

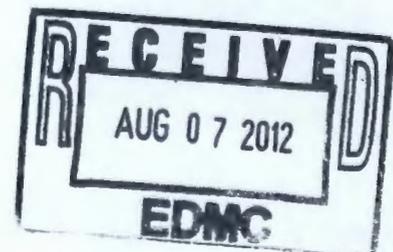
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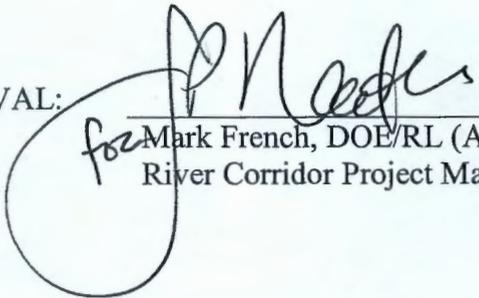
## 100/300 AREA UNIT MANAGER MEETING ATTENDANCE AND DISTRIBUTION

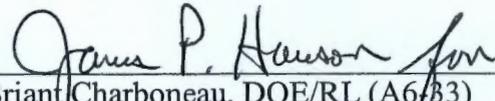
NAME	E-MAIL ADDRESS	MSIN	COMP
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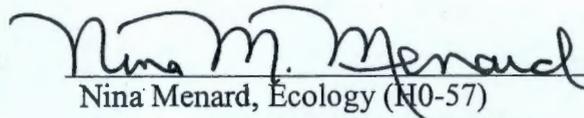


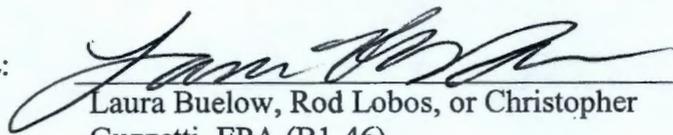
100/300 AREA UNIT MANAGERS MEETING  
APPROVAL OF MEETING MINUTES

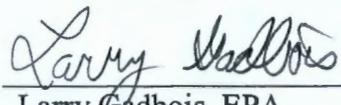
~~July 12, 2012~~ DS 7/31/12  
June 14

APPROVAL:  Date 7/12/12  
for Mark French, DOE/RL (A3-04)  
River Corridor Project Manager

APPROVAL:  Date July 12, 2012  
Brian Charboneau, DOE/RL (A6/B3)  
Groundwater Project Manager

APPROVAL:  Date 7/12/12  
Nina Menard, Ecology (N0-57)  
Environmental Restoration Project  
Manager

APPROVAL:  Date 7/12/12  
Laura Buelow, Rod Lobos, or Christopher  
Guzzetti, EPA (B1-46)  
100 Area Project Manager

APPROVAL:  Date 7-12-12  
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**

**June 14, 2012**

**ADMINISTRATIVE**

- Next Unit Manager Meeting (UMM) – The next meeting will be held July 12, 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 May 10, 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 June 14, 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. No issues were identified and no action items were documented.

Agreement 1: Attachment 3 provides EPA's concurrence with the path forward at 100-F-57:2 to remove additional material around the SCR-6 location.

Agreement 2: Attachment 4 provides EPA's concurrence for a non-contiguous onsite determination to send two float switches containing mercury from 100-F to 100-N for interim storage prior to being recycled at the Centralized Consolidation/Recycling Center.

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

**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 5 provides status and information for D4/ISS activities at 100-N. No issues were identified and no action items were documented.

Agreement 1: Attachment 6 provides Ecology's approval for attachment of a qualifier to the sample results for the 100-N-63:2 diesel stain area stating that the five verification samples were received by the laboratory with a sample cooler temperature above four degrees Celsius.

Agreement 2: Attachment 7 provides Ecology's concurrence to include UPR-100-N-9 with UPR-100-N-14 and that the focused sample should be sufficient to cover the site.

Agreement 3: Attachment 8 provides Ecology's approval to leave the 1908-N concrete monolith in place.

Agreement 4: Attachment 9 provides Ecology's approval to leave in place the basement walls and floor of the 182-N High Lift Pumphouse.

Agreement 5: Attachment 10 provides Ecology's approval to leave a small portion of the 1908-N wall stuck in a below grade corner of the monolith.

Agreement 6: Attachment 11 provides Ecology's approval of the staging pile area for demolition of the 1120-N Storage and Training Building.

Agreement 7: Attachment 12 provides Ecology's approval of the staging pile area for demolition of the 1103-N (MO-415) office building and other structures in its immediate vicinity (e.g., MO-100, MO-427).

Agreement 8: Attachment 13 provides Ecology's approval of the staging pile area for demolition of the Industrial Hygiene Field Services Facility (MO-425/426) and other structures in its immediate vicinity.

Agreement 9: Attachment 14 provides a 100-N Ancillary Facilities Removal Action Sampling Determination Form for Building 105-ND.

Agreement 10: Attachment 15 provides a 100-N Ancillary Facilities Removal Action Sampling Determination Form for Building 1143-N.

Agreement 11: Attachment 16 provides a 100-N Ancillary Facilities Removal Action Sampling Determination Form for Buildings 1112-N and 1112-NA.

Agreement 12: Attachment 17 provides a 100-N Ancillary Facilities Removal Action Sampling Determination Form for Buildings 1322-N, 1322-NA, 1322-NB, and 1322-NC.

Agreement 13: Attachment 18 provides a 100-N Ancillary Facilities Removal Action Sampling Determination Form for Building 1303-N.

Agreement 14: Attachment 19 provides TPA Change Notice TPA-CN-510, revising DOE/RL-2000-16, *Remedial Design Report/Remedial Action Work Plan for the 100-NR-1 Treatment Storage and Disposal Units*, Rev. 2, to allow excavated material that has been packaged to be returned to an excavation area or staging pile area in situations where the material has subsequently been determined to exceed normal transport requirements.

#### **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 20 provides status of the 100-K Sludge

Treatment Project and the 100-K Facility Demolition and Soil Remediation projects. No issues were identified and no action items were documented.

Agreement 1: Attachment 21 provides EPA's off-site approval to send two containers from 100-K to Diversified Scientific Services, Inc. for treatment/disposal.

Agreement 2: Attachment 22 provides EPA's concurrence to re-sample the 600-29 waste site at the locations where verification samples failed.

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

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

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

Agreement 1: Attachment 23 provides Ecology's provides TPA Change Notice TPA-CN-514, revising DOE/RL-2001-47, *Remedial Design Report/Remedial Action Work Plan for the 300 Area*, Rev. 3, to reflect a modified approach for the 618-10 Burial Ground related to the handling of concrete/lead drums for disposal.

#### **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 or action items were documented.

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

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

#### **MISSION COMPLETION PROJECT**

Attachment 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

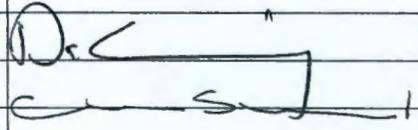
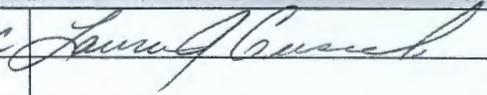
100/300 AREA UNIT MANAGER MEETING

ATTENDANCE AND DISTRIBUTION

June 14, 2012

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# Attachment B

100/300 Area UMM  
Action List  
June 14, 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  
June 14, 2012  
Washington Closure Hanford Building  
2620 Fermi Avenue, Richland, WA 99354  
Room C209; 2:00p.m.

Administrative:

- Approval and signing of previous meeting minutes (May 10, 2012)
- Update to Action Items List
- Next UMM (7/12/2012, 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)

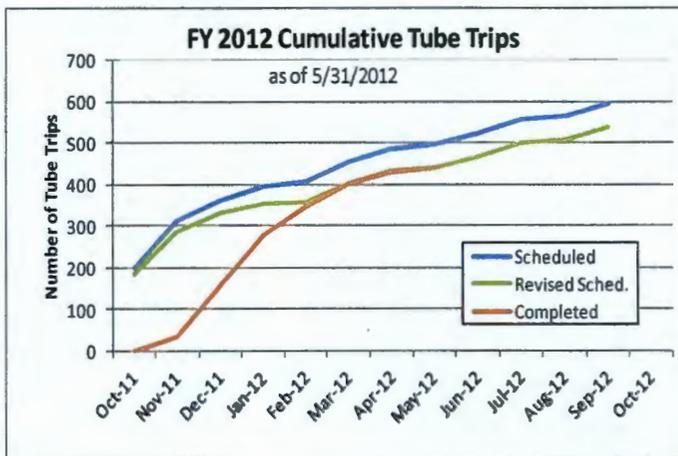
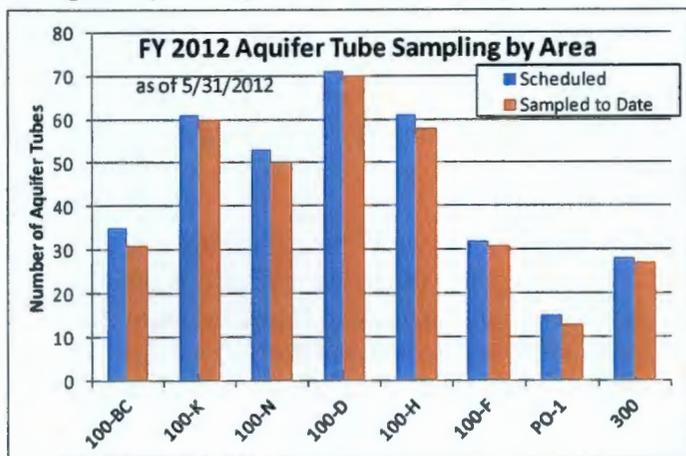
Adjourn

# Attachment 1

**100/300 Areas Unit Managers Meeting  
June 14, 2012**

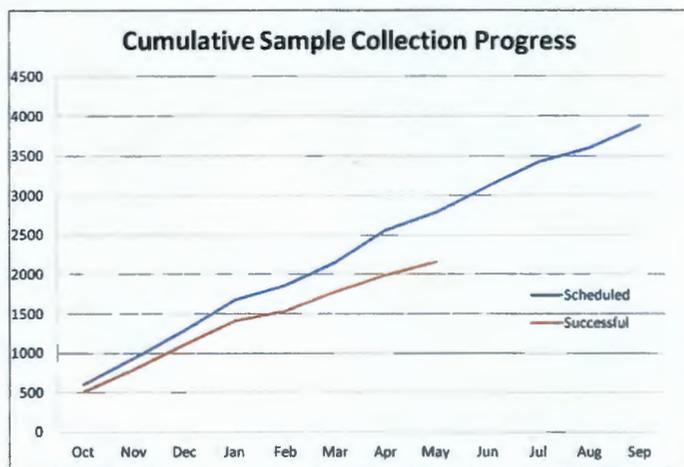
**General information on Aquifer Tube Sampling**

Aquifer tube sampling remained on schedule in May. 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 *trips* (some tubes are sampled multiple times in a year). Some tube sampling trips 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.



**General information on Groundwater Sampling**

The wells completed successfully are reported in a table on the last page of this handout. May sample progress is described in the table below. Two-hundred fourteen samples scheduled for collection in May, 165 samples were collected. Of the 49 uncollected samples, 27 were not attempted, while 22 were missed for the following reasons in the table below. Samplers continue to work overtime in order to recover schedule, and sample collection is being prioritized to reflect required vs. "best practice" samples.



Program	Sampling Projects	Year To Date Progress			May Progress		
		Scheduled	Successful	% Complete	Scheduled	Successful	Completed
AEA	11	192	95	49%	18	3	17%
CERCLA	17	2636	1632	62%	137	111	81%
DOH	1	40	22	55%	1	0	0%
OTHER	2	2	2	100%	2	2	100%
RCRA	26	649	403	62%	54	49	91%
WAC	3	71	47	66%	2	0	0%
<b>Totals</b>	<b>60</b>	<b>3590</b>	<b>2201</b>	<b>61%</b>	<b>214</b>	<b>165</b>	<b>77%</b>

**Breakdown of May missed samples:**

- 1 well required maintenance
- 5 samples were dry
- 2 scheduling errors
- 2 wells were not configured for sampling
- 12 sampling schedule changes were made
- 27 Were not attempted

**100/300 Areas Unit Managers Meeting  
June 14, 2012**

**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.)

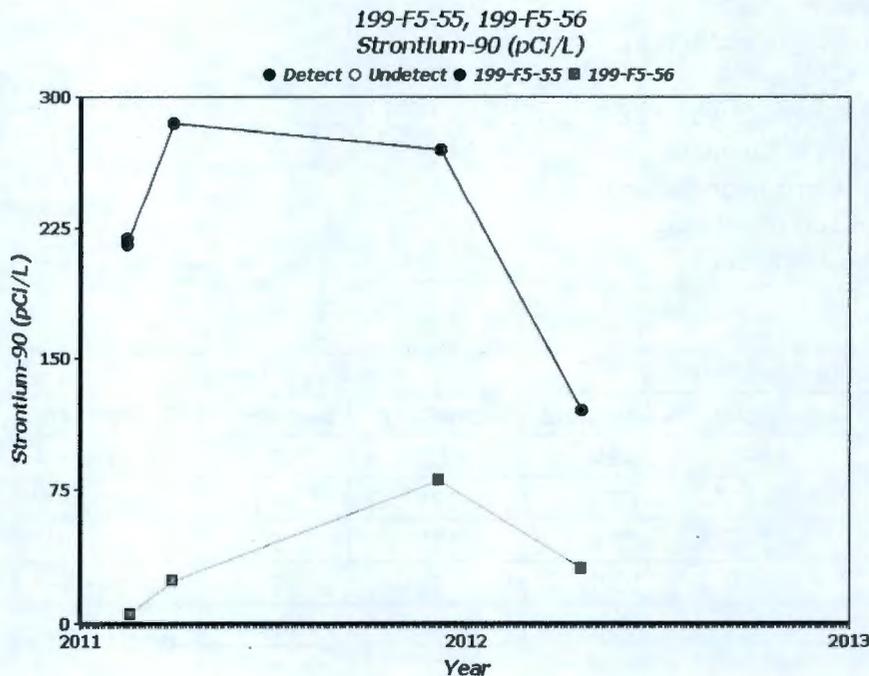
*Schedule Status – On schedule.*

**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 currently being re-evaluated.*

- CERCLA Process Implementation: RI/FS report development continues. The team held the monthly 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. The next meeting was tentatively scheduled for June 19, 2012, but will be rescheduled.
- Groundwater monitoring: Three wells were sampled in April and data are being loaded into HEIS. Strontium-90 concentrations declined in the two vadose boreholes completed as temporary wells. Well 199-F5-55 is adjacent to the 116-F-14 retention basin and well 199-F5-56 is at the fuel storage basin. The latter well also had elevated uranium in December 2011 (35 µg/L) but the concentration declined to 15.3 µg/L in April 2012.



**100/300 Areas Unit Managers Meeting**  
**June 14, 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 currently being re-evaluated based on 100-K comments.*

- Conducted status meeting with Ecology on 5/24 to review well realignments, sampling results, RI/FS report progress and other issues. Monthly meetings are planned for the 4<sup>th</sup> Thursday of every month.
- Well Realignments: Fifteen wells within 100-HR-3 will potentially be impacted due to continued remediation at select waste sites. The schedule for these activities is under development.
- CERCLA Process Implementation: RI/FS & PP preparation continues. The team is incorporating the applicable 100-K resolutions into the document for consistency. Team will meet with RL on the comment resolution schedule.
- Remedial Actions:
  - Both DX and HX pump and treat system are operating as designed. May 1 through 31, 2012 performance:
    - The systems treated 59 million gallons.
    - The system removed 46 kg of hexavalent chromium
- Monitoring & Reporting: Concentrations are decreasing from extraction wells 199-D5-39 and 199-D5-104 at the northwest corner of the D South hotspot.

**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 mid-December to accommodate comments from the 100-K documents.*

- RI/FS Activities
  - Work continues on preparation of the RI/FS report. The groundwater flow model for the 100-N area has been completed and is based on the 100 Area integrated model. Preliminary contaminant transport modeling of the groundwater COCs (Sr-90, nitrate, and diesel) has been completed and is under review. The new model incorporates the hydrologic, geologic, and geochemical conditions from the new and historic data from previous models and the new RI/FS data. The model also takes into consideration the apatite permeable reactive barrier as installed. The conceptual site model is being updated to incorporate the new data from the RI. The FS is underway with the preliminary screening of technologies and early identification of remedial alternatives.
  - A meeting was held with Ecology on May 9, 2012 to discuss the preliminary screening of technologies and development of the remedial alternatives. A follow-on meeting has been scheduled for June 6<sup>th</sup> to continue the discussion on technology screening and alternative development.

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- Performance Monitoring - Apatite Permeable Reactive Barrier (PRB)
  - Samples were collected on May 6, 7, and 9, 2012 for the following wells and aquifer tubes:
    - 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.
    - 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.
  - When data from this sampling event are available, the results will be presented in the UMM.
- RCRA Monitoring – 1324-N
  - Sampling of the five RCRA wells (199-N-165, 199-N-71, 199-N-72, 199-N-73, and 199-N-74) for the unit was completed on March 14, 2012. Well 199-K-151 was sampled on March 20, 2012. Well 199-K-152 was sampled on 5-17-2012. The expanded analyte list for the groundwater collected from these wells includes: 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. This analysis has been added to the October sampling for both these wells. The other data is coming in at this time and is being evaluated. A meeting will be scheduled with Ecology to discuss these results once they are available.

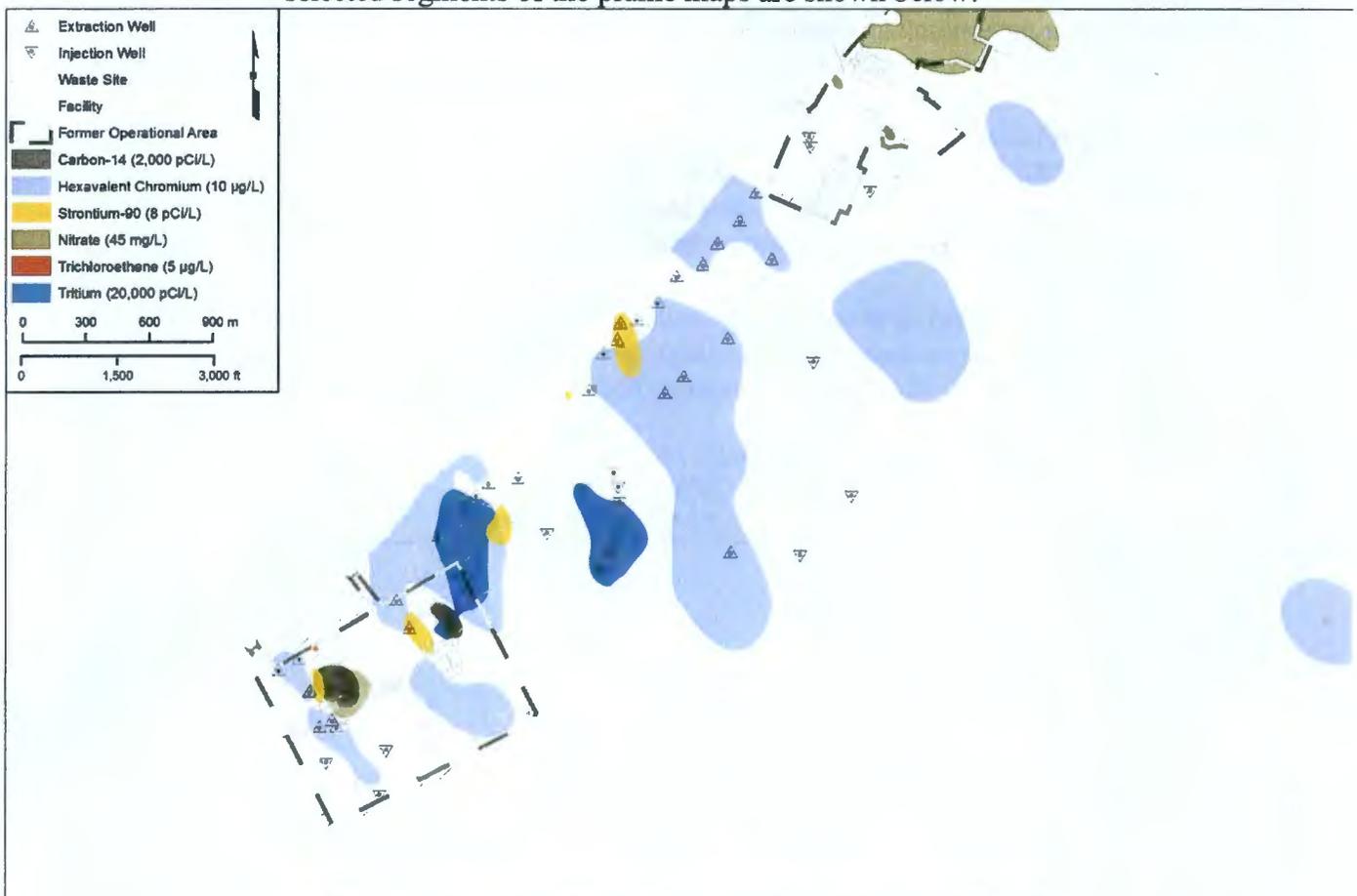
**100-KR-4 Groundwater Operable Unit – Bert Day / Chuck Miller**

- CERCLA Process Implementation:
  - 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.
  - A redline/strikeout and clean copy of the Draft Rev. 0 100-K Proposed Plan was delivered to EPA on June 11, 2012.
- Remedial Actions:
  - Cultural Resource Monitoring: May KR4 pump-and-treat monitoring was performed on May 25, 2012. RL sent the 7-day notification for monitoring on May 18, 2012. No representatives of the consulting parties participated in the monitoring. The appropriate well locations were monitored. No evidence of off-road driving was observed.
  - KX and KW pump and treat systems are operating as designed. 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. May 1 through 31, 2012 performance:
    - The systems treated 36 million gallons.
    - The system removed 4.3 kg of hexavalent chromium
- Monitoring
  - Integration of data collected during the 100-K RI, as well as extrapolation of historical data from decommissioned wells and incorporation of pump-and-treat effluent concentration data was used to support refinement of inferred groundwater contaminant plumes at 100-K.
  - The most substantive changes in inferred plume configurations were for the following:
    - Tritium, where elevated concentrations detected during drilling at 199-K-192 were incorporated into the plume, resulting in an increase in the apparent maximum plume concentration. Tritium in pump-and-treat effluent water produced an area

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exceeding the 20,000 pCi/L MCL in the vicinity of the injections wells south of 116-K-2 Trench.

- Carbon-14, where extrapolation of historically-elevated concentrations at wells near the KE and KW gas dryer condensate cribs resulted in larger plumes with higher concentrations downgradient of the crib locations.
- Strontium-90, where extrapolation of historically-elevated concentrations at wells near the KE and KW fuel storage basin overflow crib/reverse wells resulted in larger plumes with higher maximum concentrations downgradient of the crib locations. Elevated strontium-90 concentration at 199-K-200, located at the head end of the 116-K-2 Trench, resulted in an increase in the apparent maximum concentration in that area.
- Hexavalent chromium, where the former large plume area in the vicinity of the distal end of 116-K-2 Trench has been dissected by pump-and-treat operations into three distinct smaller plume segments.
- The revised plumes are presented in the 2011 groundwater monitoring report and selected segments of the plume maps are shown below:



**Inferred 2011 groundwater plume distribution at 100-K**

- Modifications & Expansions
  - ResinTech SIR-700 Test:
    - KW P&T continues to operate well with SIR-700 resin; the test has been successful and all activities are complete.

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- SIR-700 transition at KR4: Two vessels in Trains A and B are operating fully on the new resin as of the week of June 4, 2012. Train C has the two vessels loaded and is operating at a lower gpm. The flowrate is gradually being increased while pH is being managed.

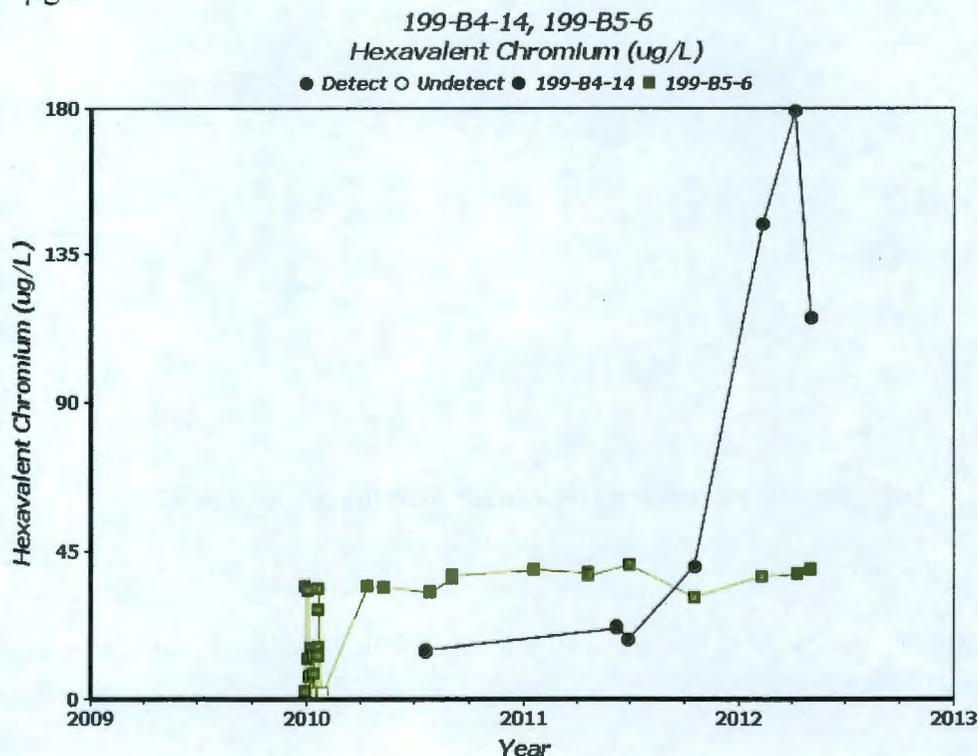
- Issues and Conditions Observed
  - None to report in May.

**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 currently being re-evaluated.*

- CERCLA Process Implementation:
  - RI/FS report development continues. The team held the monthly 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. The next meeting was tentatively scheduled for June 19, 2012, but will be rescheduled.
- Groundwater Monitoring
  - RL and EPA signed TPA-CN-522, which revises the routine groundwater monitoring sampling and analysis plan (SAP), on May 25, 2012. The revision adds the new RI wells to the routine SAP, and adjusts sampling frequency to what is appropriate for current conditions.
  - The May 2012 hexavalent chromium results from wells downgradient of 100-C-7:1 are available. The concentration in the shallow well 199-B4-14 dropped to 115 µg/L. The concentration in the deeper well remained about the same as in February and April at 39 µg/L.



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**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).

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 05-30-12. Three wells further downgradient (399-4-9, 399-4-10, 399-4-14) were sampled on 05-21 and 05-22. Well 399-3-20 was sampled on 05-15, the day before the leak was discovered. Results of the May 2012 sampling are not yet available. Monthly sampling of well 399-4-15 is planned for 6 months to monitor for potential impacts of the leak.

- 618-11 Burial Ground — Nothing new to report.
- 618-10 Burial Ground/316-4 Cribs — 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 300FF5-2 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 two additional 618-10 wells, 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 05-10-12; results are not yet available.

