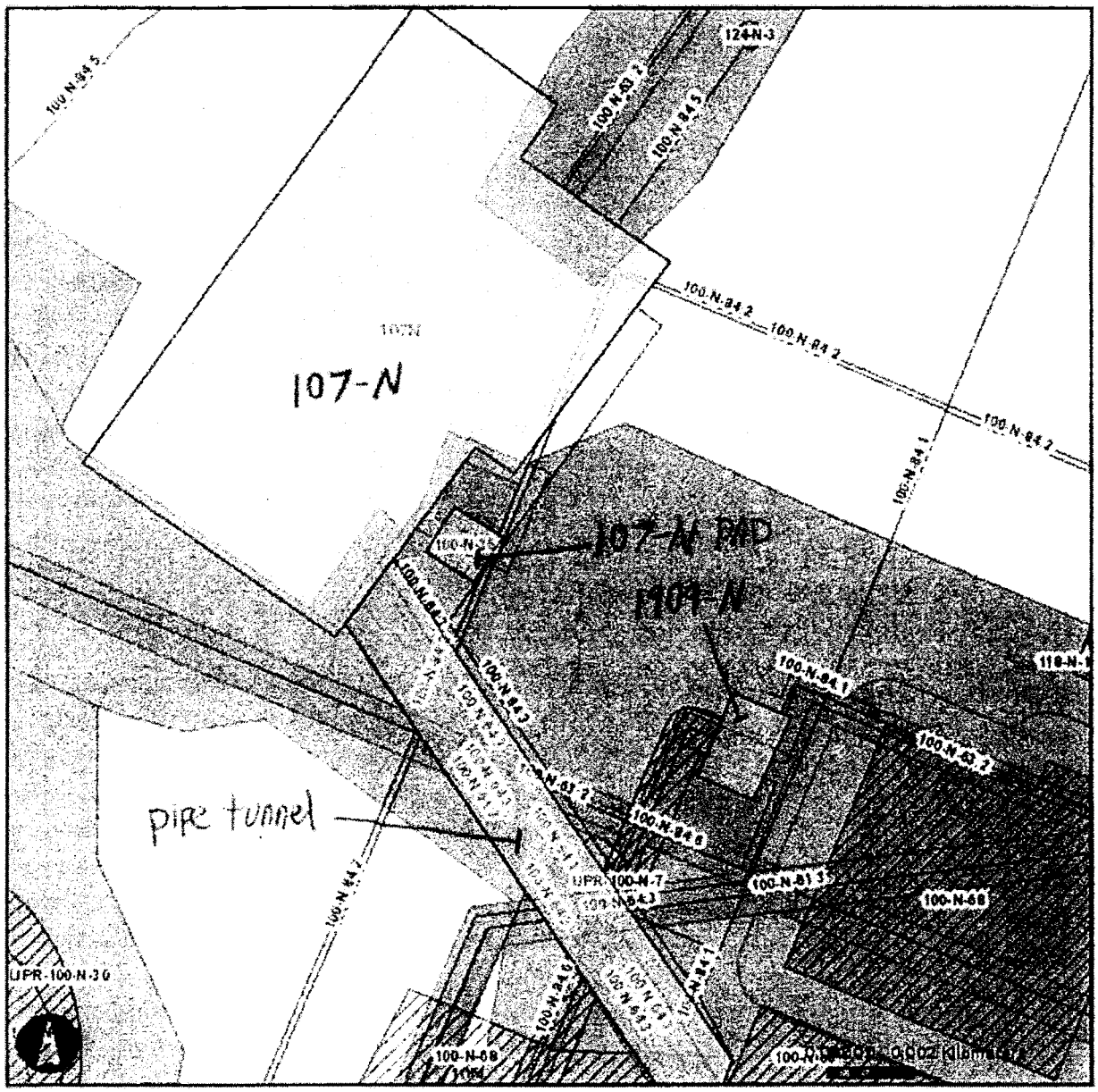
Information Reviewer Signature	Printed Name	Date
David Warren	David Warren	6/19/12

The regulatory representative below agrees with the decision outlined in section I of this form for the indicated facility and supports implementation of that decision based on the information currently available.

DOE Signature	Printed Name RF Guercia	Date 6/19/12
Ecology Signature Nina M. Menard	Printed Name NINA M. Menard	Date 6/20/12

Figure 1.
GIS Site tool map
for 107-N and surrounding area

Map



Buildings

Buildings

WasteSitePoints

- Sitecode Missing in SIS
- Accepted,
- Accepted, Closed Out
- Accepted, Consolidated

WasteSitesLine (continued)

- Accepted, Interim Closed Out
- Accepted, No Action
- Accepted, Rejected
- Discovery,
- Not Accepted,

WasteSitePolys

- Sitecode Missing in SIS

Waste Polygon Labels

Waste Line Labels

Waste Point Labels

N_EXC_Toe

N_EXC_Daylight

Attachment 16

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

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A. INSTRUCTIONS

This form must be completed to: 1) document existing data in order to determine if current data is suitable to prove completion of 100-N Ancillary Facilities, or 2) document that site-specific sampling and analyses are needed to provide completion for 100-N Ancillary Facilities.

B. GENERAL INFORMATION

Building Name:	River Pumphouse, Guard Tower, No. 3 Diesel Pumphouse, Hanford Generating Plant (HGP) River Pumphouse, and HGP Outfall	Building Number:	181-N, 181-NA, 181-NB, 181-NE, and 1908-NE (WIDS Site 1908-NE)

WIDS Sites Associated or Adjacent:

Associated:

100-N-53 (Accepted), 100-N-56 (Rejected), 100-N-61 (Accepted), 100-N-61:1 (Accepted), 100-N-80 (Accepted), 100-N-84:1, 2, 3, 6, & 7 (Accepted, colon 7 was reclassified as No Action), and 1908-NE (Interim Closed Out)

-Note: Verification samples were taken for 100-N-53. Consult sample (HEIS) numbers J1CY09, J1CY10, J1CY11, J1CY12, J1CY13, J1CY14

Adjacent:

100-N-1 (Interim Closed Out), 100-N-73 (Not Accepted), 100-N-76 (Rejected), and 100-N-84:5 (Accepted)

Other:

181-N: This facility was constructed of reinforced concrete and contained diesel-driven and remotely operated deep-well pumps. It supplied raw Columbia River water to the 183-N and 105-N facilities (CCN 125287 pgs. 1-2; DOE/RL-90-22 pgs. 2-4, 2-28, and 2-55; DOE/RL-97-22 pg. 2-11; and BHI-00221 pg. 3-64). Demolition of the facility began in January of 2012 (SIS Facility Summary Report for 181-N pg. 1).

181-NA: This facility was an enclosure constructed of steel and bulletproof glass atop a 60 foot steel framed tower located within the 181-N facility footprint. It provided a vantage and protection for personnel guarding the shoreline of the 100-N Area (CCN 125287 pg. 1, DOE/RL-97-22 pg. 2-11, and BHI-00221 pg. 3-65). The facility was demolished on January 11, 2012 (SIS Facility Summary Report for 181-NA pg. 1).

181-NB: This facility was a metal structure that contained an auxiliary diesel engine used to support electric motors in the 181-N facility. It was located on the concrete slab of the 181-N facility (CCN 125287 pg. 1, CCN 130563 pg. 1, DOE/RL-97-22 pg. 2-11, and BHI-00221 pg. 3-66). Demolition of the facility began in January of 2012 (SIS Facility Summary Report for 181-NB pg. 1).

181-NE: This facility was constructed of reinforced concrete and contained diesel-driven and remotely operated deep-well pumps. It supplied raw Columbia River water to the HGP (CCN 130563 pg. 1; DOE/RL-90-22 pgs. 2-7, 2-55, and 3-36; and DOE/RL-97-22 pgs. 2-15 & 2-16). The facility also contained trash screens and a trash pump, a diesel fuel tank, and two electrical substations (CCN 130563 pg. 1). Demolition of the facility began in February of 2012 (SIS Facility Summary Report for 181-NE pg. 1).

1908-NE: This facility was an open-topped reinforced concrete structure that received liquid from WIDS site 100-N-1 and the HGP sump. It discharged liquid to the Columbia River via an effluent pipeline, which was designated as WIDS site 100-N-80 (DOE/RL-90-22 pgs. 2-7, 2-58, and 3-36; DOE/RL-97-22 pg. 2-9; and WIDS General Summary Report for 1908-NE). Demolition of the facility began in March of 2012.

The 181-NA and 181-NB structures were completely removed. The interior voids of the 181-N, 181-NE, and 1908-NE were filled with clean borrow sand from the Environmental Restoration Disposal Facility (ERDF) (CCN 165554 pg. 2) to an elevation equal to that of the adjacent bench. They were demolished to a level 3 feet below that of the grade of the adjacent slope and the benches installed to facilitate demolition, and backfilled/contoured to match the surrounding grade. The portions of the structures that remain below grade are isolated from the adjacent Columbia River by benches composed of clean borrow pit soil (CCN 165554 pg. 2).

