

Meeting Minutes Transmittal/Approval  
 Unit Manager's Meeting: 300-FF-1 Operable Unit  
 450 Hills, Richland, Washington  
 September 24, 1992

FROM/APPROVAL: Robert G. McLeod Date 10-22-92  
 Robert G. McLeod, 300-FF-1 Unit Manager, RL (A5-19)

APPROVAL: David R. Einan Date 22 Oct 92  
 David R. Einan, 300-FF-1 Unit Manager, EPA (B5-01)

APPROVAL: Dib Goswami Date 10/22/92  
 Dib Goswami, 300-FF-1 Unit Manager, WA Department of Ecology

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

- Attachment #1 - Meeting Summary/Summary of Commitments and Agreements
- Attachment #2 - Agenda For 300-FF-1 Meeting
- Attachment #3 - Attendance List for 300-FF-1
- Attachment #4 - Action Items Status List
- Attachment #5 - 300-FF-1 Work Progress
- Attachment #6 - Remedial Investigation Summary Schedule
- Attachment #7 - Approved Document Change Control Form 300-FF-1-28



PREPARED BY: Kay Kimmel Date 10/22/92  
 Suzanne Clarke, Kay Kimmel, GSSC (A4-35)

CONCURRENCE BY: Pon Belden for Date 10/22/92  
 G. Henckel, WHC 300-FF-1 RI Coordinator (H4-55)

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Attachment #1

Meeting Summary

Unit Manager's Meeting: 300-FF-1 Operable Unit  
September 24, 1992

1. SIGNING OF THE AUGUST 300-FF-1 MEETING MINUTES:

Minutes were reviewed and approved with no changes.

2. ACTION ITEM UPDATE (See Attachment #4):

3FF1.33 Open No change.  
LC Hulstrom

3. NEW ACTION ITEMS (INITIATED September 24, 1992):

No new action items were initiated.

4. STATUS AND SCHEDULE OF TASKS: Ron Belden presented the update of the status of 300-FF-1 tasks (see attachments #5 and #6).

- Change Request 28 was signed (see attachment #7).

5. INFORMATION

- RLWS Pipeline Integrity - The integrity and degree of contamination of the retired radioactive liquid waste sewer underground pipeline is being assessed via a remote camera train. Selected portions of the videotape of this activity were presented.

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UNIT MANAGER'S MEETING AGENDA  
300-FF-1 OU  
September 24, 1992  
10:15 - 10:45 AM  
Room 47  
450 Hills  
Richland, Wa

Presenter - Ron Belden

Introduction:

Status:

Action Items

Remedial Investigation

Schedule

Issues:

Other Topics: Status of Change Request No. 28 regarding changes to the Work Plan QAPP.

Video presentation of the retired RLWS survey.

Agreements and Commitments

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Commitments/Agreements Status List

300-FF-1 Operable Unit

September 24, 1992

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Item No.	Action	Status
3FF1.33	Assure that proper communication channels are maintained within WHC for activities concerning the 300 Area and define what criteria are to be followed for reporting surface contamination findings to DOE and the regulators. Revise EII 2.3 to include this information. Action: LC Hulstrom	Open no change from last month

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0 Remedial Investigation Activities

TASK 1 - SOURCE INVESTIGATION

- 1a - Source Data Compilation  
Task completed
- 1b - Ground Penetrating Radar Survey  
Task completed.
- 1c - Electromagnetic Survey  
Task completed.
- 1d - Topographic Base Map Development  
Task completed.
- 1e - "In-Pipe" Remote Inspection Survey of the RLWS  
Task completed.
- 1f - Soil Gas Survey  
Task completed.
- 1g - Non-Hazardous Source Characterization  
Change request approved to defer ash pit sampling.

TASK 2 - GEOLOGIC INVESTIGATION

- 2a - Geologic Data Compilation  
Task completed.

TASK 3 - SOIL INVESTIGATION

- 3a - Surface Radiation Survey  
Task completed.
- 3b - Soil Sampling and Analysis  
Validation complete. Summary report in progress.

TASK 4 - AIR INVESTIGATION

- 4a - Air Data Compilation  
Task completed.
- 4b - Ambient Air Sampling  
Task completed.