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

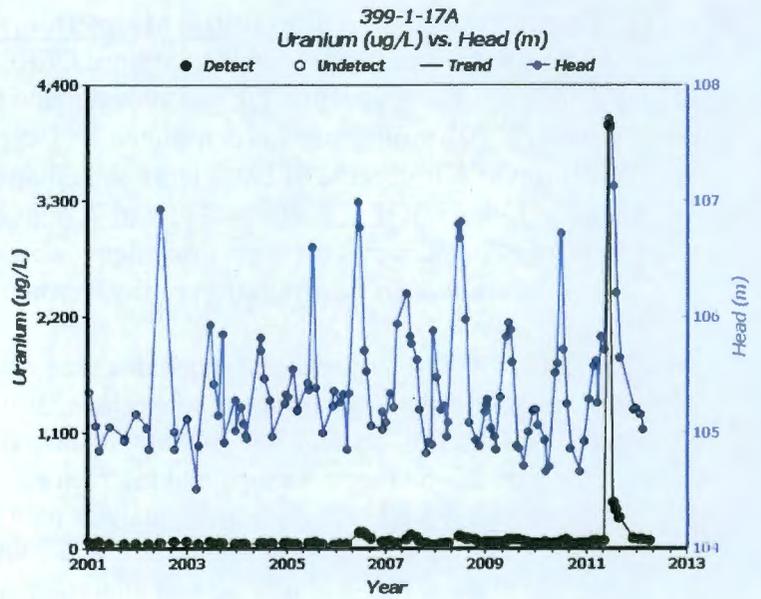
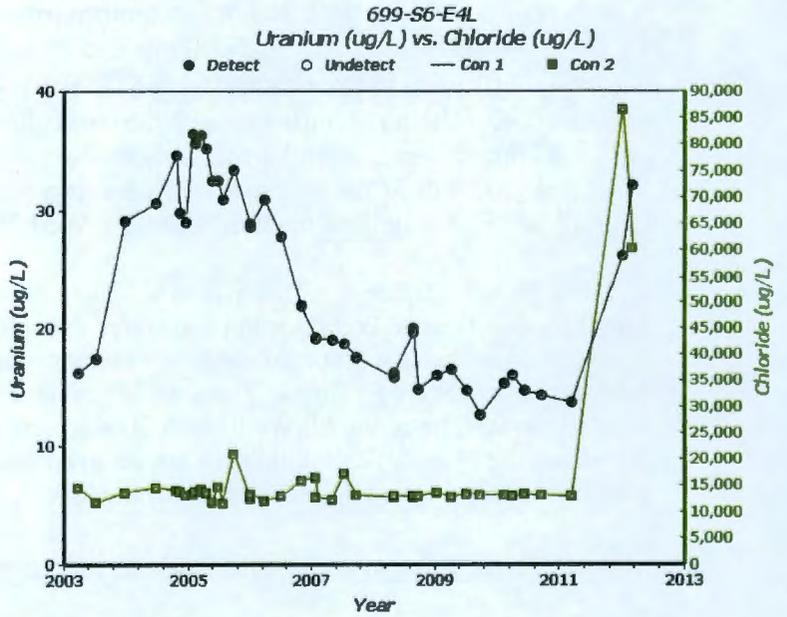


Figure 300FF5-2. Uranium and Chloride Trends at Well 699-S6-E4L at the 618-10 Burial Ground.



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**Wells sampled in May 2012**

<b>Summary of Wells &amp; Aquifer Tubes Sampled in the River Corridor Areas During May 2012</b>						
<b>Week</b>	<b>100-BC</b>	<b>100-K</b>	<b>100-N</b>	<b>100-D/H</b>	<b>100-F</b>	<b>300 Area</b>
<b>May 1-4</b>	199-B5-6 199-B4-14		199-N-188 199-N-71			699-12-2C 699-13-0A 699-13-1E 699-13-2D 699-13-3A
<b>May 7-11</b>				199-H2-1 199-D2-6 199-D5-119 199-D5-199 199-D5-122 199-D5-15 Redox-1-3.3 REdox-3-3.3 Redox-1-6.0 Redox-3-4.6 699-93-48A		699-S6-E4L 399-3-18

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<b>Summary of Wells &amp; Aquifer Tubes Sampled in the River Corridor Areas During May 2012</b>						
<b>Week</b>	<b>100-BC</b>	<b>100-K</b>	<b>100-N</b>	<b>100-D/H</b>	<b>100-F</b>	<b>300 Area</b>
<b>May 14-18</b>		199-K-178		199-D5-20		399-1-57
		199-K-141		199-D5-39		399-1-6
		199-K-152		199-D5-104		399-1-56
		199-K-166		199-D8-73		399-1-54
		199-K-168		199-H4-12C		399-1-55
				199-H1-33		399-1-15
				199-H4-76		399-1-1
				199-H1-42		399-1-23
				199-H1-40		399-2-2
				199-H1-43		399-3-33
				199-H1-39		399-3-20
						399-2-1
						399-2-32
						399-3-10
						399-3-1
						399-2-5
						399-1-58
						399-1-8
						399-3-12
						399-1-64
					399-1-63	
					399-1-59	
					399-1-11	
					399-1-12	
					399-1-2	
					399-1-21A	
					399-1-21B	
					399-1-7	
					399-3-22	
					399-4-1	
					399-3-2	
					399-3-6	
					399-3-19	
					399-3-38	

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<b>Summary of Wells &amp; Aquifer Tubes Sampled in the River Corridor Areas During May 2012</b>						
<b>Week</b>	<b>100-BC</b>	<b>100-K</b>	<b>100-N</b>	<b>100-D/H</b>	<b>100-F</b>	<b>300 Area</b>
<b>May 21-25</b>		C6250	26-D	199-D5-18		399-4-14
		C6241	26-M	199-D5-97		399-4-10
		699-D49-98	26-S	199-D5-144		399-6-3
			199-N-186	199-H3-9		399-5-4B
			N116mArray-3A	199-H1-7		399-8-3
			N116mArray-4A	199-H3-2A		399-3-21
			NVP2-116.0	199-H3-10		399-1-61
			N116mArray-6A	199-H3-3		399-1-1
				199-H3-5		399-3-9
				199-H5-1A		399-8-5A
				199-H4-45		399-6-5
				199-H4-46		399-4-7
				199-H4-48		399-4-9
				199-H4-5		399-8-1
				199-H4-6		
				199-H3-6		
				199-H4-10		
				199-H4-11		
				199-H4-13		
				199-H4-12A		
				199-H4-64		
				199-H4-63		
				199-H4-4		
			199-H4-75			
			199-H4-70			
			199-H4-69			
			199-H4-15A			
			199-H1-37			
			199-H1-36			
			199-H1-35			
			199-H1-34			
			199-H1-7			
			199-H6-1			
			199-H6-3			
			199-H6-4			
			199-H3-7			

**100/300 Areas Unit Managers Meeting  
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<b>Summary of Wells &amp; Aquifer Tubes Sampled in the River Corridor Areas During May 2012</b>						
<b>Week</b>	<b>100-BC</b>	<b>100-K</b>	<b>100-N</b>	<b>100-D/H</b>	<b>100-F</b>	<b>300 Area</b>
<b>May 28-31</b>		199-K-146 199-K-152 199-K-131 199-K-148 199-K-147 199-K-161 199-K-153 199-K-163 199-K-154 199-K-171 199-K-139 199-K-132 199-K-138 199-K-165 199-K-137 199-K-140		199-D5-14 199-D5-43 199-D5-98 199-D5-93 199-D4-86 199-D5-133 199-D8-71 199-D8-70 199-D8-5 199-D8-4 199-D5-121 199-D4-23 199-D2-11 199-D4-22 199-D3-2 199-D5-123 199-D5-120 199-D8-69 199-D8-90 199-D8-91 199-D8-97 199-D8-95 199-D5-130 199-D7-3 199-D5-131 199-D8-96 199-D8-98 199-D7-6 199-H1-5 199-H4-82 199-H4-80 199-H4-81 199-D8-89 199-D8-73 199-D8-88 199-D5-92		399-4-15

**100/300 Areas Unit Managers Meeting  
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<b>Summary of Wells &amp; Aquifer Tubes Sampled in the River Corridor Areas During May 2012</b>						
<b>Week</b>	<b>100-BC</b>	<b>100-K</b>	<b>100-N</b>	<b>100-D/H</b>	<b>100-F</b>	<b>300 Area</b>
				199-D5-39		
				199-D5-32		
				199-D5-20		
				199-D5-104		
				199-D5-101		
				199-D4-99		
				199-D4-98		
				199-D4-97		
				199-D4-96		
				199-D4-95		
				199-D4-83		
				199-D4-39		
				199-D4-38		
				199-D5-37		
				199-D8-101		
				199-D5-125		
				199-D5-126		
				199-D5-143		
				199-D5-16		
				199-D5-132		

# Attachment 2

June 14, 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, 240,100 tons
  - LDR material, 65,000 tons, LDR complete
- MSA continued power line relocation activities.

**100-D**

- Completed load-out at 100-D-50:6, 100-D-50:1 and 100-D-50:8
- Commenced load-out at 100-D-77
- Completed confirmatory sampling at 100-D-101, 100-D-102, 100-D-69 and 100-D-96
- Completed post-excavation in-process sampling at 100-D-66; sample results indicate RAGs are now being met
- Results of post-excavation in-process sampling at 118-D-2:2 are passing with no need for further excavation
- Results of verification sampling in potholes at 116-DR-3 and 100-D-50:9 indicate data is passing
- Completed load-out of tar anomaly in 100-D-56

**100-F**

- Trailer demobilization of support trailers complete
- Additional remediation at failed stockpile sample failure location complete

**100-H**

- No field activities being conducted at 100-H at this time

**100-K**

- Began closure sampling 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
- Discussions continue on plan for in-situ bioremediation at UPR-100-N-17
- Continued preparation of closure documents and conducting verification sampling

## **618-10 Trench Remediation**

- Continued loadout of soil waste to ERDF.
- Continued excavation of trench soils.
- Continued excavation and processing of drums and anomalies
- Incident on Monday 6/4 with drum smoking in DPF #1 curtailed the week's operations with drum handling. Recovery actions are underway.

## **100-IU-2/6**

- All field work has been completed for this fiscal year
- Began and completed remediation of 600-386 Segment 5
- Began and complete all field work for 600-300, 600-305, 600-306, 600-307, 600-308, 600-309, 600-310, 600-311, 600-312, 600-313, 600-314, 600-316, 600-317, 600-319, 600-320, 600-324 and 600-326
- Began remediation but plumes exist that will require additional remediation in FY13 at 600-298, 600-299, 600-318, 600-321 and 600-328
- Closeout samples are being collected from sites where excavation is complete
- Work on closeout reports has begun

# Attachment 3

## **^WCH Document Control**

---

**From:** Saueressig, Daniel G  
**Sent:** Wednesday, June 13, 2012 6:41 AM  
**To:** ^WCH Document Control  
**Subject:** RE: 100-F-57:2 Additional Remediation at SCR-6  
And this one? Thank you!

Thanks,

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

---

**From:** Saueressig, Daniel G  
**Sent:** Monday, June 11, 2012 12:56 PM  
**To:** ^WCH Document Control  
**Subject:** FW: 100-F-57:2 Additional Remediation at SCR-6

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

Thanks,

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

---

**From:** Post, Thomas C [mailto:thomas.post@rl.gov]  
**Sent:** Monday, June 11, 2012 12:54 PM  
**To:** Saueressig, Daniel G  
**Subject:** RE: 100-F-57:2 Additional Remediation at SCR-6

Dan,

I concur.

Thanks.

Tom

---

**From:** Saueressig, Daniel G [mailto:dgsauere@wch-rcc.com]

**Sent:** Monday, June 11, 2012 12:00 PM  
**To:** Post, Thomas C  
**Subject:** FW: 100-F-57:2 Additional Remediation at SCR-6

Tom, can you reply to Chris's email below with your approval?

Thanks,

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

---

**From:** Christopher Guzzetti [<mailto:Guzzetti.Christopher@epamail.epa.gov>]  
**Sent:** Thursday, June 07, 2012 2:35 PM  
**To:** Capron, Jason M  
**Cc:** Saueressig, Daniel G; Strom, Dean N; Carman, Hans M; Fancher, Jonathan D (Jon); Proctor, Megan L; Howell, Theresa Q; Post, Thomas C  
**Subject:** Re: 100-F-57:2 Additional Remediation at SCR-6

I concur with the path forward.

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

▼ "Capron, Jason M" ---06/07/2012 01:32:53 PM---Tom & Chris- Per our discussion on 100-F-57:2 earlier today, we intend to remove

From: "Capron, Jason M" <[jmcapron@wch-rcc.com](mailto:jmcapron@wch-rcc.com)>  
 To: Christopher Guzzetti/R10/USEPA/US@EPA, "Post, Thomas C" <[thomas.post@rl.doe.gov](mailto:thomas.post@rl.doe.gov)>  
 Cc: "Fancher, Jonathan D (Jon)" <[JDFANCHE@wch-rcc.com](mailto:JDFANCHE@wch-rcc.com)>, "Carman, Hans M" <[hmcarm@wch-rcc.com](mailto:hmcarm@wch-rcc.com)>, "Strom, Dean N" <[dnstrom@wch-rcc.com](mailto:dnstrom@wch-rcc.com)>, "Proctor, Megan L" <[mlprocto@wch-rcc.com](mailto:mlprocto@wch-rcc.com)>, "Saueressig, Daniel G" <[dgsauere@wch-rcc.com](mailto:dgsauere@wch-rcc.com)>, "Howell, Theresa Q" <[theresa.howell@wch-rcc.com](mailto:theresa.howell@wch-rcc.com)>  
 Date: 06/07/2012 01:32 PM  
 Subject: 100-F-57:2 Additional Remediation at SCR-6

Tom & Chris-

Per our discussion on 100-F-57:2 earlier today, we intend to remove additional material around the SCR-6 location due to the 3.07 mg/kg hexavalent chromium detection in the verification sample. Following material removal, we will collect a replacemnt sample from the same SCR-6 location, to be analyzed for hexavalent chromium only. The results for the first verification sample for all other analytes will be used in the evaluation for the "scrape area."

If this is acceptable to you, I'd appreciate your concurrence with this e-mail. We won't prepare further amendment/revision of the approved verification work instruction.

Thanks again for the discussion,

Jason

# Attachment 4

**^WCH Document Control**

---

**From:** Saueressig, Daniel G  
**Sent:** Tuesday, June 12, 2012 2:21 PM  
**To:** ^WCH Document Control  
**Subject:** FW: NON-CONTIGUOUS ONSITE APPROVAL REQUEST  
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:** Tuesday, June 12, 2012 2:20 PM  
**To:** Saueressig, Daniel G  
**Cc:** Christopher Guzzetti; Post, Thomas C; Elliott, Wanda  
**Subject:** Re: NON-CONTIGUOUS ONSITE APPROVAL REQUEST

I concur with the path forward.

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" --06/12/2012 02:18:09 PM--Hi Laura, I'd like to request your approval for a non-contiguous onsite determination to send 2 floa

From: "Saueressig, Daniel G" <dgsauere@wch-rcc.com>  
To: Laura Buelow/R10/USEPA/US@EPA  
Cc: "Post, Thomas C" <thomas.post@rl.doe.gov>, Christopher Guzzetti/R10/USEPA/US@EPA, "Elliott, Wanda" <WELL461@ECY.WA.GOV>  
Date: 06/12/2012 02:18 PM  
Subject: NON-CONTIGUOUS ONSITE APPROVAL REQUEST

---

Hi Laura, I'd like to request your approval for a non-contiguous onsite determination to send 2 float switches containing mercury from 100-F to 100-N for interim storage prior to being recycled at the Centralized Consolidation/Recycling Center (CCRC). The switches were removed from the septic holding tank at 100-F that we recently took out of service.

I believe shipment of the mercury from 100-N to the CCRC will take place within the next 30 days. I've discussed this with my Ecology contact and she didn't have any concerns.

Give me a call if you have any questions.

Thanks,

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

[attachment "winmail.dat" deleted by Laura Buelow/R10/USEPA/US] [attachment "message\_body.rtf" deleted by Laura Buelow/R10/USEPA/US]

# Attachment 5

# 100 Area D4/ISS Status

## June 14, 2012

### 100-N

**181-N River Pumphouse:** 100% complete.

**181-NE HGP River Pumphouse:** 100% complete.

**1908-NE HGP Outfall:** Scheduled for completion this week.

**1908-N Reactor Outfall:** 100% complete. Received Ecology approval to leave in place below grade light concrete monolith and stubborn concrete.

**182-N High Lift Pumphouse:** 100% complete. Received Ecology approval to leave in place below grade walls and floor.

**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):** Cleanup of corridor 7 complete and installation of structural steel to close corridor 22 is complete. Continuing with the acquisition of steel plates for sealing penetrations, installation of concrete pour backs, and grouting base plates. Scheduled to soon begin the installation of steel wall plates. Completion of ISS is expected by mid July. Shop/offices floor slab northeast of Reactor Building recently demolished and loaded out.

**107-N Basin Recirculating/Cooling Facility:** Demolition 60% complete. Load out 50% complete. Scheduled to be 100% complete in early July.

**1303-N Spacer Silos:** Excavation and demolition 100% complete. Load out scheduled to be complete at end of June.

**1900-N Water Supply Tanks** – Demolition of tank foundations 100% complete. Loadout 50% complete. Completion scheduled for end of June.

**1120-N Storage and Training Building** – Facility has been vacated and cold and dark activities have been started (e.g., power has been cut). Removal of hazardous materials scheduled to begin soon. Demolition scheduled to begin late June or early July. Received Ecology approval of debris staging pile area.

**100-N Mobile Offices** – MO-415, MO-100, MO-425, MO-426 and MO-427 have been vacated. Cold and dark activities have been initiated (e.g., power has been cut). Removal of hazardous materials from offices scheduled to start soon. Demolition scheduled to begin near end of June. Received Ecology approvals of debris staging pile areas.

# Attachment 6

**^WCH Document Control**

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**From:** Faust, Toni L  
**Sent:** Tuesday, May 29, 2012 1:47 PM  
**To:** ^WCH Document Control  
**Cc:** Buckmaster, Mark A; Saueressig, Daniel G; Newman, Dennis J  
**Subject:** FW: 100-N-63:2 diesel area samples received at lab above temperature

Please Chron the below regulatory agreement email.

Thanks Toni

---

**From:** Elliott, Wanda (ECY) [mailto:well461@ECY.WA.GOV]  
**Sent:** Tuesday, May 29, 2012 11:22 AM  
**To:** Faust, Toni L  
**Subject:** RE: 100-N-63:2 diesel area samples received at lab above temperature

We are ok with the out of temp.

*Wanda Elliott*  
(509) 372-7904  
Environmental Scientist  
Nuclear Waste Program  
Washington State Department of Ecology

---

**From:** Faust, Toni L [mailto:tifaust@wch-rcc.com]  
**Sent:** Tuesday, May 29, 2012 9:07 AM  
**To:** Elliott, Wanda (ECY)  
**Subject:** 100-N-63:2 diesel area samples received at lab above temperature

The 5 verification samples for the 100-n-63:2 diesel stain area (figure 3 of 0100N-WI-G0022) collected on 5-23-2012 were received by the Laboratory with a sample cooler temperature above 4 degrees Celsius. The samples are to be analyzed for Metals, petroleum hydrocarbons, and polyaromatic hydrocarbons. A qualifier will be attached to the sample results due to the condition of receipt. No other issues of sample receipt are noted. Based on the fact that the soil where the samples were collected has seen rises and falls far larger than this, WCH needs to know if Ecology will have issues with the data qualifier. Please let me know.

Thanks toni

# Attachment 7

165774

**^WCH Document Control**

**From:** Saueressig, Daniel G  
**Sent:** Tuesday, May 29, 2012 6:59 AM  
**To:** ^WCH Document Control  
**Cc:** Howell, Theresa Q  
**Subject:** FW: UPR-100-N-9

**Attachments:** UPR-100-N-9 Leak history path forward.doc

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

Thanks,

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

---

**From:** Elliott, Wanda (ECY)  
**Sent:** Monday, May 21, 2012 10:41 AM  
**To:** 'Howell, Theresa Q'  
**Cc:** Boyd, Alicia (ECY); Proctor, Megan L  
**Subject:** RE: UPR-100-N-9

We reviewed the attachment and believe that the inclusion of UPR-100-N-9 with UPR-100-N-14 grouping. The focused sample should be sufficient to cover the site. Please update the WIVS and the WIDS and SIS accordingly. When updating the WIVS please ensure that the COPCs are inclusive of the waste site.

Thanks,

*Wanda Elliott*  
(509) 372-7904  
Environmental Scientist  
Nuclear Waste Program  
Washington State Department of Ecology

---

**From:** Howell, Theresa Q [mailto:theresa.howell@wch-rcc.com]  
**Sent:** Thursday, May 17, 2012 3:10 PM  
**To:** Elliott, Wanda (ECY)  
**Cc:** Boyd, Alicia (ECY); Proctor, Megan L  
**Subject:** UPR-100-N-9

Hi Wanda,

I'd like to request that you go ahead and review the UPR-100-N-9 proposal that was provided during the bi-weekly meeting yesterday. The project and I discussed and we agree that the path forward presented in the paper is accurate - I apologize for any confusion. Please don't hesitate to call if you have any questions. I've attached an electronic copy for your convenience.

Thanks,  
Theresa

## UPR-100-N-9 Waste Site

### History

The UPR-100-N-9 is an inactive, low-level liquid waste site that is located at N Area coordinates NN6710 WN6580, near the 119-N Sample Building. An unplanned release of radioactively-contaminated water occurred at this site on October 14, 1974. The site, also known as UN-100-N-9, has been documented in Unusual Occurrence Report Number 74-29 (100-N Technical Baseline Report, WCH-SD-EN-TI-251, Section 4.35).

RL Occurrence Report for UPR-100-N-9 (Report No. 74-29), states that the excavation work during the unplanned release was being conducted under Design Change No. 3322, "119-N Stack Sampling Building Equipment Modification," to reroute the disposal of 119-N Building condenser cooling water from the 36-inch low pressure flush line to an earth adsorption pit.

When the old coordinates, "NN6710 WN6580", are compared to the drawing, they fall slightly north of the 119-N Building. The evidence provided in the below figures suggests that the location of UPR-100-N-9 as indicated in the GIS layer was wrong.

All the evidence is consistent with the location given in the Technical Baseline Report (WCH-SD-EN-TI-251). It provides coordinates that when converted to NAD83 put it directly beneath the polygon representing UPR-100-N-14 where two pipelines intersect. The drawing linked in SIS was incorrect; therefore, the drawing and the SIS report has been corrected and updated accordingly.

The SIS and GIS were both updated to state that UPR-100-N-9 is at the following location: 571236.7 E, 149666.6 N

WIDS had the correct location until 12/9/1996 when it was changed to the present (and incorrect) location to match the HGIS coordinates. WIDS no longer displays coordinates in their report, so no changes are necessary.

### Proposed Path Forward:

The NEW UPR-100-N-9 waste site location is within the UPR-100-N-14, 100-N-87 and 100-N-102:1 excavation (Figure 3). This excavation has an approved verification sample design. UPR-100-N-9 waste site coordinates lay directly above the FS-1 location. Because this leak occurred from the pipelines that were approximately 0.76 m (2.5 ft) bgs, and the depth of the excavation was approximately 8.5 m (28 ft); therefore this unplanned release waste site was significantly "over excavated".

Therefore, because the COPCs are the same for this waste site, it is proposed that no additional samples are collected, and the closeout documentation for UPR-100-N-9 will be supported by this focused sample, and the WSRF and supporting documentation for UPR-100-N-9 will be attached to the RSVP for UPR-100-N-14, 100-N-87, and 100-N-102:1.



Figure 2

Drawing H-1-37669, Sheet No.1:

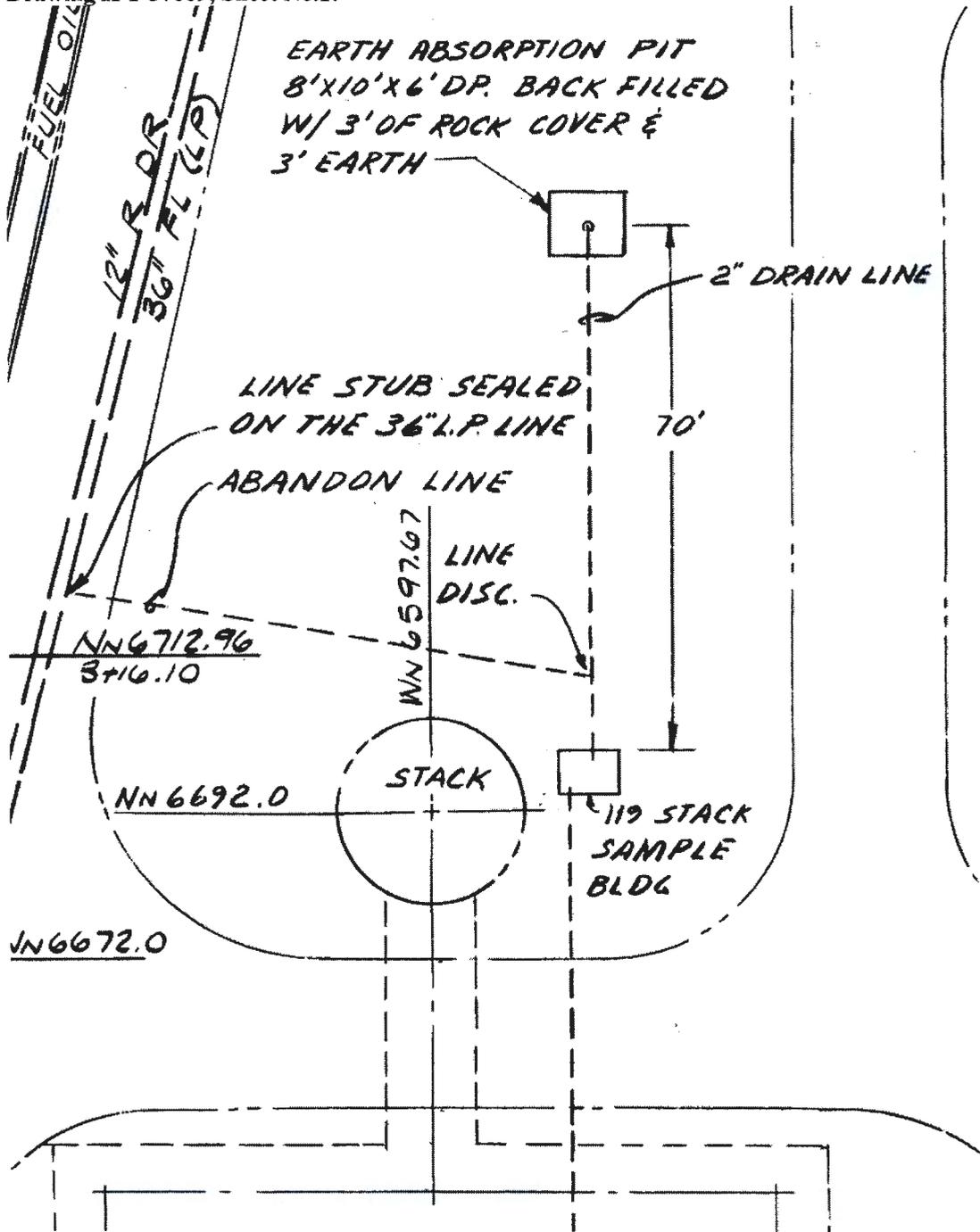
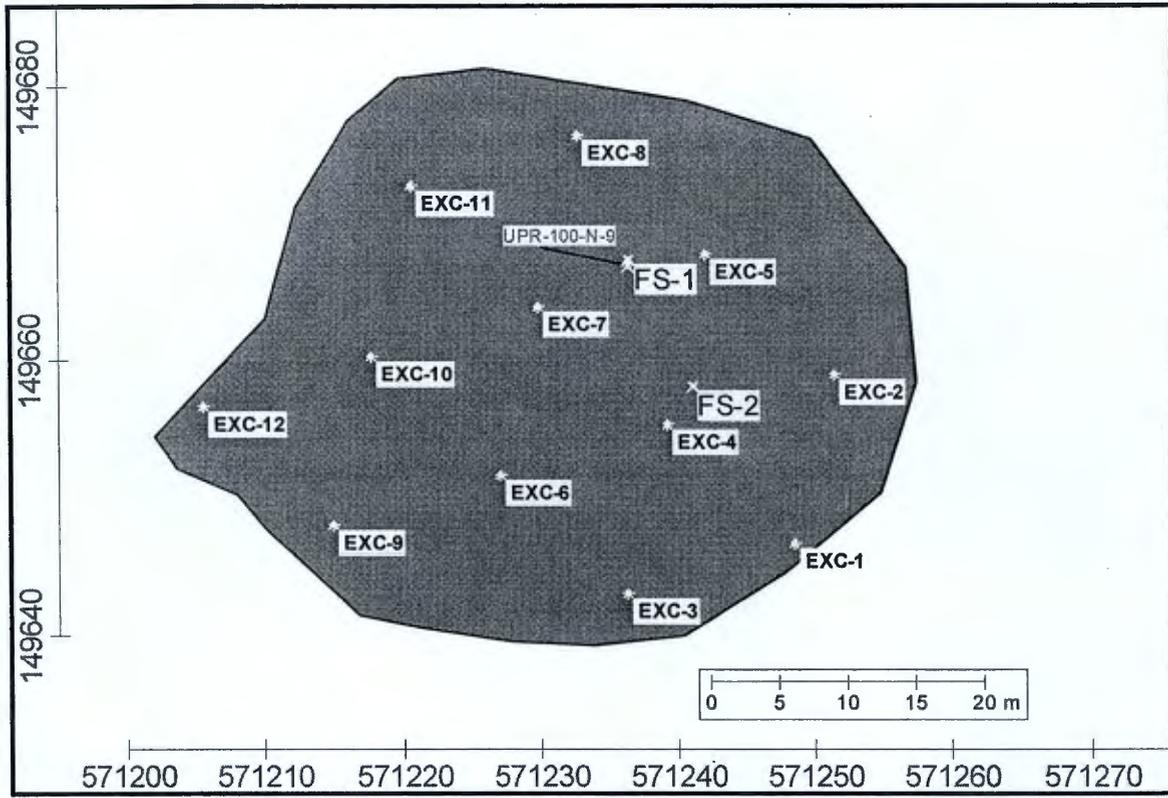


Figure 3



# Attachment 8

166186

**^WCH Document Control**

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**From:** Warren, David J  
**Sent:** Thursday, June 07, 2012 8:41 AM  
**To:** ^WCH Document Control  
**Subject:** FW: 1908-N Evaluation of Concrete Monolith  
**Attachments:** 1908-N Concrete Evaluation\_HEIS Number Correction.doc

Please CHRON this e-mail and the attachment as 1908-N Approval to leave concrete monolith. I would like this document to replace the document that was previously assigned this title and number of 165639, or at least assigned that number and rev. 1, as the original document assigned that number had an error that required correction. Please let me know if this is not possible. Thanks.

