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## Unit Managers' Meeting: 100 Areas Remedial Action Unit/Source Operable Units

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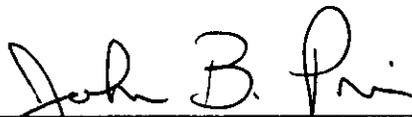
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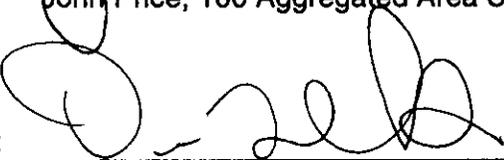
**Meeting Minutes Transmittal/Approval  
Unit Managers' Meeting  
100 Area Remedial Action and Waste Disposal Unit/Source Operable Unit  
3350 George Washington Way, Richland, Washington  
April 24, 2003**

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APPROVAL:  Date 5/22/03  
Chris Smith/Jamie Zeisloft, 100 Area Unit Managers, RL (A3-04)

APPROVAL:  Date 5/22/03  
Michael Thompson/ Arlene Tortoso, Waste Management  
Division, RL (A6-38)

APPROVAL:  Date 5/22/03  
John Price, 100 Aggregated Area Unit Manager, Ecology (B5-18)

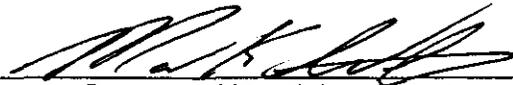
APPROVAL:  Date 5-22-03  
Dennis Faulk, 100 Aggregate Area Unit Manager, EPA (B5-01)

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Meeting minutes are attached. Minutes are comprised of the following:

- Attachment 1 -- Attendance Sheet
  - Attachment 2 -- Agenda
  - Attachment 3 -- 100 Area Meeting Minutes
  - Attachment 4 -- WIDS site CVP Closeout Summary Table
  - Attachment 5 -- Well 199-K-111A Tritium plume graphs
  - Attachment 6 -- Approved 117-DR Exhaust Filter Building Proposed Additional Soil Sampling and 1720-HA Arsenal Removal/disposal Summary
  - Attachment 7 -- E-mail approval to implement a change to the 100N non-radionuclide emissions
  - Attachment 8 -- White paper on Particulate Emissions from Abrasive Blasting at the 116-N-1 and UPR 100-N-31 Remedial Action
- 

Prepared by:

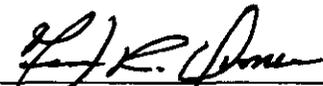


Amy Pennock (X3-16) / Mike Wetzler (H0-17)

Date

5/23/03

Concurrence by:



Vern Dronen, Project Manager  
BHI Remedial Action and Waste Disposal Project (H0-17)

Date

5/22/03





**100 AREA**  
**UNIT MANAGERS MEETING AGENDA**  
3350 George Washington Way  
April 24, 2003

**1:00 – 4:00 p.m. 3350 GWW (Room 1B45)**

***Administrative***

- Meeting minutes status
- Next 100 UMM is May 22, 2003, at 1:00 – 4:00, 3350 GWW (1B45)

***Groundwater***

- 100 Area Open Action Items
- 100-Area Open forum and discussion
- 100-BC-5 and 100-FR-3 DQO status

***100-BC-5 Groundwater OU***

- 

***100-FR-3 Groundwater OU***

- 

***100-HR-3 Groundwater OU***

- Remediation treatment status

***100-KR-4 Groundwater OU***

- Remediation treatment status

***100-NR-2 Groundwater OU***

- Remediation treatment status

***Review Open Action Items Log***

***General Crossover Items***

- CVP status
- Status of Institutional Controls Assessments
- Review and approve last UMM minutes

***D&D***

- 117-DR Exhaust Filter Building Proposed Additional Soil Sampling and 120-HA Arsenal Removal/Disposal Summary
- Project status

## ***Remedial Action***

### ***100 Area Common***

- 100 Area RDR/RAWP and SAP proposed revisions
- ESD Status
- 100 Area Remaining Sites Confirmatory SAP
- Remaining Sites Sampling Efforts Status
  - Analytical detection limits clarification
  - Regulators schedule during Spring Break (April 7-11)
- 118-K-1 Design

### ***100 F, K, and Group 4***

- 100 F Backfill Status
- 100-F-19 CVP Additional Sites (100-F-29 Experimental Animal Farm Pipeline and UPR-100-F-1 Animal Septic Spill)
- 100 K General Status
- 199-K-33 Groundwater Well Abandonment

### ***100 N***

- Air Monitoring Plan

### ***100 B/C***

- Project Status
- Remaining Sites
- Characterization Sites

### ***105F Fuel Storage Basin***

- RAWD and D&D Interface at 105F Fuel Storage Basin
- Backfilling at 105 F Fuel Storage Basin by RAWD and D&D to support SSE subcontractor mobilization

## **Other**

# UNIT MANAGERS MEETING MINUTES

3350 George Washington Way, 1B45

April 24, 2003

1:00 – 3:00 p.m.                      100 Area                      3350 GWW, 1B45

## *Administrative*

- Meeting Minute Status – Both the February and March meeting minutes were approved and signed by those in attendance.
- The next 100 Area Unit Managers Meeting will be held on May 22, 2003, at 3350 GWW room 1B45 starting at 1:00 p.m.