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September 24, 1992

TASK 5 - TERRESTRIAL BIOLOGICAL INVESTIGATION

- 5a - Biological Survey
  - 5a-1 Hazardous Substances Biological Uptake Assessment  
Task completed.
- 5a-2 Species Survey  
Task completed.
- 5b - Asparagus Sampling and Analysis  
Resampling deferred.

TASK 6 - DATA EVALUATION

- 6a - Source Data Evaluation
- 6b - Geologic Data Evaluation
- 6c - Soil Data Evaluation
- 6d - Air Data Evaluation
- 6e - Terrestrial Biological Data Evaluation
- 6f - Integration of Data Evaluation Tasks

Task completed.

Task 7 - VERIFICATION OF ARARS

Task completed.

Task 8 - BASELINE RISK ASSESSMENT

Task completed.

Task 9 - PHASE I RI REPORT

The Phase I RI Report-Draft B was delivered to DOE/RL on September 14 and RL delivered copies to EPA and Ecology on that same day. Only minor work relating to additional data evaluation activities as recommended in the RI report is being accomplished until comments are received.

Phase I/II Feasibility Study

Draft A of the Phase I/II Report was delivered to RL on September 14. The document was delivered by RL on that same day, September 14, to EPA and Ecology satisfying the TPA Milestone (M-15-03A) of September 15, 1992. No activity is scheduled for this project until comments are received.