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C. INFORMATION SOURCES

Available information (list document number for each if applicable):

Historical Site Assessment: • Historical Site Assessment for 181N River Pump House and Associated Facilities: CCN 125287 • Historical Site Assessment for 181-NE and 1908-NE: CCN 130563	Site Walkdown: N/A
IH Characterization Report: N/A	Radiological Survey: Radiological Survey Records: • RSR-100SMT-06-0272 • RSR-100SMT-06-0287 • RSR-IFSM-05-0364
IHC/FHC Document: Initial Hazard Categorization (IHC) Form for D4 of the 1908-NE Facility: IHC-2011-0013	WIDS/SIS: • Waste Information Data System (WIDS) General Summary Report for 1908-NE • RCC Stewardship Information System (SIS) Facility Summary Reports for 181-N, 181-NA, 181-NB, 181-NE, and 1908-NE
PDSR: N/A	Facility Inspection: 100N River Structures (181-N, 181-NE, 1908-NE) Visual Surveys of Sediment Removal: CCN 161465
Waste Characterization Checklist: N/A	Summary Report: N/A

Other:

- 100 Area River Effluent Pipeline Site Visit Notes: CCN 112489
- Asbestos Inspection & Sampling Report for the 181-NE and 1908-NE (Revision 1): CCN 129093
- Cleanup Verification Package for the Hanford Generating Plant 100-N-4 Tile Field (SWMU #5); 100-N-1 Settling Pond (SWMU #6); 1908-NE Outfall (SWMU #7); 1716-NE Maintenance Garage (SWMU #8) and 100-N-52 Underground Storage Tank; 100-N-3 Maintenance Garage French Drain, 100-N-41 Gate House Septic Tank, and 100-N-45 Office Building Septic Tank (SWMU #9); 100-N-5 Bone Yard (SWMU #10); and 100-N-46 Underground Storage Tank, Rev. 0: HGP-CVP-SWMUs 5, 6, 7, 8, 9, & 10
- Differing Site Condition Regarding Sediment at 181-N: CCN 155797
- Ecology Approval of D4 Request to Not Perform GPERS Surveys of the 100N River Structures: CCN 165554
- Engineering Evaluation/Cost Analysis for the 100-N Area Ancillary Facilities and Integration Plan, Rev. 1: DOE/RL-97-22
- Engineering Report of the Hanford Generating Plant Radiation Contamination Survey, Rev. 0: WHC-SD-NR-ER-100
- Interim Remedial Action Record of Decision for the 100-NR-1 and 100-NR-2 Operable Units
- Notice of Differing Site Conditions, 181-N, 181-NE, 1908-NE River Structures: CCN 156198
- "Pre-Existing" Conditions Survey of Hanford Site Facilties Phase II, Rev. 0: BHI-00221
- RCRA Facility Investigation/Corrective Measures Study Work Plan for the 100-NR-1 Operable Unit, Rev. 0: DOE/RL-90-22
- Reissuance of National Pollutant Discharge Elimination System (NPDES): CCN 068571
- Sampling and Analysis Plan for Disposition of the 181-N, 181-NE, and 1908-NE River Structures, Rev. 0: WCH-446
- Work Package "Class 1 Asbestos Removal 181NE, Rev. 0": 100-08-07-28-001 D
- Work Package "Hazardous Material Removal 181N, 181NA, 181NB, and 181NE, Rev. 0": 100-08-07-15-002 A
- Facility Photographs Pre-Demolition, Time-Stamped: SIS Facility Summary Report for 181-N pg. 3 (11/3/2005), SIS Facility Summary Report for 181-NE pgs. 4 & 6 (6/6/2006), and SIS Facility Summary Report for 1908-NE pgs. 5 & 6 (2/7/2005)
- Facility Photographs Pre-Demolition, No Time Stamp: SIS Facility Summary Report for 181-N pgs. 4-9, SIS Facility Summary Report for 181-NA pgs. 4 & 7, SIS Facility Summary Report for 181-NE pg. 5, SIS Facility Summary Report for 1908-NE pg. 4, CCN 155797 pg. 3, CCN 156198 Attachment 5, and WCH-446 pgs. 1-2 & 1-32

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D. HAZARDOUS SUBSTANCES

Check all that apply:

☐ None ☒ Asbestos containing material ☒ Lead ☒ PCBs/PCB Articles ☒ Oils/Greases

☒ Chemicals List: Elevated levels of various inductively-coupled plasma (ICP) metals and polycyclic aromatic hydrocarbons (PAHs) were detected in sediment samples from the 181-N, 181-NE, and 1908-NE facilities (CCN 155797 pg. 4, CCN 156198 Attachments 1-4, and WCH-446 Appendix B). In addition, elevated levels of pH and various ICP metals were detected in concrete samples from the 181-N, 181-NE, and 1908-NE facilities (WCH-446 Appendix B). See part G of this form for a complete list of samples collected at these facilities. Antifreeze was present at the 181-NE facility prior to hazardous material removal (100-08-07-15-002 A Attachment 3).

☒ Radiological Contamination ☒ Mercury/Mercury Devices

☒ Other: Capillary tubes were present in the 181-N, 181-NB, and 181-NE facilities (100-08-07-15-002 A Attachment 3).

References/Comments:

- Asbestos containing material: Asbestos was present at the 181-NB and 181-NE facilities (CCN 129093 Attachments 2 & 3, DOE/RL-97-22 pgs. 2-25 & 2-26, and BHI-00221 pg. 3-66). There was potential for asbestos to be present at the 181-N and 181-NA facilities (DOE/RL-97-22 pgs. 2-25 & 2-26).
- Lead: Incandescent bulbs and lead caulking were present in the 181-NE and 1908-NE facilities (CCN 130563 pg. 4). Lead fuses were present in the 181-NB and 181-NE facilities (100-08-07-15-002 A Attachment 3). There was potential for lead flashing and lead-based paint to be present at all five facilities (CCN 125287 pg. 3 & CCN 130563 pg. 4).
- PCBs/PCB Articles: PCBs were detected in sediment from the 1908-NE facility in concentration above the PCB remedial action goals (RAGs) (CCN 156198 Attachment 3 and WCH-446 Appendix B). The 181-NE and 1908-NE facilities contained multiple transformers that could have historically contained PCBs (CCN 130563 pgs. 1 & 4). There was potential for PCBs to be present in door actuators and fluorescent light fixtures within the 181-NE and 1908-NE facilities (CCN 130563 pg. 4 & 100-08-07-15-002 A Attachment 3). Additionally, there was potential for PCBs to be present in residual oils, residual greases, door actuators, and fluorescent light ballasts within the 181-N, 181-NA, and 181-NB facilities (CCN 125287 pg. 3 & 100-08-07-15-002 A Attachment 3).
- Oils/Greases: Oils, greases, and/or fuels were presumed to be present in all five facilities (CCN 130563 pg. 5, 100-08-07-15-002 A Attachment 3, and DOE/RL-97-22 pgs. 2-25 & 2-27). Oils and greases were detected in sediment from the 181-NE and 1908-NE facilities in concentrations above the corresponding RAGs (CCN 156198 Attachments 2 & 3 and WCH-446 Appendix B). The pumps in the 181-N, 181-NB, and 181-NE facilities leaked unknown amounts of petroleum product, resulting in residual contamination (CCN 130563 pg. 2 & DOE/RL-97-22 pgs. 2-11 through 2-16). The 181-N and 181-NE facilities contained a waste oil tank and a diesel fuel tank, respectively (CCN 130563 pg. 1, DOE/RL-90-22 pg. 3-16, and BHI-00221 pg. 3-64). The tank at the 181-N facility was reportedly never used (DOE/RL-90-22 pg. 3-16).
- Radiological Contamination: Consistent with a documented potential for elevated radiological levels at the 1908-NE facility, sediment sampled from the 1908-NE facility exceeded the U-233/234 RAG (DOE/RL-97-22 pg. 2-24 & WCH-446 Appendix B). The COPCs for the 181-N, 181-NE, and 1908-NE facilities included multiple radiological constituents (WCH-446 Table 1 and WIDS General Summary Report for 1908-NE pg. 1). Mud dauber intrusion was reported at the 181-N and 181-NE facilities, and might also have occurred at the 1908-NE facility (RSR-100SMT-06-0287, CCN 125287 pg. 2, and CCN 130563 pg. 5).
- Mercury/Mercury Devices: Mercury was detected in sediment from the 181-N facility in concentration above the mercury RAGs (CCN 156198 Attachment 1 and WCH-446 Appendix B). Mercury switches and possibly mercury vapor lights were present in the 181-N, 181-NE, and 1908-NE facilities (CCN 130563 pg. 4 & 100-08-07-15-002 A Attachment 3).

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Liquids: ☒ Yes ☐ No

If yes, describe source and nature of liquids:
As described in part B of this form, the 181-N and 181-NE facilities drew water from the Columbia River and the 1908-N facility discharged water to the Columbia River. Accordingly, the processing of water processing was an integral part of operations at these facilities.

1908-NE effluent was discharged to the Columbia River via Outfall 005, a National Pollutant Discharge Elimination System (NPDES) point source (CCN 068571 pg. 1 & SIS Facility Summary Report for 1908-NE pg. 2). Outfall 005 was removed from the NPDES permit in 1999 (CCN 068571 pg. 1).

The 181-N facility discharged inlet screen backwash water to the Columbia River via Outfall 007, a NPDES point source (WCH-446 pg. 1-15 & DOE/RL-90-22 pgs. 2-62 & 3-16). Outfall 007 was removed from the NPDES permit in 1999 (CCN 068571 pg. 1).

