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CFarm
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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

3100 Port of Benton Blvd • Richland, WA 99354 • (509) 372-7950

September 28, 2009

*Hanford
Administrative Record*

TO: Valarie Peery

FROM: Jeff Lyon

JL 9/28/09

SUBJECT: Waste Management Area-C (WMA-C) 1996 Memorandum of Understanding (Section II., D, and E) briefing provided to the Environmental Protection Agency (EPA) on August 26, 2009

The Department of Ecology presented the attached information at the Tri-Party Agreement (TPA) briefing to EPA on WMA-C, and in support of the Ecology/EPA Memorandum of Understanding. Participants were from EPA, the United States Department of Energy-Office of River Protection, and Washington River Protection Solutions. In the briefing, we reviewed the "RCRA Facility Investigation/Corrective Measures Study Work Plan for Waste Management Area C," RPP-PLAN-39114, Revision 0 (Work Plan), submitted for milestone M-45-60. I initialed the attached material and notes from that TPA briefing on September 25, 2009. I hope that these attachments can be submitted as part of the C-Farm Administrative Record. Once our response letter is peer reviewed and signed, I will include that in the file as well.

We provided this briefing because we are the lead agency and the TPA offers us the opportunity to discuss any potential concerns with the non-lead agency, EPA, regarding these actions. For any changes we are suppose to include updates as an agenda item for the TPA Project Manager Meeting Quarterly Meetings.

Attachments

cc: Cheryl Whalen, Cleanup Section Manager

RECEIVED
FEB 25 2010
EDMC

m-045-60

S-2-4, H011

Attachments

1. Attendee List
2. Notes
3. Presentation "EPA TPA Briefing on WMC-C RFI Work Plan"
4. Waste management Area C Work Plan for Corrective Measures
5. Pages iii-v of RPP-PLAN-39114, Rev. 1 – Table ES-1 Sample Plan WMA C Phase 2 Characterization for RFI/CMS (3Sheets)
6. Appendix I – Single-Shell Tank System Waste Retrieval and Closure Process
7. Page 4-10 of RPP-PLAN-3911, Rev. 1 – Figure 4-2 Sample Locations for Phase 2 Characterization
8. Email dated July 8, 2009, from Helen Brownell, EPA, to Jeff Lyon, Ecology "Re: WMA-C Soil Characterization for Closure"
9. Meeting Notice, "Updated: Briefing for WMA-C closure – soil characterization"

<u>Name</u>	<u>ORG</u>	<u>PHONE</u>
MARK TRIPLETT	PNNL	376-1825
Jeff Lynn	ECY	539-1996
Larry Gadbois	EPA	376-9884
Rod Lobos	EPA	376-3749
Zelma Jackson	ECY	372-7910
Dib Goswami	ECY	372-7902
Mike Barnes	Ecology	372-7927
Chris Kemp	ORP	373-0649
Craig Cameron	EPA	376-8665
DEVID FAWLER	EPA	6-8631
Cheryl Whalen	Ecology	372-7972
DAN PARKER	WRPS	372-0766
Brenda Jentzen	ECY	372-7912
JOE CAGGIANO	ECY	372-7915
Jeff Luke	WRPS	
Susan Eberlein	WRPS	3721689
Bob Lober	ORP	

WMAC RFI/CMS Work Plan
Meeting

08/26/09

for 9-25-09
TPA Briefing
8/26

SAP WMA-C

Larry G.
8/26/09

Can they push to 200'? Basic assumption in their plan.
1st + then 2nd push idea is good (log, then collect soil samples)

Why ~~is~~ is the max depth for C-100 Series tanks 200 ft,
and for 200 series it is 160 ft max? Why don't we
want to know what is below that depth?

Figure 3-2 All the data collection is within the
red dotted perimeter, but the study boundary
is shown larger (yellow dotted line).
There is no study planned between the
red dots & yellow dotted line.

3.4 1st paragraph Holding times in SW-846 are requirements,
not just "recommended."
Last sentence is really bad.