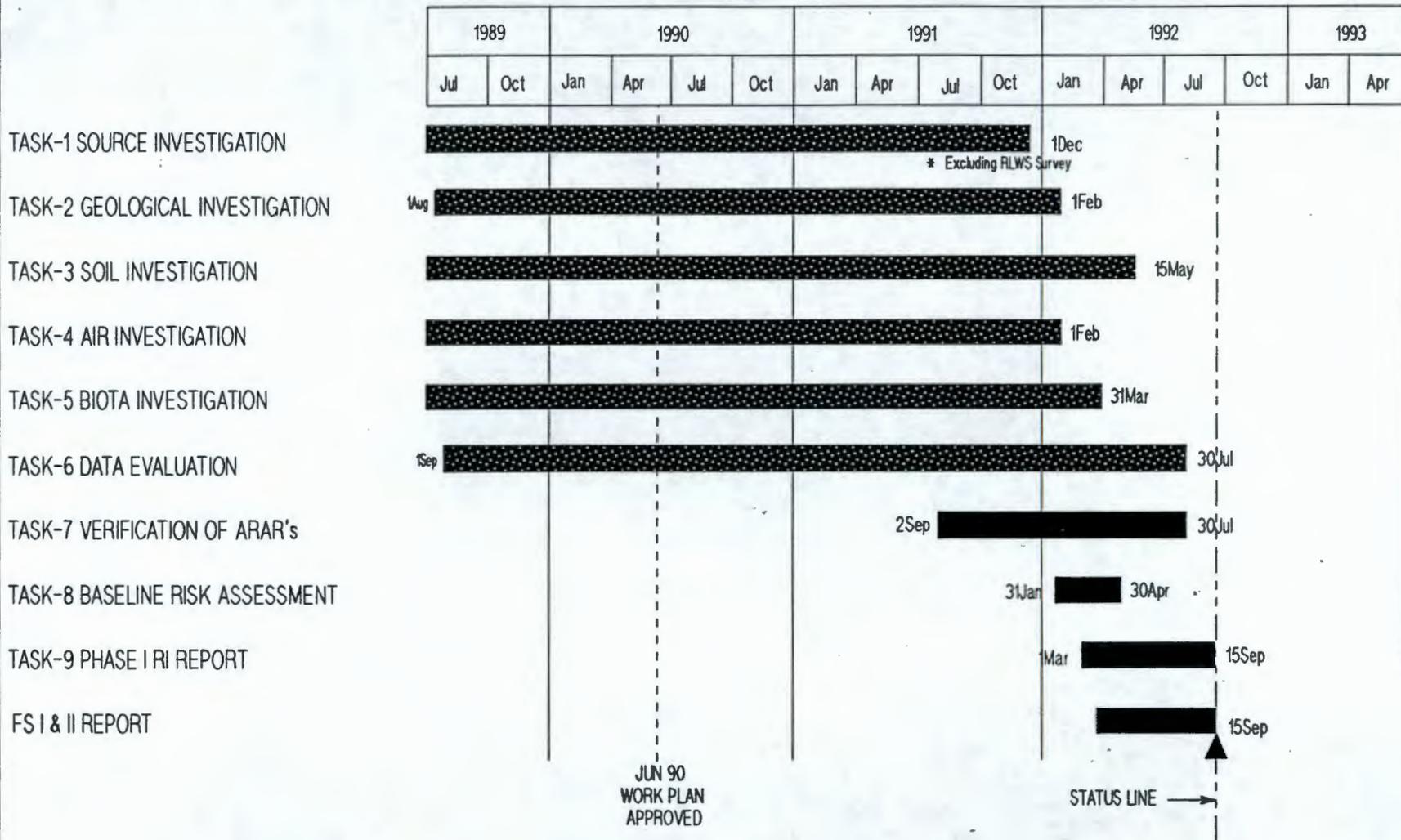
0 Schedule

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**300-FF-1 OPERABLE UNIT**

**REMEDIAL INVESTIGATION SUMMARY SCHEDULE**



Project:	GH300RIS	Date: 21 Sep 92 09:05
<b>300-FF-1 OPERABLE UNIT</b>		
Page: 1 of 1	Drawn by: Steve J. Sakey	6-3092/H4-55/450 Hills

Attachment #6

Page 1 of 1

Change Number 300-FF-1-28	APPROVED DOCUMENT CHANGE CONTROL FORM  Do not use blue ink. Type or print in black.	Date June 23, 1992
Document Number & Title DOE/RL 88-31, "Remedial Investigation/ Feasibility Study Work Plan for the 300-FF-1 Operable Unit, Hanford Site, Richland, Washington		Date Document Last Issued  June, 1990
Originator  G. C. Henckel, 300-FF-1 RI Coordinator	Phone  (509) 376-1994	
<p>Description of Change</p> <p>See attached pages containing changes to the 300-FF-1 Work Plan required by DOE-RL audit finding 91-03-WHC-02, which required the QAPP's for the various operable units be revised to include contract laboratory precision and accuracy limits, detection limits, etc.. Also required were several definition changes in the PMP and QAPP sections, see attached.</p> <p>Note: Include affected page number: PMP-3,5,6,7,8, SAP/QAPP-5,7,8,11,22.</p>		
<p>Justification and Impact of Change</p> <p>Response to DOE-RL audit finding.</p>		
R. G. Mcleod <i>Robert G. Mcleod</i> DOE Unit Manager	<u>8-27-92</u> Date	
D. R. Einan <i>David R. Einan</i> Lead Regulatory Unit Manager	<u>22 Sept 92</u> Date	
Per Action Plan for Implementation of the Hanford Consent Order and Compliance Agreement Section 9.3		

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CORRECTIONS TO 300-FF-1 PMP AND QAPP

- 1) In the Project Management Plan section 2.2 Project Organization and Responsibilities (pg. PMP-3) the title and defined responsibilities of the Quality Assurance Officer are revised as follows:

"The Cognizant Quality Assurance Manager is responsible for coordination and/or oversight of performance to the QAPP requirements by means of internal auditing and surveillance techniques. The Cognizant Quality Assurance Manager will have the necessary organizational independence and authority to identify conditions adverse to quality and to inform the Technical Lead of needed corrective action."

- 2) In the last sentence of section 2.2 of the QAPP (pg. SAP/QAPP-5) the reference requiring all laboratory work to be subject to the surveillance controls invoked by QI 7.3, "Source Surveillance and Inspection" shall be deleted. The last sentence of section 2.2 will read:

"All analyses shall be coordinated through the Westinghouse Hanford Office of Sample Management and shall be performed in compliance with Westinghouse Hanford approved laboratory QA Plans and analytical procedures."