David Warren  
100-N EPL  
539-6040

---

**From:** Elliott, Wanda (ECY) [mailto:well461@ECY.WA.GOV]  
**Sent:** Wednesday, June 06, 2012 3:29 PM  
**To:** Warren, David J  
**Subject:** RE: 1908-N Evaluation of Concrete Monolith

No problem.

*Wanda Elliott*  
(509) 372-7904  
Environmental Scientist  
Nuclear Waste Program  
Washington State Department of Ecology

**From:** Warren, David J [mailto:djwarren@wch-rcc.com]  
**Sent:** Wednesday, June 06, 2012 3:29 PM  
**To:** Elliott, Wanda (ECY)  
**Cc:** Boyd, Alicia (ECY); McCurley, Clay D  
**Subject:** RE: 1908-N Evaluation of Concrete Monolith

Wanda,

The incorrect sample number(s) was the only issue. Thanks.

Dave

---

**From:** Elliott, Wanda (ECY) [mailto:well461@ECY.WA.GOV]  
**Sent:** Wednesday, June 06, 2012 3:26 PM  
**To:** Warren, David J  
**Cc:** Boyd, Alicia; McCurley, Clay D  
**Subject:** RE: 1908-N Evaluation of Concrete Monolith

**If the only issue was typos in the sample numbers then I still approve. If the sample results changed then I will need to re-evaluate the data. My guess is that you just typed the sample numbers.**

*Wanda Elliott*

6/11/2012

(509) 372-7904  
Environmental Scientist  
Nuclear Waste Program  
Washington State Department of Ecology

**From:** Warren, David J [mailto:djwarren@wch-rcc.com]  
**Sent:** Wednesday, June 06, 2012 3:13 PM  
**To:** Elliott, Wanda (ECY)  
**Cc:** Boyd, Alicia (ECY); McCurley, Clay D  
**Subject:** RE: 1908-N Evaluation of Concrete Monolith

Wanda,

We found a mistake with respect to the sample numbers that were referenced in the evaluation of the sample data for the 1908-N Concrete Monolith that was attached to the e-mail that Mr. McCurley sent you below. The sample numbers referenced should have been J1P170 and J1P171, rather than J19170 and J19171 as was listed in the original evaluation. We have corrected the mistake (see attached) and wish to re-submit for your approval. Please contact me if you have any questions. Thanks.

Dave Warren  
539-6040

---

**From:** Elliott, Wanda (ECY) [mailto:well461@ECY.WA.GOV]  
**Sent:** Thursday, May 10, 2012 3:55 PM  
**To:** McCurley, Clay D  
**Cc:** Warren, David J; Thompson, Wendy S; Boyd, Alicia; Menard, Nina  
**Subject:** RE: 1908-N Evaluation of Concrete Monolith

Clay,

We reviewed the data and approve of leaving the monolith in place. Can you make sure that the attachment can be referenced at a later date?

Thanks,

*Wanda Elliott*  
(509) 372-7904  
Environmental Scientist  
Nuclear Waste Program  
Washington State Department of Ecology

---

**From:** McCurley, Clay D [mailto:cdmccurl@wch-rcc.com]  
**Sent:** Thursday, May 10, 2012 1:14 PM  
**To:** Elliott, Wanda (ECY)  
**Cc:** Warren, David J; Thompson, Wendy S; Boyd, Alicia (ECY)  
**Subject:** 1908-N Evaluation of Concrete Monolith

Wanda. As requested by Ecology, we collected and analyzed a sample of the lean concrete around and beneath the 1908-N Reactor Outfall. Attached is the evaluation. In accordance with the *Removal Action Work Plan for*

6/11/2012

*100-N Area Ancillary Facilities* (DOE/RL-2002-70, Rev. 3), we are requesting Ecology's approval to leave this concrete in place. I can also provide you with a report summarizing how the sample was collected if you need it. Contact me if you have any questions.

Clay

6/11/2012

## Evaluation of 1908-N Monolith Concrete Sample

### Introduction

On April 26, 2002, a sample of concrete was collected from the 1908-N concrete monolith that remains after demolition of the 1908-N Outfall structure (Figure 1). The sample was chipped from the monolith and submitted for laboratory analysis to evaluate potential contaminant concentrations and make a decision concerning whether or not this material may remain in place or requires removal as provided in the *Removal Action Work Plan for 100-N Area Ancillary Facilities* (DOE-RL 2012). The concrete sample was collected in accordance with ENV-1, *Environmental Monitoring & Management*, to fulfill the requirements of the *100-N Area Remedial Action Sampling and Analysis Plan for CERCLA Waste Sites* (SAP) (DOE-RL 2006a).

### Data Evaluation

Analytical results for this concrete sample (Tables 1 and 2) were conservatively compared against the applicable cleanup criteria for soil as presented in the *Remedial Design Report/Remedial Action Work Plan for the 100-N Area* (DOE-RL 2006b). An evaluation of these results show that residual contaminant concentrations in the concrete do not preclude any future uses (as bounded by the rural-residential scenario) and allow for unrestricted use of shallow zone soils (i.e., surface to 4.6 m [15 ft] deep). The results also demonstrate that residual contaminant concentrations are protective of groundwater and the Columbia River.

Comparison of the concrete sample results for the monolith against the soil cleanup criteria are provided in Table 3. Contaminants that were not detected by laboratory analysis are excluded from the comparison table. Calculated cleanup levels are not presented in the Cleanup Levels and Risk Calculations database (Ecology 2011) under WAC 173-340-740(3) for calcium, magnesium, potassium, silicon, and sodium. The EPA's *Risk Assessment Guidance for Superfund* (EPA 1989) recommends that aluminum and iron not be considered in site risk evaluations. Therefore, aluminum, calcium, iron, magnesium, potassium, silicon, and sodium are not considered site COPCs and are not included in this table. Potassium-40, uranium-238/uranium-234 (including secular equilibrium daughters, radium-226 and bismuth-214), thorium-232 (including secular equilibrium daughters thorium-228, radium-228, and lead-212) were detected at levels typical for concrete and are not considered further since these isotopes are naturally occurring and not related to the operational history of the site.

Evaluation of the results provided in Table 3 indicate that all COPCs were either undetected or were quantified below remedial action goals (RAGs) and soil lookup values with the exception of copper and zinc which were detected above the soil RAGs for protection of the Columbia River. However, based on RESRAD modeling discussed in Appendix C of the 100-N Area RDR/RAWP (DOE-RL 2006b), residual concentrations of copper and zinc are not predicted to migrate more than 3 m (9.8 ft) in 1,000 years, based on copper, having the lowest partitioning coefficient, 22 mL/g. The vadose zone underlying the concrete monolith at the 1908-N outfall is approximately 4.4 m (14.5 ft) thick. Therefore, residual concentrations of copper and zinc are predicted to be protective of groundwater, and thus, the Columbia River.

Figure 1. 1908-N Outfall - Monolith



Table 1. Inorganic Sample Summary Table.

Sample Number	Sample Date	Aluminum			Antimony			Arsenic			Barium			Beryllium			Boron		
		mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL
J1P170	4/26/12	7370		5	0.6	U	0.6	1.78		1	103		0.5	0.206		0.2	7.76		2

Sample Number	Sample Date	Cadmium			Calcium			Chromium			Cobalt			Copper			Hexavalent Chromium		
		mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL
J1P170	4/26/12	0.0783	B	0.2	76700		1200	10.2		0.2	5.58		2	22.4		1			
J1P171	4/26/12	NA														0.284		0.155	

Sample Number	Sample Date	Iron			Lead			Magnesium			Manganese			Mercury			Molybdenum		
		mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL
J1P170	4/26/12	15000		20	2.56		0.5	3420		75	344		5	0.025	U	0.025	1.01	B	2

Sample Number	Sample Date	Nickel			Potassium			Selenium			Silicon			Silver			Sodium		
		mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL	mg/kg	Q	PQL
J1P170	4/26/12	5.96		4	1120		400	0.3	U	0.3	202		2	0.2	U	0.2	940		50

Sample Number	Sample Date	Vanadium			Zinc		
		mg/kg	Q	PQL	mg/kg	Q	PQL
J1P170	4/26/12	40.9		2.5	223		10

B = Detected below reporting limit  
 MDA = minimum detectable activity  
 NA = not analyzed  
 Q = qualifier  
 PQL = practical quantitation limit  
 U = undetected

**Table 2. Radionuclide Sample Summary Table.**

Sample Number	Sample Date	Americium-241 GEA			Bismuth-214 GEA			Cerium-144 GEA			Cesium-137 GEA			Cobalt-60 GEA			Europium-152 GEA		
		pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA
J1P170	4/26/12	0.029	U	0.029	0.331		0.052	0.106	U	0.106	0.024	U	0.024	0.022	U	0.022	0.061	U	0.061

Sample Number	Sample Date	Europium-154 GEA			Europium-155 GEA			Lead-212 GEA			Niobium-94 GEA			Potassium-40 GEA			Radium-226 GEA		
		pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA
J1P170	4/26/12	0.076	U	0.076	0.051	U	0.051	0.436		0.034	0.02	U	0.02	7.9		0.231	0.321		0.05

Sample Number	Sample Date	Radium-228 GEA			Thorium-228 GEA			Thorium-232 GEA			Uranium-235 GEA			Thorium-232 GEA			Uranium-235 GEA		
		pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA
J1P170	4/26/12	0.416		0.108	0.421		0.033	0.416		0.108	0.133	U	0.133	0.416		0.108	0.133	U	0.133

Sample Number	Sample Date	Uranium-238 GEA			Americium-241 AEA			Plutonium-238 AEA			Plutonium-239/240 AEA			Thorium-228 AEA			Thorium-230 AEA		
		pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA
J1P170	4/26/12	2.88	U	2.88	-0.05	U	0.477	0	U	0.366	-0.048	U	0.366	0.147	U	0.282	0.147	U	0.6

Sample Number	Sample Date	Thorium-232 AEA			Uranium-233/234 AEA			Uranium-235 AEA			Uranium-238 AEA			Total Beta Radiostromtium			Carbon-14		
		pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA
J1P170	4/26/12	0.294		0.225	0.343		0.202	0.128	U	0.244	0.343		0.202	-0.074	U	0.318	-0.779	U	2.85

Sample Number	Sample Date	Nickel-63			Plutonium-241			Tritium		
		pCi/g	Q	MDA	pCi/g	Q	MDA	pCi/g	Q	MDA
J1P170	4/26/12	-1.67	U	3	6.28	U	14.2	1.28	U	6.08

**Table 3. Comparison of the Concrete Sample Concentrations to Soil Action Levels.**

COPC	Result (pCi/g)	Soil Lookup Values (pCi/g) <sup>a</sup>			Does the Result Exceed Lookup Values?
		Shallow Zone Lookup Value	Soil Lookup Value for Groundwater Protection	Soil Lookup Value for River Protection	
Uranium-234	0.343 (<BG)	1.1 <sup>b</sup>	1.1 <sup>b</sup>	1.1 <sup>b</sup>	No
Uranium-238	0.343 (<BG)	1.1 <sup>b</sup>	1.1 <sup>b</sup>	1.1 <sup>b</sup>	No
COPC	Result (mg/kg)	Soil Cleanup Levels (mg/kg) <sup>a</sup>			Does the Result Exceed RAGs?
		Direct Exposure	Protective of Groundwater	Protective of the River	
Arsenic	1.78 (<BG)	20 <sup>b</sup>	20 <sup>b</sup>	20 <sup>b</sup>	No
Barium	103 (<BG)	5,600	200	400	No
Beryllium	0.206 (<BG)	10.4 <sup>d</sup>	1.51 <sup>b</sup>	1.51 <sup>b</sup>	No
Boron <sup>e</sup>	7.76	7,200	320	-- <sup>f</sup>	No
Cadmium <sup>c</sup>	0.0783 (<BG)	13.9 <sup>d</sup>	0.81 <sup>b</sup>	0.81 <sup>b</sup>	No
Chromium, total	10.2 (<BG)	80,000	18.5 <sup>b</sup>	18.5 <sup>b</sup>	No
Hexavalent chromium <sup>e</sup>	0.284	2.1 <sup>d</sup>	4.8	2	No
Cobalt	5.58 (<BG)	24	15.7 <sup>b</sup>	-- <sup>f</sup>	No
Copper	22.4	2,960	59.2	22.0 <sup>b</sup>	Yes <sup>g</sup>
Lead	2.56 (<BG)	353	10.2 <sup>b</sup>	10.2 <sup>b</sup>	No
Manganese	344 (<BG)	3,760	512 <sup>b</sup>	512 <sup>b</sup>	No
Molybdenum <sup>e</sup>	1.01	400	8	-- <sup>f</sup>	No
Nickel	5.96 (<BG)	1,600	19.1 <sup>b</sup>	27.4	No
Vanadium	40.9 (<BG)	560	85.1 <sup>b</sup>	-- <sup>f</sup>	No
Zinc	223	24,000	480	67.8 <sup>b</sup>	Yes <sup>g</sup>

<sup>a</sup> Lookup values and RAGs obtained from the 100 Area RDR/RAWP (DOE-RL 2006b) unless otherwise noted.

<sup>b</sup> Where cleanup levels are less than background, cleanup levels default to background per WAC 173-340-700[4][d] (1996). The arsenic cleanup level of 20 mg/kg has been agreed to by the Tri-Party Agreement Project managers (DOE-RL 2006b).

<sup>c</sup> Hanford Site-specific background value is not available; it was not evaluated during background study. Value used is from *Natural Background Soil Metals Concentrations in Washington State* (Ecology 1994).

<sup>d</sup> Carcinogenic cleanup level calculated based on the inhalation exposure pathway (WAC 173-340-750[3], 1996) using an airborne particulate mass-loading rate of 0.0001 g/m<sup>3</sup> (*Hanford Guidance for Radiological Cleanup* [WDOH 1997]).

<sup>e</sup> No Hanford Site-specific or Washington State background value is available.

<sup>f</sup> No parameters (bioconcentration factors or ambient water quality criteria values) are available from the Washington State Department of Ecology Cleanup Levels and Risk Calculations database or other databases to calculate cleanup levels (WAC 173-340-730(3)(a)(iii), 1996 [Method B for surface waters]).

<sup>g</sup> Because the soil partitioning coefficient values for copper and zinc are greater than 20 mL/g (22 mL/g and 30 mL/g, respectively), RESRAD modeling discussed in Appendix C of the 100-N Area RDR/RAWP (DOE-RL 2006b) predicts that these constituents will not reach groundwater within 1,000 years. The vadose zone underlying the concrete monolith at the 1908-N outfall is approximately 4.4 m (14.5 ft). Based on RESRAD modeling, constituents with a soil partitioning coefficient of 16 mL/g or greater are not predicted to migrate through a vadose zone of this thickness and reach groundwater within 1,000 years. Therefore, residual concentrations of copper and zinc are predicted to be protective of groundwater and the Columbia River.

-- = not applicable

BG = background

COPC = contaminant of potential concern

EPA = U.S. Environmental Protection Agency

RAG = remedial action goal

RDL = required detection limit

RDR/RAWP = Remedial Design Report/Remedial Action Work Plan for the 100 Area

RESRAD = RESidual RADioactivity (dose assessment model)

WAC = Washington Administrative Code

## References

DOE-RL, 2006a, *100-N Area Remedial Action Sampling and Analysis Plan for CERCLA Waste Sites*, DOE/RL-2005-92, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

- DOE-RL, 2006b, *Remedial Design Report/Remedial Action Work Plan for the 100-N Area*, DOE/RL-2005-93, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.
- DOE-RL, 2012, *Removal Action Work Plan for 100-N Area Ancillary Facilities*, DOE/RL-2002-70, Rev. 3, U.S. Department of Energy, Richland Operations Office, Richland, Washington.
- Ecology, 1994, *Natural Background Soil Metals Concentrations in Washington State*, Publication No. 94-115, Washington State Department of Ecology, Olympia, Washington.
- Ecology, 2011, *Cleanup Levels and Risk Calculations (CLARC) Database*, Washington State Department of Ecology, Olympia, Washington, <<https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>>.
- ENV-1, *Environmental Monitoring & Management*, Washington Closure Hanford, Richland, Washington.
- EPA, 1989, *Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part A)*, Interim Final, EPA/540/1-89/002, Office of Emergency and Remedial Response, U.S. Environmental Protection Agency, Washington, D.C.
- WAC 173-340, 1996, "Model Toxics Control Act -- Cleanup," *Washington Administrative Code*.
- WDOH, 1997, *Hanford Guidance for Radiological Cleanup*, WDOH/320-015, Rev. 1, Washington State Department of Health, Olympia, Washington.

# Attachment 9

**^WCH Document Control**

**From:** McCurley, Clay D  
**Sent:** Wednesday, May 23, 2012 12:14 PM  
**To:** ^WCH Document Control  
**Subject:** 182-N High Lift Pump House - Ecology Approval to Leave Basement Walls and Floor

**Attachments:** First Diesel Pedestal.doc; Second Diesel Pedestal.doc; Third Diesel Pedestal.doc; NW Corner.doc; 182-N Gamma Track Map.pdf

All. Please print the attachments and chron with this email as Ecology's approval to leave in place the basement walls and floor of the 182-N High Lift Pump House. Let me know the chron number. Thanks. Clay



First Diesel Pedestal.doc (451...



Second Diesel Pedestal.doc (43...



Third Diesel Pedestal.doc (490...



NW Corner.doc (495 KB)



182-N Gamma Track Map.pdf (708...

**From:** Elliott, Wanda (ECY) [<mailto:wel1461@ECY.WA.GOV>]  
**Sent:** Wednesday, May 23, 2012 11:27 AM  
**To:** McCurley, Clay D  
**Cc:** Warren, David J; Boyd, Alicia  
**Subject:** RE: 182-N High Lift Pump House - Basement Stains

Sorry it took me so long to get back to you. I wanted to talk over this issue with Alicia before I responded. The photos that you sent showing the additional scabbling appear to have addressed the issues. You guys are good to go.

I also understand that my voice mail is not working....thanks for the heads up.

*Wanda Elliott*  
 (509) 372-7904  
 Environmental Scientist  
 Nuclear Waste Program  
 Washington State Department of Ecology

**From:** McCurley, Clay D [<mailto:cdmccurl@wch-rcc.com>]  
**Sent:** Tuesday, May 22, 2012 11:58 AM  
**To:** Elliott, Wanda (ECY)  
**Cc:** Warren, David J  
**Subject:** 182-N High Lift Pump House - Basement Stains

Hi Wanda. As you may remember, when you and Mign were here last week we inspected the basement of the 182-N. During that inspection, you requested additional scabbling to remove staining on the remaining pedestals and removal of the debris from the northwest corner. I took photos of those issues at that time to use as "before" photos. We got those tasks completed and I've taken "after" photos. We also got a GPERs survey done yesterday and I got back the results this morning.

Attached are the "before/after" photos and the GPERs survey. The pedestals look good (not much of them left) and I can't see any staining anywhere. For the debris in the northwest corner, we dug it out as requested. We had to demolish a concrete footer and the floor in this corner as well in order to get all the debris out. The staining you see on the wall (where the debris was) is fixative that was periodically applied during demolition for dust suppression. This "fixative" stain is evident in many areas around the edge of the floor where pulverized debris ended up piled against the wall. The GPERs survey came back clean (i.e., showing no rad (gamma) contamination greater than 1.5 times background).

165761

As I mentioned to you last week, and in accordance with our Ancillary Facilities RAWP (DOE/RL-2002-70, Rev. 3), we are requesting Ecology's approval to leave the concrete floor and walls in place. The top edges of the walls have been demolished down 3 feet or more below grade and the floor has been perforated to prevent retention of water. FR will eventually backfill the basement with clean fill. If you want another look, let me know when you can come out and I'll make sure we can get access.

Clay  
942-8928

<< File: First Diesel Pedestal.doc >> << File: Second Diesel Pedestal.doc >> << File: Third Diesel Pedestal.doc >> << File: NW Corner.doc >> << File: 182-N Gamma Track Map.pdf >>

# 182-N High Lift Pumphouse

Before/After Photos



First diesel pedestal in basement floor on 05-16-2012.



First diesel pedestal in basement floor on 05-18-2012.

# 182-N High Lift Pumphouse

Before/After Photos



Second diesel pedestal in basement floor on 05-16-2012.



Second diesel pedestal in basement floor on 05-18-2012.

## 182-N High Lift Pumphouse

Before/After Photos



Third diesel pedestal in basement floor on 05-16-2012.



Third diesel pedestal in basement floor on 05-18-2012.

# 182-N High Lift Pumphouse

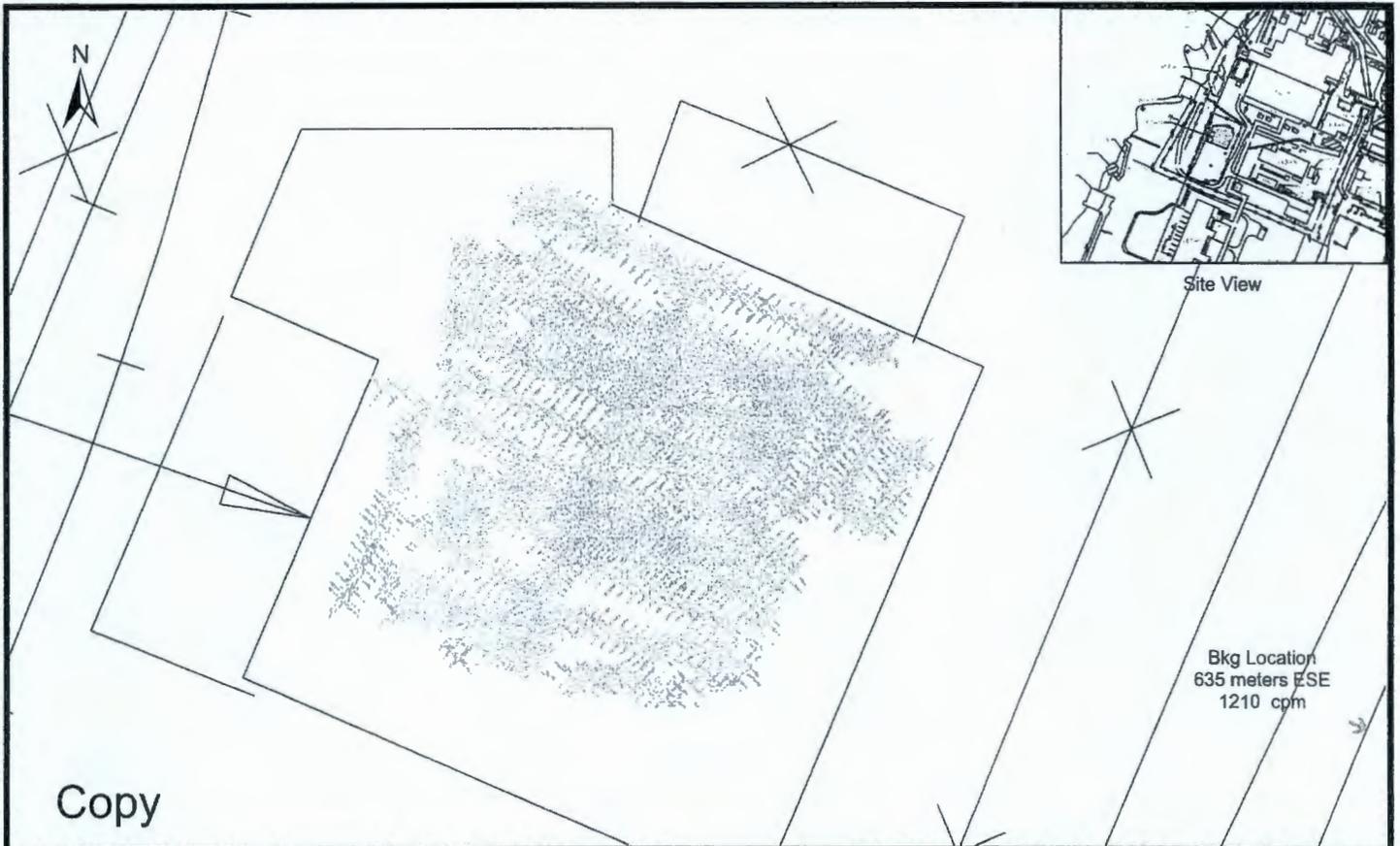
Before/After Photos



Northwest corner of basement floor on 05-16-2012.



Northwest corner of basement floor on 05-18-2012.