## *Groundwater*

- 100 Area Open Action Items – There were no open action items.
- 100 Area Open Forum and Discussion – There were no items discussed.
- 100-BC-5 and 100-FR-3 DQO Status – Bob Peterson (PNNL) noted that the DQO internal comments are currently being incorporated.

### *100-BC-5 Groundwater OU*

- Was not discussed.

### *100-FR-3 Groundwater OU*

- Was not discussed.

### *100-HR-3 Groundwater OU*

- Remediation Treatment Status – Jane Borghese (FH) reported that the system is currently operating between 205 – 240 gallons per minute. The extraction well H4-65 remains shutdown during this reporting period due to low groundwater/river levels. Regarding ISRM – Completed FY03 Phase III injections (199-D4-80, 199-D4-81, 199-D4-82, 199-D3-03, and 199-D3-04) by April 12, 2003. The ISRM pond blower was repaired and brought back on-line after WDOE, DOE, and WDOH granted approval of continued operation.

### ***100-KR-4 Groundwater OU***

- Remediation Treatment Status – Jane Borghese (FH) reported that the system is currently operating between 260 – 267 gallons per minute. Larry Gadbois (EPA) asked to increase the flow rate of 199-K-120. Bob Peterson (PNNL) reported that Well 199-K-111A showed an increase of tritium (**Attachment 5**) giving an indication of a possible tritium plume. Tom Kisenwether (ERC) reported that a BCP is in process to remove well K33. Larry Gadbois (EPA) asked Arlene Tortoso (DOE) to look into the possibility for a replacement well and a plan for installing new shoreline aquifer tubes in the 100 Area.

**ACTION \*\* Arlene Tortoso (RL) will look into the possibility for a replacement well and a plan for installing a new shoreline aquifer tubes in the 100 Area.**

### ***100-NR-2 Groundwater OU***

- Remediation Treatment Status – Jane Borghese (FH) reported that the system is currently operating at 65 gallons per minute. Laboratory analysis from oil found in well 119-N18 is expected in the next few weeks.

### ***-General Cross Over Items***

- CVP Status – Jill Thomson (ERC) handed out the WIDS Site CVP Closeout Summary Table (**Attachment 4**) and it was briefly discussed.
- Institutional Controls Assessments – Ella Feist (ERC) reported that this document was sent to DOE last week.

### ***D & D***

- The approved 117-DR Exhaust Filter Building Proposed Additional Soil Sampling and 1720-HA Arsenal Removal/Disposal Summary was submitted for inclusion to the meeting minutes (**Attachment 6**).

### ***100 Area Common***

- 100 Area RDR/RAWP and SAP Proposed Revisions – Ella Feist (ERC) discussed that the documents are currently being revised and scheduled for RL and regulator review starting the first part of June.
- ESD Status – Ella Feist (ERC) reported that the Remaining Sites ESD, which adds approximately 30 additional wastes sites to the Remaining Sites ROD is scheduled to go back to EPA for a second review the first part of May. This revision included the confirmatory sampling costs of the waste sites as requested by EPA during the first review.

- 100 Area Remaining Sites Confirmatory SAP – Ella Feist (ERC) noted that EPA provided their comments to the Remaining Sites SAP on April 24, 2003. Ecology has yet to provide comments. EPA believes that it is not necessary to revise and finalize this SAP and provided alternatives for documenting the sampling and analysis to be performed for the 100/300 Area remaining sites. Comment responses are due by May 8, 2003
- Remaining Sites Sampling Efforts Status – Ella Feist (ERC) stated that work is continuing with the accelerated remaining sites sampling efforts. A field walkdown of the 100-IU2/IU6 remaining sites was conducted on April 21 to identify what surface debris requires removal and what sampling needs are required. The sample designs for 100-B/C and 100-K Areas are completed and approved. Field sampling at the 100-B/C Area is complete and in progress at the 100-K Area. The 100-F Area sample designs are with EPA for review and approval.
- 118-K-1 Design – John Ludowise (ERC) discussed air monitors and ASA for the 118-K-1 Design. The 118-K-1 remedial design is progressing. The final design will be distributed within BHI for review in early May. The design is scheduled to be completed by late June.