Were the hazardous substances removed from the facility prior to demolition? ☒ Yes ☐ No

As verified by what documentation:
All hazardous substances identified within the 181-N, 181-NA, 181-NB, and 181-NE facilities were removed prior to demolition (100-08-07-15-002 A Attachments 4 & 5).

- Asbestos removal was completed at the 181-N and 181-NB facilities in 2005 (CCN 125287 pg. 2). All Class 1 asbestos was removed from the 181-NE facility (100-08-07-28-002 D pg. 3).
- Diesel oil and lubricating greases were drained from the motors and pump bearings in the 181-N and 181-NB facilities prior to demolition (CCN 125287 pg. 2).

Chemically contaminated sediment was removed from the 181-N, 181-NE, and 1908-NE facilities prior to demolition (CCN 161465 pg. 1). The interior voids of the above facilities were filled with clean borrow sand from the ERDF (CCN 165554 pg. 2) to an elevation equal to that of the adjacent bench.

Was there potential for hazardous substances to be introduced into the soils during facility operations or demolition? ☒ Yes ☐ No ☐ N/A

References/Comments:
The 181-N, 181-NA, 181-NB, 181-NE and 1908-NE facilities were potentially contaminated by site operations and processes (CCN 125287 pg. 1 & CCN 130563 pg. 1). Accordingly, there was potential for hazardous substances to be introduced into the underlying and adjacent soils.

It is believed that piping between the HGP and the 181-NE and 1908-NE facilities was grouted prior to demolition (CCN 130563 pg. 2).

List any hazardous materials left in the building for demolition:
None.

Does review of historical records and process knowledge indicate a potential for radiological or chemical contamination to be present in the facility?
General:

Sediment from within the 181-N, 181-NE, and 1908-NE facilities was sampled and determined to exceed soil cleanup levels for multiple constituents (CCN 161465 pg. 2 & WCH-446 pgs. 1-23 & 1-24). As a result, the contaminated sediment was removed from the facilities prior to demolition (CCN 161465 pg. 1).

Concrete from the 181-N, 181-NE, and 1908-NE facilities was sampled and analyzed (WCH-446 Appendix B). Based on multiple elevated constituent levels detected in the samples, it was determined that concrete rubble generated during demolition could not be buried in-situ in accordance with the original disposal plan (WCH-446 pg. 1-24 & Appendix B). Accordingly, the disposal plan was altered to require disposal of the rubble at the ERDF (WCH-446 pgs. 1-22 & 1-24). However, it was determined that the concrete portions of these facilities that would remain intact following facility demolition could be left in place without additional sampling (WCH-446 pg. 1-24).

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Radiological:

The 181-N, 181-NA, 181-NB, 181-NE, and 1908-NE facilities were determined to not be radiologically contaminated (CCN 165554 pg. 1). Accordingly, Global Positioning Environmental Radiological Surveyor (GPERS) surveys were determined to be unnecessary for the footprints of these facilities (CCN 165554 pg. 1).

- Based on process knowledge, there is no known source of radiological contamination for the 181-N, 181-NA, or 181-NB facilities (CCN 125287 pg. 2 & WCH-446 pg. 1-23). Radiological surveys were performed at the 181-NE facility and did not detect radiological contamination (RSR-100SMT-06-0272 & RSR-100SMT-06-0287). A radiological survey was performed at the 181-N and 181-NB facilities and did not detect radiological contamination (RSR-IFSM-05-0364).
- The 1908-NE facility received liquid from WIDS site 100-N-1, which was associated with the HGP, a chemically and radiologically contaminated facility (CCN 130563 pg. 1, DOE/RL-97-22 pg. 2-9, WCH-446 pgs. 1-22 & 1-23, and SIS Facility Summary Report for 1908-NE). 1908-NE water and sediment samples were analyzed for radiological contaminants and a radiological survey of the facility walls was performed (IHC-2011-0013 pg. 1 & HGP-CVP-SWMUs 5, 6, 7, 8, 9, & 10 pg. 10). Neither the samples nor the survey identified radiological contamination (IHC-2011-0013 pg. 1 & HGP-CVP-SWMUs 5, 6, 7, 8, 9, & 10 pg. 10).
- A subsequent sample of 1908-NE sediment was found to exceed the human health RAG for U-233/234 (WCH-446 Appendix B). However, this sediment was removed prior to demolition (CCN 161465 pg. 1).

Chemical:

Oil stains were present on concrete at the 181-N, 181-NB, and 181-NE facilities (CCN 125287 pg. 2 & WCH-446 pg. 1-21). Historical documentation for these facilities does not mention any significant spill or release, however it is noted that unknown amounts of petroleum product had leaked from the pumps of these facilities, resulting in residual contamination (CCN 125287 pg. 2, CCN 130563 pg. 2, and DOE/RL-97-22 pgs. 2-11 through 2-16). The stained concrete was removed during demolition of the upper deck of the pumphouse structures.

Comments:

Pertinent design drawings include H-1-45007, Sheets 24 and 31. The SIS Facility Summary Report for 181-NE references 19 design drawings.

Samples were taken from the riverbed and river shoreline within the planned demolition bench footprints (WCH-446 pgs. 1-21 & 1-24). The sampled areas were subsequently covered by benches to support the removal of the river structures. The benches were composed of clean borrow pit soil (CCN 165554 pg. 2). Any residual contamination underneath the benches will be addressed as part of the final ROD (WCH-446 pgs. 1-21 & 1-24).

E. FIELD OBSERVATIONS

Visual Inspection

Were any stained soils/anomalies discovered during or after demolition of the facility? ☐ Yes ☒ No

References/Comments:

Documentation for these facilities does not identify any stained soils or anomalies following demolition commencement. As addressed in part D of this form, stains were identified at some of these facilities, but were removed during demolition.

Were samples taken of the stained soils/anomalies? ☐ Yes ☐ No ☒ N/A

References/Comments:

This question is not applicable as neither stained soils nor anomalies were present following demolition. Nevertheless, sediment from the 181-N, 181-NE, and 1908-NE facilities was sampled prior to demolition (WCH-446 pg. 1-24 & Appendix B). The sediment was removed prior to demolition of the structures.

Do results of the samples indicate that chemical contamination exists? ☐ Yes ☐ No ☒ N/A

References/Comments:

N/A

Is the area potentially a discovery site? ☐ Yes ☒ No

References/Comments:

This question is not applicable as neither stained soils nor anomalies were present following demolition.

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Radiological Surveys

Did radiological surveys (GPERS or equivalent) identify contamination? ☐ Yes ☒ No

References/Comments:
No reviewed radiological survey performed at any of these facilities detected radiological contamination (RSR-IFSM-05-0364, RSR-100SMT-06-0272, and RSR-100SMT-06-0287). GPERS surveys were deemed to be unnecessary for the footprints of these facilities as the facilities were determined to not be radiologically contaminated (CCN 165554 pg. 1).

Were samples taken of the radiologically contaminated soils? ☐ Yes ☐ No ☒ N/A

References/Comments:
This question is not applicable as no reviewed radiological survey identified contamination at any of these facilities. Nevertheless, sediment from the 181-N, 181-NE, and 1908-NE facilities was sampled prior to demolition (WCH-446 pg. 1-24 & Appendix B).

Is the area potentially a discovery site? ☐ Yes ☒ No

References/Comments:
No reviewed radiological survey identified contamination at any of these facilities.

Were the contaminated materials removed? ☐ Yes ☐ No ☒ N/A

References/Comments:
This question is not applicable as no reviewed radiological survey identified contamination at any of these facilities. Nevertheless, contaminated sediment was discovered within, and removed from, the 181-N, 181-NE, and 1908-NE facilities prior to demolition (CCN 161465 pg. 1).

F. WIDS SITES

Were there any WIDS sites affected by D4 activities? ☒ Yes ☐ No

If yes, list the WIDS sites:
1908-NE

Were the WIDS site(s) completely removed? ☒ Yes ☐ No

References/Comments:
With demolition and loadout of the 1908-NE facility complete, it is believed that no contamination remains within the 1908-NE WIDS site boundary. The interior voids of the structure were filled with clean borrow sand from the ERDF (CCN 165554 pg. 2) to an elevation equal to that of the adjacent bench. It was demolished to a level 3 feet below that of the grade of the adjacent slope and the bench installed to facilitate demolition, and backfilled/contoured to match the surrounding grade.

Will the Ancillary Facility Footprint be deferred to FR to be closed out with a co-located Waste Site? ☐ Yes ☒ No

References/Comments:
The 1908-NE facility footprint has been designated as WIDS site 1908-NE, which is listed in the Interim Remedial Action Record of Decision for the 100-NR-1 and 100-NR-2 Operable Units (pg. B-vii). Accordingly, the FR organization is responsible for final closeout of the footprint of the 1908-NE facility and deferral will not be necessary. However, final closeout of the 181-N, 181-NA, 181-NB, and 181-NE facility footprints is neither the responsibility of the FR organization nor will this responsibility be deferred to the FR organization.

G. COPCs FOR SOILS AND STRUCTURES REMAINING AFTER DEMOLITION

What are the potential contaminants of concern for the remaining below-grade soil?