Legend	Summary Statistics
NET CPM	Coverage File: N142A
× <1815	Number of Data Pnts: 910
● 1815 - 5000	Type of Survey: gamma
● 5000 - 10000	Max GCPM: 1541
● 10000 - 25000	Avg Bkg CPM: 1210
● 25000	Survey Date: 5/21/2012
	Area Surveyed: 632 m <sup>2</sup>
	Project File: ESRFRM120080
	Pdf File: ESRFRM120080C

**100N D4**  
**182-N**  
**GPERS Radiological Survey**  
**Gamma Track Map**

0 2 4 6 8 10  
Meters

**EBERLINE SERVICES**  
**HANFORD, INC.**

Survey Map Prepared By Bruce Coomer, ESI

Document/CCN Number: 165761

**Customer to Complete:**

- Please expedite (Note: Hand to WCH Document Control personnel, do not put in basket.)
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- This closes action on CCN \_\_\_\_\_
- Distribution Completed: Yes \_\_\_\_ No \_\_\_\_ Initials \_\_\_\_\_
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- LTS (Long-Term Stewardship)     40 (Septic Documents)     90 (Water Quality)
- PART (Partnering Session Info)     50 (Operating Record)

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DATA ENTRY BY \_\_\_\_\_  
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CONTENT ID # \_\_\_\_\_

# Attachment 10

**^WCH Document Control**

**From:** McCurley, Clay D  
**Sent:** Wednesday, May 30, 2012 4:11 PM  
**To:** ^WCH Document Control  
**Cc:** Trevino, Ruben A; Flannery, Michael (Mike) D; Bigby, Daniel A  
**Subject:** 1908-N Ecology Approval to Leave Stubborn Concrete

**Attachments:** ESRFRM120085C.pdf; 1908-N on 05-30-12a.jpg; 1908-N on 05-30-12b.jpg; 1908-N on 05-30-12j.jpg; Monolith Photos on 05-23-2012.doc

Folks. Please print the attachments and chron with this email message as Ecology's approval to leave a small portion of the 1908-N wall stuck in a below grade corner of the monolith. Let me know the chron number selected. Thanks. Clay

**From:** Elliott, Wanda (ECY) [<mailto:well461@ECY.WA.GOV>]  
**Sent:** Wednesday, May 30, 2012 3:44 PM  
**To:** McCurley, Clay D  
**Cc:** Boyd, Alicia; Warren, David J; Guercia, Rudolph F  
**Subject:** RE: 1908-N Stubborn Concrete

**We concur with leaving the stubborn concrete in place.**

*Wanda Elliott*  
 (509) 372-7904  
 Environmental Scientist  
 Nuclear Waste Program  
 Washington State Department of Ecology

**From:** McCurley, Clay D [<mailto:cdmccurl@wch-rcc.com>]  
**Sent:** Wednesday, May 30, 2012 3:08 PM  
**To:** Elliott, Wanda (ECY)  
**Cc:** Boyd, Alicia (ECY); Warren, David J; Guercia, Rudolph F  
**Subject:** RE: 1908-N Stubborn Concrete

Wanda. Successfully got GPERS performed on the 1908-N this morning. They used their cart and were able to safely cover much more of the structure than I had anticipated. Attached is the report. Nothing exceeded 1.5 times background. I've also attached some action photos of the survey. While I was there this morning, I did not observe any stains or anomalies on or around the monolith. Looks pretty clean to me. We're still requesting Ecology concurrence with leaving the stubborn concrete stuck in the corner of the below grade monolith. Let me know what you think.

Thanks. Clay



ESRFRM120085C.p  
df (708 KB)



1908-N on



1908-N on



1908-N on

5-30-12a.jpg (518 K); 5-30-12b.jpg (494 K); 5-30-12j.jpg (415 K).

**From:** Elliott, Wanda (ECY) [<mailto:well461@ECY.WA.GOV>]  
**Sent:** Tuesday, May 29, 2012 8:33 AM  
**To:** McCurley, Clay D  
**Subject:** RE: 1908-N Stubborn Concrete

**Is there any new status on this subject?**

*Wanda Elliott*  
(509) 372-7904  
Environmental Scientist  
Nuclear Waste Program  
Washington State Department of Ecology

---

**From:** McCurley, Clay D [<mailto:cdmccurl@wch-rcc.com>]  
**Sent:** Thursday, May 24, 2012 1:42 PM  
**To:** Elliott, Wanda (ECY)  
**Cc:** Boyd, Alicia (ECY); Warren, David J; Guercia, Rudolph F  
**Subject:** 1908-N Stubborn Concrete

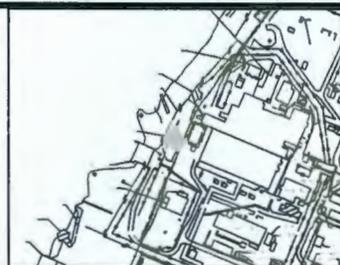
Wanda. We are almost complete with the demolition and load out of the 1908-N Reactor Outfall structure but we're having difficulty with a small portion of the wall near the bottom northeast corner. If you open the attachment and zoom to 200% you'll see the last remaining bit of the below grade wall and rebar stuck in the monolith's northeast corner. Note: The rebar and concrete you see in the foreground is loose and will be removed.

We cannot get our hammer positioned at a good angle to scabble this last stubborn portion of the wall and rebar. We have successfully scabbled away the all surface areas that came into contact with outfall water in the past but the rest is firmly stuck in the corner. In accordance with requirement our Ancillary Facilities RAWP (DOE/RL-2002-70, Rev. 3) we are requesting Ecology's approval to leave this small amount of stubborn concrete in place.

Please contact me if you need more information or if you would like to visit and view the issue. Thanks. Clay



Monolith Photos on  
05-23-2012....



Site View



Bkg Location  
767 meters SE  
1204 cpm

Copy

Legend

NET CPM

- × <1806
- 1806 - 5000
- 5000 - 10000
- 10000 - 25000
- 25000

Summary Statistics

Coverage File: N151  
Number of Data Pnts: 1373  
Type of Survey: gamma  
Max GCPM: 2187  
Avg Bkg CPM: 1204  
Survey Date: 5/30/2012  
Area Surveyed: 883 m<sup>2</sup>  
Project File: ESRFRM120085  
Pdf File: ESRFRM120085C

100N D4

1908-N

**GPERS Radiological Survey  
Gamma Track Map**

0 2 4 6 8 10

Meters



Survey Map Prepared By Bruce Coomer, ESI







# 1908-N Lean Concrete Monolith

May 23, 2012



View of monolith below grade (facing east).



View of monolith below grade (facing north).

# Attachment 11

**^WCH Document Control**

**From:** McCurley, Clay D  
**Sent:** Wednesday, May 30, 2012 3:18 PM  
**To:** ^WCH Document Control  
**Subject:** 1120-N Storage and Training Building - Ecology Approval for Staging Pile Area

**Attachments:** 1120-N Staging Pile Area 05-29-12.jpg; 1120-N Staging Pile.doc

Please print the attachments and chron with this email message as Ecology approval of the staging pile area for demolition of the 1120-N Storage and Training Building. Let me know the chron number selected. Thanks.

Clay

---

**From:** Elliott, Wanda (ECY) [<mailto:well461@ECY.WA.GOV>]  
**Sent:** Wednesday, May 30, 2012 10:02 AM  
**To:** McCurley, Clay D  
**Subject:** RE: 1120-N Storage and Training Building - Ecology Approval for Staging Pile Area

**That's even better!**

*Wanda Elliott*  
**(509) 372-7904**  
**Environmental Scientist**  
**Nuclear Waste Program**  
**Washington State Department of Ecology**

---

**From:** McCurley, Clay D [<mailto:cdmccurl@wch-rcc.com>]  
**Sent:** Tuesday, May 29, 2012 2:57 PM  
**To:** Elliott, Wanda (ECY)  
**Cc:** Boyd, Alicia (ECY); Warren, David J; Trevino, Ruben A; Flannery, Michael (Mike) D; Bigby, Daniel A; Allen, Mark E; Guercia, Rudolph F; Faust, Toni L  
**Subject:** RE: 1120-N Storage and Training Building - Ecology Approval for Staging Pile Area

Fortunately the parking lot is not asphalt (see photo). Asphalt ends just the other side of the crosswalk. The parking lot is hard pan like most of the rest of the roads out here so I'm hoping we don't get into PAH issues.



1120-N Staging Pile  
Area 05-29...

---

**From:** Elliott, Wanda (ECY) [<mailto:well461@ECY.WA.GOV>]  
**Sent:** Tuesday, May 29, 2012 2:27 PM  
**To:** McCurley, Clay D  
**Cc:** Boyd, Alicia; Warren, David J; Trevino, Ruben A; Flannery, Michael (Mike) D; Bigby, Daniel A; Allen, Mark E; Guercia, Rudolph F; Faust, Toni L  
**Subject:** RE: 1120-N Storage and Training Building - Ecology Approval for Staging Pile Area

Clay,

**We don't see anything of particular concern except that most of the pile will be sitting over an asphalt parking lot. So we'll probably have PAH issues in the end. We could either sample it prior to staging waste, or just deal with it later. Your call.**

Thanks,

**Wanda Elliott**  
**(509) 372-7904**  
**Environmental Scientist**  
**Nuclear Waste Program**  
**Washington State Department of Ecology**

---

**From:** McCurley, Clay D [<mailto:cdmccurl@wch-rcc.com>]

**Sent:** Tuesday, May 29, 2012 1:57 PM

**To:** Elliott, Wanda (ECY)

**Cc:** Boyd, Alicia (ECY); Warren, David J; Trevino, Ruben A; Flannery, Michael (Mike) D; Bigby, Daniel A; Allen, Mark E; Guercia, Rudolph F; Faust, Toni L

**Subject:** 1120-N Storage and Training Building - Ecology Approval for Staging Pile Area

Wanda. We will soon be starting demolition of the 1120-N Storage and Training Building and other structures in its immediate vicinity (e.g., septic tank and leach field 1607-N-9 [WIDS 124-N-9]). The 1120-N is sufficiently large that direct loading to ERDF during demolition may not be practical. It is also outside the 100-N AOC. We have identified an area on the northwest side of the building (see attachment) that we would like to reserve for staging piles of demolition debris if needed. As specified in section 4.2.3.2 of the *Removal Action Work Plan for 100-N Area Ancillary Facilities* (DOE/RL-2002-70, Rev. 3), we are requesting Ecology's approval to use all or a portion of this area for staging piles. Please contact me if you have any questions.

Thanks. Clay



1120-N Staging  
Pile.doc (1 MB)...



### Staging Pile Area for 1120-N Demolition



# Attachment 12

**^WCH Document Control**

**From:** McCurley, Clay D  
**Sent:** Thursday, May 31, 2012 7:34 AM  
**To:** ^WCH Document Control  
**Cc:** Trevino, Ruben A; Flannery, Michael (Mike) D; Bigby, Daniel A; Warren, David J; Faust, Toni L  
**Subject:** 1103-N (MO-415), MO-100 and MO-427 Demolition - Ecology Approval of Staging Pile Locations

**Attachments:** 100-N Mobile Offices Staging Piles.doc

Please print the attachment and chron with this email per the subject. Let me know which chron number has been applied.

Thanks. Clay

**From:** Elliott, Wanda (ECY) [<mailto:wel1461@ECY.WA.GOV>]  
**Sent:** Thursday, May 31, 2012 7:17 AM  
**To:** McCurley, Clay D  
**Subject:** RE: 1103-N (MO-415) Demolition - Ecology Approval of Staging Pile Locations

I approve.

*Wanda Elliott*  
 (509) 372-7904  
 Environmental Scientist  
 Nuclear Waste Program  
 Washington State Department of Ecology

**From:** McCurley, Clay D [<mailto:cdmccurl@wch-rcc.com>]  
**Sent:** Thursday, May 31, 2012 7:02 AM  
**To:** Elliott, Wanda (ECY)  
**Cc:** Boyd, Alicia (ECY); Warren, David J; Trevino, Ruben A; Flannery, Michael (Mike) D; Bigby, Daniel A; Allen, Mark E; Guercia, Rudolph F; Faust, Toni L  
**Subject:** 1103-N (MO-415) Demolition - Ecology Approval of Staging Pile Locations

Wanda. We will soon be starting the demolition of our 1103-N (MO-415) office building and other structures in its immediate vicinity (e.g., MO-100, MO-427). The size and number of structures we will be simultaneously demolishing is sufficiently large that maintaining the debris within the footprint of the buildings or direct loading during demolition may not be practical. These structures are also outside the 100-N AOC. We have identified areas adjacent these structures (see attachment) that we would like to reserve for staging piles of demolition debris if needed. As specified in section 4.2.3.2 of the *Removal Action Work Plan for 100-N Area Ancillary Facilities* (DOE/RL-2002-70, Rev. 3), we are requesting Ecology's approval to use all or portions of these areas for staging piles. Please contact me if you have any questions.

Thanks. Clay



100-N Mobile  
Offices Staging P...

**Staging Pile Area for MO-415 (1103-N) and Other Nearby Mobile Offices**



# Attachment 13

**^WCH Document Control**

**From:** McCurley, Clay D  
**Sent:** Thursday, June 07, 2012 7:45 AM  
**To:** ^WCH Document Control  
**Cc:** Trevino, Ruben A; Flannery, Michael (Mike) D; Bigby, Daniel A; Comer, John W; Warren, David J; Faust, Toni L  
**Subject:** MO-425 and MO-426 Demolition - Ecology Approval of Staging Pile Location  
**Attachments:** MO-425-426 Staging Pile.doc

Please print the attachment and chron it with this email per the subject. Also, please let me know which chron number is assigned. Thanks. Clay

**From:** Elliott, Wanda (ECY) [<mailto:wel1461@ECY.WA.GOV>]  
**Sent:** Thursday, June 07, 2012 7:21 AM  
**To:** McCurley, Clay D  
**Cc:** Boyd, Alicia; Warren, David J; Trevino, Ruben A; Flannery, Michael (Mike) D; Bigby, Daniel A; Allen, Mark E; Guercia, Rudolph F; Faust, Toni L  
**Subject:** RE: MO-425-426 Demolition - Ecology Approval of Staging Pile Locations

I approve.

*Wanda Elliott*  
 (509) 372-7904  
 Environmental Scientist  
 Nuclear Waste Program  
 Washington State Department of Ecology

**From:** McCurley, Clay D [<mailto:cdmccurl@wch-rcc.com>]  
**Sent:** Wednesday, June 06, 2012 3:35 PM  
**To:** Elliott, Wanda (ECY)  
**Cc:** Boyd, Alicia (ECY); Warren, David J; Trevino, Ruben A; Flannery, Michael (Mike) D; Bigby, Daniel A; Allen, Mark E; Guercia, Rudolph F; Faust, Toni L  
**Subject:** MO-425-426 Demolition - Ecology Approval of Staging Pile Locations

Wanda. We will soon be starting the demolition of the Industrial Hygiene Field Services Facility (MO-425/426) and other structures in its immediate vicinity. The size and number of structures we will be simultaneously demolishing is sufficiently large that maintaining the debris within the footprint of the buildings or direct loading during demolition may not be practical. These structures are also outside the 100-N AOC. We have identified an area surrounding and including these structures (see attachment) that we would like to reserve for a staging pile of demolition debris if needed. As specified in section 4.2.3.2 of the *Removal Action Work Plan for 100-N Area Ancillary Facilities* (DOE/RL-2002-70, Rev. 3), we are requesting Ecology's approval to use all or a portion of this area for staging piles. Please contact me if you have any questions.

Thanks. Clay



MO-425-426  
 aging Pile.doc (1)

# Staging Pile Area for Demolition of MO-425, MO-426 and Other Nearby Structures



# Attachment 14

# 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number  
SDF-100N-023

## 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: Remote Air Intake and Local Air Intake Building Number: 105-ND

WIDS Sites Associated or Adjacent:

Associated:

- 100-N-66 & 100-N-84:1 (both Accepted)

Adjacent:

Due to the proximity of the 105-ND facility to the 105-N reactor and 1802-N Pipe Trestle, it is adjacent to many WIDS sites.

WIDS Sites posing "Environmental Restoration Concerns," as identified in CCN 126293:

- 100-N-28, 120-N-3, and 124-N-2 (all Accepted)
- 100-N-9 & 120-N-8 (both Rejected)
- UPR-100-N-41 (Not Accepted)

Other:

The 105-ND facility consisted of two aboveground structures and a connecting underground concrete trench (CCN 126293 pgs. 1-2). One of the above-ground structures was the Remote Air Intake, located south of 109-N, by the 1802-N Pipe Trestle; the other was the Local Air Intake, located east of, and adjacent to the 105-N. For purposes of this form, 105-ND is considered to be only the above-ground structures. The portion of the structure adjacent the 105-N Reactor Building was demolished in October of 2009 by the Subcontractor performing demolition of the 109-N/105-N structures down to what were later to become the exterior walls of the Safer Storage Enclosure (SSE). The remainder of the 105-ND south of 182-N was demolished in April of 2012.

## C. INFORMATION SOURCES

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

<p>Historical Site Assessment for Historical Site Assessment: <u>105-ND Remote Air Intake: CCN 126293</u></p> <p>IH Characterization Report: <u>N/A</u></p> <p>IHC/FHC Document: <u>N/A</u></p> <p>PDSR: <u>N/A</u></p> <p>Waste Characterization Checklist: <u>N/A</u></p>	<p>Site Walkdown: <u>Visual Inspection of the 105-ND Excavation Soils: CCN 165474</u></p> <p>Radiological Survey: <u>Global Positioning Environmental Radiological Surveyor (GPERS): • ESR-FRM-12-0053BC • ESR-FRM-12-0053GC • ESR-FRM-08-0072C</u></p> <p>WIDS/SIS: <u>RCC Stewardship Information System (SIS) Facility Summary Report: 105-ND &amp; 1802-N</u></p> <p>Facility Inspection: <u>N/A</u></p> <p>Summary Report: <u>N/A</u></p>
---	--

Other:

- 100N Facility Endpoint Criteria and Turnover Documentation 105-ND Remote Air Intake (background information only): CCN 521107
- Radiological Survey Record: RSR-100N-08-1047 / 1197 / 1387 / 1515 / 1879
- Radiological Survey Record: RSR-100N-10-1286
- Radiological Survey Record: RSR-100N-11-0557
- Photographs of the 105-ND Facility Pre-Demolition, Time-Stamped: SIS Facility Summary Report for 105-ND pg. 4 (1/5/2006), CCN 126293 pg. 6 (1/5/2006)
- Photographs of the 105-ND Facility Pre-Demolition, No Time Stamp: SIS Facility Summary Report for 105-ND pgs. 3, 5, 6, 7, and 8; SIS Facility Summary Report for 1802-N pg. 8
- Photographs of the 105-ND Facility Post-Demolition, No Time Stamp: CCN 165474 pg. 2

# 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number  
SDF-100N-023

## 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:**

The Historical Site Assessment for the 105-ND facility states that no indication, pathway, or source of asbestos, lead, mercury, PCBs, or refrigerants was discovered during review of process knowledge and facility documentation (CCN 126293 pg. 2). However, the document does identify the nearby 1802-N Pipe Trestle as a potential source of radiological contamination (CCN 126293 pg. 2). As detailed below, radiological contamination was not identified at the 105-ND facility. Accordingly, no hazardous substance has been associated with this facility.

Liquids:  Yes     No

If yes, describe source and nature of liquids:

The 105-ND facility was used to intake and transfer air to the 105-N and 182-N facilities (CCN 126293 pg. 1 & SIS Facility Summary Report for 105-ND pg. 1). No liquids were involved in its operation.

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

As verified by what documentation:

This question is not applicable because the facility did not contain hazardous substances. The facility consisted only of two aboveground air intake structures.

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-ND facility was described as having the potential to be contaminated by site operations and/or processes (CCN 126293 pg. 1). However, this determination was attributed to the fact that the condensate drip legs from the 1802-N Steam Pipe Trestle could have radiologically contaminated the surfaces of the southernmost portion of the 105-ND structure. Pre- or post-demolition radiological surveys of the structure never identified contamination. Accordingly, there was no potential for a release to the environment during D4 activities.

List any hazardous materials left in the building for demolition:

This question is not applicable because the facility did not contain hazardous substances. The facility consisted only of two aboveground air intake structures.

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

There is no indication that a pathway for contamination of the 105-ND facility existed. As detailed below, radiological surveys did not support the conclusion that the facility, or its footprint, had become contaminated:

**Radiological Contamination:** No radiological contamination was identified in any reviewed survey record.

- GPERs Surveys: ESR-FRM-12-0053BC, ESR-FRM-12-0053GC, and ESR-FRM-08-0072C
- Routine Radiological Surveys: RSR-100N-08-1047, RSR-100N-08-1197, RSR-100N-08-1387, RSR-100N-08-1515, RSR-100N-08-1879, RSR-100N-10-1286, RSR-100N-11-0557.

**Chemical Contamination:** No hazardous substance has been associated with the 105-ND facility (CCN 126293 pg. 2). No stained soil or anomaly was discovered during a post-demolition visual inspection of the 105-ND footprint (CCN 165474 pg. 1). There does not appear to have been any leak or spill at the facility during its operation (CCN 126293 pg. 1).

**Comments:**

Pertinent design drawings include H-1-49306, Sheets 2, 3, and 4; and H-1-45007, Sheets 1, 9, 22, and 29.

## 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number  
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### E. FIELD OBSERVATIONS

#### Visual Inspection

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

References/Comments:

No stained soil or anomaly was discovered during a post-demolition visual inspection of the 105-ND footprint (CCN 165474 pg. 1).

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

References/Comments:

This question is not applicable because no stained soil or anomaly was discovered at the facility.

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

References/Comments:

This question is not applicable because no stained soil or anomaly was discovered at the facility.

Is the area potentially a discovery site?  Yes  No

References/Comments:

There is no reason to consider the 105-ND footprint as a potential discovery site.

#### Radiological Surveys

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

References/Comments:

• GPERS Surveys: ESR-FRM-12-0053BC, ESR-FRM-12-0053GC, and ESR-FRM-08-0072C  
• Routine Radiological Surveys: RSR-100N-08-1047, RSR-100N-08-1197, RSR-100N-08-1387, RSR-100N-08-1515, RSR-100N-08-1879, RSR-100N-10-1286, RSR-100N-11-0557.

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

References/Comments:

This question is not applicable because radiologically contaminated soil was not found.

Is the area potentially a discovery site?  Yes  No

References/Comments:

No radiologically contaminated soil was found.

Were the contaminated materials removed?  Yes  No  N/A

References/Comments:

This question is not applicable because radiologically contaminated soil was not found.

### F. WIDS SITES

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

If yes, list the WIDS sites:

No indication of an effect to a WIDS site was found.

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

References/Comments:

This question is not applicable because no indication of an effect to a WIDS site was found.

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

References/Comments:

Deferral is not necessary for closeout of the 105-ND facility.

### G. COPCs FOR SOILS AND STRUCTURES REMAINING AFTER DEMOLITION

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

## 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

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None     SVOC     VOC     Metals     TPH     Rad     PCBs

Other (Specify): \_\_\_\_\_

**Comments:**

The 105-ND facility did not contain hazardous substances. Furthermore, and as detailed above, no radiologically contaminated soil was found at the facility.

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

Constituents detected / concentrations / rationale  
N/A

Sample Collection Summary  
N/A

**H. NOTES / ADDITIONAL INFORMATION**

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

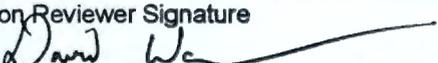
If checked, list the attachment(s):

**I. SAMPLING**

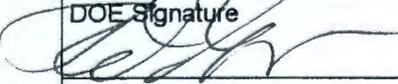
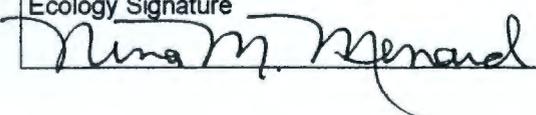
Are soil samples required to demonstrate that remaining structure or below-grade soils meet cleanup standards?       Yes     No

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.

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 David Warren	Date 5/30/12
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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 Guerra	Date 5/24/12
Ecology Signature 	Printed Name NINA M. Menard	Date 6/4/12

# Attachment 15

# 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number  
SDF-100N-018

## 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: Carpenter/Paint Shop Building Number: 1143-N

WIDS Sites Associated or Adjacent:

- Associated: 100-N-84:1, 100-N-84:3, 100-N-84:5, 100-N-84:6
- Adjacent: 120-N-1
- All waste sites above have been classified as accepted

Other:

The 1143-N facility was used as a carpenter shop, paint shop, and a heavy equipment mechanic's shop (CCN 128263 pg. 1). The facility was positioned atop a concrete slab foundation (CCN 128263 pg. 1). It was demolished in 2012 (SIS Summary Report for 1143-N).

A 24" French drain (WIDS Site 100-N-88) was present outside the 1143-N facility near its southeast corner (CCN 128263 pg. 4; H-1-45007, Sheet 6).

## C. INFORMATION SOURCES

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

Historical Site Assessment: <u>Historical Site Assessment for the 1143-N Carpenter/Paint Shop: CCN 128263</u>	Site Walkdown: <u>Visual Inspection of the 1143-N Excavation Soils: CCN 164961</u>
IH Characterization Report: <u>N/A</u>	Radiological Survey: <u>Global Positioning Environmental Radiological Surveyor (GPERS): ESR-FRM-120035BC &amp; ESR-FRM-120035GC</u>
IHC/FHC Document: <u>N/A</u>	WIDS/SIS: <u>RCC Stewardship Information System (SIS) Facility Summary Report: 1143-N</u> <u>Waste Information Data System (WIDS) General Summary Report: 100-N-88</u>
PDSR: <u>N/A</u>	Facility Inspection: <u>N/A</u>
Waste Characterization Checklist: <u>N/A</u>	Summary Report: <u>N/A</u>

Other:

- 100-N-88 Remaining Site for Remedial Action: CCN 154783
- Asbestos Inspection and Sampling Report for 1143-N Carpenter/Paint Shop and Storage Sheds: CCN 144255
- Explanation of Significant Differences for the 100-NR-1 and 100-NR-2 Operable Units Interim Remedial Action Record of Decision: pertinent portion attached to this form
- "Pre-Existing" Conditions Survey of Hanford Site Facilities, Phase II: BHI-00221
- Propane Tank at 1143-N: CCN 006239
- Radiological Survey Record: RSR-100N-10-1681
- Radiological Survey Record: RSR-100N-10-1695
- Radiological Survey Record: RSR-100N-11-0085
- Radiological Survey Record: RSR-IFSM-05-0291
- Radiological Survey Record: RSR-IFSM-10-0491
- WCH Spill/Release Checklist Report Number 12-024: CCN 0633426
- Work Package to Safely Demolish and Dispose of 1143N Carpenters shop: 100 10 06 03 018
- Work Package to safely remove hazmat material, perform above grade demolishing and dispose MO-765, HSO0007, HSO0008, and 1143-N Carpenters Shop and associated WIDS site: 100 11 11 09 031
- Photographs of the 1143-N Facility Pre-Demolition, Time-Stamped: SIS Facility Report for 1143-N pg. 4 (3/19/2003), pg. 5 (8/2/2006), pg. 6 (8/9/2006)

# 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number  
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• Photograph of the 1143-N Facility Pre-Demolition, No Time Stamp: SIS Facility Report for 1143-N pg. 3

## D. HAZARDOUS SUBSTANCES

Check all that apply:

- None   
  Asbestos containing material   
  Lead   
  PCBs/PCB Articles   
  Oils/Greases  
 Chemicals   
 Various chemicals used by carpenters, mechanics, and painters; refrigerants from water coolers  
 List: (BHI-00221 pg. 3-81, CCN 128263 pg. 3, SIS Summary Report for 1143-N, and WIDS General Summary Report for 100-N-88); possible existence of a 1,000 gallon propane tank (CCN 006239)  
 Radiological Contamination   
  Mercury/Mercury Devices  
 Other: Emergency light batteries, fluorescent lights, and capillary tube regulators (CCN 128263 pg. 3)

References/Comments:

Asbestos:

- ACM was expected within the facility (CCN 128263 pg. 2)
- Samples were taken of PACM, no 1143-N sample yielded a detectable level of asbestos (CCN 144255 Att. 2 & 3)

Lead:

- Encapsulated lead bricks were present within the facility (CCN 128263 pg. 2)
- Lead primer was expected to be present on all structural steel and painted pipes (CCN 128263 pg. 3)

PCBs/PCB Articles:

- Door actuators -only suspect PCB sources (CCN 128263 pg. 3)
- Fluorescent light ballasts -only suspect PCB sources (CCN 128263 pg. 3)

Oils/Greases:

- Oily rags within a weather enclosure (CCN 128263 pg. 3)

Radiological Contamination:

- Radiologically regulated equipment was accepted into the facility to receive maintenance work (CCN 128263 pg. 2)

Mercury/Mercury Devices:

- Interior/exterior lights (only suspect mercury sources) (CCN 128263 pg. 3)

Liquids:  Yes     No

If yes, describe source and nature of liquids:

A sink within the 1143-N facility discharged to 100-N-88, a French drain outside of the facility (WIDS General Summary Report for 100-N-88). 100-N-88 was assigned the following COPCs: PCBs, barium, boron, cadmium, chromium (total), copper, lead, manganese, mercury, molybdenum, nickel, zinc, hexavalent chromium, IC anions, SVOCs, and VOCs (CCN 154783 pg. 6).