The air monitoring plan (AMP) for 118-K-1 Remediation is being prepared. The AMP will be available for DOE and regulator review in the next couple of weeks. Larry Gadbois (EPA) asked if it is necessary to issue the AMP at this point if the remediation of 118-K-1 does not start for a few years. John Ludowise stated that the design incorporates requirements of the AMP, and in order to finish the design, there should be an approved AMP in place.

The auditable safety analysis for 118-K-1 is being prepared. It will be transmitted to DOE for review by mid-May.

#### ***100 F, K, and Group 4***

- 100 F Backfill Status – Tom Kisenwether (ERC) stated that progress is ahead of schedule.
- 126-F-1 CVP– Tom Kisenwether (ERC) noted that a letter was sent to DOE recommending that the existing current CVP be shelved until europium decays enough to meet clean up goals.
- 100 K General Status – Tom Kisenwether (ERC) discussed a BCP that will be submitted to change the excavation schedule. This revised schedule will better utilize on site equipment.

**100 N**

- Project Status – Jon Fancher (ERC) submitted an email documenting approval from Ecology and DOE to implement a change to the 100N EA non-radionuclide emissions allowing use of a higher quality of abrasive in decontamination operations (**Attachment 7**). A white paper was also submitted on this subject. (**Attachment 8**).

**100 B/C**

- Project Status – Dean Strom (ERC) noted that the project is currently chasing additional plumes at 100-B-5 and 100-B-8. The pipeline work is on schedule and is continuing towards C-Reactor. The six accelerated sites at 100-BC have all been remediated and sampled. The project also completed Confirmation Sampling sites at 100-BC.
- Risk Assessment Pilot Project –Pam Doctor (ERC) noted that the independent technical peer review for the 100 B/C risk assessment pilot project was held April 14 - 18. Tribal, Trustee, and HAB representatives were in attendance. The peer review panel found that the project is generally in compliance with regulatory requirements for an ecological risk assessment and noted that, in several instances, the project has gone beyond what is required by conducting biota sampling. They provided recommendations for improvement to the project, particularly with respect to integrating groundwater into the assessment.

**Other**

- Nothing else was discussed.

## **Outstanding 100 Area Unit Manager's Meeting Action Items**

### **April 2003 Actions**

- **Arlene Tortoso (RL) to look into the possibility for a replacement well.**
- **Arlene Tortoso (RL) to provide a plan for installing a new shoreline aquifer tubes in the 100 Area**