☒ None ☐ SVOC ☐ VOC ☐ Metals ☐ TPH ☐ Rad ☐ PCBs

☐ Other (Specify): N/A

Comments:
All contamination is believed to have been removed during D4 activities at these facilities.

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Summary of in-process soil sampling requirements:
N/A

Constituents detected / concentrations / rationale
Sediment samples from the 181-N facility exceeded the RAGs for mercury, various ICP metals, and PAHs (CCN 155797 pg. 4, CCN 156198 Attachment 1, and WCH-446 Appendix B). Sediment samples from the 181-NE facility exceeded the RAGs for oil and grease, various ICP metals, and PAHs (CCN 156198 Attachment 2 & WCH-446 Appendix B). Sediment samples from the 1908-NE facility exceeded the RAGs for oil and grease, various ICP metals, PAHs, and U-233/234 (CCN 156198 Attachment 3 & WCH-446 Appendix B). Also, PCBs were detected in two sediment samples from the 1908-NE facility (CCN 156198 Attachment 3).

Concrete samples from the 181-N facility exhibited elevated pH levels and exceeded the RAGs for various ICP metals (CCN 156198 Attachment 4 & WCH-446 Appendix B). Concrete samples from the 181-NE facility exhibited elevated pH levels and exceeded the RAGs for various ICP metals, PCBs, and PAHs (CCN 156198 Attachment 4 & WCH-446 Appendix B). Concrete samples from the 1908-NE facility exhibited elevated pH levels and exceeded the RAGs for various ICP metals and one 1908-NE concrete sample exceeded the RAG for a PAH (CCN 156198 Attachment 4 & WCH-446 Appendix B).

Five samples from the 181-NE facility were determined to contain asbestos (CCN 129093 Attachment 2).

Sample Collection Summary
181-N:
- Pump shaft crust: Sample (HEIS) Number J1C381 (WCH-466 Appendix B)
- Concrete: Sample (HEIS) Numbers J1D566 & J1D567 (WCH-466 Appendix B)
- Concrete: Sample (HEIS) Numbers J1D573, J1D574, J1D5R7, and J1D5R8 (CCN 156198 Attachment 4)
- Sediment: Sample (HEIS) Numbers J1CFP8, J1CFP9, and J1CNN5 (CCN 155797 pg. 4, CCN 156198 Attachment 1, and WCH-466 Appendix B)

181-NE:
- Concrete: Sample (HEIS) Numbers J1D570 & J1D571 (WCH-466 Appendix B)
- Concrete: Sample (HEIS) Numbers J1D577, J1D578, J1D5R9, and J1D5T0 (CCN 156198 Attachment 4)
- Sediment: Sample (HEIS) Numbers J1CNY2 & J1CNY3 (CCN 156198 Attachment 2 & WCH-466 Appendix B)
- Suspected asbestos containing material: Sample (HEIS) Numbers J12PN9, J12PP0, J12PP1, J12PP2, J12PP3, J12PP4, J12PP5, J12PP6, and J12PP7 (CCN 129093 Attachments 2 & 3).

1908-NE:
- Concrete: Sample (HEIS) Numbers J1CNT3, J1D568, and J1D569 (WCH-466 Appendix B)
- Concrete: Sample (HEIS) Numbers J1CNT2, J1D575, J1D576, and J1D5T1 (CCN 156198 Attachment 4)
- Sediment: Sample (HEIS) Numbers J1CNM6, J1CNM7, and J1CNM8 (CCN 156198 Attachment 3 & WCH-466 Appendix B)

Beneath the River Benches:
- Riverbed sediment: Sample (HEIS) Numbers J1CM89, J1CM90, J1CM91, and J1CXT4 (WCH-466 Appendix B)
- Shoreline sediment: Sample (HEIS) Numbers J1DWM5, J1DWM6, J1DWM7, J1DWM8, J1DWM9, J1DWN0, J1DWN1, and J1DWN2 (WCH-466 Appendix B)

H. NOTES / ADDITIONAL INFORMATION

☐ Check here if additional information / data / maps / sketches are attached to this form.

If checked, list the attachment(s):
N/A

I. SAMPLING

Are soil samples required to demonstrate that remaining structure or below-grade soils meet cleanup standards? ☐ Yes ☒ No

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number
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Based on the above information it was determined that sampling: ☐ will ☒ will not be required in order to demonstrate that cleanup criteria have been met.

The individual below acknowledges that the review of this facility has been completed. He or she also commits to provide to the Department of Energy (DOE) and the Washington State Department of Ecology (Ecology) any available information that could alter the sampling decision established in this form.

Information Reviewer Signature	Printed Name	Date
David Warren	David Warren	7/11/12

The regulatory representative below agrees with the decision outlined in section I of this form for the indicated facility and supports implementation of that decision based on the information currently available.

DOE Signature	Printed Name RF Guercia	Date 7/9/2012
Ecology Signature	Printed Name Nina M. Menard	Date 7/10/12

Attachment 17

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number
SDF-100N-022

A. INSTRUCTIONS

This form must be completed to: 1) document existing data in order to determine if current data is suitable to prove completion of 100-N Ancillary Facilities, or 2) document that site-specific sampling and analyses are needed to provide completion for 100-N Ancillary Facilities.

B. GENERAL INFORMATION

Building Name: Fission Products Trap (FPT) Building Number: 105-NE (also referred to as 1305-N)

WIDS Sites Associated or Adjacent:
Associated:
100-N-63:2 & 100-N-84:5 (Both Accepted)
Adjacent:
100-N-66 & 100-N-84:3 (Both Accepted)

Other:
The 105-NE facility was used to remove solids from the low-pressure flush line and the low-pressure diversion effluent lines (BHI-01110 pg. 1). Removed solids were collected in piping within the facility and were able to be transferred to a cask for removal from the facility (BHI-01110 pg. 2). No evidence suggests that solids were ever removed from the facility (BHI-01110 pg. 1). The 105-NE facility was demolished by D4 in April of 2012 and the excavation required for removal remains open.

The footprint of the 105-NE facility is co-located with WIDS sites 100-N-63:2 and 100-N-84:5 (GIS Site Tool Figure 1-attached to this form). Additionally, the excavation required to remove the 105-NE is located on the west side of the 105-N Reactor, within a much larger excavation that encompasses numerous waste sites identified for remediation and verification. Verification sampling of the 105-NE FPT will, in consult with Ecology, be combined with verification sampling for co-located/adjacent waste sites on the west side of the 105-N reactor building. As such, the 105-NE footprint will be deferred to the Field Remediation (FR) organization for closure which will likely result in the facility being focused sampled as part of verification sampling performed for nearby waste sites, most likely 118-N-1.

C. INFORMATION SOURCES

Available information (list document number for each if applicable):

Historical Site Assessment: N/A
Site Walkdown: N/A
IH Characterization Report: N/A
Radiological Survey: Radiological Survey Records: RSR-100N-11-2024 / 2031 / 2040 / 2052 / 2079 / 2085
IHC/FHC Document: 105-NE Fission Products Trap and 1305-N Piping Preliminary Hazard Classification: BHI-01110
WIDS/SIS: Stewardship Information System (SIS) Facility Summary Report for 105-NE
PDSR: N/A
Facility Inspection: N/A
Waste Characterization Checklist: N/A
Summary Report: N/A

Other:
- 100-N Technical Manual Volume 2 (background information only): HW-69000
- Calculation of Radionuclides in 105-NE, 1305-N, and 1304-N: 0100N-CA-N0025
- Calculation of 105-N & 109-N Initial Hazard Categorization for ISS: 0100N-CA-N0068
- Fission Product Trap (FPT) Water Removal: CCN 030417
- Figure 1: GIS Site Tool for 105-NE (attached to this form)
- Work Package to Remove Cyclone Separator from 105NE and Ship to ERDF, Prepare FPT for Demo: 100 09 09 08 041
- Photograph of the 105-NE Facility Pre-Demolition, Time-Stamped: SIS Facility Summary Report for 105-NE pg. 5 (6/11/2002)
- Photographs of the 105-NE Facility Pre-Demolition, No Time Stamp: SIS Facility Summary Report for 105-NE pgs. 3 & 4

D. HAZARDOUS SUBSTANCES

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number
SDF-100N-022

Check all that apply:

☐ None ☐ Asbestos containing material ☐ Lead ☐ PCBs/PCB Articles ☐ Oils/Greases

☐ Chemicals List:

☒ Radiological Contamination ☐ Mercury/Mercury Devices

☐ Other:

References/Comments:
Radiological Contamination:
- Water in the 105-NE facility (CCN 030417, 0100N-CA-N0025 sect. 4.1.4, and BHI-0110 pg. 2)
- Sediment and/or fuel fragments in the 105-NE facility piping (0100N-CA-N0025 sects. 4.1.3, 4.1.4, and Attachment 2; BHI-01110 pg. 2)

Liquids: ☒ Yes ☐ No

If yes, describe source and nature of liquids:
The facility contained an estimated 3,600 gallons of water in addition to an estimated 3,204 gallons of water in the connected piping (0100N-CA-N00025 sects. 4.1.1, 4.1.2, and Attachment 1). All such water is presumed to have been radiologically contaminated (0100N-CA-N0025 sects. 4.1.1 & 4.1.2).