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

As verified by what documentation:

A work package for 1143-N contains steps that include the removal of mercury-containing components, light bulbs, PCB ballast, and door actuators (100 10 06 03 018 WCH Task Instruction section 5.3). Additionally, craft-related chemicals within the 1143-N facility were removed and relocated to the 1120-N and Energy Northwest Leased Facilities in the 600 Area prior to demolition of the 1143-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:

The 1143-N facility was potentially contaminated by site operations and/or processes (CCN 128263 pg. 1). Accordingly, there was potential for releases to the environment during D4 activities (CCN 128263 pg. 1).

Approximately four gallons of hydraulic fluid were spilled during demolition (CCN 0633426). Removal of the affected soil was completed on the same day and the incident did not require reporting to DOE or another agency because no CERCLA Reportable Quantity threshold was reached (CCN 0633426).

List any hazardous materials left in the building for demolition:

None. Removal of components containing hazardous substances is addressed in a hazmat removal work package 100 10 06 03 018 WCH Task Instruction section 5.3.

## 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

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

Elevated levels of beta and gamma contamination were detected within the 100-N-88 French drain (RSR-100N-10-1681). The 100-N-88 inlet pipe was sampled for gross alpha and gross beta, but neither was detected (HEIS # J1C1P8, CCN 154783 pg. B-1). Additional radiological surveys were conducted in the area of the 1143-N facility, but did not indicate the presence of radiological contamination (RSR-IFSM-10-0491, RSR-IFSM-05-0291, RSR-100N-11-0085, and RSR-100N-10-1695). The post-demolition GPERS surveys conducted at the 1143-N footprint did not yield levels of radiological contamination in exceedance of twice the corresponding background level (ESR-FRM-120035BC & ESR-FRM-120035GC).

It appears that the chemicals, both stored and used, at the 1143-N facility consisted only of those that were needed for carpentry, painting, and mechanic purposes, and were not associated with any reactor processes or effluent (BHI-00221 pg. 3-81 & CCN 128263 pgs. 2 & 3). As the facility had a concrete slab foundation, any release of these chemicals within the facility would have been, at least somewhat, contained (CCN 128263 pg. 1). However, there is no indication that a spill or release occurred within the facility during its operation (CCN 128263 pg. 2).

A sink within the 1143-N facility discharged to 100-N-88, which was found to be chemically contaminated (WIDS General Summary Report for 100-N-88 & CCN 154783). The sink was removed with the 1143-N facility, and D4 personnel were instructed to directly load out and dispose of 100-N-88 debris to ERDF containers. Storing and staging of debris were expressly prohibited (100 11 11 09 031 WCH Task Instruction section 5.5). The Field Remediation (FR) organization was made responsible for the final closeout of 100-N-88 (Explanation of Significant Differences for the 100-NR-1 and 100-NR-2 Operable Units Interim Remedial Action Record of Decision pg. 15).

Comments:

Pertinent design drawing: H-1-45007, sheet 6

### E. FIELD OBSERVATIONS

#### Visual Inspection

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

References/Comments:

No anomaly nor stained soil was discovered following facility demolition (CCN 164961).

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

References/Comments:

N/A

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:

No anomaly nor stained soil was discovered following demolition (CCN 164961).

#### Radiological Surveys

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

References/Comments:

One work progress radiological survey indicated that detectable levels of contamination were found in 100-N-88 (RSR-100N-10-1681). However, no other reviewed radiological survey indicated the presence of radiological contamination (RSR-IFSM-10-0491, RSR-IFSM-05-0291, RSR-100N-11-0085, and RSR-100N-10-1695). The post-demolition GPERS surveys conducted over the 1143-N footprint did not identify radiological contamination (ESR-FRM-120035BC & ESR-FRM-120035GC).

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

References/Comments:

The 100-N-88 inlet pipe was sampled for gross alpha and gross beta, neither was detected (HEIS # J1C1P8, CCN

## 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

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154783 pg. B-1).

Is the area potentially a discovery site?  Yes  No

**References/Comments:**

The sample of 100-N-88 did not yield detectable levels of radiological contamination. No radiological contamination was identified in the area after D4 work was complete.

Were the contaminated materials removed?  Yes  No  N/A

**References/Comments:**

The only apparent indication of radiologically contaminated material in the area came from 100-N-88 (RSR-100N-10-1681). The 100-N-88 inlet pipe was sampled for gross alpha and gross beta, neither was detected (HEIS # J1C1P8, CCN 154783 pg. B-1). 100-N-88 was removed as part of D4 operations at 1143-N. After demolition and loadout, no radiologically contamination was identified in the area (ESR-FRM-120035BC & ESR-FRM-120035GC).

### F. WIDS SITES

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

**If yes, list the WIDS sites:**

100-N-88

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

**References/Comments:**

WIDS site 100-N-88 (French drain at the southeast corner of 1143-N) was completely removed as part of D4 work at the 1143-N facility.

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

**References/Comments:**

The 1143-N footprint is not within FR scope and will not be deferred to FR. WIDS site 100-N-88 is however in FR scope and will be closed out by the FR organization (Explanation of Significant Differences for the 100-NR-1 and 100-NR-2 Operable Units Interim Remedial Action Record of Decision pg. 15)

### 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 detailed in parts D and E of this form, it is unlikely that any contamination would have remained within the facility footprint following D4 activities, with the exception of 100-N-88. Closeout of 100-N-88, including identification of potential contaminants of concern, will be performed by the FR organization.

Summary of in-process soil sampling requirements:

N/A

Constituents detected / concentrations / rationale

Consult Sample Collection Summary below for actual data.

Sludge from 100-N-88:

- Constituents Detected Above Practical Quantitation Limits: barium, calcium, copper, iron, magnesium, manganese, potassium, silicon, zinc, chloride, sulfate, and acetone
- Constituents Detected Below Practical Quantitation Limits (Estimated Concentration): aluminum, boron, cadmium, chromium, molybdenum, nickel, sodium, 2-butanone, and methylenechloride

The 100-N-88 Site will be closed out by Field Remediation.

**Sample Collection Summary**

Sludge from 100-N-88: Sample (HEIS) Numbers J1C1P8 & J1C1P9 (CCN 154783 Appendix B)

The 100-N-88 Site will be closed out by Field Remediation.

## 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number  
SDF-100N-018

### H. NOTES / ADDITIONAL INFORMATION

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

If checked, list the attachment(s):

- Explanation of Significant Differences for the 100-NR-1 and 100-NR-2 Operable Units Interim Remedial Action Record of Decision (pertinent portions only)

### 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

*David Warren*

Printed Name

David Warren

Date

5/30/12

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

*RFG*

Printed Name

RFG

Date

5/24/12

Ecology Signature

*Nina M. Menard*

Printed Name

Nina M. Menard

Date

6/4/12

March 2011

**Explanation of Significant Differences**

**for the**

**100-NR-1 and 100-NR-2 Operable Units**  
**Interim Remedial Action Record of Decision**

**Hanford Site**  
**Benton County, Washington**

**March 2011**

**Table 2. Waste Sites Being Added to the 100-NR-1/NR-2 Interim Remedial Action Record of Decision. (7 Pages)**

Operable Unit	Site Name	Current Site Knowledge/Comment	Media/Material	Known or Potential Contamination	Estimated Cost of Site Remediation
100-NR-1	100-N-88, 1143-N French Drain <sup>a</sup>	The site consists of a 0.61-m (24-in.)-diameter french drain and its associated 5.1-cm (2-in.) drain pipeline and underlying soil. Until about 1997, a sink within the facility discharged to this site. The potential existed for the site to have inadvertently received paint solvents and other hazardous liquids from the activities within the building. The sink was removed about 1997 and discharges to this site ceased.	Soil, pipe and debris	Chemical contaminants	\$984,334
100-NR-1	100-N-89, 117-NVH French Drain <sup>b</sup>	The french drain is a 61-cm (24-in.)-diameter concrete pipe buried to 91 cm (36 in.) that received discharge from back flushing a raw water supply line in the 117-NVH Valve House. The top of the pipe is at grade and it is filled with gravel. An additional 46 cm (18 in.) of gravel is beneath the pipe. A metal plate covers the pipe.	Soil, concrete, and debris	Chemical contaminants	\$308,317
100-NR-1	100-N-90, 100-N Reactor Rod Caves <sup>b</sup>	The rod cave is two 30.5-cm (12-in.) carbon steel pipes buried in the earth berm on the north side of the 117-N Air Filter Building. The west ends of the pipes have aluminum covers; the east ends are buried in the berm. Two vertical pipes for monitoring radiation levels extend through the berm. The rod cave was the temporary storage for used control rods from N Reactor.	Soil, pipe	Radiological contaminants	\$120,159
100-NR-1	100-N-91, 100-N Battery Debris <sup>b</sup>	The site consists of a 0.6-m (2-ft)-diameter battery dump. The exterior of the batteries have degraded and the contents mixed into the soil. There is no vegetation growing in the affected area.	Soil, debris	Chemical contaminants	\$120,159
100-NR-1	100-N-92, 100-N Stain Area #1 <sup>a</sup>	The site consists of a 3-m (10-ft)-diameter area stained with a white substance resembling dried paint and two 4-L (1-gal) cans.	Soil, debris	Chemical contaminants	\$214,577
100-NR-1	100-N-93, 100-N Stain Area #2 <sup>a</sup>	The site consists of potentially contaminated soil. It includes concrete, metal, glass debris, stained soil, suspected friable asbestos, and garnet sand with areas lacking in vegetation.	Soil, debris	Chemical contaminants, asbestos	\$214,577
100-NR-1	100-N-94, 100-N Oil Filters #1 <sup>b</sup>	The site consists of the underlying soil and approximately 50 oil filters.	Soil, debris	Chemical contaminants, TPH	\$120,159

# Attachment 16

## 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number  
SDF-100N-017

### 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: Document Control Building and Guard House / Microwave Tower Building Number: 1112-N and 1112-NA

WIDS Sites Associated or Adjacent:  
100-N-84 (colon sites 1, 2, 3, 4, 5, 6, and 8) and UPR-100-N-19 / 21 / 23 / 42  
All of these WIDS sites are classified as accepted.

#### Other:

The 1112-N and 1112-NA facilities were erected atop concrete slab floors (CCN 126706 pg. 1). Throughout its history, the 1112-N facility was used for access control, document storage, office space, and telecommunications storage (CCN 126706 pgs. 1 & 2). The 1112-NA facility was a microwave tower with an instrument shed at its base (CCN 126706 pg. 1).

Above grade demolition of the 1112-N and 1112-NA facilities was completed in 2009. Only above grade demolition was pursued at that time due to the close proximity of the 1112-N facility foundation to the active 100-N export water line. Below grade demolition of the 1112-N and 1112-NA facilities was completed on March of 2012, following deactivation of the export water line. The 1112-N below grade structure was removed completely while the 4 footings for the 1112-NA tower were removed three foot below grade, with the remaining portions of the clean concrete footings to be left in place based on results of the visual inspection and final radiological surveys.

### C. INFORMATION SOURCES

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

<p>Historical Site Assessment for Historical Site Assessment: the 1112-N &amp; 1119-N Facilities: <u>CCN 126706</u></p> <p>IH Characterization Report: <u>N/A</u></p> <p>IHC/FHC Document: <u>N/A</u></p> <p>PDSR: <u>N/A</u></p> <p>Waste Characterization Checklist: <u>N/A</u></p>	<p>E-mail documenting visual inspection of Site Walkdown: the 1112-N and 1112-NA Excavation Soils: <u>CCN 164788</u></p> <p>Radiological Survey: <u>Global Positioning Environmental Radiological Surveyor (GPERS): ESR-FRM-120038BC and ESR- FRM-120038GC</u></p> <p>RCC Stewardship Information System (SIS) WIDS/SIS: Facility Summary Reports: 1112-N and 1112- NA</p> <p>Facility Inspection: <u>N/A</u></p> <p>Summary Report: <u>N/A</u></p>
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#### Other:

- Analysis for Bulk Samples for Fiber Content of Asbestos: CCN 023890
- Asbestos Inspection and Sampling Report for 1112-NA Microwave Tower: CCN 144629
- Drawing H-1-41183 Sheet 1, Rev. 5
- Drawing H-1-41184 Sheet 1, Rev. 2
- Drawing H-1-41185 Sheet 1, Rev. 2
- Field Support Refrigerant/Inventory Form: CCN 509020
- Field Support Refrigerant/Inventory Form: CCN 519231
- Hazardous Material Removal Work Package for 1112-N: 100 08 07 15 002 A-Pack (e)
- Hazardous Material Removal Work Package for 1112-NA: 100 08 07 15 002 A-Pack (j)
- Pre-Existing Conditions Survey of Hanford Site Facilities, Phase II: BHI-00221
- Spill/Release Checklist Concerning Potable Water Spill: CCN 506599
- Photograph of the 1112-N and 1112-NA Facilities Pre-Demolition, Time-Stamped: SIS Facility Report for 1112-N pg. 6 (2/1/2006), CCN 144629 pg. 2 (5/20/2009); CCN 144629 pg. 2 (5/20/2009)
- Photographs of the 1112-N and 1112-NA Facilities Pre-Demolition, No Time Stamp: SIS Facility Report for 1112-N pgs. 3-5, SIS Facility Report for 1112-NA pg. 4, and CCN 126706

## 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

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pg. 3

- Photographs of the 1112-N and 1112-NA Facilities Post-Demolition, No Time Stamp: SIS Facility Report for 1112-NA pg. 5; CCN 164788 pgs. 2-5

### D. HAZARDOUS SUBSTANCES

Check all that apply:

- None    
  Asbestos containing material    
  Lead    
  PCBs/PCB Articles    
  Oils/Greases  
 Chemicals    
 Tritium & vinyl chloride (CCN 126706 pgs. 5 & 6), refrigerant including R-22 (CCN 126706 pg. 8,  
 List: CCN 519231 pg. 1, and CCN 509020 pg. 1), and potential for volatile fluid within thermometers  
 (CCN 126706 pg. 8)
- Radiological Contamination    
 Mercury/Mercury Devices  
 Other: Dry-cell and lead-acid batteries (BHI-00221 pgs. 3-77 & 3-78)

References/Comments:

- Asbestos Containing Material
  - 2% Chrysotile in 1112-N floor (CCN 023890 pg. 1); 1112-NA microwave dish covers contained non-friable presumed ACM (CCN 144629 Attachments 1 & 2); H-1-41185 Sheet 1, sections B-12 & B-13; and H-1-41183 Sheet 1, section D-8
- Lead
  - CCN 126706 pgs. 6 & 7; H-1-41184 Sheet 1 (section D-7)
- PCBs/PCB Articles
  - CCN 126706 pgs. 7 & 8
- Oils/Greases
  - Through connection to UPR-100-N-19 / 21 / 23 / 42
- Mercury/Mercury Devices
  - CCN 126706 pg. 7

Liquids:  Yes     No

If yes, describe source and nature of liquids:

The 1112-N facility contained water and sewer utilities (CCN 126706 pgs. 2 and 10).

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

As verified by what documentation:

Multiple hazardous substances were encountered within the 1112-N facility (100 08 07 15 002 A-Pack (e) Table 1). All such substances were removed or identified for segregation prior to demolition, with the exception of "Bio-Hazards" (100 08 07 15 002 A-Pack (e) Table 2). The 1112-N facility presumably contained a majority of the hazardous substances at these facilities. However, it was predicted that these substances would not affect the disposal of the 1112-N facility rubble if they were not removed prior to its demolition (CCN 126706 pg. 8).

Multiple hazardous substances were encountered within the 1112-NA facility (100 08 07 15 002 A-Pack (j) Table 1). All such substances were removed or identified for segregation prior to demolition, with the possible exception of two window air conditioning units (100 08 07 15 002 A-Pack (j) Table 2).

The hazardous substances contained within these facilities did not present a reasonable potential for release during demolition, as detailed below. All documented sources of tritium, lead, PCBs, and mercury were present in standard building fixtures such as lamps, switches, and door actuators (CCN 126706 pgs. 5-9). No reviewed asbestos analysis indicated the presence of friable asbestos (CCN 023890 & CCN 144629).

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 contained various hazardous substances. However, the contamination potential based on the nature and quantity of contained hazardous substances were minimal (CCN 126706 pg. 2). Because of this, the 1112-N and 1112-NA facilities were assigned a Type III risk level (CCN 126706 pg. 1). Facilities with a Type III risk level classification are managed as if they are free of contamination (CCN 126706 pg. 1). Such a classification was assigned to facilities for which there was not a reasonable potential for a release of hazardous material into the environment during demolition

## 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

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(CCN 126706 pg. 1).

List any hazardous materials left in the building for demolition:

- "Bio-Hazards" (100 08 07 15 002 A-Pack (e) Tables 1 & 2)
- (possibly) two window air conditioning units (100 08 07 15 002 A-Pack (j) Tables 1 & 2)
- (possibly) non-friable asbestos sources (CCN 023890 pg. 1 & CCN 144629 Attachments 1 & 2)
- (possibly) radiological contamination as a result of biological contaminant migration (CCN 126706 pg. 5)

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

No. Hazardous substances were removed from these facilities prior to demolition and visual inspection of the excavations following removal did not identify soil staining or anomalies that would be indicative of chemical contamination (CCN 164788). Furthermore, the GPERS survey for this location yielded no points of elevated radiological contamination (ESR-FRM-120038BC and ESR-FRM-120038GC).

Comments:

A spill of 6,300 gallons of potable water occurred from a valve pit adjacent the 1112-N on June of 1998 (CCN 506599 pg. 1). These facilities were within the 100-N underground radioactive material area (CCN 126706 pg. 5).

Pertinent design drawings include H-1-45007 Sheets 35 & 36, H-1-41181 Sheet 1, H-1-41183 Sheet 1, H-1-41184 Sheet 1, and H-1-41185 Sheet 1.

### E. FIELD OBSERVATIONS

#### Visual Inspection

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

References/Comments:

No anomaly nor stained soil was discovered (CCN 164788).

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

References/Comments:

N/A

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:

GPERS: ESR-FRM-120038BC and ESR-FRM-120038GC

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

References/Comments:

N/A

Is the area potentially a discovery site?  Yes  No

References/Comments:

N/A

Were the contaminated materials removed?  Yes  No  N/A

References/Comments:

N/A

### F. WIDS SITES

## 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

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

If yes, list the WIDS sites:  
N/A

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

References/Comments:  
This question is not applicable as no WIDS sites were affected by D4 activities.

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:  
N/A

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

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

#### Sample Collection Summary

• 1112-N Floor (Asbestos): Sample Number TMH1195233 (CCN 023890 pg. 2). The sample showed the flooring material to contain 2% Chrysotile asbestos.

### H. NOTES / ADDITIONAL INFORMATION

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

If checked, list the attachment(s):  
E-mail documenting visual inspection of the 1112-N and 1112-NA Excavation Soils (CCN 164788)

### 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

*David Warren*

Printed Name

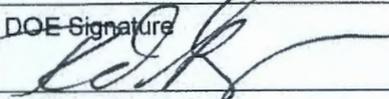
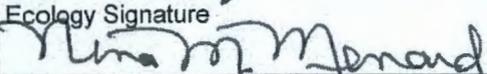
David Warren

Date

5.9.12

**100-N ANCILLARY FACILITIES REMOVAL ACTION  
SAMPLING DETERMINATION FORM**Determination Number  
SDF-100N-017

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 5/14/12
Ecology Signature 	Printed Name NINA M. MENARD	Date 5/17/12

164788

**^WCH Document Control**

**From:** Warren, David J  
**Sent:** Monday, March 26, 2012 2:04 PM  
**To:** ^WCH Document Control  
**Subject:** Visual Inspection of the 1112-N and 1112-NA excavation soils

**Attachments:** 1112N.NA Visual Inspection.doc; ESRFRM120038BC.pdf; ESRFRM120038GC.pdf

Please CHRON this e-mail and attachments as Visual Inspection of the 1112-N and 1112-NA excavation soils. Contact me if you have any questions. Thanks.

David Warren  
100-N EPL  
539-6040

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**From:** Warren, David J  
**Sent:** Tuesday, March 20, 2012 10:39 AM  
**To:** Allen, Mark E  
**Cc:** McCurley, Clay D  
**Subject:** Visual Inspection of the 1112-N and 1112-NA excavation soils

At approximately 0930 hours on March 13, 2012, the soils/remaining structures at the 1112-N (Guard Station/Document Control Building) and 1112-NA (Microwave Tower) open excavations were visually inspected for signs of staining or anomalous items. Both excavations, including the remaining footings of the 1112-NA microwave tower which were removed to a level 3 feet below grade, were observed to be free of any stained soils or anomalies that would be indicative of chemical or petroleum contamination. The required GPERS surveys (Performed 3/14/2012, attached) didn't identify any contamination, nor was any expected since the structures were not contaminated. Additionally, GPS surveys have been performed to delineate the extent of excavations and locations of microwave tower footings that are to be left 3 feet below grade, pending approval by Ecology to do so. Please see the attached word file for photographs that were taken during the inspection. I'll CHRON this email and attachments for future use as references in closure documentation. Feel free to contact me if you have any questions. Thanks.

David Warren  
100-N D4 Environmental Project Lead  
WCH  
539-6040



1112N.NA Visual  
Inspection.doc...

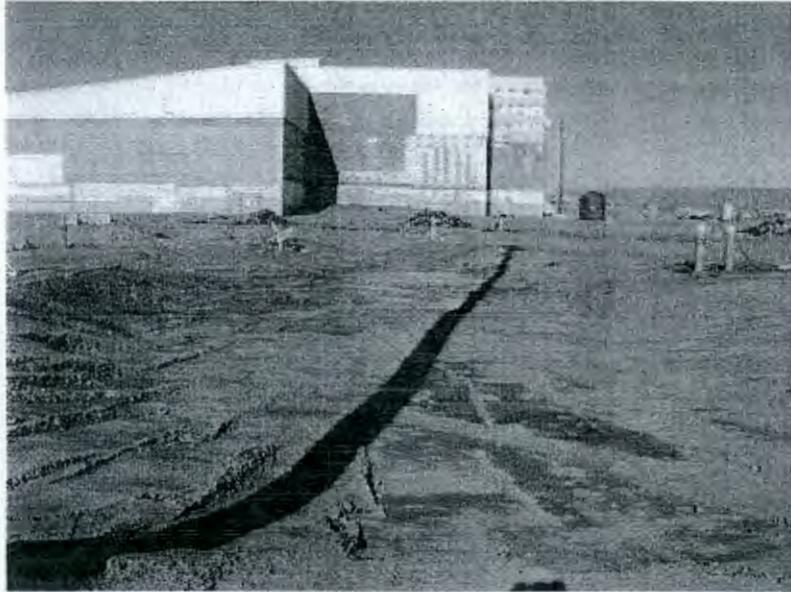


ESRFRM120038BC.  
pdf (709 KB)



ESRFRM120038GC.  
pdf (716 KB)

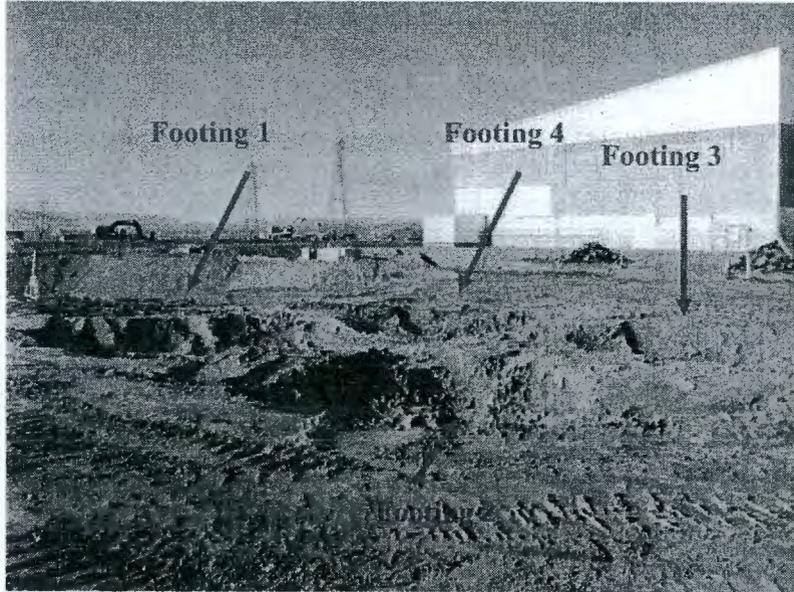
**1112-N/1112-NA Visual Inspection Photographs**



**1112-N Excavation Looking West-Northwest**



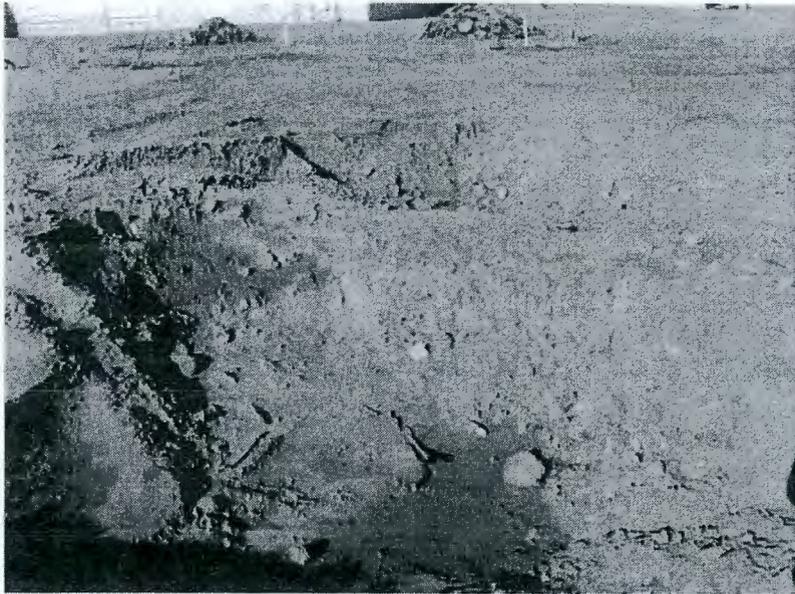
**1112-N Excavation Looking East-Southeast**