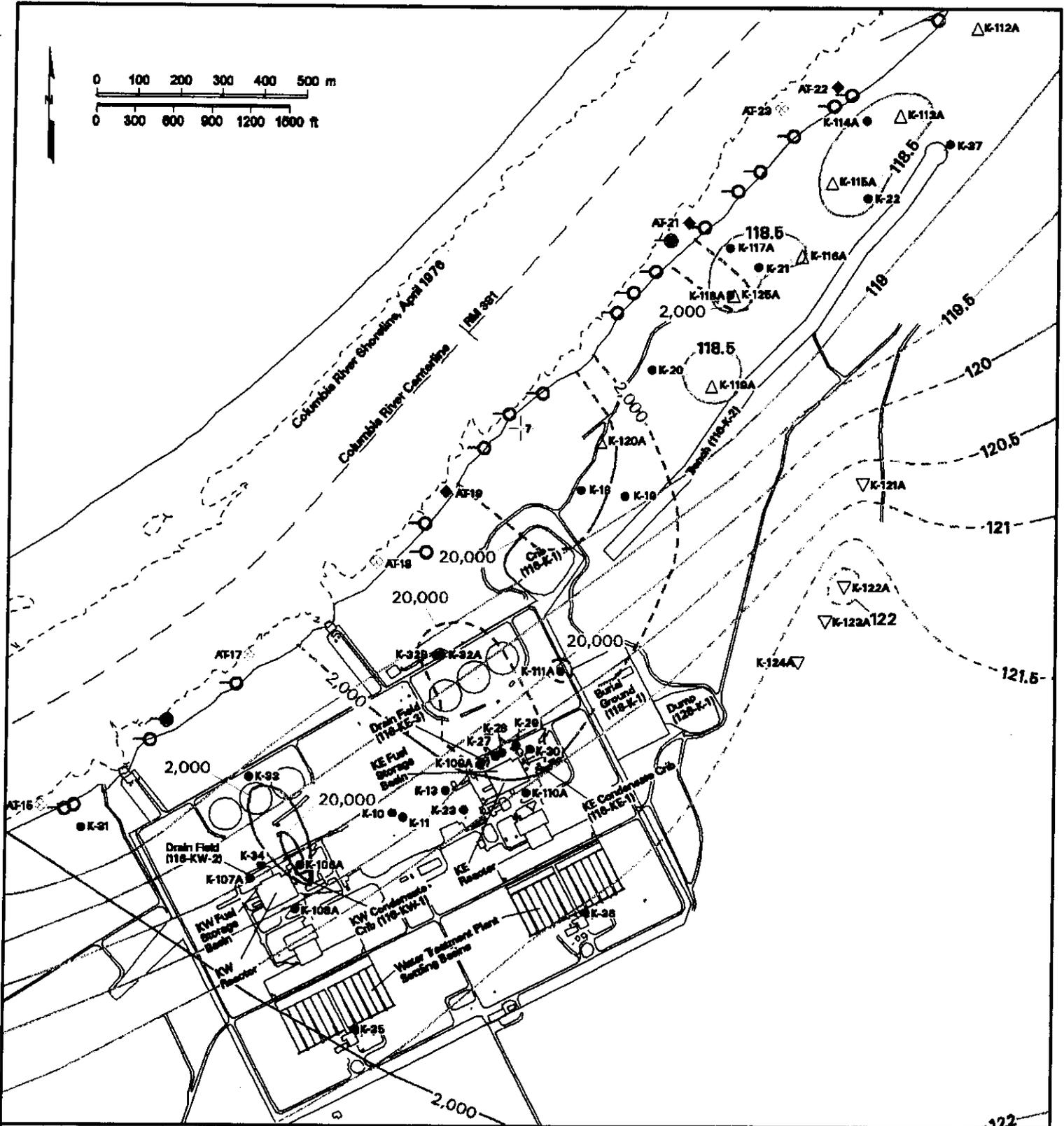
## WIDS Site CVP Closeout Summary Table

WIDS Site Closeout	CVP Doc. No. documenting WIDS site closeout	EPA/ Ecology WIDS Signoff	Issue Rev. 0 CVP
<b>100 B/C Area</b>			
116-B-13	CVP-1999-00002	7/22/99	7/1999
116-B-14	CVP-1999-00003	7/22/99	7/1999
116-C-1	CVP-1998-00006	1/21/99	1/1999
116-B-1	CVP-1999-00012	12/8/1999	12/1999
116-B-11	CVP-1999-00001	12/8/1999	12/1999
116-C-5	CVP-1999-00004	12/8/1999	12/1999
116-B-4	CVP-1999-00014	2/24/2000	3/3/2000
116-B-6B	CVP-1999-00017	2/24/2000	3/3/2000
116-B-9	CVP-1999-00009	2/24/2000	3/3/2000
116-B-2	CVP-1999-00015	2/24/2000	3/3/2000
116-B-3	CVP-1999-00013	2/24/2000	3/3/2000
116-B-10	CVP-1999-00010	2/24/2000	3/3/2000
116-B-12	CVP-1999-00008	2/24/2000	3/3/2000
116-C-2A			
116-C-2B	CVP-1999-00019	3/15/2000	3/28/1999
116-C-2C			
116-B-6A	CVP-1999-00011	5/17/2000	5/26/2000
116-B-16			
116-B-7			
132-B-6	CVP-2002-00003	7/25/2002	8/6/2002
132-C-2			
BC Pipeline	CVP-2002-00012	TBD	
1607-B7	CVP-2003-00004	(5/16/03)	
1607-B8	CVP-2003-00005	(5/19/03)	
1607-B9	CVP-2003-00006	(5/20/03)	
1607-B10	CVP-2003-00007	(5/19/03)	
1607-B11	CVP-2003-00008	(5/19/03)	
100-C-3	CVP-2003-00009	(5/20/03)	
<b>100 D Area</b>			
100-D-4 (107D5)	CVP-98-00004	3/25/1999	3/1999
100-D-20 (107D3)	CVP-98-00003	3/25/1999	3/1999
100-D-21(107D2)	CVP-98-00002	3/25/1999	3/1999
100-D-22 (107D1)	CVP-98-00001	3/25/1999	3/1999
1607-D2		closed	
1607-D2:1 Tile Field	CVP-98-00005	3/25/1999	3/1999
Septic Pipelines	CVP-2000-0004	9/26/2000	9/2000
Septic Tank	CVP-99-00005	11/23/1999	12/1999
116-DR-9			
100-D-25	CVP-99-00006	1/6/2000	1/2000
116-D-7	CVP-99-00007	8/15/2000	8/2000
100-D-18 (107D4)	CVP-2000-00001	9/26/2000	10/2/2000
116-DR-1			
116-DR-2	CVP-2000-00002	9/26/2000	9/27/2000
100-D-48		closed	
100-D-48:1 (Grp 2 North Pipelines)	CVP-2000-00003	3/14/2001	3/2001
100-D-48:2 (Grp 2 West Pipelines)	CVP-2000-00005	9/26/2000	10/2/2000
100-D-48:3 (Grp 3 Large Pipelines)	CVP-2000-00034	4/20/2001	4/20/2001
100-D-48:4 (Grp 3 Small Pipelines)	CVP-2000-00033	4/17/2001	4/20/2001
100-D-19			
UPR-100-D-4	CVP-2000-00003	3/14/2001	3/2001
100-D-49		closed	
100-D-49:1 (Grp 2 North Pipelines)	CVP-2000-00003	3/14/2001	3/2001
100-D-49:2 (Grp 2 East Pipelines)	CVP-2000-00005	9/26/2000	10/2/2000
100-D-48:3 (Grp 3 Large Pipelines)	CVP-2000-00034	4/20/2001	4/20/2001