Were the hazardous substances removed from the facility prior to demolition? ☐ Yes ☒ No

As verified by what documentation:
The only hazardous substance that appears to have been associated with the 105-NE facility was radiological contamination present in both the facility water and piping. Due to its nature, the contamination was not removed prior to demolition, but was fixed with Zeolite/Bentonite and grout prior to demolition (100 09 09 08 041 WCH Task Instruction pgs. 14 & 16).

Was there potential for hazardous substances to be introduced into the soils during facility operations or demolition? ☒ Yes ☐ No ☐ N/A

References/Comments:
The 105-NE facility contained radiologically contaminated water and sediment that was not removed prior to demolition (100 09 09 08 041 WCH Task Instruction pgs. 14 & 16). Accordingly, there was potential for the adjacent soil to become contaminated during facility operations and demolition. The radiologically contaminated contents of the facility were determined to pose only a minimal risk to the environment, presumably because the facility had thick concrete walls which were thought to be sufficient to prevent contained liquids from entering the exterior environment (0100N-CA-N0025 Attachment 2).

List any hazardous materials left in the building for demolition:
Prior to demolition, the contaminants in the water and piping were fixed with Zeolite/Bentonite and grout, respectively (100 09 09 08 041 WCH Task Instruction pgs. 14 & 16)

Does review of historical records and process knowledge indicate a potential for radiological or chemical contamination to be present in the facility?
Radiological: The chief cause for environmental concern related to this facility is the large amount of radiologically contaminated water that was present within the facility. It is not evident if any such water, or any contaminated sediment, was released into the adjacent soil. A radiological survey record states that background radiological levels near the 105-NE facility prohibited the usage of direct and transferable radiological surveys (RSR-100N-11-2031). The source of these elevated levels is undetermined.

Chemical Contamination: The 105-NE facility was not designed for chemical usage and no information was found to suggest that chemicals were used within the facility (BHI-01110 pg. 3).

Comments:
The radionuclide inventory of the 105-NE facility was included in a calculation for 105-N and 109-N initial hazard categorization (0100N-CA-N0068 Table 6-2).

Pertinent design drawings include H-1-28397, H-1-28447, and H-1-28465.

E. FIELD OBSERVATIONS

Visual Inspection:

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

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Were any stained soils/anomalies discovered during or after demolition of the facility? ☐ Yes ☒ No

References/Comments:
No record was found to indicate that stained soils or anomalies were discovered in the vicinity of the 105-NE facility following demolition.

Were samples taken of the stained soils/anomalies? ☐ Yes ☐ No ☒ N/A

References/Comments:
As no stained soil or anomaly appears to have been discovered, this question is not applicable.

Do results of the samples indicate that chemical contamination exists? ☐ Yes ☐ No ☒ N/A

References/Comments:
As no stained soil or anomaly appears to have been discovered, this question is not applicable.

Is the area potentially a discovery site? ☒ Yes ☐ No

References/Comments:
Refer to the Radiological Surveys section below.

Radiological Surveys

Did radiological surveys (GPERS or equivalent) identify contamination? ☐ Yes ☒ No

References/Comments:
No reviewed radiological surveys identified contamination (RSR-100N-11-2024 / 2031 / 2040 / 2052 / 2079 / 2085). However, it is worth noting that this facility was expected to contain substantially elevated radiological levels (BHI-01110 sects. 3.0 & 4.0, 0100N-CA-N0025 sects. 4.1.2, 4.1.4, and Attachment 2). Furthermore, a radiological survey record mentions the existence of prohibitive background radiological levels near the 105-NE facility (RSR-100N-11-2031).

Were samples taken of the radiologically contaminated soils? ☒ Yes ☐ No ☐ N/A

References/Comments:
While no reviewed surveys identified contamination, a sample of wet sediment was removed from the 105-NE facility for analysis. The HEIS number for this sample is J12669. Analysis of the sample revealed that significant radiological contamination existed in the sediment. The sediment and water was stabilized with Zeolite/Bentonite and grout prior to demolition.

Is the area potentially a discovery site? ☒ Yes ☐ No

References/Comments:
As the facility footprint has not been incorporated into a WIDS site, and the facility historically contained highly contaminated material, the area could potentially become a discovery site if contaminants are found in quantities that require further extensive remediation.

Were the contaminated materials removed? ☒ Yes ☐ No ☐ N/A

References/Comments:
All contaminated materials within the 105-NE facility were presumably removed during its demolition.

F. WIDS SITES

Were there any WIDS sites affected by D4 activities? ☒ Yes ☐ No

If yes, list the WIDS sites:
Portions of 100-N-63:2 and 100-N-84:5 that fell within the layback of the excavation required to remove the 105-NE FPT were removed. Additionally, it should be noted that D4 removed multiple pipelines and waste sites in this area that fell within the laybacks of the excavations for other structures. By default, D4 will have removed most of the piping and waste sites between the 105-N reactor building the steep incline that breaks down to the Columbia River.

Were the WIDS site(s) completely removed? ☐ Yes ☒ No

References/Comments:
Portions of 100-N-63:2 and 100-N-84:5 that fell within the excavation layback were removed.

Will the Ancillary Facility Footprint be deferred to FR to be closed out with a co-located Waste Site? ☒ Yes ☐ No

References/Comments:
The FR organization will be responsible to close out the footprint of the 105-NE facility in conjunction with closeout of the

100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

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collocated WIDS site, most likely the 118-N-1.

G. COPCs FOR SOILS AND STRUCTURES REMAINING AFTER DEMOLITION

What are the potential contaminants of concern for the remaining below-grade soil?

☐ None ☐ SVOC ☐ VOC ☐ Metals ☐ TPH ☒ Rad ☐ PCBs

☐ Other (Specify): _____

Comments:
COPCs for closure of the 105-NE footprint and co-located WIDS sites will be identified by Field Remediation.

Summary of in-process soil sampling requirements:
N/A

Constituents detected / concentrations / rationale
Consult analysis results of the Sample Collection Summary below.

Sample Collection Summary
HEIS Sample Number: J12669 (SIS Facility Summary Report for 105-NE). Analysis of the sample revealed that significant radiological contamination existed in the sediment. The sediment and water was stabilized with Zeolite/ Bentonite and grout prior to demolition. The material was demolished and loaded out with the 105-NE structure demolition debris.

H. NOTES / ADDITIONAL INFORMATION

☒ Check here if additional information / data / maps / sketches are attached to this form.

If checked, list the attachment(s):
Figure 1: GIS Site Tool for 105-NE (attached to this form)

I. SAMPLING

Are soil samples required to demonstrate that remaining structure or below-grade soils meet cleanup standards? ☐ Yes ☒ No

Based on the above information it was determined that sampling: ☐ will ☒ will not be required in order to demonstrate that cleanup criteria have been met.

The individual below acknowledges that the review of this facility has been completed. He or she also commits to provide to the Department of Energy (DOE) and the Washington State Department of Ecology (Ecology) any available information that could alter the sampling decision established in this form.

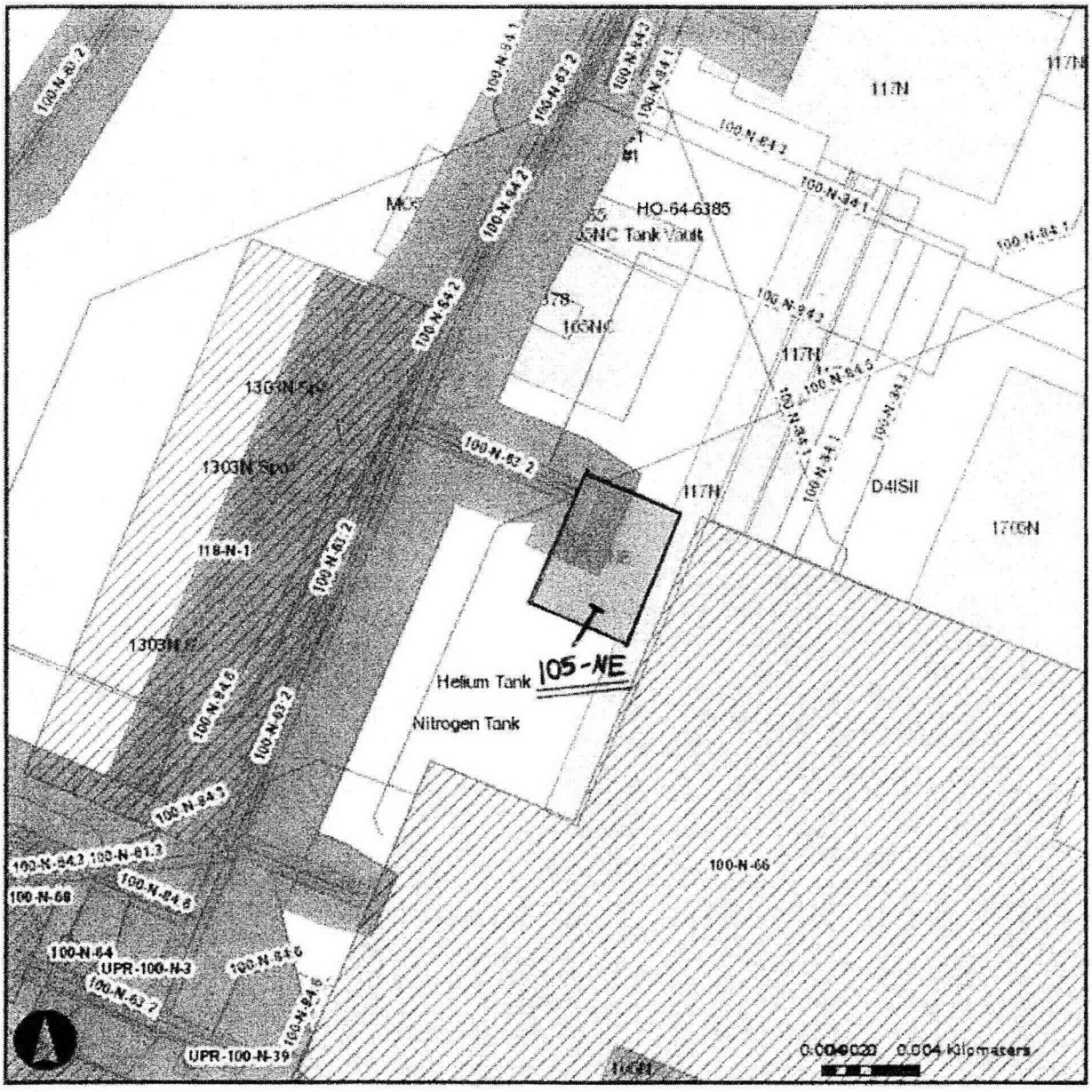
Information Reviewer Signature	Printed Name	Date
David Warren	David Warren	6/19/12