**1112-NA (overview of tower footing locations)**



**Footing 1**



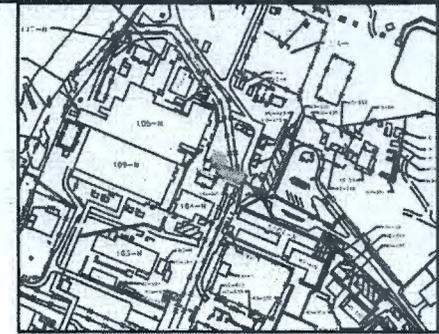
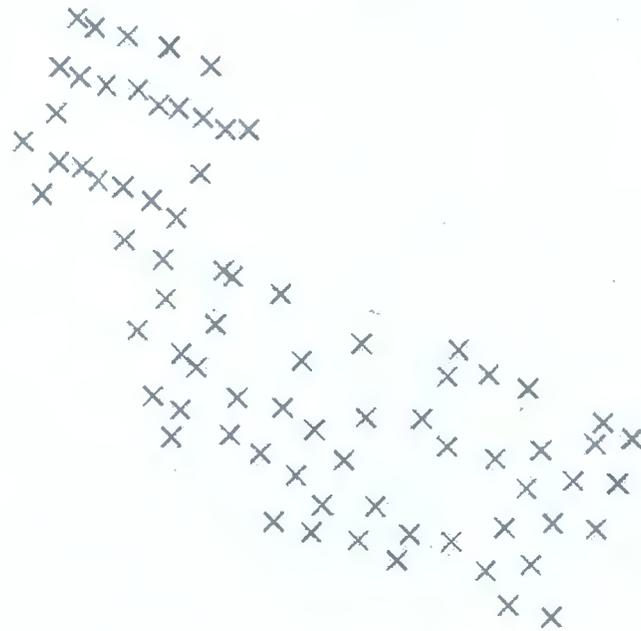
**Footing 2**



**Footing 3**



**Footing 4**



Site View

Copy

Bkg Location  
429 meters SE  
410 cpm



Legend

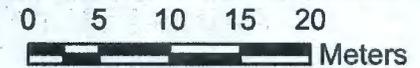
Summary Statistics

NET CPM

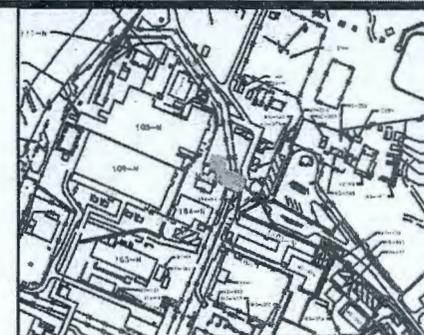
- × <615
- 615 - 5000
- 5000 - 10000
- 10000 - 25000
- 25000

Coverage File: N074B  
 Number of Data Pnts: 79  
 Type of Survey: beta  
 Max GCPM: 753  
 Avg Bkg CPM: 410  
 Survey Date: 3/14/2012  
 Area Surveyed: 767 m<sup>2</sup>  
 Project File: ESRFRM120038B  
 Pdf File: ESRFRM120038BC

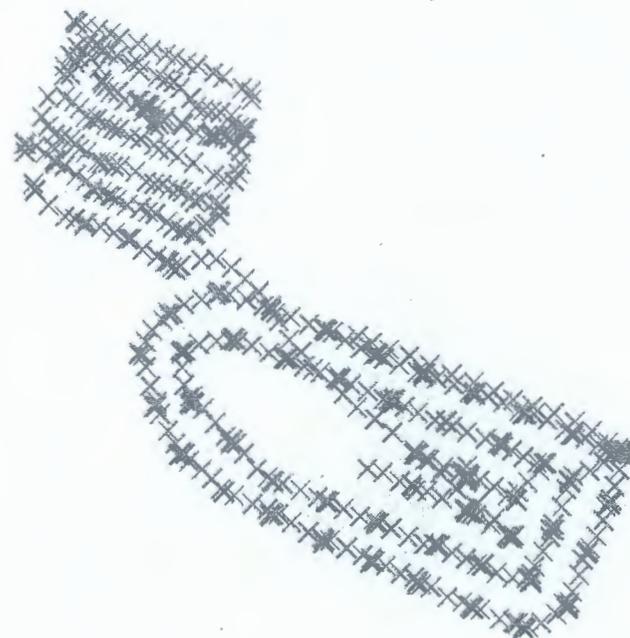
**100N Field Remediation  
 1112-N / 1112-NA  
 GPERS Radiological Survey  
 Beta Track Map**



Survey Map Prepared By Bruce Coomer, ESI



Site View



Bkg Location  
429 meters SE  
1332 cpm



Copy

Legend

- NET CPM
- X <1998
  - 1998 - 5000
  - 5000 - 10000
  - 10000 - 25000
  - 25000

Summary Statistics

Coverage File: N074.A  
 Number of Data Pnts: 923  
 Type of Survey: gamma  
 Max GCPM: 1984  
 Avg Bkg CPM: 1332  
 Survey Date: 3/14/2012  
 Area Surveyed: 767 m<sup>2</sup>  
 Project File: ESRFRM120038G  
 Pdf File: ESRFRM120038GC

**100N Field Remediation  
 1112-N / 1112-NA  
 GPERS Radiological Survey  
 Gamma Track Map**



Survey Map Prepared By Bruce Coomer, ESI

# Attachment 17

## 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number  
SDF-100N-009

### 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: Waste Treatment Pilot Plant, Effluent Water Pilot Plant Annex, Crib Effluent Iodine Monitoring Facility, and Crib Sample Pump Pit      Building Number: 1322-N, 1322-NA, 1322-NB, and 1322-NC

#### WIDS Sites Associated or Adjacent:

• Associated: (All WIDS sites below are classified as Accepted unless otherwise noted)  
UPR-100-N-4, UPR-100-N-8, UPR-100-N-31, 100-N-63:1 (Interim Closed Out), 100-N-63:2, 100-N-84:3, 100-N-84:6, 100-N-84:7, 100-N-84:8 (intersects 100-N-84: 3 & 6)

Other:

### C. INFORMATION SOURCES

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

<p>Historical Site Assessment: <u>1322-N, 1322-NA, 1322-NB, 1322-NC/100N: CCN 124147</u></p> <p>IH Characterization Report: <u>N/A</u></p> <p>IHC/FHC Document: <u>Initial Hazard Categorization Documentation Form for the 1322-N Complex: IHC-2007-0011</u></p> <p>PDSR: <u>Post-Demolition Summary Report for the 1322-N, 1322-NA, 1322-NB, and 1322-NC Waste Treatment Pilot Plant Facility Complex: CCN 157108</u></p> <p>Waste Characterization Checklist: <u>N/A</u></p>	<p>Site Walkdown: <u>N/A</u></p> <p>Radiological Survey: <u>Global Positioning Environmental Radiological Surveys (GPERs): ESR-FRM-05-0265 &amp; ESR-FRM-10-0146</u></p> <p>WIDS/SIS: <u>RCC Stewardship Information System (SIS) Facility Summary Reports: 1322-N, 1322-NA, 1322-NB, and 1322-NC WIDS reports for UPR-100-N-4, UPR-100-N-8, and UPR-100-N-31.</u></p> <p>Facility Inspection: <u>Asbestos Inspection and Sampling Reports for the 1322-N Complex: CCN 131955 &amp; CCN 144944</u></p> <p>Summary Report: <u>N/A</u></p>
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Other:

- 100 Area D4 Project Building Completion Report: WCH-473
- Pre-Existing Conditions Survey of Hanford Site Facilities to be Managed by BHI, Phase II: Doc Num BHI-00221
- Documentation of 1322-N Water Sample Results: CCN 024095
- Documentation of 1322-N Water Sample Results: CCN 025950
- Documentation of 1322-N Water Sample Results: CCN 030867
- GIS Field Remediation Overlay Map: Attached to this form
- Remediation Designs: 0100N-DD-C0252 / C0298
- Photograph of 1322-N Facilities Pre-Demolition, No Time Stamp: SIS Facility Summary Report for 1322-N pg. 3 (partial time stamp); CCN 157108 pg. 9; CCN 157108 pg. 10 (partial time stamp)
- Photographs of 1322-N Facilities Pre-Demolition, With Time Stamp: SIS Facility Summary Report for 1322-N pg. 4 (1/18/2006) & pg. 5 (10/31/2005); SIS Facility Summary Report for 1322-NB pg. 4 (6/11/2002); CCN 124147 pg. 7 (1/24/2006) & (6/11/2002); and CCN 124147 pg. 8 (6/11/2002)
- Photograph of 1322-N Facilities Post-Demolition, No Time Stamp: CCN 157108 pg. 11

### D. HAZARDOUS SUBSTANCES

Check all that apply:

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

## 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

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Chemicals List: Refrigerants: IHC-2007-0011 pg. 3 & BHI-00221 pg. 3-94

Radiological Contamination  Mercury/Mercury Devices

- Other:
- Metals (contained in sand blasting media): CCN 124147 pg. 4
  - Aerosol paint cans: BHI-00221 pgs. (3-92) - (3-95)
  - Standing liquid in 1322-N building sump: BHI-00221 pg. 3-92
  - Unknown contents (held in 55-gallon drum): CCN 124147 pg. 4 & BHI-00221 pg. 3-93

**References/Comments:**

- Asbestos containing material (ACM): IHC-2007-0011 pg. 3, CCN 124147 pg. 3, and CCN 131955 pg. 1 & Attachment 4
- Lead: IHC-2007-0011 pg. 3, CCN 124147 pg. 3, and BHI-00221 pgs. (3-92) - (3-94)
- PCBs/PCB Articles: IHC-2007-0011 pg. 3 & CCN 124147 pg. 3
- Radiological Contamination: ESR-FRM-10-0146, CCN 124147 pg. 2, and BHI-00221 pgs. (3-92) - (3-95)
- Mercury/Mercury Devices: IHC-2007-0011 pg. 3, CCN 124147 pg. 3, and BHI-00221 pg. 3-94

Liquids:  Yes  No

**If yes, describe source and nature of liquids:**

The 1322-N facility contained a drainage tank that was used during the diversion of radioactive effluent waste that originated at the 105-N reactor plant (WCH-473 pg. 5). The processes conducted at the other facilities within the 1322-N complex also utilized this radioactive effluent waste (IHC-2007-0011 pg. 1).

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

**As verified by what documentation:**

All known hazardous substances were removed from the facilities prior to demolition (WCH-473 pg. 15).

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

**References/Comments:**

Each of these facilities were identified as potentially contaminated (CCN 124147 pg. 1). Furthermore, radioactive contamination was identified at these facilities (CCN 124147 pg. 1, ESR-FRM-05-0265, and ESR-FRM-10-0146). Accordingly, there was potential for hazardous substances to be introduced into the soils during facility operations and/or demolition.

**List any hazardous materials left in the building for demolition:**

Based on text within the 100 Area D4 Project Building Completion Report it seems that no hazardous materials were left in the building for demolition (WCH-473 pg. 15). This was not verified through review of pertinent Hazardous Material Removal Work Packages because the Field Remediation organization will be responsible to perform final closeout at this location. See the "Comments" section below for further details.

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

GPERS surveys conducted at the facility indicate the presence of elevated radiological levels (ESR-FRM-05-0265 & ESR-FRM-10-0146). Both the beta and gamma radiological levels exceeded twice their corresponding background radiological levels at the time of the survey (ESR-FRM-10-0146).

**Comments:**

Each of these facilities has been demolished, including their respective foundations (WCH-473 pgs. 5-8 & pg. 15). The location where these facilities used to exist has been transferred to the Field Remediation organization (WCH-473 pgs. 5-8 & CCN 157108 pg. 7). Verifying the attainment of cleanup standards at this location will be determined as part of a remedial action (WCH-473 pg. 16 & CCN 157108 pg. 7). All waste sites associated with these facilities will be closed out by the Field Remediation organization (CCN 157108 pg. 4). The planned excavation boundaries for the associated waste sites cover the historical footprints of these facilities in entirety (GIS Field Remediation Overlay Map--attached to this form).

Backfilling at this location will be performed in conjunction with remedial action activities (WCH-473 pgs. 5-8).

Multiple samples were taken from water at 1322-N (CCN 024095, CCN 025950, and CCN 030867). These samples were analyzed for radiological constituents and subsequently failed multiple radiological evaluations (CCN 025950). Accordingly, the water at 1322-N was not released from radiological controls (CCN 025950).

## 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number  
SDF-100N-009

### E. FIELD OBSERVATIONS

#### Visual Inspection

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

**References/Comments:**

No stains were identified prior to demolition of these facilities (CCN 124147 pg. 2). No anomalies were discovered during demolition of the facilities (CCN 157108 pg. 6).

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

**References/Comments:**

Neither stained soils nor anomalies were discovered, 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 discovered, so this question is not applicable.

Is the area potentially a discovery site?  Yes  No

**References/Comments:**

Neither stained soils nor anomalies were discovered.

#### Radiological Surveys

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

**References/Comments:**

ESR-FRM-05-0265 & ESR-FRM-10-0146

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

**References/Comments:**

It was not determined during review of these facilities if the radiologically contaminated soils were sampled because the Field Remediation organization will be responsible to perform closeout of this location.

Is the area potentially a discovery site?  Yes  No

**References/Comments:**

The GPERS surveys identified elevated levels of radiological contamination.

Were the contaminated materials removed?  Yes  No  N/A

**References/Comments:**

It was not determined during review of these facilities if the radiologically contaminated soils were removed because the Field Remediation organization will be responsible to perform closeout of this location.

### F. WIDS SITES

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

**If yes, list the WIDS sites:**

The following WIDS sites were presumed to have been removed by D4 activities: UPR-100-N-4, UPR-100-N-8, and UPR-100-N-31 (CCN 157108 pg. 4).

The following WIDS sites were partially removed by D4 activities: 100-N-63:2 & 100-N-84:6 (CCN 157108 pg. 4).

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

**References/Comments:**

As indicated above, only UPR-100-N-4, UPR-100-N-8, and UPR-100-N-31 were presumed to have been 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 WIDS sites that were presumed to have been removed by D4 activities will undergo verification sampling by the Field Remediation organization, if necessary (CCN 157108 pg. 4). Verification sampling for UPR-100-N-4, UPR-100-

## 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number  
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N-8, and UPR-100-N-31 will provide sufficient coverage of the 1322-N, NA, NB, & NC removal excavation (See attached GIS Field Remediation Overlay map and FR design drawings). The WIDS sites that were partially removed by D4 activities are within the Field Remediation organization's scope of work (CCN 157108 pg. 4).

### 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:

The COPCs associated with these facilities were not identified for use with this form because the Field Remediation organization will perform closeout of this location. Accordingly, the remedial action will identify and address COPCs associated with this facility.

Summary of in-process soil sampling requirements:

N/A

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

#### Sample Collection Summary

- Joint compound at 1322-NA: Sample (HEIS) Number J14BM0 (CCN 157108 Attachment 1 & CCN 131955 Attachment 4)
- Caulking at 1322-N: Sample (HEIS) Number J14BM1 (CCN 157108 Attachment 1 & CCN 131955 Attachment 4)
- Insulation at 1322-NA: Sample (HEIS) Number J14BM2 (CCN 157108 Attachment 1 & CCN 131955 Attachment 4)
- Wall board at 1322-NA: Sample (HEIS) Numbers J14BM3 & J14BM4 (CCN 157108 Attachment 1 & CCN 131955 Attachment 4)
- Grit media at 1322-N: Sample (HEIS) Number J14BM7 (CCN 157108 Attachment 1)
- Insulation at 1322-N: Sample (HEIS) Numbers J14Y01 & J14Y02 (CCN 157108 Attachment 1)
- Soil at 1322-N: Sample (HEIS) Number J19L06 (CCN 157108 Attachment 1)
- Pipe coupon at 1322-N: Sample (HEIS) Numbers J19VX3 & J19VX4 (CCN 157108 Attachment 1)
- Water at 1322-N: Sample (HEIS) Numbers J19VX5 & J19VX5-A (CCN 157108 Attachment 1)
- Pipe wrap at 1322-N: Sample (HEIS) Number J19Y16 (CCN 157108 Attachment 1)
- IX Resin at 1322-NA: Sample (HEIS) Numbers J1C0X7 & J1C0X8 (CCN 157108 Attachment 1)
- TSD piping scale at 1322-N: Sample (HEIS) Number B0YC82 (SIS Facility Summary Report for 1322-N pg. 1)
- Water at 1322-N: Sample (HEIS) Numbers S5079-01.J20, S5079-02.J20, S5079-04.J20, and S5079-06.J20 (CCN 024095 & CCN 030867)

### H. NOTES / ADDITIONAL INFORMATION

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

If checked, list the attachment(s):

GIS Field Remediation Overlay Map  
FR Excavation Design Drawings 0100N-DD-C0252 and 0100N-DD-C0298

### 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.

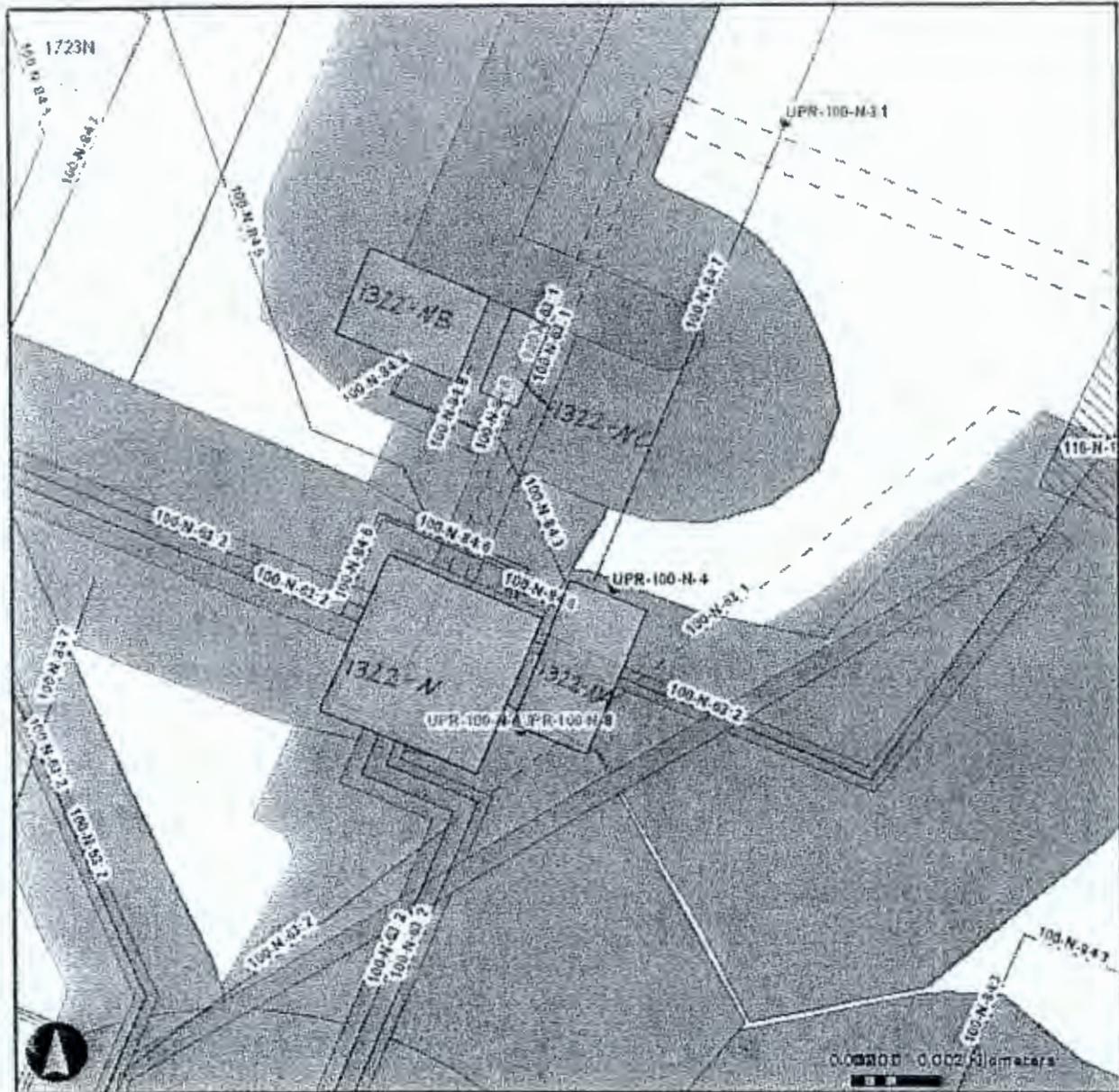
The individual below acknowledges that the review of this facility has been completed. He or she also commits to provide to the Department of Energy (DOE) and the Washington State Department of Ecology (Ecology) any available information that could alter the sampling decision established in this form.

## 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number  
SDF-100N-009

Information Reviewer Signature <i>David Warren</i>	Printed Name David Warren	Date <i>5/21/12</i>
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 <i>[Signature]</i>	Printed Name <i>RF Guerra</i>	Date <i>5/15/12</i>
Ecology Signature <i>Nina M. Menard</i>	Printed Name <i>NINA M. Menard</i>	Date <i>5/29/12</i>

# Map



**Buildings**



**WasteSitePoints**

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

**WasteSitesLine (continued)**

- Accepted, Rejected
- Discovery,
- Not Accepted,

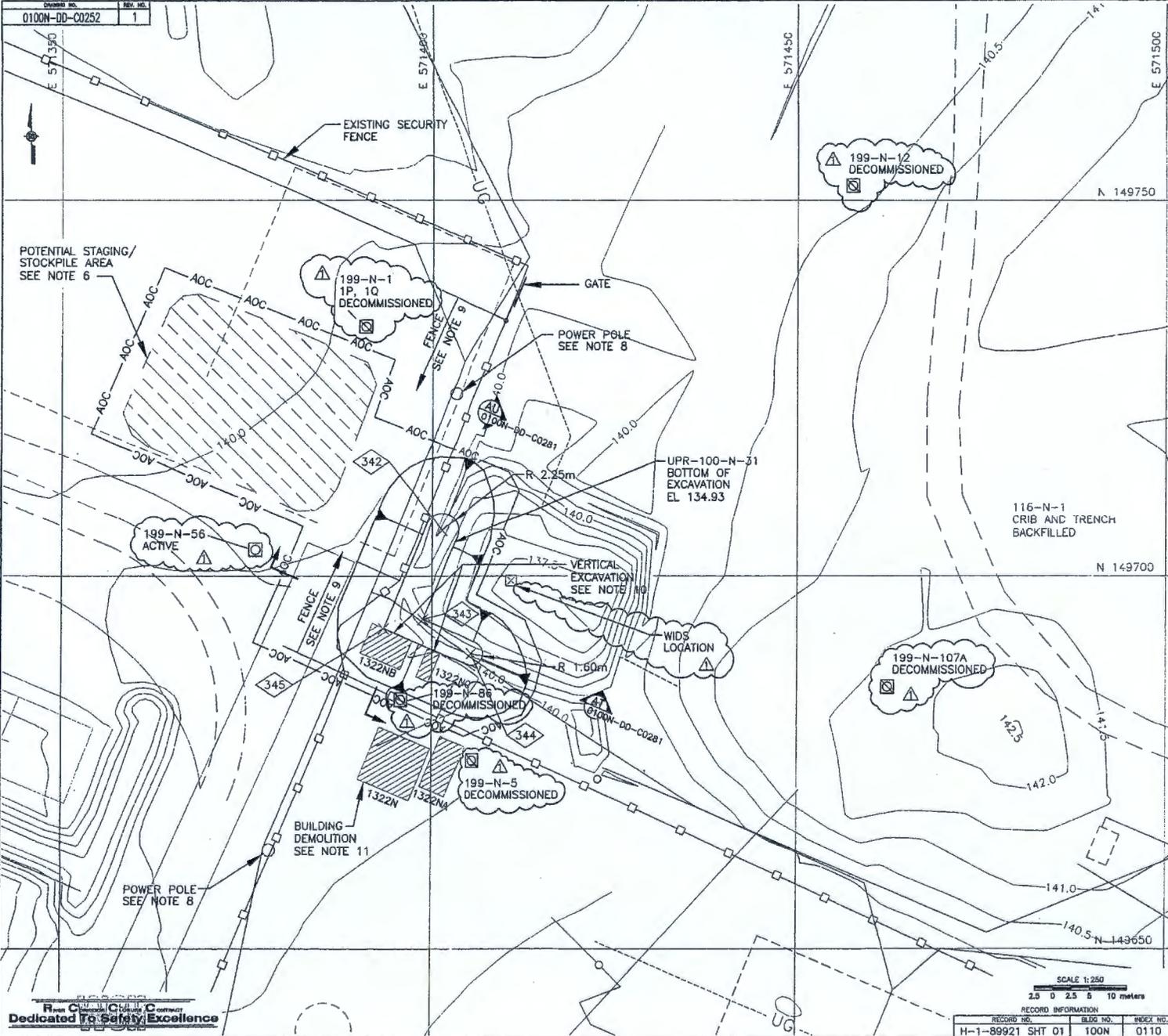
**WasteSitePolys**

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

**Waste Point Labels**

- N\_EXC\_Toe
- N\_EXC\_Daylight
- Main Roads
- Railroads

DRAWING NO. 0100N-DD-C0252  
REV. NO. 1



NOTES

- SEE DRAWING 0100N-DD-G0023 FOR GENERAL ABBREVIATIONS AND SYMBOLS LIST.
- 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, G#0579926, G#0579929, G#0580014, G#0580015, G#0580016, G#0580017, G#0580019, AND G#0580104. ACTUAL LOCATIONS AND DIMENSIONS SHALL BE VERIFIED BY THE SUBCONTRACTOR. AS-BUILT CONSTRUCTION MAY VARY FROM NEAT-LINES SHOWN ON DRAWINGS.
- ALL ELEVATIONS AND DIMENSIONS ARE IN METERS EXCEPT AS SPECIFICALLY SHOWN.
- 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.
- CONTOUR INTERVAL IS 0.5 METERS.
- STAGING OF MATERIAL SHALL OCCUR WITHIN THE AOC/WASTE SITE BOUNDARY UNLESS DIRECTED BY THE CONTRACTOR. STAGING OF MATERIAL OUTSIDE OF THE AOC/WASTE SITE BOUNDARY, SHALL HAVE PRIOR APPROVAL IN WRITING BY THE CONTRACTOR.
- SEE DRAWING NO. 0100N-DD-C0305, 0100N-DD-C0306, OR 0100N-DD-C0307 FOR WASTE SITE SURVEY CONTROL DESIGN COORDINATE TABLE.
- SUBCONTRACTOR SHALL TAKE ALL NECESSARY SAFETY PRECAUTIONS WHEN WORKING IN PROXIMITY TO ENERGIZED POWER LINES. ALL REASONABLE METHODS TO PROTECT EXISTING POWER POLES SHALL BE TAKEN BEFORE RE-ROUTING POWER LINES AND REMOVAL OF POLES WILL BE REQUIRED.
- SUBCONTRACTOR SHALL REMOVE PORTIONS OF SECURITY FENCE AS NEEDED TO FACILITATE REMEDIATION OF WASTE SITE. REMOVED SECTIONS SHALL BE REPLACED AS DIRECTED BY CONTRACTOR.
- VERTICAL EXCAVATION FACE ALLOWED NEXT TO INTACT STRUCTURES, IF BUILDINGS 1322NB AND 1322NC ARE STANDING AT TIME OF PIPING EXCAVATION.
- BUILDINGS 1322N, 1322NA, 1322NB, AND 1322NC ARE TO BE DEMOLISHED BY OTHERS. SOME PIPING MAY BE REMOVED WITH BUILDINGS.