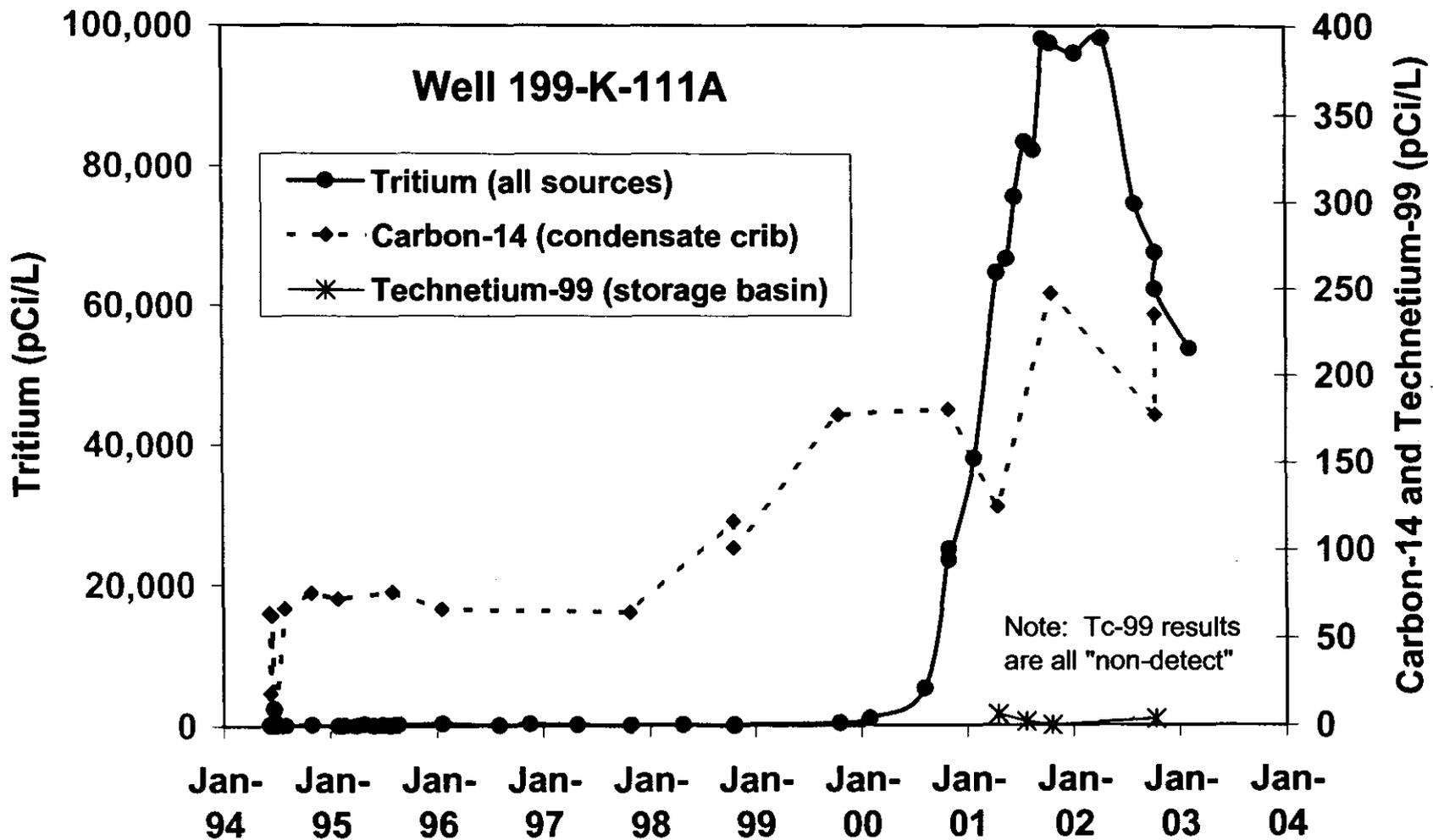
## WIDS Site CVP Closeout Summary Table

WIDS Site Closeout	CVP Doc. No. documenting WIDS site closeout	EPA/ Ecology WIDS Signoff	Issue Rev. 0 CVP
<b>100 F Area</b>			
116-F-4	CVP-2001-00006	11/8/2001	11/15/2001
116-F-5	CVP-2001-00007	8/16/2001	8/23/2001
1607-F6	CVP-2001-00010	11/8/2001	11/15/2001
UPR-100-F2	CVP-2001-00011	4/22/2002	5/7/2002
100-F-19:1	CVP-2001-00002	5/21/2002	6/10/2002
100-F-19:3			
100-F-34			
116-F-12			
100-F-40	site closed (No CVP)	2/15/2002	2/15/2002
116-F-14	CVP-2001-00009	7/11/2002	7/18/2002
100-F-2	CVP-2001-00001	7/25/2002	8/5/2002
100-F-15	CVP-2002-00001	7/25/2002	8/6/2002
100-F-4			
100-F-11			
100-F-16			
116-F-9	CVP- 2001-00008	10/16/2002	10/22/2002
116-F-2	CVP- 2001-00005	1/13/2003	3/11/2003
126-F-1	CVP- 2002-00002	1/13/2003	TBD
100-F-35	CVP-2002-00007	4/15/2003	
116-F-1	CVP-2002-00009	(5/16/03)	
116-F-3	CVP-2002-00008	4/15/2003	
116-F-6	CVP-2002-00010	(5/9/03)	
116-F-10	CVP-2002-00006	4/15/2003	
1607-F2	CVP-2002-00005	1/13/2003	3/11/2003
100-F-19:2	CVP-2001-00003	(5/22/03)	
116-F-11			
UPR-100-F-1			
100-F-29			
UPR-100-F-3	CVP-2003-10	(6/20/03)	
100-F-25	CVP-2003-11	(6/20/03)	
100-F-23	CVP-2003-12	(6/20/03)	
100-F-24			

Date in the parentheses indicate the estimated date



- Tritium Contour (pCi/L) (FY 2001) (modified from PNNL-13788)
- Water Table Contour 0.5 m interval
- Monitoring Well
- ◆ Aquifer Tube (Surveyed)
- ◇ Aquifer Tube (Estimated)
- Seep (Surveyed)
- Seep (Estimated)
- ⊕ Hanford River Marker (HRM)
- ▽ Injection Well
- △ Extraction Well



# **117-DR Exhaust Filter Building Proposed Additional Soil Sampling and 1720-HA Arsenal Removal/Disposal Summary**

**April 2, 2003**

## **1.0 INTRODUCTION**

This document has been prepared as an addendum to the Phase III Sampling and Analysis Plan (Phase III SAP) for the 105-F and 105-DR Reactors and ancillary facilities (DOE-RL 2000b). It describes additional sampling and analysis than that prescribed in the Phase III SAP to support verification of cleanup levels for the overburden soils and soils underlying the 117-DR Exhaust Filter Building.

This addendum also summarizes waste characterization and site closure sampling and analysis considerations for the scheduled decontamination and decommissioning (D&D) of the 1720-HA Arsenal.