- 3) See attached table revising the original QAPP preliminary target values for detection limits, precision, and accuracy, to correspond to the actual values that the contracted laboratories can produce. Also add a reference to section 15.0 as follows:

Lindahl, P.C., 1984, *Determination of Inorganic Anions in Aqueous and Solid Samples of Ion Chromatography*, EPA/6004-84/017, Argonne National Laboratory Argonne, Illinois.

- 4) The text in the QAPP section 4.1.2 (pg. SAP/QAPP-11) requiring OSM to meet qualifications defined in EII 1.7 and control records as defined in EII 1.6 will be revised as follows:

"All reviewers as necessary, shall be qualified under the requirements of EII 1.7 or MRP 4.22 as applicable. All participant contractor or subcontractor procedures, plans, and/or manuals shall be retained as project quality records in compliance with WHC-CM-3-5 Section 5 (WHC 1990),..."

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- 5) The text in the QAPP section 11.0 (pg. SAP/QAPP-22) defining requirements for the preventive maintenance of laboratory analytical equipment shall be revised as follows:

"When samples are analyzed using EPA reference methods, the preventive maintenance requirements for laboratory analytical equipment are as defined in the procured laboratory's QA plan(s)."

- 6) Page PMP-3 contains the definition of a "Quality Coordinator" this title will change to "Cognizant Quality Assurance Engineer". In Figures 3-6 on pages PMP-5 to PMP-8 the "QA Coordinator" will change to "Cognizant QA Engineer" and the "Quality Assurance Officer" will change to "Cognizant QA Manager". This will accomodate the position descriptions and responsibilities currently defined.

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Table QAPJP-1. Analytical Methods, Analytical Parameters, Detection Limits, and Precision and Accuracy Requirements for the 300-FF-1 Operable Unit. (sheet 1 of 4)

Category of Analysis	Analyte of Interest	Analytical Level <sup>a</sup>	Analytical Method	CRDL or CRQL (Soil) <sup>b</sup>	Precision (Soil) <sup>c</sup>	Accuracy (Soil) <sup>c</sup>	CRDL or CRQL (Water) <sup>b</sup>	Precision (Water) <sup>c</sup>	Accuracy (Water) <sup>c</sup>
Radiation Screening	Gross beta/gamma	I	p	N/A	N/A	N/A	N/A	N/A	N/A
Soil Gas Screening	Volatiles in Soils	II	5020/5030 <sup>e</sup>	m	±30	65-135	m	±30	65-135
Lab Screen <sup>d</sup> -XRF	j	II	PNL-SP-19 <sup>a</sup>	j	N/A	N/A	N/A	N/A	N/A
	-SC	Relative Ionic Strength	II	120.1 <sup>e</sup>	N/A	N/A	N/A	N/A	N/A
	-ISE	Specific Ionic Strength	II	4500-NH <sub>3</sub> F, 4500-F C, 4500-NO <sub>3</sub> D, 2510 B, 4500-H <sup>+</sup> B <sup>e</sup>	N/A	N/A	N/A	N/A	N/A
	-HS/GC	Chlorinated Volatiles	II	3810/8010 <sup>e</sup>	m	±30	65-135	m	±30
	-SE/GC	Aroclor 1248	II	8080 <sup>e</sup>	0.1 mg/kg	±20	65-135	N/A	N/A
Radionuclides <sup>a</sup>	Gross alpha	III	EP-10, PRO-032-302, PRO-032-1, RL-2302 (Water); EA-82, PRO-032-15, RL-2302 (Soils) <sup>a</sup>	10 pCi/g	±35 <sup>e</sup>	30-105	3 pCi/L	±35 <sup>e</sup>	30-105
	Gross beta	III	EP-10, PRO-032-302, PRO-032-1, RL-2302 (W); EA-82, PRO-032-15, RL-2302 (S) <sup>a</sup>	15 pCi/g	±35 <sup>e</sup>	30-105	4 pCi/L	±35 <sup>e</sup>	30-105
	Cesium-137	V	RC-30, PRO-042-5, RL-4303, RL-4304 (W,S) <sup>a</sup>	0.1 pCi/g	±35 <sup>e</sup>	30-105	15 pCi/L	±35 <sup>e</sup>	30-105
	Cobalt-60	V	RC-30, PRO-042-5, RL-4303, RL-4304 (W,S) <sup>a</sup>	0.05pCi/g	±35 <sup>e</sup>	30-105	25 pCi/L	±35 <sup>e</sup>	30-105
	Strontium-90	V	RC-306, RC-303, RC-309, RC-304, RL-2314 (W,S); PRO-032-16 (W); PRO-032-38, PRO-032-25 (S) <sup>a</sup>	1 pCi/g	±35 <sup>e</sup>	30-105	2 pCi/L	±35 <sup>e</sup>	30-105
	Tritium	V	EP-20 (W); EA-48, PRO-052-57 (S); RL-2320 (W,S) <sup>a</sup>	400 pCi/g	±35 <sup>e</sup>	30-105	400 pCi/L	±35 <sup>e</sup>	30-105
	Uranium-235	V	EP-70, EP-71, EP-5, PRO-052-32, RL-2322 (W,S) <sup>a</sup>	1 pCi/g	±35 <sup>e</sup>	30-105	1 pCi/L	±35 <sup>e</sup>	30-105
	Uranium-238	V	EP-70, EP-71, EP-5, PRO-052-32, RL-2322 (W,S) <sup>a</sup>	1 pCi/g	±35 <sup>e</sup>	30-105	1 pCi/L	±35 <sup>e</sup>	30-105