The regulatory representative below agrees with the decision outlined in section I of this form for the indicated facility and supports implementation of that decision based on the information currently available.

DOE Signature	Printed Name R F Garcia	Date 6/19/12
Ecology Signature	Printed Name Rick Bond	Date 6/20/12

Figure 1
GIS site tool map for
105-NE

Map



Buildings

WasteSitePoints

- Sitecode Missing in SIS
- Accepted,
- Accepted, Closed Out
- Accepted, Consolidated
- Accepted, Interim Closed Out

WasteSitesLine (continued)

- Accepted, No Action
- Accepted, Rejected
- Discovery,
- Not Accepted,

WasteSitePolys

- Sitecode Missing in SIS
- Accepted,

Waste Polygon Labels

Waste Line Labels

Waste Point Labels

N_EXC_Toe

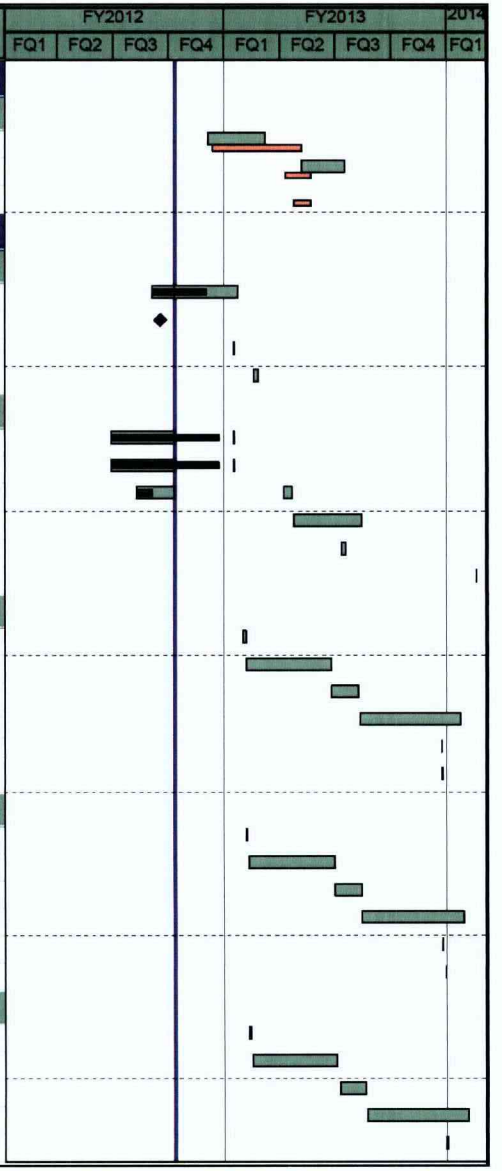
N_EXC_Daylight

Attachment 18

Field Remediation
100-K Area
TPA Milestone M-16-145 (12-31-12)

Milestone Description: Complete Interim Response Actions for 100-K Area Facilities & WS (not included as Phase 1, 2 or 3 Work)

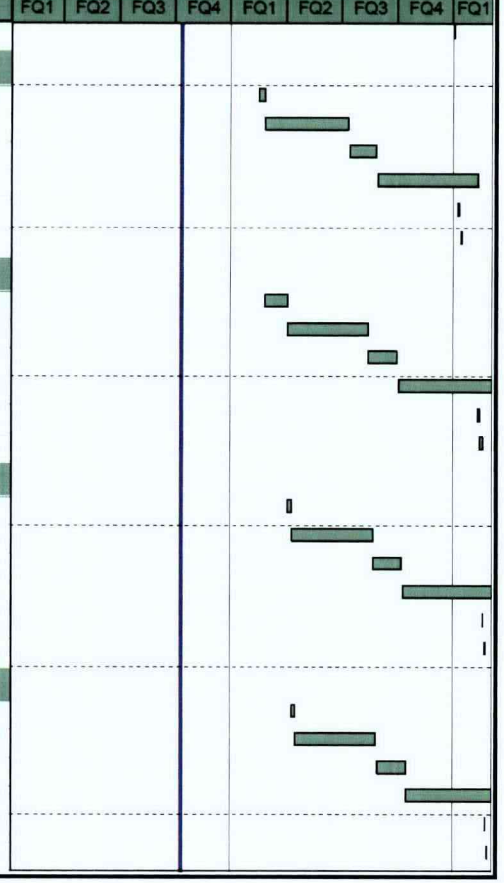
Activity ID	Activity Name	Remaining Duration	Physical % Complete	Start	Finish	Delta from Last Week	TPA (?)
In SPIF							
118-K-1 Remediation/Closeout							
4000S910	Closeout Documentation Excluding Trench "N"	53.0	0%	04-Sep-12*	06-Dec-12	-9	Y
4000S920	Backfill Trenches Excluding Trench "N"	40.0	0%	04-Feb-13*	15-Apr-13	0	Y
4000S930	Revegetation Excluding Trench "N"	8.0	0%	03-Feb-14*	13-Feb-14	0	Y
Not in SPIF							
600-29 RTD-REA-118 (TPA-MS)							
4000S960	Closeout Documentation	59.0	63%	06-Jun-12 A	23-Oct-12	3	Y
4000S470	Closeout Documentation - Backfill Concurrence	0.0	100%	18-Jun-12 A		6	Y
4000S970	Backfill	2.0	0%	17-Oct-12*	18-Oct-12	0	Y
4000S980	Revegetation	4.0	0%	19-Nov-12*	27-Nov-12	0	Y
128-K-2 RTD-REA-118 (TPA-MS)							
S5008B10	Excavate Additional Volume	3.2	87%	29-Mar-12 A	18-Oct-12	0	Y
S5008B20	Loadout Additional Quantity	3.2	87%	29-Mar-12 A	18-Oct-12	0	Y
4000S1000	Closure Sampling	9.0	10%	09-May-12 A	21-Jan-13	0	Y
4000S1010	Closeout Documentation	65.0	0%	22-Jan-13	15-May-13	0	Y
4000S1020	Backfill	5.0	0%	11-Apr-13	18-Apr-13	20	Y
4000S1030	Revegetation	2.0	0%	19-Nov-13*	20-Nov-13	2	Y
100-K-93							
4000S1060	Excavation/Loadout 100-K-93	3.0	0%	31-Oct-12*	05-Nov-12	0	Y
4000S1130	Work Instructions 100-K-93	75.0	0%	06-Nov-12	26-Mar-13	0	Y
4000S1140	Closeout Sampling 100-K-93	26.0	0%	27-Mar-13	09-May-13	0	Y
4000S1150	Closeout Documentation 100-K-93	93.0	0%	13-May-13	24-Oct-13	0	Y
4000S1160	Backfill 100-K-93	1.0	0%	23-Sep-13	23-Sep-13	0	Y
4000S1170	Revegetation 100-K-93	1.0	0%	24-Sep-13	24-Sep-13	0	Y
100-K-87							
4000S1070	Excavation/Loadout 100-K-87	3.0	0%	06-Nov-12*	08-Nov-12	0	Y
4000S1180	Work Instructions 100-K-87	75.0	0%	12-Nov-12	01-Apr-13	0	Y
4000S1190	Closeout Sampling 100-K-87	26.0	0%	02-Apr-13	15-May-13	0	Y
4000S1200	Closeout Documentation 100-K-87	93.0	0%	16-May-13	30-Oct-13	0	Y
4000S1210	Backfill 100-K-87	1.0	0%	26-Sep-13	26-Sep-13	0	Y
4000S1220	Revegetation 100-K-87	1.0	0%	30-Sep-13	30-Sep-13	0	Y
100-K-91							
4000S1080	Excavation/Loadout 100-K-91	3.0	0%	12-Nov-12*	14-Nov-12	0	Y
4000S1230	Work Instructions 100-K-91	75.0	0%	15-Nov-12	04-Apr-13	0	Y
4000S1240	Closeout Sampling 100-K-91	26.0	0%	08-Apr-13	21-May-13	0	Y
4000S1250	Closeout Documentation 100-K-91	93.0	0%	22-May-13	05-Nov-13	0	Y
4000S1260	Backfill 100-K-91	1.0	0%	02-Oct-13	02-Oct-13	0	Y