The sampling and analysis activities discussed in this addendum will be implemented by Decommissioning Projects upon U.S. Department of Energy and Washington State Department of Ecology approval.

## **2.0 117-DR EXHAUST FILTER BUILDING**

### **2.1 Background**

The remaining portions of the 105-DR Large Sodium Fire *Resource Conservation and Recovery Act of 1976* (RCRA) treatment, storage, and disposal facility include the 117-DR Exhaust Filter Building and associated underground exhaust ducts. These areas are currently being removed for disposal. The waste characterization sampling is described in the 105-F/105-DR Phase II SAP and the 117-DR Exhaust Filter Building addendum (DOE-RL 1998, BHI 2003). Characterization sampling has been completed, and additional soil sampling described in this addendum will be performed in the soils beneath the underground exhaust duct after removal of the 117-DR structure to support RCRA closure. The closure sampling requirements are described in the Phase III SAP (DOE-RL 2000b).

### **2.2 Discussion**

The 117-DR Exhaust Filter Building was originally identified as a nonwater-bearing structure. The Phase II sampling data, facility inspections, and historical information indicate that the facility is a water-bearing structure, and higher-than-anticipated levels of heavy metal contamination in the seal pit sludge have been identified. This sludge will be removed prior to demolition of the lower portion of the structure.

The soils underlying the structure have the potential to become contaminated as a result of leakage and structural removal. The Phase III SAP describes the requirements for closure sampling underneath the exhaust duct, but does not address sampling to support verification of cleanup levels for the overburden soils and soils underlying the 117-DR structure.

The contaminant of concern (COC) list below summarizes potential contaminants from the Phase II contaminant of potential concern list for the exhaust plenum, as well as contaminants found in the sediment during sampling and analysis. This list is consistent with soil COCs listed in the 100 Area Remedial Action SAP (DOE-RL 2001).