Table QAPjP-1. Analytical Methods, Analytical Parameters, Detection Limits, and Precision and Accuracy Requirements for the 300-FF-1 Operable Unit. (sheet 2 of 4)

Category of Analysis	Analyte of Interest	Analytical Level <sup>a</sup>	Analytical Method	CRDL or CRQL (Soil) <sup>b</sup>	Precision (Soil) <sup>c</sup>	Accuracy (Soil) <sup>c</sup>	CRDL or CRQL (Water) <sup>b</sup>	Precision (Water) <sup>c</sup>	Accuracy (Water) <sup>c</sup>
Metals <sup>d</sup>	Aluminum	IV	EPA 200.7, 202.1, or 202.2	20	±35	75-125	200	±20	75-125
	Antimony	IV	EPA 200.7, 204.1, or 204.2	6	±35	75-125	60	±20	75-125
	Beryllium	IV	EPA 200.7, 210.1, or 210.2	0.5	±35	75-125	5	±20	75-125
	Cadmium	IV	EPA 200.7, 213.1, or 213.2	0.5	±35	75-125	5	±20	75-125
	Chromium	IV	EPA 200.7, 218.1, or 218.2	1	±35	75-125	10	±20	75-125
	Copper	IV	EPA 200.7, 220.1, or 220.2	2.5	±35	75-125	25	±20	75-125
	Iron	IV	EPA 200.7, 236.1, or 236.2	10	±35	75-125	100	±20	75-125
	Lead	IV	EPA 200.7, 239.1, or 239.2	0.5	±35	75-125	5	±20	75-125
	Manganese	IV	EPA 200.7, 243.1, or 243.2	1.5	±35	75-125	15	±20	75-125
	Mercury	IV	EPA 245.1, 245.2, or 245.5	0.02	±35	75-125	0.2	±20	75-125
	Nickel	IV	EPA 200.7, 249.1, or 249.2	4	±35	75-125	40	±20	75-125
	Silver	IV	EPA 200.7, 272.1, or 272.2	1	±35	75-125	10	±20	75-125
	Zinc	IV	EPA 200.7, 289.1, or 289.2	2	±35	75-125	20	±20	75-125
Ions	Ammonia	IV	EPA 350.3 <sup>e</sup>	N/A	N/A	N/A	100	±20	75-125
	Fluoride	IV	EPA 300/mod.f or 340.2 <sup>e</sup>	2.5	±35	75-125	500	±20	75-125
	Nitrate	IV	EPA 300/mod.f, 352.1, 353.2, 353.3 or 354.2 <sup>e</sup>	1.25	±35	75-125	250	±20	75-125
	Nitrite	IV	EPA 300/mod.f, 354.1 <sup>e</sup>	1.25	±35	75-125	250	±20	75-125
	Sulfate	IV	EPA 300/mod.f, 375.2, 375.3, or 375.4 <sup>e</sup>	1.25	±35	75-125	250	±20	75-125
Volatile Organics <sup>d</sup>	1,2-Dichloroethene	IV	EPA 624	5	d	d	5	d	d
	Methylene Chloride	IV	EPA 624	5	d	d	5	d	d
	Tetrachloroethene	IV	EPA 624	5	d	d	5	d	d
	Trichloroethene	IV	EPA 624	5	d	d	5	d	d