Field Remediation
100-K Area
TPA Milestone M-16-145 (12-31-12)

Milestone Description: Complete Interim Response Actions for 100-K Area Facilities & WS (not included as Phase 1, 2 or 3 Work)

Activity ID	Activity Name	Remaining Duration	Physical % Complete	Start	Finish	Delta from Last Week	TPA (?)
4000S1270	Revegetation 100-K-91	1.0	0%	03-Oct-13	03-Oct-13	0	Y
100-K-95							
4000S1090	Excavation/Loadout 100-K-95	4.0	0%	15-Nov-12*	26-Nov-12	0	Y
4000S1280	Work Instructions 100-K-95	75.0	0%	27-Nov-12	11-Apr-13	0	Y
4000S1290	Closeout Sampling 100-K-95	26.0	0%	15-Apr-13	29-May-13	0	Y
4000S1300	Closeout Documentation 100-K-95	93.0	0%	30-May-13	12-Nov-13	0	Y
4000S1310	Backfill 100-K-95	2.0	0%	09-Oct-13	10-Oct-13	0	Y
4000S1320	Revegetation 100-K-95	2.0	0%	14-Oct-13	15-Oct-13	0	Y
100-K-84							
4000S1100	Excavation/Loadout 100-K-84	19.0	0%	27-Nov-12*	02-Jan-13	0	Y
4000S1330	Work Instructions 100-K-84	75.0	0%	03-Jan-13	15-May-13	0	Y
4000S1340	Closeout Sampling 100-K-84	26.0	0%	16-May-13	02-Jul-13	0	Y
4000S1350	Closeout Documentation 100-K-84	93.0	0%	03-Jul-13	18-Dec-13	0	Y
4000S1360	Backfill 100-K-84	2.0	0%	12-Nov-13	13-Nov-13	0	Y
4000S1370	Revegetation 100-K-84	2.0	0%	14-Nov-13	18-Nov-13	0	Y
100-K-86							
4000S1110	Excavation/Loadout 100-K-86	4.0	0%	03-Jan-13*	09-Jan-13	0	Y
4000S1380	Work Instructions 100-K-86	75.0	0%	10-Jan-13	22-May-13	0	Y
4000S1390	Closeout Sampling 100-K-86	26.0	0%	23-May-13	10-Jul-13	0	Y
4000S1400	Closeout Documentation 100-K-86	93.0	0%	11-Jul-13	30-Dec-13	0	Y
4000S1410	Backfill 100-K-86	2.0	0%	19-Nov-13	20-Nov-13	0	Y
4000S1420	Revegetation 100-K-86	2.0	0%	21-Nov-13	25-Nov-13	0	Y
100-K-92							
4000S1120	Excavation/Loadout 100-K-92	3.0	0%	10-Jan-13*	15-Jan-13	0	Y
4000S1430	Work Instructions 100-K-92	75.0	0%	16-Jan-13	29-May-13	0	Y
4000S1440	Closeout Sampling 100-K-92	26.0	0%	30-May-13	16-Jul-13	0	Y
4000S1450	Closeout Documentation 100-K-92	93.0	0%	17-Jul-13	06-Jan-14	0	Y
4000S1460	Backfill 100-K-92	1.0	0%	25-Nov-13	25-Nov-13	0	Y
4000S1470	Revegetation 100-K-92	1.0	0%	26-Nov-13	26-Nov-13	0	Y



Activity /Actions Supporting Schedule

ISSUE / CONCERNS

Milestone	Due Date	Status
TPA M-16-145	12/31/2012	12/31/2012 F
PFP M-30	03/31/2013	03/31/2013 F

Attachment 19

100K Area Unit Managers Meeting Status

July 12, 2012

RL-0012 Sludge Treatment Project

- No change in status for TPA Milestone M-016-171 (Technology evaluation and report and new interim milestones for K Basin sludge treatment and packaging). This milestone is considered complete.
- The Knock Out Pot material processing operations including the loading of Multi-Canister Overpack (MCO) baskets commenced on June 12, 2012. TPA Milestone M-016-172 (Complete KOP Material Removal from 105-KW Fuel Storage Basin) is on schedule with two days of float.
- A draft siting study that evaluated 22 existing nuclear facilities for the treatment and packaging of K Basin Sludge was prepared and is undergoing review. Technology evaluation of processes to be used for removing water from a sludge slurry stream to increase solids concentration for subsequent loading into drums is being evaluated. These activities support Milestone M-016-173 (K Basin sludge treatment and packaging technology selection). Current schedules indicate 704 days of float.
- KW Basin Annex and building system final design was completed in support of TPA Milestone M-16-174 (Complete Final Design of Sludge Retrieval and Transfer System). Optimization testing on mock up the sludge retrieval and transfer system and components continued. Data validation of the sample analysis of the KW basin floor and pit sludge is in progress. Current schedules indicate a float of 333 days. Under M-016-175 (Begin Sludge Removal from 105-KW Fuel Storage Basin), civil site work for the construction of the KW Basin Annex was completed. The float for this milestone is currently at -511 days.
- No change in status for TPA Milestone M-016-176 (Complete sludge removal from 105-KW). The schedule indicates -511 days of float.
- In support of M-016-178, the packaging and removal of remaining found fuel and fuel received from burial ground cleanup actions was completed and the material was shipped to CVDF, processed in CVDF, and shipped to CSB for interim storage. Documentation is being prepared to formally communicate the removal of found fuel from the 105-K W Fuel Storage Basin. The schedule float is -511 days.

RL-0041K Facility Demolition and Soil Remediation

Remedial Actions:

- Removal of contaminated soils in Area AH was completed and in-process samples were collected July 3 to determine if additional remediation will be required. AH waste site float: 100-K-62 and 100-K-77: 56 days.
- The Remaining Sites Verification Package (RSVP) for Area AA Zone 2 and Stockpile #5 was approved by DOE-RL and EPA documenting the closure of the following waste sites

100-K-18, 100-K-19, 100-K-79 (partial), 100-K-97, 120-KW-5 and 120-KW-7. Backfill of Area AA Zone 2 began June 28. AA Zone 2 waste sites have 93 days of float.

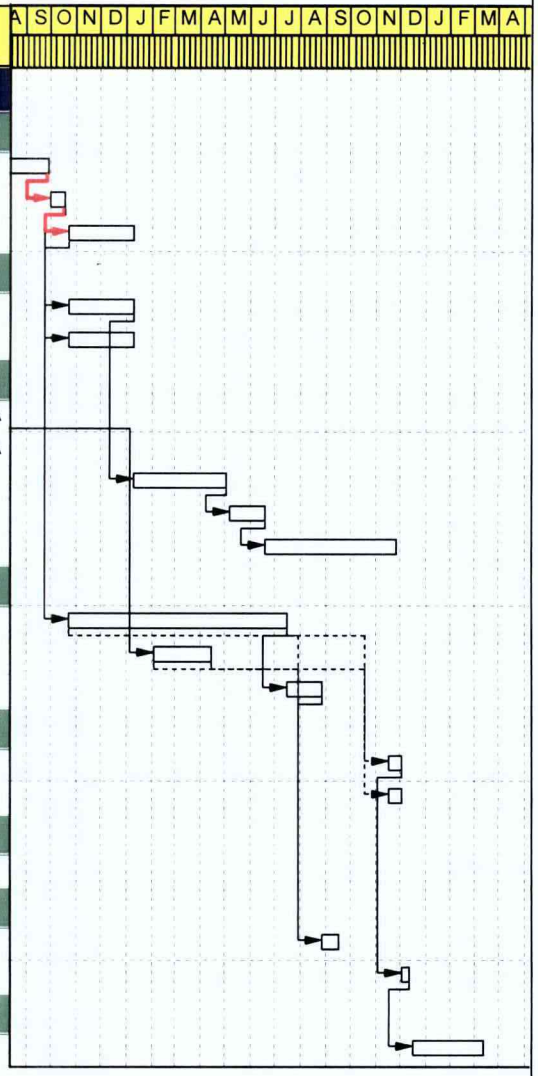
- The Remaining Sites Verification Package (RSVP) for Area AA Zone 1 and Stockpile #11 is with DOE-RL and EPA for review, this RSVP documents the closure of waste sites 100-K-34, 1607-K3 and 100-K-102. Area AA Zone 1 has 89 days of float.
- The verification sample instruction for Area AG, Zone 2 was approved by DOE-RL and EPA. Collection of the verification samples began July 9. This sampling will support the closure of phase 1 waste sites 100-K-36 and 100-K-3. Area AG, Zone 2 has 36 days of float.
- The verification sample instruction for Area AG Zone 1 is being reviewed by DOE-RL and EPA. The verification sample instruction includes phase 1 waste sites 100-K-3, 100-K-69, 100-K-70, and 100-K-71. The schedule shows six days of float.
- The Remaining Sites Verification Package for Area AH is in CHPRC internal review. This RSVP documents the closure of the following waste sites 100-K-6, 132-KE-1, 100-K-62 and 100-K-46. There are 51 days of float.
- The Remaining Sites Verification Package for waste site 100-K-53 is in CHPRC internal review. This RSVP documents the closure of waste site 100-K-53. There are 73 days of float.
- The Remaining Sites Verification Package for waste site 100-K-63 is currently being drafted. This RSVP documents the closure of waste site 100-K-63. The schedule indicates 86 days of float.