- Americium-241, cesium-137, cobalt-60, europium-152, europium-154, europium-155, nickel-63, plutonium-238, plutonium-239/240, strontium-90, uranium-234/uranium-235, uranium-238, carbon-14, chromium +6, semivolatile organic analytes, lead, arsenic, barium, silver, selenium, mercury, cadmium, chromium, sodium, lithium.

### **2.3 Recommendations**

Additional sampling of the overburden and underlying soils to support site closure will follow the closeout approach described in the 100 Area Remedial Action SAP (DOE-RL 2001). The COCs identified in Section 2.2 will be applied for closure sampling and analysis. The project shall address the requirements of the SAP by implementing the excavation, field measurements, and sampling methodology described in the *Instruction Guide for Remediation of the 100 Area Waste Sites* (BHI 2001).

All sample collection, documentation, handling, packaging, and shipping will be performed in accordance with applicable procedures in BHI-EE-01, *Environmental Investigations Procedures*, BHI-EE-05, *Field Screening Procedures*, and BHI-EE-11, *Environmental Radiological Measurements Plan*.

## **3.0 1720-HA ARSENAL FACILITY**

### **3.1 Introduction**

This section summarizes waste characterization and site closure sampling and analysis considerations for the scheduled D&D activities at the 1720-HA Arsenal.

### **3.2 Background**

The 1720-HA Arsenal structure is scheduled for D&D. The demolition debris will be disposed of in the Environmental Restoration Disposal Facility. The scope of work for the removal, disposition, and characterization/closure documentation is described in the 105-D and 105-H Removal Action Work Plan (DOE-RL 2000a).

Data quality objectives, a SAP, or other closure documentation have not been prepared for the 1720-HA Arsenal. Existing data, including historical and process information, were reviewed

and determined to be sufficient to support waste characterization and disposal of the demolition debris and that sampling will not be required.

### **3.3 Discussion**

The 1720-HA Arsenal is a 1.8-m by 2.4-m (6-ft by 8-ft) concrete structure located in the 100-H Area. This facility was used for central storage of ammunition and firearms, used by the Hanford Security Patrol, and was most recently used to store explosives for demolition work.

The facility has no history of processing, using, or storing radioactive materials or chemicals in this facility. Radiological survey measurement information (RSR 105H-03-0264) confirm that no contamination exists in this facility.

The probability of lead contamination from the storage was determined to be insignificant based on the exterior cladding (nonlead) and storage methods of the ammunition and firearms. The interior floor area and exterior entry into the facility was screened for the presence of lead using an instant lead-testing screen (Lead Check Swabs). All tests were negative for the presence of lead.

Metal structures of the facility (door, roof trim, air vents) are coated with paint that is common to the reactor areas. These paints have previously been sampled, and existing analytical data will be used for the disposition of the demolition debris. There is also a small area that has asbestos-containing ceiling tile.

Based on the facility history, there is no indication that the underlying soils are contaminated. The surrounding soil area was not used as a shooting range, and no radioactive materials were present at this facility during its use.

### **3.4 Recommendation**

Existing data, including historical and process information, were determined to be sufficient to support removal, waste disposition, and disposal of the demolition debris. No additional sample analysis will be conducted prior to D&D activities to support waste disposal.

The soil underlying the facility after removal of the structure is considered clean, and no sampling and analyses will be required for verification that the site meets the cleanup criteria for site closure.

## **4.0 REFERENCES**

BHI-EE-01, *Environmental Investigations Procedures*, Bechtel Hanford, Inc., Richland, Washington.

BHI-EE-05, *Field Screening Procedures*, Bechtel Hanford, Inc., Richland, Washington.

BHI-EE-11, *Environmental Radiological Measurements Plan*, Bechtel Hanford, Inc., Richland, Washington.

BHI, 2001, *Instruction Guide for the Remediation of the 100 Areas Waste Sites*, 0100X-IG-G0001, Rev. 3, Bechtel Hanford, Inc., Richland, Washington.

BHI, 2003, *117-DR Exhaust Filter Building Proposed Additional Waste Characterization Sampling*, CCN 105031, Bechtel Hanford, Inc., Richland, Washington.

DOE-RL, 1998, *105-F/-DR Phase II Sampling and Analysis Plan*, DOE/RL-98-57, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE-RL, 2000a, *Removal Action Work Plan for 105-D and 105-H Building Interim Safe Storage Projects and Ancillary Building*, DOE/RL-2000-57, Rev. 1, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE-RL, 2000b, *Sampling and Analysis Plan for the 105-F and 105-DR Phase III Below Grade Structures and Underlying Soils*, DOE/RL-99-35, Rev. 1, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE-RL, 2001, *100 Area Remedial Action Sampling and Analysis Plan*, DOE/RL-96-22, Rev. 3, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

*Resource Conservation and Recovery Act of 1976*, 42 U.S.C. 6901, et seq.