Table QAPjP-1. Analytical Methods, Analytical Parameters, Detection Limits, and Precision and Accuracy Requirements for the 300-FF-1 Operable Unit. (sheet 3 of 4)

Category of Analysis	Analyte of Interest	Analytical Level <sup>a</sup>	Analytical Method	CRDL or CRQL (Soil) <sup>b</sup>	Precision (Soil) <sup>c</sup>	Accuracy (Soil) <sup>c</sup>	CRDL or CRQL (Water) <sup>b</sup>	Precision (Water) <sup>c</sup>	Accuracy (Water) <sup>c</sup>
Pesticides/PCBs <sup>d</sup>	Aroclor-1248	IV	EPA 608	80	d	d	0.5	d	d
Other	Cation Exchange Cap.	III	9080/9081 <sup>e</sup>	N/A	N/A	N/A	N/A	N/A	N/A
	pH (soil)	III	9045 <sup>e</sup>	N/A	N/A	N/A	N/A	N/A	N/A
	pH (water)	III	k	N/A	N/A	N/A	N/A	N/A	N/A
	Air Samples	V	n	n	n	n	N/A	N/A	N/A

<sup>a</sup> Analytical Levels are as defined in Section 4.3.1.1 of Data Quality Objectives for Remedial Response Activities: Volume 1, Development Process (EPA 1987) and Table 45 of the work plan for this operable unit.

<sup>b</sup> For all CLP analytical categories, CRDL refers to the Contract Required Detection Limit specified on the *US EPA Contract Laboratory Program Statement of Work for Inorganics Analysis* (EPA 1989a); CRQL refers to the Contract Required Quantitation Limit specified in the *US EPA Contract Laboratory Program Statement of Work for Organics Analysis* (EPA 1988c). CRQLs are provided for all other (non-CLP) categories, and represent maximum values that can be reliably achieved by analytical laboratories under routine normal conditions. Unless otherwise specified, all inorganic soil values are expressed in mg/Kg, and all organic soil values are expressed as µg/Kg; CLP Target Compound List (TCL) values for inorganic soil CRDLs are the lower of the values specified in the CLP SOW (EPA 1989a). All CRDL/CRQL values for water are expressed in µg/L. Laboratory agreements for services shall require updating as necessary to accommodate periodic updates of the CLP SOWs (EPA 1989a and 1988c).

<sup>c</sup> Acceptable ranges for precision and accuracy for EPA Contract Laboratory Program (CLP) TCL organics and TAL inorganic parameters shall be as specified for each analyte by the applicable CLP Statements of Work (SOWs; see EPA 1989a and 1988c). For all other parameters, the ranges provided shall be considered maximum values that can be reliably achieved by the laboratories under routine normal conditions. Precision is expressed as Relative Percent Difference (RPD); accuracy is expressed as percent recovery (%R). In all cases, these limits apply to sample results greater than five times the CRDL or CRQL, and shall be considered requirements in the absence of known or suspected interferences which may hinder achieving the limit by the analytical laboratory.

<sup>d</sup> Methods, CRDLs, CRQLs, precisions and accuracies are as specified in the CLP SOWs (EPA 1989a and EPA 1988c as applicable) for organic and inorganic analysis. For Volatile Organics and Pesticides/PCBs, the EPA has designated representative compounds to be used as spikes and has defined precision and accuracy numbers for these compounds. If the spiked compounds meet the criteria outlined by the EPA, the other compounds analyzed also meet the criteria.

<sup>e</sup> Methods specified are from *Methods for Chemical Analysis of Water and Wastes* (EPA 1979).