DOCUMENT CONTROL *See attached*

△									
△									
△	3/23/04	ISSUED FOR AWARD	JAN	FEB	MAR	APR	MAY	JUN	JUL
△	11/05/04	ISSUED FOR BID	AUG	SEP	OCT	NOV	DEC	JAN	FEB
REV.	DATE	DESCRIPTION	BY	CHECKED	DATE	BY	CHECKED	DATE	BY

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  
UPR-100-N-31 WASTE SITE CIVIL PLOT PLAN

WCH JOB NO.	DOE CONTRACT NO.	CADD FILENAME
14655	DE-AC06-05RL-14655	INDC0252.DWG

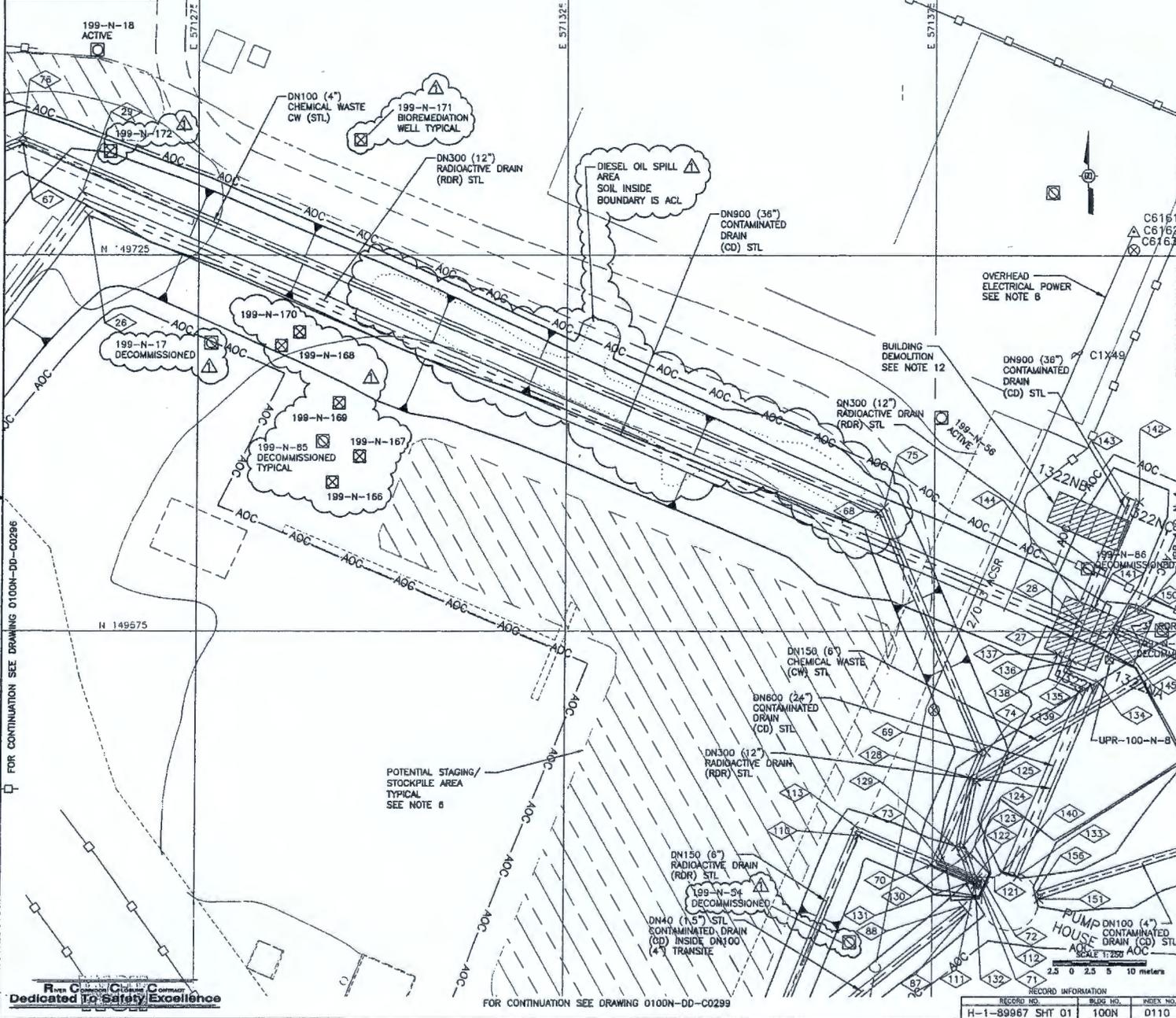
TASK	DRAWING NO.	REV. NO.
100 N	0100N-DD-C0252	1

SCALE 1:250  
2.0 0 2.5 5 10 meters

RECORD INFORMATION		
RECORD NO.	BLOG NO.	INDEX NO.
H-1-89921 SHT 01	100N	0110

**Fluor Daniel**  
Dedicated To Safety Excellence

DRAWING NO. 0100N-DD-C0298  
REV. NO. 1



**NOTES**

- SEE DRAWING 0100N-DD-C0023 FOR GENERAL ABBREVIATIONS AND SYMBOLS LIST.
- 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, GJ0579926, GJ0579929, GJ0580014, GJ0580015, GJ0580016, GJ0580017, GJ0580019, AND GJ0580104. ACTUAL LOCATIONS AND DIMENSIONS SHALL BE VERIFIED BY THE SUBCONTRACTOR. AS-BUILT CONSTRUCTION MAY VARY FROM NEAT-LINES SHOWN ON DRAWINGS.
- ALL ELEVATIONS AND DIMENSIONS ARE IN METERS EXCEPT AS SPECIFICALLY SHOWN.
- 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.
- CONTOUR INTERVAL IS 0.5 METERS.
- STAGING OF MATERIAL SHALL OCCUR WITHIN THE AOC/WASTE SITE BOUNDARY UNLESS DIRECTED BY THE CONTRACTOR. STAGING OF MATERIAL OUTSIDE OF THE AOC/WASTE SITE BOUNDARY, SHALL HAVE PRIOR APPROVAL IN WRITING BY THE CONTRACTOR.
- SEE DRAWING NO. 0100N-DD-C0305, 0100N-DD-C0306, OR 0100N-DD-C0307 FOR WASTE SITE SURVEY CONTROL DESIGN COORDINATE TABLES.
- SUBCONTRACTOR SHALL TAKE ALL NECESSARY SAFETY PRECAUTIONS WHEN WORKING IN PROXIMITY TO ENERGIZED POWER LINES. ALL REASONABLE METHODS TO PROTECT EXISTING POWER POLES SHALL BE TAKEN BEFORE RE-ROUTING POWER LINES AND REMOVAL OF POLES WILL BE REQUIRED.
- CONTAMINATED AREA (ACL), CLEAN AREA (BCL), WIDTH, AND DEPTH OF PIPE EXCAVATIONS CALCULATED IN COMPLIANCE WITH 0100N-SP-C0043 REV. 0. VOLUME ESTIMATE FOR 100-N AREA WASTE SITES.
- VERTICAL EXCAVATION FACE ALLOWED NEXT TO INTACT STRUCTURES (161-N PUMPHOUSE AND 1908-N SEAL WELL).
- LOCATION, ELEVATIONS, AND DIMENSIONS PROVIDED WERE TAKEN FROM HANFORD SITE RECORDS AND DRAWINGS: H-1-45007 SHT 50, REV 4, SHT 51, REV 3, AND SHT 57 REV 3, 6/20/81. ACTUAL LOCATIONS AND DIMENSIONS SHALL BE VERIFIED BY THE SUBCONTRACTOR. AS-BUILT CONSTRUCTION MAY VARY FROM NEAT-LINES SHOWN ON DRAWINGS.
- BUILDING 1322N, 1322NA, 1322NB, AND 1322NC ARE TO BE DEMOLISHED BY OTHERS. SOME PIPING MAY BE REMOVED WITH BUILDINGS.
- 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

DATE	ISSUED FOR	BY	CHKD	APP'D
11/05/08	ISSUED FOR BID	DC	SMC	NA
DATE	ISSUED FOR	BY	CHKD	APP'D

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-63 EFFLUENT PIPELINES CIVIL PLOT PLAN 3

WCH JOB NO.	DOE CONTRACT NO.	CADD FILENAME
14655	DE-AC06-05RL-14655	1NDC0298.DWG

TASK	DRAWING NO.	REV. NO.
100N	0100N-DD-C0298	1

Riverside Construction Company  
Dedicated To Safety Excellence

FOR CONTINUATION SEE DRAWING 0100N-DD-C0299

RECORD INFORMATION

RECORD NO.	PLANS NO.	REVISION NO.
H-1-89967	SHT 01	100N
		D110

DATE PLOTTED: 11/05/08

# Attachment 18

# 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number  
SDF-100N-019

## 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: Spacer Silos Building Number: 1303-N

WIDS Sites Associated or Adjacent:

100-N-63, 118-N-1, UPR-100-N-3, UPR-100-N-10, UPR-100-N-12 (all of these sites have been classified as accepted)

Other:

The 1303-N facility footprint has been entirely incorporated into the boundary of WIDS site 118-N-1 (CCN 125295 pg. 3). As such, its footprint will be closed out by the Field Remediation (FR) organization (GIS Site Tool Figure 1-attached to this form). At the time that this SDF was generated, the 1303-N facility had not been completely removed by the D4 organization.

The 1303-N facility consisted of 3 silos that received irradiated fuel spacers (CCN 125295 pg. 1). Two of the silos were constructed of galvanized steel and the third was constructed of reinforced concrete (CCN 125295 pg. 1). All silos were eventually covered by concrete and soil (CCN 125295 pg. 1). Two of the silos were open on the bottom (WIDS General Summary Report for 118-N-1).

## C. INFORMATION SOURCES

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

Historical Site Assessment for  
Historical Site Assessment: 1303-N Spacer Silos: CCN 125295 Site Walkdown: N/A

IH Characterization Report: N/A Radiological Survey: N/A

IHC/FHC Document: N/A WIDS/SIS: RCC Stewardship Information System (SIS) Facility Summary Report: 1303-N

Waste Information Data System (WIDS) General Summary Report: 118-N-1

PDSR: N/A Facility Inspection: N/A

Waste Characterization Checklist: N/A Summary Report: N/A

Other:

- Design Drawing H-1-28760, Sheet 1, Rev. 5
- GIS Site Tool Figure 1: (attached to this Form)
- Photograph of the 1303-N Facility Pre-Demolition, Time-Stamped: SIS Facility Report for 1303-N pg. 4 (6/11/2002)
- Photographs of the 1303-N Facility Pre-Demolition, No Time Stamp: SIS Facility Report for 1303-N pgs. 3, 5, 6, and 7

## D. HAZARDOUS SUBSTANCES

Check all that apply:

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

Chemicals List: aluminum (CCN 125295 pg. 2 & H-1-28760, Sheet 1) and those associated with paint, as listed below

Radiological Contamination  Mercury/Mercury Devices

Other: latex paint (CCN 125295 pgs. 1 & 2)

References/Comments:

Asbestos Containing Material:

- (Potential) Caulking, sealants, and damp proofing materials (CCN 125295 pg. 2)

Lead:

- (Potential) Paint and lead caulking (CCN 125295 pg. 3)

## 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number  
SDF-100N-019

**Radiological Contamination:**

- The facility received irradiated fuel rods and water from the fuel storage basin (CCN 125295 pg. 1)
- Cobalt-60 is the primary radionuclide associated with this facility (CCN 125295 pg. 2)
- Primary radionuclides associated with the fuel storage basin water are cesium-137, strontium-90, hydrogen-3, and plutonium-239/240 (CCN 125295 pg. 2)

**Paint:**

- RCRA Metals: arsenic, barium, cadmium, chromium, lead, selenium, silver, and mercury (CCN 125295 pg. 2)

Liquids:  Yes  No

If yes, describe source and nature of liquids:

Water from the fuel storage basin was used to dislodge irradiated fuel spacers that became trapped in the transfer line (CCN 125295 pg. 1). Additionally, paint and non-contaminated water were used to suppress contamination at the facility (CCN 125295 pg. 1).

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

As verified by what documentation:

All irradiated fuel spacers were removed from the facility in 1995 (CCN 125295 pg. 1). Radionuclides were released into the soil during facility operation as two of its silos were open on the bottom (WIDS General Summary Report for 118-N-1). Accordingly, radionuclides will not be removed prior to demolition. Additionally, the paint will not be removed from the facility prior to the commencement of demolition.

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

References/Comments:

The facility received a Type I classification (CCN 125295 pg. 1). Type I facilities are those that are significantly contaminated and/or contained significant levels of hazards (CCN 125295 pg. 1).

List any hazardous materials left in the building for demolition:

**Radiological Contamination:**

- The areas adjacent to the 1303-N were covered with contaminated paint chips from the last fuel spacer removal (1995). In order to control spread of contamination, the area adjacent the silos was covered with 6 inches of crushed rock (CCN 125295 pg. 1). Additionally, the internal walls of the 1303-N silos are covered with radiological contamination, although it is likely that a majority of it has been fixed to the walls with paint.

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

The processes used at the facility created a potential for both radiological and chemical contamination to be present within the footprint of the facility (CCN 125295 pgs. 1-2). Furthermore, the facility received a Type I designation which indicates that significant contamination risks could be present in the area (CCN 125295 pg. 1).

Comments:

Pertinent design drawings include H-1-28760, Sheet 1; H-1-37328; H-1-37329; H-1-45007, Sheet 37; and H-1-45007, Sheet 44.

### E. FIELD OBSERVATIONS

#### Visual Inspection

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

References/Comments:

There was no record of stained soils/anomalies for this facility. The footprint of this facility will be closed out by the FR organization.

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

References/Comments:

This question is not applicable because there was no record of stained soils/anomalies for this facility. The footprint of this facility will be closed out by the FR organization.

## 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number  
SDF-100N-019

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

**References/Comments:**

This question is not applicable because there was no record of stained soils/anomalies for this facility. The footprint of this facility will be closed out by the FR organization.

Is the area potentially a discovery site?  Yes  No

**References/Comments:**

The footprint of this facility is entirely incorporated into WIDS site 118-N-1.

### Radological Surveys

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

**References/Comments:**

Radiological surveys at this location were not reviewed because the footprint of this facility will be closed out by the FR organization.

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

**References/Comments:**

This question is not applicable because radiological surveys were not reviewed for this facility.

Is the area potentially a discovery site?  Yes  No

**References/Comments:**

The footprint of this facility is entirely incorporated into WIDS site 118-N-1.

Were the contaminated materials removed?  Yes  No  N/A

**References/Comments:**

This question is not applicable because radiological surveys were not reviewed for this facility.

### F. WIDS SITES

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

**If yes, list the WIDS sites:**

WIDS site 118-N-1 incorporates the entire footprint of the 1303-N facility. Additional waste sites affected by D4 activities were not known at the time that this SDF was generated because post-demolition reports were not available at the time of generation.

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

**References/Comments:**

118-N-1 will be verified removed as part of FR verification sampling. It was unclear during generation of this SDF if 118-N-1 would be completely removed along with 1303-N.

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

**References/Comments:**

The footprint of the facility is entirely incorporated into WIDS site 118-N-1. Accordingly, deferral of the footprint is not necessary because the footprint is already within the FR scope of work.

### 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:**

COPCs for this location will be developed by the FR organization.

**Summary of in-process soil sampling requirements:**

This item was not reviewed because the FR organization will be responsible for closeout of this facility footprint.

## 100-N ANCILLARY FACILITIES REMOVAL ACTION SAMPLING DETERMINATION FORM

Determination Number  
SDF-100N-019

### Constituents detected / concentrations / rationale

This item was not reviewed because the FR organization will be responsible for closeout of this facility footprint.

### Sample Collection Summary

This item was not reviewed because the FR organization will be responsible for closeout of this facility footprint.

### 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

### 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.

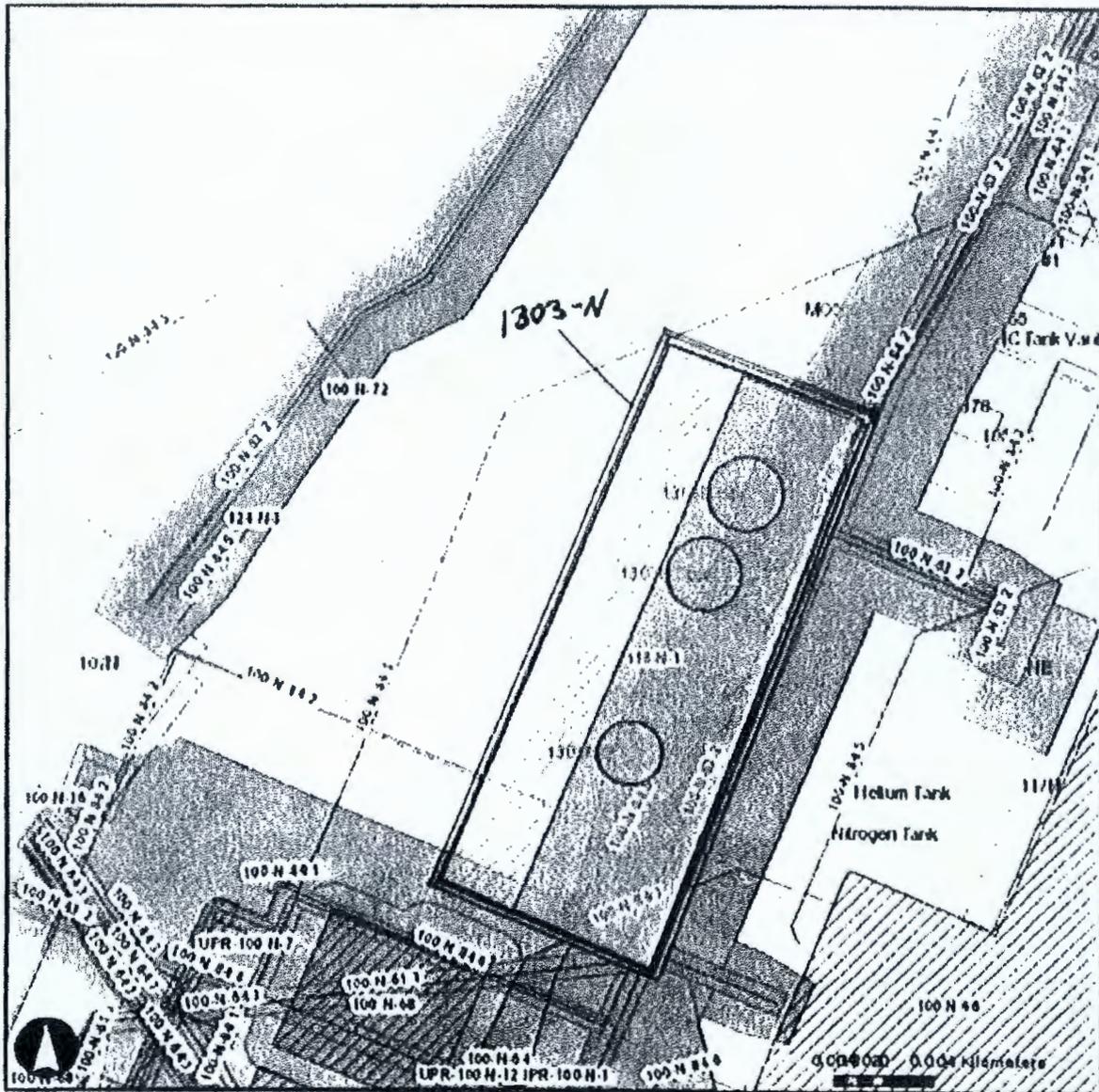
The individual below acknowledges that the review of this facility has been completed. He or she also commits to provide to the Department of Energy (DOE) and the Washington State Department of Ecology (Ecology) any available information that could alter the sampling decision established in this form.

Information Reviewer Signature <i>David Warren</i>	Printed Name David Warren	Date 6/7/12
---	------------------------------	----------------

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 <i>[Signature]</i>	Printed Name RF Guerra	Date 6/7/12
Ecology Signature <i>Nina M. Menard</i>	Printed Name NINA M. Menard	Date 6/12/12

# Map 1303-N



**MR & Stewardship Features**

-  MR & Stewardship Features
-  WasteSitePolys
-  Buildings
-  WasteSitePoints
  -  Sitecode Missing in SIS
  -  Accepted,

**WasteSitesLine (continued)**

-  Accepted, Interim Closed Out
-  Accepted, No Action
-  Accepted, Rejected
-  Discovery,
-  Not Accepted,
-  WasteSitePolys
  -  Sitecode Missing in SIS

**Waste Line Labels**

-  Waste Point Labels
-  N\_EXC\_Toe
-  N\_EXC\_Daylight
-  Buildings

# Attachment 19



## Attachment to TPA CN-510

Additional text to be added to DOE/RL-2000-16.

**3.1.1.2 Excavation.** Excavation begins when the field analytical system has obtained sufficient data to characterize the site's initial conditions (initial conditions are used for database purposes) and the excavation subcontractor receives notification to begin work. Excavation of the designated work site involves removing clean and contaminated soils and debris found within the site's boundaries and removing the perimeter fence. The soils exposed during excavation are monitored for radiological and hazardous constituents, as defined in the SAP (DOE-RL 2000).

Materials are excavated using standard equipment and construction methods for both shallow and deep excavations. Containers are relocated from the container staging area to the excavation site and are prepared with a plastic liner. Excavated materials are placed in the lined containers and, depending on the material composition, are designated for transport to the ERDF, a clean material storage area, or a soil treatment storage area.

Containers destined for the ERDF are surveyed and decontaminated (if required) prior to entering the clean work area. Survey stations provide sheltered work areas where loaded containers are covered (i.e., by folding and securing the liner over the load) and surveyed for radioactive contamination. If minor contamination is found on a container's exterior, contamination is removed at the survey stations. If a container has significant exterior contamination, it is sent to the decontamination station where it is more aggressively decontaminated. In the unlikely event that a container cannot be decontaminated with the normal equipment and techniques available at the decontamination station, an evaluation will be made of the advanced and appropriate techniques, and these techniques will be implemented.

After containers are released for transportation to the ERDF and the shipping papers have been completed, the containers are relocated to a clean container transfer area. When a transport vehicle is available, the containers are placed onto clean trailers for transport to the ERDF. The trucks and trailers used for hauling within the excavation site remain in the contaminated area and do not require decontamination. Empty containers being returned from the ERDF are loaded onto excavation site trailers for refilling.

Excavated material that has been package may be returned to an excavation or staging pile area in situation where the dose rates, contamination levels, free liquids, or other abnormalities have subsequently been determined to exceed normal transportation requirements. In these situations, when repackaging is necessary, the previously excavated material will be reloaded into the transportation container. Notification to the lead regulatory agency is generally not required for these actions. The exception is LDR waste, lead regulator approval is required prior to returning LDR waste to the AOC.

Activities are guided during excavation from data obtained by the field analytical system working concurrently with excavation. Data are used to continually update the site characteristic database. Additional information on the field analytical system is presented in the SAP (DOE-RL 2000).

Dust control is maintained on the haul roads, at the excavation site, and at the clean soil storage area. All material transported from the excavation site is covered, contained, or has moisture content adequate for inhibiting dust without being covered or contained during transport and disposal. The moisture content of bulk-contaminated material destined for ERDF disposal is in accordance with the ERDF waste acceptance criteria (BHI 1998). Dust palliative is applied to open excavation sites when potential concerns arise about health issues or the spread of contamination.

When RAOs have been met and verified, site backfill will be authorized. Clean backfill material is obtained from clean material storage areas, approved clean rubble areas, and local borrow sites. Excavations are backfilled to agreed-upon elevations (Table 1-1).

# Attachment 20

## 100K AREA Unit MANAGERS MEETING STATUS

June 14, 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.
- A Level 2 Readiness Assessment for Knock Out Pot (KOP) processing was completed on May 31, 2012, in support of TPA Milestone M-016-172 (Complete KOP Material Removal from 105-KW Fuel Storage Basin). The KOP material removal campaign is starting the week of June 11, 2012.
- A siting study is in progress to support Milestone M-016-173 (K Basin sludge treatment and packaging technology selection).
- Formal review of the 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). A Technology Readiness Assessment (TRA) was held the week of June 4, 2012 to support completion of final process system design. The TRA team concluded all Critical Technology Elements are at a TRL-6 level.
- Under M-016-175 (Begin Sludge Removal from 105-KW Fuel Storage Basin), the contract for the construction of the KW Basin Annex and building systems was issued. CERCLA waste accumulation areas will be used as staging piles for material excavated during Annex construction. Environmental documentation to support the facility modifications and storage of K Basin sludge as well as filter media from the various water filtration systems in the KW Basin at T-Plant has been scoped and scheduled to include the following:
  - NEPA Environmental Assessment and Finding of No Significant Impact
  - Alternative PCB decontamination application associated with the disposition of the equipment used to treat the KE Basin North Loadout Pit Sludge.
  - Management of sludge under T Plant RCRA permit.
  - Hanford Air Operating Permit / FF01 License for T Plant for both construction and operations associated with lag storage of sludge.
- No change in status for TPA Milestone M-016-176 (Complete sludge removal from 105-KW).
- 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.

### RL-0041K Facility Demolition and Soil Remediation

**Remedial Actions:**

- Verification samples in Area AA Zones 1 and 2 and Stockpile #11 were completed and third party validated in accordance with the associated Verification Sampling Instructions. The results were incorporated into the Remaining Sites Verification Package (RSVP) for Area AA Zone 2 and Stockpile #5 which supports the closure of waste sites: 100-K-18, 100-K-19, 100-K-79 (partial), 100-K-97, 120-KW-5 and 120-KW-7. The RSVP is currently being reviewed by DOE-RL and EPA.
- The Remaining Sites Verification Package for Area AA Zone 1 and Stockpile #11 which supports the closure of waste sites: 1607-K3, 100-K-34 and 100-K-102 is being drafted.
- Comments from DOE-RL review of the RSVP for waste site 100-K-63 are being incorporated.
- The verification sample instruction for Area AG, Zone 2 is being reviewed by DOE-RL and EPA. The verification sample instruction includes phase 1 waste sites 100-K-36 and 100-K-3.
- Remediation of the following phase 1 waste sites was completed: 100-K-3, 100-K-68, 100-K-69, 100-K-70, and 100-K-71. Workers loaded 318 ERDF containers (6,073 tons) of contaminated soil for disposal. In-process sample results indicate that no radiologically contaminated soils remain in these waste site footprints. A verification sample instruction for these Area AG Zone 1 waste sites is being drafted.
- The residual radiological contamination (carbon-14) found within the waste site footprints of 100-K-6, 132-KE-1, 100-K-62 and 100-K-53 will be tied to the future remediation of 116-KE-1. A remaining sites verification package for these waste sites is being drafted.

**Demolition:**

- Demolition of 182-K/100-K-106 and load out of associated waste has been completed. Plans are underway to enter the site to develop civil drawings and conduct sampling as soon as excavation personnel confirm that the site is ready.
- Asbestos abatement in 105-KE Water Tunnel is complete. Strain relief for the tunnel piping was also completed. Demolition and pourback preparations are planned to start on June 12, 2012.
- Demolition and clean out work continued in 183.2-KE Sedimentation Basin. EPA walked-down the site on June 8<sup>th</sup>, to establish sampling approach for verification sampling to support closeout and backfill of the basin. Sampling potholes are anticipated to begin on June 12, 2012.
- 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. Remaining efforts are on hold. A field visit with EPA is planned for June 14 to establish a path forward for this Phase III site.
- Pre-demolition planning activities for 1908-K are on hold.

# Attachment 21

**^WCH Document Control**

---

**From:** Saueressig, Daniel G  
**Sent:** Wednesday, June 13, 2012 6:41 AM  
**To:** ^WCH Document Control  
**Subject:** RE: OFFSITE APPROVAL REQUEST  
Could I get this number too?