Demolition:

- Demolition of 182-K/100-K-106 and load out of associated waste has been completed. Data have been collected to develop civil drawings with drawings anticipated approximately July 20. Staging piles were flattened to allow for sampling with samples to be collected the week of July 9th. There are currently 779 days of float.
- The 105KE water tunnel demolition began on 6/27/12. The work is currently approximately 60% done on both the tunnel and valve pit. Work is continuing on the demolition of the west side interior walls of the 183.2 Sedimentation basin. The east side of the basin is completed except in areas where work has been delayed until approximately mid-July due to nesting of migratory birds. Concrete samples and soil samples from potholes were collected June 21, 2012, and initial results indicate that the concrete and soils meet with the RAOs. Analysis of the results is waiting for the results of duplicate samples from the analytical laboratory. Backfill of the basin is anticipated to begin the week of July 16. The schedule shows 25 days of float.
- Hexavalent chromium stained concrete was removed from the east side of the basement floor of 190-KE. Removal extended eight feet into concrete and appears to have eliminated all staining. Samples have been collected on June 25, 2012, to determine the extent of remaining contamination in the concrete. Upon receipt and review of the analytical results, the path forward for this Phase 3 site is to document site conditions in a protectiveness evaluation to support a Removal Action Report for the Pump House. There are currently 19 days of float.

Attachment 20

Activity ID	Activity Name	RD	% Comp	Start	Finish
Field Remediation - Rob Cantwell					
Excavation					
FR3810	PSR Preparation	43	0%	16-Jul-12*	27-Sep-12
FR3770	Re-Mob for West Wall Excavation	12	0%	01-Oct-12*	18-Oct-12
FR3560	Exc 100-C-7:1 West Wall Plume (125,000 BCMS)	42	0%	22-Oct-12	09-Jan-13
Loadout					
FR3760	100-C-7:1 West Wall Plume Loadout (94,000 Tons)	42	0%	22-Oct-12*	09-Jan-13
FR3780	Remaining 100-C-7:1 ACL Stockpile Loadout (50,000 Tons)	42	0%	22-Oct-12	09-Jan-13
Closure Documents and Sampling					
FR1040	Prepare Closure Document 100-C-7	0	100%	19-Apr-12 A	27-Jun-12 A
FR3790	Prepare Verification Work Instruction 100-C-7:1 Stock Pile Areas	0	100%	12-Jun-12 A	28-Jun-12 A
FR3570	Prepare Verification Work Instruction 100-C-7:1 West Wall	64	0%	10-Jan-13	02-May-13
FR3580	Closure Sampling and Analysis 100-C-7:1 West Wall	26	0%	06-May-13	19-Jun-13
FR3590	Prepare Closure Document 100-C-7:1	89	0%	20-Jun-13	26-Nov-13
Backfill					
FR3600	Backfill 100-C-7:1	145	0%	22-Oct-12	15-Jul-13
FR1080	Backfill 100-C-7	40	0%	04-Feb-13*	15-Apr-13
FR3820	Backfill 100-C-7:1 West Wall Plume	25	0%	16-Jul-13	27-Aug-13
Reveg					
FR1090	Revege 100-C-7	8	0%	18-Nov-13*	03-Dec-13
FR3610	Revege 100-C-7:1	8	0%	18-Nov-13*	03-Dec-13
Powerline Relocation					
MS1040	MSA Removal and Disposal of Powerlines	6	5%	20-Jun-12 A	19-Jul-12*
600-253 - Pit 24					
FR3620	Recontour 600-253 (Pit 24)	10	0%	28-Aug-13	16-Sep-13
FR3630	Reveg 600-253 (Pit 24)	6	0%	04-Dec-13	12-Dec-13
Final FR Punch List					
FR3690	Final FR Punch List (Remove Trailers, CTA, Lay-down Yard, Miscellane...	48	0%	16-Dec-13	13-Mar-14



Critical Remaining Work ◆ Milestone
Current Bar Labels % Complete

TASK filter: EPA Schedule View.

Attachment 21

Attachment 22

166449

^WCH Document Control

From: Saueressig, Daniel G
Sent: Monday, July 09, 2012 6:05 AM
To: ^WCH Document Control
Subject: FW: REQUEST FOR STAGING PILE EXTENSION AT 100-C-7:1

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

Thanks,

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

From: Laura Buelow [mailto:Buelow.Laura@epamail.epa.gov]
Sent: Wednesday, June 27, 2012 3:16 PM
To: Saueressig, Daniel G
Cc: Post, Thomas C
Subject: Re: REQUEST FOR STAGING PILE EXTENSION AT 100-C-7:1

I concur with a 180 day extension to the staging pile.

Laura Buelow, Ph.D.
Project Manager
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

"Saueressig, Daniel G" ---06/27/2012 05:36:12 AM---Hi Laura, I'd like to request a 6 month extension to a couple staging pile areas supporting 100-C-7:

From: "Saueressig, Daniel G" <dgsauere@wch-rcc.com>
To: Laura Buelow/R10/USEPA/US@EPA
Cc: "Post, Thomas C" <thomas.post@rl.doe.gov>
Date: 06/27/2012 05:36 AM
Subject: REQUEST FOR STAGING PILE EXTENSION AT 100-C-7:1

Hi Laura, I'd like to request a 6 month extension to a couple staging pile areas supporting 100-C-7:1 that are set to expire in July 2012. The increased scope associated with remediation of 100-C-7:1 has necessitated the need for this extension.

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

166449

Thanks,

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

Attachment 23

618-10 Burial Ground Remediation Schedule

Item	Facility Work Description	FY 10				FY 11				FY 12				FY 13				FY 14				FY 15			
		Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	Q-3	Q-4
	618-10 Burial Ground Remediation																								
1	**DOE NTP**			✦																					
	Characterization																								
2	**Non-Intrusive Characterization, Issue FIR, Evaluation**																								
3	**Intrusive Characterization, Issue FIR**																								
	Infrastructure																								
4	**Site Mobilization and Infrastructure Construction**																								
	Trench Remediation																								
5	**Trench Excavation & Anomaly Segregation**																								
6	**Trench Anomaly Processing & Characterization**																								
7	**Trench Loadout**																								
8	**Trench Loadout Exceeds 115% of B.2 Table**											✦													
9	**Backfill and Document Closeout**																								
	VPU Remediation																								
10	**VPU Workshop**									✦															
11	**VPU Tech Development**																								
12	**VPU Mobilization, Mockup and PSR**																								
13	**VPU Remediation and Disposal**																								
14	**Burial Ground Sampling, Backfill, Demobilization & Closeout**																								

C:\Documents and Settings\defaulk\Local Settings\Temporary Internet Files\OLK19F\618-10 Summary Schedule Rev22Jun12
7/11/2012

Attachment 24

300 Area Closure Project Status
July 12, 2012
100/300 Area Combined Unit Manager Meeting

Ongoing Activities

- Met TPA Milestone M-094-08 on June 25th with completion of the 308 Building.
- Initiated backfill of all waste sites north of Apple St.
- 309 Reactor – Fuel examination cell removal preparations ongoing.
- 340 Complex – Completed demolition and load-out of the 307 Basins and removal of RRLWS and RLWS piping. Preparations for vault removal ongoing.
- 3730 – Hazardous material removal and hot-cell stabilization preparations.
- 308A – Completing demolition and site preparation for turn over to subcontractor for TRIGA reactor removal.
- 327 – Below-grade demolition and backfill complete.
- 321 & 3706 – Completing remediation.
- 323 – Water pumping from four below-grade tanks ongoing..
- Preparing for asbestos abatement in 337B caisson.
- Slab removal west of Alaska continues, close-out of initial group completed.

Demolition & Remediation Preparation Activities

- Preparing for process sewer (300-15) remediation north of Apple St.
- Finalize preparations for 310 TEDF demolition.
- Preparations for demolition of the 329 Building ongoing.
- Preparations for demolition of the 382 Complex ongoing.

60-Day Project Look Ahead

- Continue authorization reviews for asbestos abatement activities.
- Continue 340 Complex waste site remediation and finalize engineering for vault removal.
- Complete site preparation and mobilize for TRIGA reactor removal.
- Grout 3730 hot cells.
- Initiate north of Apple process sewer (300-15) remediation.
- Complete remediation 321 and 3706 areas.
- Continue 309 reactor removal activities.
- Initiate and complete 310 TEDF demolition.
- Initiate 329 Building demolition.
- Initiate and complete 382 Complex demolition.

Attachment 25

Environmental Protection Mission Completion Project
July 12, 2012

Long-Term Stewardship

- The consolidated Revision 0, 100-F/IU-2/IU-6 – Segment 3 turnover and transition package is currently being finalized for transmittal to RL in mid-July .

Remedial Investigation of Hanford Site Releases to the Columbia River

- Meetings are scheduled in mid-July to continue review of the redline sections of the Rev. 0 human health risk assessment report..

Document Review Look-Ahead

- None