5 sites ^{for multi suite analysis} is not many on which to dismiss highly
suspect potential COPCs.

W-25-09
DAB/epj
8/24

Briefing for EPA 8/26/09

8/26/2009

8/26/09
BPA
8/26/09

**EPA TPA Briefing on WMA-C RFI
Work Plan**

August 26th
2009

Expectations

Process to satisfy -

1. TPA

- Appendix I- Section 3.1 and by reference (from 3.1 - Section 5.5 and 5.6) (SST System Closure Regulatory Integration Strategy, page I-9);
- TPA Action Plan, Lead Regulatory Agency Concept (page 7),
- Section 5.1 (page 5-1),
- Section 6.3 (Page 6-5), and by reference from 6.3 - Section 7.4.2 (page 7-17) - functionally equivalent information gathered in the CERCLA process through the RI as described in Section 7)
- TEIS to ensure compliance with NEPA - Federal NEPA

2. MOU for WA State, Dept. of Ecology and EPA

ROD

TPA Briefing for EPA

- Ecology Tank Farm Storage Project goal for Closure of WMA-C by 2019
- TPA milestone M-45-60, DOE's Phase 2 RFI/CMS Work Plan for WMA-C
- Briefing Goal
 - provide information and the WMA-C RFI Work Plan
 - request EPA comments if desired
 - meet EPA expectations outlined in the MOU and the TPA
- Briefing includes Soil Characterization Work Plan Information for Waste Management Area C (WMA-C)
- Work Plan will identify the soil characterization necessary to provide information to make a closure decision in WMA-C and support the SST PA

EPA Response

- Provide review comments for resolution
- Express in letter
 - Confirm these actions (reference to Appendix I process) are CERCLA equivalent based on EPA authority
 - Indicate EPA response to Ecology Closure decision following
 - Other items suggested by EPA
- How will this process "address" or incorporate closure decisions in ROD?

Check in occasional => get EPA pitfalls => CERCLA => gets concurrence from Ecy => letter. => use MOU; EIS-procedural => Program perspective => NEPA decision vs CERCLA decision / No requirement to put CERCLA decision over Ecy;

8/26/2009

8/26/2009

EPA Feedback

- When will the closure/TPA process be incorporated into a ROD?
- What do we need to do to assure coordination with EPA?
- Does the existing WMA C work plan cover all characterization needed to support both RCRA corrective action and CERCLA remedy selection?

Current text

- Where information regarding treatment, management, and disposal of radioactive source, byproduct material, and/or special nuclear components of mixed waste (as defined by the Atomic Energy Act of 1954) is incorporated into this document, it is not incorporated for the purpose of regulating the radiation hazards of such components under the authority of the Revised Code of Washington (RCW) 70.105, "Hazardous Waste Management Act," and its implementing regulations, but is provided for information purposes only.

Points for further discussion

- How does the work within the RFI/CMS ensure a consistent remedy selection. EPA Insight on the following topics:
 - Submittal of both RFI/CMS and RI/FS for their respective authorities, then manage via permit - clarify expectations for TPA or other authorities.
 - Will this have any effects on a CPP document, referencing CMS for a CERCLA remedy selection - clarify expectations for TPA or other authorities.
 - Elimination of RFI/CMS completely - Not Ecology's position
 - What are your thoughts on the relationship between WMA C PA and the Central Plateau Baseline Risk Assessment
 - What do you anticipate for coordination of these 2 efforts?

Suggested text

- Consistent with par 19 of the TPA, this plan addresses all aspects of contamination, including AEA material. However the inclusion of AEA materials in the plan does not confer state RCRA or HWMA authority over otherwise exempt AEA spent, byproduct, and special nuclear material.

- Proposed by EPA to US DO

TPA lays it out.

Check in occasional => get EPA pitfalls => CERCLA => gets concurrence from Ecy => letter. => use MOU; EIS-procedural => Program perspective => NEPA decision vs CERCLA decision / No requirement to put CERCLA decision over Ecy;

8/26/2009

8/26/2009

EPA Feedback

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- proposed by EPA to US DOE

TPA lays it out.