Thanks,

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

---

**From:** Saueressig, Daniel G  
**Sent:** Monday, June 11, 2012 11:59 AM  
**To:** ^WCH Document Control  
**Subject:** FW: OFFSITE APPROVAL REQUEST

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

Thanks,

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

---

**From:** David Einan [mailto:Einan.David@epamail.epa.gov]  
**Sent:** Thursday, June 07, 2012 3:36 PM  
**To:** Saueressig, Daniel G  
**Cc:** Christopher Guzzetti; Zeisloft, Jamie; Landon, Roger J; Wilkinson, Stephen G  
**Subject:** Re: OFFSITE APPROVAL REQUEST

Dan--

DSSI is acceptable. Region 4 asked if these 2 drums were hazardous or radioactive. Please let me know.

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

509-376-3883

"Saueressig, Daniel G" ---06/05/2012 01:55:03 PM---Chris, I'd like to request your approval in accordance with 40 CFR 300.440 and Section 4.3.4 of the

From: "Saueressig, Daniel G" <dgsauere@wch-rcc.com>  
To: Christopher Guzzetti/R10/USEPA/US@EPA  
Cc: David Einan/R10/USEPA/US@EPA, "Zeisloft, Jamie" <jamie.zeisloft@rl.doe.gov>, "Landon, Roger J" <RJLANDON@wch-rcc.com>, "Wilkinson, Stephen G" <sgwilkin@wch-rcc.com>  
Date: 06/05/2012 01:55 PM  
Subject: OFFSITE APPROVAL REQUEST

---

Chris, I'd like to request your approval in accordance with 40 CFR 300.440 and Section 4.3.4 of the 100 Area RDR/RAWP for the 100 Area (DOE/RL-96-17) to send some waste offsite for treatment/disposal.

2 containers from 100-K are scheduled to go to Diversified Scientific Services, Inc. (EPA ID# TNR000005397), one a 55 gallon drum containing approximately 30-40 gallons of nitric acid and the other a 55 gallon drum containing 15-20 gallons of oil.

Let me know if you approve, shipment of this material is planned for the June/July timeframe.

Thanks,

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

# Attachment 22

165636

**^WCH Document Control**

---

**From:** Saueressig, Daniel G  
**Sent:** Thursday, May 10, 2012 2:50 PM  
**To:** ^WCH Document Control  
**Subject:** FW: 600-29 failed verification sample  
Please provide a chron number. This email documents a regulatory agreement.

Thanks,

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

---

**From:** Fancher, Jonathan D (Jon)  
**Sent:** Thursday, May 10, 2012 2:43 PM  
**To:** Saueressig, Daniel G  
**Subject:** FW: 600-29 failed verification sample

FYI

---

**From:** Glossbrenner, Ellwood T [mailto:ellwood.glossbrenner@rl.gov]  
**Sent:** Thursday, May 10, 2012 2:41 PM  
**To:** 'Christopher Guzzetti'; Carman, Hans M  
**Cc:** Strom, Dean N; Fancher, Jonathan D (Jon); Perrott, Matthew W  
**Subject:** RE: 600-29 failed verification sample

I concur also.

Ellwood T. Glossbrenner  
509-376-5828

---

**From:** Christopher Guzzetti [mailto:Guzzetti.Christopher@epamail.epa.gov]  
**Sent:** Thursday, May 10, 2012 1:00 PM  
**To:** Carman, Hans M  
**Cc:** Strom, Dean N; Glossbrenner, Ellwood T; Fancher, Jonathan D (Jon); Perrott, Matthew W  
**Subject:** RE: 600-29 failed verification sample

I concur.

Christopher J. Guzzetti  
U.S. EPA Region 10  
Hanford Project Office  
Phone: (509) 376-9529

Fax: (509) 376-2396  
Email: [guzzetti.christopher@epa.gov](mailto:guzzetti.christopher@epa.gov)

▼ "Carman, Hans M" ---05/10/2012 12:12:58 PM---Chris and Ellwood,

From: "Carman, Hans M" <[hmcarm@wch-rcc.com](mailto:hmcarm@wch-rcc.com)>  
To: Christopher Guzzetti/R10/USEPA/US@EPA  
Cc: "Glossbrenner, Ellwood T" <[ellwood.glossbrenner@rl.doe.gov](mailto:ellwood.glossbrenner@rl.doe.gov)>, "Perrott, Matthew W" <[mwperrot@wch-rcc.com](mailto:mwperrot@wch-rcc.com)>, "Fancher, Jonathan D (Jon)" <[JDFANCHE@wch-rcc.com](mailto:JDFANCHE@wch-rcc.com)>, "Strom, Dean N" <[dnstrom@wch-rcc.com](mailto:dnstrom@wch-rcc.com)>  
Date: 05/10/2012 12:12 PM  
Subject: RE: 600-29 failed verification sample

Chris and Ellwood,

We have finished the additional remediation at 600-29. With your concurrence we would like to re-sample at the same locations as the fail verification sample on Monday 5-14?

---

**From:** Christopher Guzzetti [<mailto:Guzzetti.Christopher@epamail.epa.gov>]  
**Sent:** Wednesday, May 09, 2012 4:52 PM  
**To:** Carman, Hans M  
**Cc:** Glossbrenner, Ellwood T  
**Subject:** Re: 600-29 failed verification sample

I concur with the proposed path forward.

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

▼ "Carman, Hans M" ---05/09/2012 04:44:05 PM---Chris and Elwood, A total of four out of the forty two verification samples for the 600-29

From: "Carman, Hans M" <[hmcarm@wch-rcc.com](mailto:hmcarm@wch-rcc.com)>  
To: Christopher Guzzetti/R10/USEPA/US@EPA, "Glossbrenner, Ellwood T" <[ellwood.glossbrenner@rl.doe.gov](mailto:ellwood.glossbrenner@rl.doe.gov)>  
Date: 05/09/2012 04:44 PM  
Subject: 600-29 failed verification sample

Chris and Elwood,

A total of four out of the forty two verification samples for the 600-29 waste site failed to meet the direct exposure RAGs. The samples failed for TPH and Semi VOA contaminants. Three of the failed samples are on the west side of K-avenue and are all associated with one excavation. Two of these three are adjacent and the third was in an area identified in the final stages of remediation. The last failed sample was located on the east side of K-avenue and failed for TPH. The sample site on the east side was listed as a miscellaneous pipe that was removed.

Visual observation of the west site, after sampling, shows some isolated remaining pieces of hardened tar like material that at a distance is easily mistaken for rocks. WCH is planning additional remediation for the larger excavation on the west side of 600-29 where the samples failed. The additional remediation includes that all visible hardened tar like material is removed by hand methods (shovel and bag) and than approximately 1 ERDF container from each failed location.

On the east side we plan to also remove 1 additional ERDF container of soil.

After the additional remediation if you concur we would resample for verification purposes.

If you have any question or comments please let me know.

The sample numbers for the failed sample are as follows.

- WSTAT # 5
- WSTAT # 8
- WCOMP # 5
- ECOMP # 2

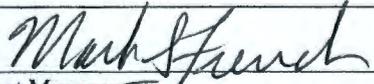
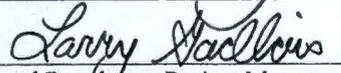
Hans Carman  
 Resident Engineer  
 Washington Closure Hanford, LLC  
 118-K-1 Burial Grounds Field Remediation  
 (509) 554-1992

[attachment "winmail.dat" deleted by Christopher Guzzetti/R10/USEPA/US] [attachment "message\_body.rtf" deleted by Christopher Guzzetti/R10/USEPA/US]

# Attachment 23



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

<b>Change Number</b> TPA-CN- 514	<b>Document Submitted Under Tri-Party Agreement Milestone</b>	<b>Date:</b> May 1, 2012		
<b>Document Number and Title:</b> DOE/RL-2001-47, Rev. 3 Remedial Design Report/Remedial Action Work Plan for the 300 Area		<b>Date Document Last Issued:</b> December 2009		
<b>Originator:</b> Mark French		<b>Phone:</b> 373-9863		
<b>Description of Change:</b> A waste form disposed in 618-10, consisting of concrete/lead lined drums, will require a modified handling approach. Containers where the concrete lining is intact meet the MACRO standard for any lead shielding that is also inside the concrete lining. When intact concreted drums are unearthed, they will be overpacked with absorbent filling the annulus between the two containers and disposed at the ERDF. If concrete is not intact, the overpacked drum will be treated by MACRO either at the ERDF or at 618-10.				
<p align="center"> <u>          M. French          </u> and <u>          L. Gadbois          </u> agree that the proposed change modifies an approved  <b>DOE</b> <b>Lead Regulatory Agency</b> </p> <p>workplan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, <i>Documentation and Records</i>, and not Chapter 12.0, <i>Changes to the Agreement</i>.</p>				
<b>Justification and Impacts of Change:</b>				
<p>DOE/RL-2001-47, Rev. 3 needs to be updated to reflect a modified approach for the 618-10 Burial Ground related to the handling of concrete/lead drums for disposal. These drums had a 20 cm (8 in.) diameter galvanized metal culvert centered in the 208 L (55 gal) drum, surrounded by concrete on the bottom and sides. The culvert may also have lead wrapped around it, depending on shielding requirements. High activity liquid or solid waste was placed in the culvert. The culvert was capped with a lead plate and concrete poured in to fill the void space. Opening these drums for examination and processing would present a very high risk due to the radiological contents. The change will involve adding absorbent materials to the intact waste forms. The absorbent mitigates the potential small liquid volumes and the intact concrete meets the MACRO standard of 40 CFR 268.42 for radioactive lead solids. This modification allows for proper disposal of the waste without undue personnel exposure to radioactive material. These changes will be included in the next revision of the document. Affected pages are 3-10, 3-11, 3-12, and 4-5.</p> <p><b>Shading indicates changes.</b></p>				
<b>Approvals:</b>				
 DOE Project Manager		4/30/12 Date	<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Disapproved
 Lead Regulatory Project Manager		5-1-2012 Date	<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Disapproved

Once all the above steps have been completed, the originator sends a copy of the signed change notice to the MSA TPAI organization (H7-28), the Administrative Record (H6-08) (refer to TPA Action Plan, Section 9.3), lead regulatory agency, affected Hanford contractor, DOE Project Manager, project/contractor Document Custodian, and others as appropriate. Maintain the original Change Notice per approved Records Management procedures.

## Remedial Action Approach and Management

based on the type of material being excavated. Alternate excavation/sorting methods (e.g., vacuum systems, metal detectors) may be proposed by the project on a case-by-case basis and implemented with concurrence from the DOE and EPA project representatives. During the excavation process, care will be taken to prevent the breakage or puncture of unopened or sealed cans, jars, and containers.

Material from waste sites that are not burial grounds (e.g., acid neutralization pit) or the periphery of burial grounds (e.g., plumes) where anomalous material is not encountered does not require mechanical sorting. This material may be directly loaded into containers after enough information is gathered to characterize the waste. Material that has been excavated using one of the approved sorting techniques will be directed in one of the following ways.

- Material that is above cleanup levels and within the ERDF waste acceptance criteria (WCH 2008) will be loaded into plastic-lined roll-off containers on project haul trucks at the excavation site. Asbestos-containing material will be double-bagged or put into roll-off containers that are double lined. The loaded containers will be covered (i.e., by folding and securing the liner over the load) and surveyed prior to being transported to a container transfer facility (CTF) using the project haul trucks. If contamination is found on a container exterior, the container will be decontaminated using standard equipment and techniques. In the unlikely event that a container cannot be decontaminated using standard methods, advanced techniques will be implemented as necessary. Released containers will be off loaded and staged in the CTF until applicable shipping papers are completed. When the shipping papers have been completed, ERDF transport vehicles will enter the CTF, pick up the full containers, and haul them to the ERDF.
- Anomalous waste (e.g., drums, intact containers, elemental lead, unknown materials) and/or above-cleanup-level material that is not within ERDF waste acceptance criteria (WCH 2008) will be set aside within the area of contamination (AOC) or within designated staging piles for further characterization and final disposition. Land disposal-restricted (LDR) wastes stored outside of the AOC shall only be returned to the AOC, and removed from the container with lead regulator approval. As needed, appropriate inerting materials may be added to drums that contain waste with pyrophoric properties. Waste that is subsequently identified for ERDF disposal or staging will be directed as described previously, with the exception that drummed waste will be transported on flatbed trailers. ~~Concreted, lead lined drums at 618-10 will be processed differently as described later in this section.~~ Excavated material that must be sent to facilities other than ERDF for treatment and/or disposal will be stockpiled or drummed and staged within the AOC or within designated staging pile areas until loaded for offsite shipment. Identification of an appropriate treatment and/or disposal facility, and arrangements for loading and transporting excavated material to facilities other than ERDF will be made on a case-by-case basis by the project in coordination with the RCC Project waste management representatives. Prior to shipment, an offsite acceptability determination in accordance with 40 CFR 300.440 must be obtained from the EPA for receipt, storage, treatment, and disposal of CERCLA waste at the identified treatment/disposal facility.

## Remedial Action Approach and Management

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- Material that is free of anomalous waste and below cleanup levels may be stockpiled onsite for use as backfill material. In certain situations, soil may be placed over material excavated within a waste site or discovered within a staging pile as a temporary measure. Such action may be undertaken to minimize an imminent threat to the worker (e.g., a high-dose item is uncovered, and a temporary soil cover is appropriate to control worker exposure). Temporary covering with soil may also be undertaken to prevent windborne dispersal of excavated material or highly contaminated soil and to maintain segregation from other waste site materials. These temporary measures may be undertaken while plans are developed for safe re-excavation and removal of waste site materials. In these instances lead regulator notification will be made.
- Excavated material that has been packaged may be returned to an excavation area or staging pile area in situations where the dose rates, contamination levels, free liquids, or other abnormalities have subsequently been determined to exceed normal transport requirements. In these situations, when repackaging is necessary, the previously excavated material will be reloaded into the transportation container. Notification to the lead regulatory agency is generally not required for these actions. The exception is LDR waste, which shall be managed in accordance with the second bullet above.
- An approved LDR treatment method for radioactively contaminated cadmium-, silver-, and mercury-containing batteries allows for macroencapsulation prior to disposal. However, lead-acid batteries are not covered by this standard and require initial treatment (draining corrosive liquids, treating separately prior to disposal) (DOE-RL et al. 2005b).
- If spent nuclear fuel (SNF) is discovered, it must be managed as spent nuclear fuel and is not eligible for disposal in ERDF. Shielded bunkers will be used for interim storage of the SNF with minimum specifications of (1) a 1.8-m (6-ft)-tall security fence, and (2) a bunker constructed of concrete shielding blocks including a heavy metal lid or concrete shielding block cover. SNF will be characterized for shipment to the 100-KW Fuel Storage Basin or the Canister Storage Building until an offsite storage or disposal facility authorized to manage SNF becomes available (DOE-RL et al. 2005b).
- If transuranic (TRU) material is discovered, it must be identified as either contact-handled transuranic (CH-TRU) waste or remote-handled transuranic (RH-TRU) waste and managed in accordance with the waste acceptance criteria of the receiving facility (WCH 2007b).
- At 618-10, some high activity waste and possibly small amounts plutonium contaminated liquid waste in small vials were sealed in concreted 208 L (55 gal) drums. Some concreted drums also contained an additional 2.5 or 5 cm (1 or 2 in.) of lead shielding. These drums had a 20 cm (8 in.) diameter galvanized metal culvert centered in the 208 L (55 gal) drum, surrounded by concrete on the bottom and sides. The culvert may also have lead wrapped around it, depending on shielding requirements. High activity liquid or solid waste was placed in the culvert. The culvert was capped with a lead plate and concrete poured in to fill the void space. Opening these drums for examination and processing would present a very

## Remedial Action Approach and Management

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high risk due to the radiological contents. Excavation techniques allow for examination of the drum condition and the condition of the concrete cap. If the outer drum is intact and the concrete cap is seen to be intact, the concrete is reasonably expected to be intact. When the concrete in these drums is intact, it meets the MACRO standard of 40 CFR 268.42 for radioactive lead solids. When the outer drum is not intact, but the concrete within the outer drum can be seen as intact on the sides and the top, the concrete can reasonably be expected to be intact. Intact concrete waste will be overpacked with an absorbent filling the annulus between the concreted drum and the overpack drum to preclude migration of potential liquids. In this form, the overpacked drum can be disposed in the ERDF. If the concrete in these drums is not intact, overpacking with absorbent will occur and then MACRO will be performed either at 618-10 and then disposed at ERDF, or the treatment will be performed at ERDF prior to disposal. If treatment at 618-10 is performed, a treatment plan will be developed and approved by the lead regulatory agency.

Excavated material will be surveyed and characterized for appropriate disposition prior to undertaking disposal of materials. When excavation of a waste site is complete, exposed dig faces will be evaluated to verify that remedial action goals have been met. When RAGs have been met and backfill concurrence is obtained from the lead regulatory agency, site backfill will be authorized. (Note: Unless specified otherwise, the term "backfill" as used in this document refers to filling in the excavation once post-waste site remediation sampling has demonstrated that RAGs have been met). Clean backfill material is obtained from clean material storage areas, approved/clean rubble, and local borrow sites. Excavations are backfilled so the sites conform to local topography.

### 3.5.3 Material Handling and Transportation

All contaminated materials (including excavated soils, debris, disposable protective clothing, air filters, and trash) require proper packaging, handling, and transportation in accordance with the waste management plan prescribed in Section 4.0. Contaminated bulk materials will be hauled in the standard ERDF open-top, hinged-gate roll-off boxes that are designed for a maximum capacity of approximately 18.1 metric tons (20 tons) and 22.7 metric tons (25 tons). The bulk containers will be transported on roll-on/roll-off trailers with hydraulic dumping capabilities that are towed by conventional tractor units. Drummed waste will be hauled on flatbed tractor-trailer units. The trailers and tractors will be suitable for operating on sloped excavation access ramps and other off-road ramps, and meet applicable DOT requirements. The wheel wells of the tractor will be constructed to prevent soil from being thrown onto the trailer and its containers during transport.

Weighed containers will be transported from the 300 Area to the ERDF over existing Hanford Site roadways. Each shipment of soil/debris transported to the ERDF will be referenced to a waste profile that is intended to bound the material found at the site. The waste profile is in effect until the characteristics of the excavation site have changed significantly. Empty containers returning from the ERDF will be removed from the ERDF tractor trailers in the CTF and rolled on to project haul trucks for refilling. The CTF helps to maintain a continuous flow of materials through the transportation system by allowing excavation to continue for a limited time if the trucks running to the ERDF are not operating, or it allows ERDF trucks to continue to run

## Waste Management Plan

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onsite or offsite laboratories. Approval of this RDR/RAWP constitutes DOE-RL remedial project manager approval for shipment of offsite and onsite laboratory sample waste back to the waste site of origin.

### 4.2.9 618-10 Concreted Drums

At 618-10, some high activity waste and small amounts plutonium contaminated liquid waste in small vials were sealed in concreted 208 L (55 gal) drums. Some concreted drums also contained an additional 2.5 or 5 cm (1 or 2 in.) of lead shielding. These drums had a 20 cm (8 in.) diameter galvanized metal culvert centered in the 208 L (55 gal) drum, surrounded by concrete on the bottom and sides. The culvert may also have lead wrapped around it, depending on shielding requirements. High activity liquid or solid waste was placed in the culvert. The culvert was capped with a lead plate and concrete poured in to fill the void space. Opening these drums for examination and processing would present a very high risk due to the radiological contents. If the outer drum is intact and the concrete cap is seen to be intact, the concrete is reasonably expected to be intact. When the concrete in these drums is intact, it meets the MACRO standard of 40 CFR 268.42 for radioactive lead solids. When the outer drum is not intact, but the concrete within the outer drum can be seen as intact on the sides and the top, the concrete can reasonably be expected to be intact. Intact concrete waste will be overpacked with an absorbent filling the annulus between the concreted drum and the overpack drum to preclude migration of potential liquids. In this form, the drum can be disposed in the ERDF. If the concrete in these drums is not intact, overpacking with absorbent will occur and then MACRO will be performed either at 618-10 and then disposed at ERDF, or the treatment will be performed at ERDF prior to disposal.

## 4.3 WASTE HANDLING, PACKAGING, AND LABELING

Materials requiring collection will be placed in containers appropriate for the material and the receiving facility. Although ERDF containers will be used for most wastes, an alternative "truck and pup" style of container may be used for nonradionuclide-contaminated waste.

Waste moved outside of the AOC must meet all substantive requirements of WAC 173-303 and DOT requirements, as appropriate. In addition, polychlorinated biphenyl (PCB) wastes will be managed in accordance with substantive provisions of 40 CFR 761, and asbestos waste will be managed in accordance with 40 CFR 61. Waste will be packaged, marked, and labeled in accordance with ARARs. If waste is determined to be SNF or TRU waste, it will be packaged in accordance with the *Hanford Site Solid Waste Acceptance Criteria* (FH 2005) or other appropriate criteria as determined at the time of shipment to an approved facility.

## 4.4 STORAGE

In general, waste unearthed in support of this RDR/RAWP will be disposed at the ERDF or other approved onsite or offsite facility. As necessary, waste will be stored in staging piles within the AOC or at the ERDF as described in the following subsections.

## TRI-PARTY AGREEMENT

Change Notice Number TPA-CN- 509	TPA CHANGE NOTICE FORM	Date: March 26, 2012
Document Number, Title, and Revision: DOE/RL-2005-93, Remedial Design Report/Remedial Action Work Plan for the 100-N Area, Rev. 0		Date Document Last Issued: October 2006
Originator: Dan Saueressig, WCH		Phone: 509-521-5326

**Description of Change:**

Text is being added to allow excavated material that has been packaged to be returned to an excavation area or staging pile area in situations where the material has subsequently been determined to exceed normal transport requirements.

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

Additional text is being added to Section 3.1.2 to allow excavated material that has been packaged to be returned to an excavation area or staging pile area in situations where the dose rates, contamination levels, free liquid, or other abnormalities have subsequently been determined to exceed normal transport requirements. The additional text is denoted with underlined text.

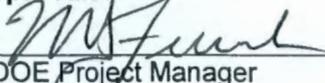
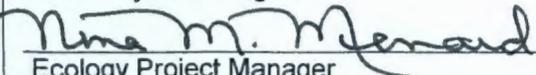
Revised text is attached.

Note: Include affected page number(s)

**Justification and Impacts of Change:**

The change will result in allowing excavated material that has been packaged to be returned to an excavation area or staging pile area in situations where the material has subsequently been determined to exceed normal transport requirements. This is consistent with the approach that is implemented at the other 100 Area sites, which are remediated in accordance with the *Remedial Design Report/Remedial Action Work Plan for the 100 Area* (DOE/RL-96-17).

**Approvals:**

 DOE Project Manager N/A	5/4/12 Date	<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved
EPA Project Manager	Date	<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved
 Ecology Project Manager	5/8/12 Date	<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved

Additional text to be added to DOE/RL-2005-93.

### 3.1.2 Excavation

Excavation begins when sufficient analytical data have been obtained to characterize the site's initial conditions (initial conditions are used for database purposes) and the excavation subcontractor receives notification to begin work. Excavation of the designated work site involves removing clean and contaminated soils, debris, and anomalous waste present within the sites boundaries. The soils exposed during excavation are monitored for radiological and hazardous constituents as defined in the 100-N Area SAP (DOE-RL 2006).

Materials are excavated using standard equipment and construction methods for both shallow lifts and deep excavations. Containers (described in Section 3.1.3) are relocated from the container staging area to the excavation site and are prepared with a plastic liner. Excavated materials are placed in the lined containers and, depending on the material composition, are designated for transport to ERDF, a clean material storage area, or a soil treatment storage area.

Material that has been excavated will be directed in one of the following ways:

- Material that is above cleanup levels and within ERDF waste acceptance criteria (BHI 2002) will be loaded into plastic-lined roll-off containers on project haul trucks at the excavation site. Asbestos-containing material will be double bagged or put into roll-off containers that are double lined. The loaded containers will be covered (i.e., by folding and securing the liner over the load) and surveyed prior to being transported to a container transfer facility (CTF) using the project haul trucks. If contamination is found on a container exterior, the container will be decontaminated using standard equipment and techniques. In the unlikely event that a container cannot be decontaminated using standard methods, advanced techniques will be implemented, as necessary. Released containers will be off-loaded and staged in the CTF until applicable shipping papers are completed. When the shipping papers have been completed, ERDF transport vehicles will enter the CTF, pick up the fix11 containers, and haul them to ERDF.
- Anomalous waste (e.g., intact containers, elemental lead, unknown materials) and/or above cleanup level material that is not within ERDF waste acceptance criteria (BHI 2002) will be set aside within the area of contamination (AOC) or within designated staging piles for further characterization and final disposition (see Section 4.0). LDR waste stored outside of the AOC shall only be returned to the AOC and removed from the container with lead regulator approval. As needed, appropriate inerting materials may be added to drums that contain waste with pyrophoric properties. Waste that is subsequently identified for ERDF disposal or staging will be directed as described previously, with the exception that drummed waste will be transported on flatbed trailers. Excavated material that must be sent to facilities other than ERDF for treatment and/or disposal will be stockpiled or drummed and staged within the AOC until loaded for offsite shipment. Identification of an appropriate treatment and/or disposal facility, and arrangements for loading and transporting excavated material to facilities other than ERDF will be made on a case-by-case basis by the project in coordination with Washington Closure Hanford (WCH) waste management representatives. Prior to shipment, an offsite determination must be obtained from EPA for receipt, storage, treatment, and disposal of CERCLA waste at the identified treatment/disposal facility.
- Material that is free of anomalous waste and below cleanup levels may be stockpiled onsite for use as backfill material.
- Excavated material that has been packaged may be returned to an excavation area or staging pile area in situations where the dose rates, contamination levels, free liquids, or other abnormalities have subsequently been determined to exceed normal transport requirements. In these situations, when repackaging is necessary, the previously excavated material will be

# Attachment 24

300 Area Closure Project Status  
June 14, 2012  
100/300 Area Combined Unit Manager Meeting

**Ongoing Activities**

- 309 Reactor – Fuel examination cell removal preparations ongoing.
- 340 Complex – Completing demolition of the 307 Basins and removal of RRLWS and RLWS piping. Preparations for vault removal ongoing.
- 3730 – Completed initial grouting of source array, hazardous material removal ongoing.
- 308 – Above and below grade demolition completed. Completing final load-out and GPERS surveys.
- 308A – Completing site preparation for turn over to subcontractor for TRIGA reactor removal.
- 326 – Tritium decontamination nearly complete.
- 327 – Below-grade demolition and close-out surveys complete, initiating backfill.
- 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 initiated.

**Demolition & Remediation Preparation Activities**

- Preparing for process sewer north of Apple, waste site close-out ongoing in same area.
- Finalize preparations for 310 TEDF demolition.
- Completed demolition of 3766 Building.

**60-Day Project Look Ahead**

- Continue authorization reviews for asbestos abatement activities.
- Continue 340 Complex waste site remediation and finalize engineering for vault removal.
- Continue site preparation for TRIGA reactor removal.
- Grout 3730 hot cells.
- Complete work at the 337 Complex, backfill and close area.
- Initiate north of Apple (Zone 7) process sewer remediation.
- Complete remediation 321 and 3706 areas.
- Continue 309 reactor removal activities.
- Initiate 310 TEDF demolition.
- Continue slab removal campaign.

# Attachment 25

## Environmental Protection Mission Completion Project

June 14, 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 by 6/28/12.

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

- Tri-Party approval of the screening level ecological risk assessment was obtained on June 5. Production of the approved Rev. 0 document is in process.
- Discussions regarding unresolved comments on the Draft A human health risk assessment were ongoing during May. Review of redline sections of the updated document was initiated in May and is scheduled to resume in late June following resolution of outstanding comments.

### **Document Review Look-Ahead**

- None