5.0 APPROVALS

Approval by the Lead Regulatory Agency (Washington State Department of Ecology) also reflects approval by the U.S. Environmental Protection Agency.



D. C. Smith, Project Manager, Restoration Project Division  
U. S. Department of Energy

4/2/03

Date



F. W. Bond, Nuclear Waste Program, Transition Project Manager  
Washington State Department of Ecology

4-2-03

Date

**Strom, Dean N**

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**From:** Fancher, Jonathan D (Jon)  
**Sent:** Thursday, April 24, 2003 9:53 AM  
**To:** Strom, Dean N  
**Cc:** Donnelly, Jack W  
**Subject:** FW: 100N Air Monitoring

Dean

We have already received email approval from Ecology to implement this. What I want you to do is

1. Read the text I have provided below.
2. Provide a printed copy of the attached file to Amy, Chris Smith, and anyone else that cares.

The text for you to read:

"We have received email approval from Ecology and DOE to implement a change to the 100N EA non-radionuclide emissions allowing use of a higher quantity of abrasive in decontamination operations. We are inserting in the text in the Meeting Minutes to get this approval in the permanent record."



116-N-1 Grit  
blasting,jgw.doc

Dale and I will not be at UMM today.

Thanks  
Jon

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

**From:** Fancher, Jonathan D (Jon)  
**Sent:** Wednesday, April 23, 2003 8:16 AM  
**To:** Smith, Douglas C (Chris); Price, John (ECY)  
**Cc:** Donnelly, Jack W  
**Subject:** 100N Air Monitoring

Chris and John

We have received email approval from both of you to implement the change to our non-radionuclide emission allowing a higher quantity of abrasive in decontamination operations. We would like to get this approval in the permanent record.

To this end I am requesting approval from both of you to insert the write-up previously agreed to (file attached) in the April Unit Managers Meeting Minutes. I know both of you won't be at the April meeting. When the minutes are signed this approval will then be formalized.

Thanks

*Jon Fancher* ☺  
*100N Remedial Action*  
☎ 373-9123  
cell 531-0700  
page 373-PAGE, 7345  
✉ jdfanche@bhi-erc.com

**Particulate Emissions from  
Abrasive Blasting at  
the 116-N-1 And UPR 100-N-31  
Remedial Action**

Waste containers, haul trucks, and/or equipment are decontaminated by conventional means such as brushing, wiping, washing, steam cleaning, grinding, or with two high efficiency particulate air (HEPA)-filtered vacuum cleaners. Wet abrasive blasting may be used for decontamination if the other methods fail.

Wet abrasive blasting will be conducted using conventional equipment. The blasting medium will be either crushed slag from coal-fired utility boilers or smelter slag (Black Blast™, Black Beauty™, Kleen Blast™ and Black Diamond™ are common trade names, which may be used). The uncontaminated blast medium is an inert material that does not exceed toxicity characteristic leaching procedure limits (40 CFR 261.24).

Up to 67,200 pounds per year of blast medium will be used. AP-42<sup>1</sup>, Table 13.2.6-1 provides emission factors for grit blasting in the open or in an enclosure. However, the emission factors for an enclosure assume that the enclosure is equipped with a fabric filter to control emissions. Because the process under consideration here will be performed in an enclosure that is not filtered, the emission factor for an enclosure does not apply.

As a conservative basis for calculation purposes AP-42 factors for grit blasting in the open were used in calculating emissions from this activity. The AP-42 emission factor in a 5 mph wind (the lowest wind speed provided) is 2.7% for total suspended particulate (TSP). This factor was used and resulted in a calculated TSP emission of 1800 lb for 67,200 lb of grit.

The Particulate Matter-10 micron size (PM-10) emission factor (AP-42, Table 13.2.6-1) is 1.3% for grit blasting in the open and is not dependent on wind speed. PM-10 emissions from 67,200 lb of grit would be 870 lb. The calculated TSP and PM-10 emissions are below the exemption thresholds listed in *Washington Administrative Code* 173-400-110(5)(d).

The following controls will be used to limit emissions:

- Water will be used to suppress dust
- Abrasive blasting will be conducted outdoors in a tarped enclosure
- Abrasive will contain particles less than one percent (by mass) which would pass through a No. 200 sieve
- Abrasive blasting operations will be curtailed when wind speed becomes excessive.

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<sup>1</sup> *Compilation of Air Pollutant Emission Factors, AP-42, 5th Edition, Volume I: Stationary Point and Area Sources, U.S. EPA, Washington, D.C..*