<sup>f</sup> Method specified is from *Determination of Inorganic Anions in Aqueous and Solid Samples by Ion Chromatography* (Lindahl 1984), and is a modification of EPA method 300.0.

<sup>g</sup> Methods specified are from *Test Methods for Evaluating Solid Waste* (EPA 1986a).

<sup>h</sup> Methods specified are from contracts with Roy F. Weston Inc. (methods with prefix PRO- and RL-), and Thermo-Analytical Inc. (all other methods listed).

**Table QAPjP-1. Analytical Methods, Analytical Parameters, Detection Limits, and Precision and Accuracy Requirements for the 300-FF-1 Operable Unit. (sheet 4 of 4)**

Category of Analysis	Analyte of Interest	Analytical Level <sup>a</sup>	Analytical Method	CRDL or CRQL (Soil) <sup>b</sup>	Precision (Soil) <sup>c</sup>	Accuracy (Soil) <sup>c</sup>	CRDL or CRQL (Water) <sup>b</sup>	Precision (Water) <sup>c</sup>	Accuracy (Water) <sup>c</sup>
<p><sup>d</sup> Laboratory screening methods include XRF (x-ray fluorescence), SC (specific conductance), ISE (ion selective electrodes), HS/GC (headspace/gas chromatography), and SE/GC (solvent extraction/gas chromatography).</p> <p><sup>j</sup> Elements to be determined by x-ray fluorescence are listed in Section 5.3.3.2.2 of the work plan and detection limits will vary with each constituent.</p> <p><sup>k</sup> Parameter shall be measured in the field in compliance with EII 5.8, "Groundwater Sampling" (WHC 1989b).</p> <p><sup>m</sup> Parameter varies depending on constituent(s) found present. For details of these parameters refer to the reference cited for the analytical method.</p> <p><sup>n</sup> Procedures and parameters for analyzing dust collected during air monitoring are the same as those for Radionuclides in soils.</p> <p><sup>p</sup> Analytical methods shall be approved Westinghouse Hanford or Westinghouse Hanford-approved participant contractor or subcontractor procedures. All procedure reviews and approvals shall be in compliance with applicable Westinghouse Hanford procedure control or procurement procedures as noted in Sections 2.1 and 2.2.</p> <p><sup>q</sup> Methods specified are from Standard Methods for the Examination of Water and Waste Water (17th Edition, 1989).</p> <p><sup>r</sup> For radiological analysis Relative Percent Difference between the sample and duplicate analysis must be within the control limits of <math>\pm 35\%</math> for results <math>&gt; 5X</math> the LLD. A control limit of <math>\pm 2X</math> the LLD is applied if one or both of the sample values are <math>&lt; 5X</math> the LLD. If both values are <math>&lt; LLD</math>, no control limit is applicable.</p>									

300-FF-1 Operable Unit Managers Meeting  
September 24, 1992

- Julie K. Erickson ..... Chief, DOE-RL, ERD/ERB (A5-19)
- Roger D. Freeberg ..... Chief, Rstr. Br., DOE-RL/ERD (A5-19)
- Steven H. Wisness ..... TPA Proj. Mgr. (A5-15)
- Diane Clark ..... DOE-RL (A5-55)
- Mike Thompson ..... DOE-RL (A5-15)
  
- Chuck Cline ..... WDOE (Lacey)
- Dib Goswami ..... WDOE (Kennewick)
  
- Lynn Albin ..... Washington Dept. of Health
- Dave Einan ..... EPA (B5-01)
- Ward Staubitz ..... USGS
  
- Audree DeAngeles ..... PRC
  
- Richard D. Wojtasek ..... Program Mgr., WHC (L4-92)
- Mel Adams ..... WHC (H4-55)
- Tom Wintczak ..... WHC (L4-92)
- George Henckel ..... WHC (H4-55)
- Rich Carlson ..... WHC (H4-55)
- L.D. Arnold ..... WHC (B2-35)
- Chris Abraham ..... GAO (A1-80)

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ADMINISTRATIVE RECORD: 300-FF-1; Care of EDMC, WHC (H4-22)

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This list has been updated. Please inform Suzanne E. Clarke (SWEC) of deletions or additions to the distribution list. (A4-35)

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