PA-2012

Waste Management Area C Work Plan for Corrective Measures

Purpose:

Provide the information needed to perform a corrective measures study for Waste Management Area (WMA) C.

- Specifically, identify the soil characterization requirements for the corrective measures study.
- Address the nature and extent of contamination sufficiently to allow decisions on corrective measures supporting closure.
- Include both radiological and chemical constituents.

See Figure I-1 of the TPA for the context of the Corrective Measures Study in closure of WMA C.

Process:

- The Data Quality Objectives (DQO) Process was used to identify the soil characterization information needed to support a corrective measures study in WMA C. DOE Office of River Protection, Washington State Department of Ecology, Environmental Protection Agency and Hanford site contractor participated in the process.
- Results of the DQO process were communicated to stakeholders and input sought before finalizing the DQO document, RPP-RPT-38152.
- A work plan, RPP-PLAN-39114, was developed to address the data needs identified in the DQO process.
- Additional work will be performed to address needs not associated with site characterization (e.g. evaluation of available technologies for soil remediation).

Stakeholder and Tribal involvement:

- Workshop held with Tribes and State of Oregon, March 6, 2008 (Nez Perce not available)
- Met with Nez Perce, March 25, 2008
- Follow on workshop with Tribes, May 8, 2008
- Visit to State of Oregon in Salem Oregon, May 12, 2008
- Follow on meeting with Tribe to provide feedback on how their input was integrated into DQO, plan, August 21, 2008

Plan:

- RPP-PLAN-39114, RCRA Facility Investigation/Corrective Measures Work Plan for Waste Management Area C, identifies multiple soil sampling locations and depths, as well as the suite of analyses required to understand the impact of waste leaks on the soil.

Handwritten signature and date:
3/25/08
K. B. [unclear]

- RPP-PLAN-39114 was formally transmitted from ORP to Ecology in December 2008. Ecology comments (including those forwarded by stakeholders, tribes and the public) are in the process of being resolved, and characterization is underway. The scope of characterization is expected to take about 4 years.

Plan Implementation:

- RPP-PLAN-39114 lays out data needs based on the DQO – new information may identify changes or additional data needs
- The plan recognizes that tank waste is currently impacting groundwater – it may not be possible to identify all sources of ground water contamination
- The plan tries to maximize the amount of information gained by use of a combination of direct push logging and sampling, electrical resistivity measurements, logging existing boreholes
 - Trade-offs have been made between number of sampling locations and number of samples/sampling depths at each location
 - Direct push at multiple locations is used instead of wide-bore drilling at few locations to obtain more extensive coverage
 - Innovative methods are being pursued (more sensitive gamma logging, test of a beta detector)
- Changes to the plan will require Ecology approval per the TPA process

Table ES-1. Sample Plan WMA C Phase 2 Characterization for RFI/CMS (3 sheets)

Map Design.	Group ^a	Location	Deployment	Number of Holes	Average Number of Samples	Known or Suspected Event	Objective	Access Availability	Ecology/ Stakeholder Interest
A	G3	Spare inlet 241-C-101	Direct push, slant	1-2	8	Tank over fill. Loss through spare inlet	Characterize C-101 release and refine conceptual models 1, 2, and 4	Fair	High
B	G2	241-C-101, south side	Direct push, vertical or slant	1	8	Tank release	Characterize C-101 release and refine conceptual models 1 and 2	Good	High
C	G4	241-C-203	Direct push, slant	3	3: 0-15 ft 15: >15 ft	Tank leak and/or tank over fill. Loss through spare inlet	Determine if C-200 actually leaked and refine conceptual models 1, 2, and 4	Fair	Moderate to high
D	G4	241-C-201 241-C-202 241-C-204	Direct push, slant	1-2/tank	8	200 series tank leaks	Determine if C-200 actually leaked and refine conceptual models 1, 2, and 4	Fair	Moderate, depending on C-203 results
E	G2	Between 241-C-106 and 200-C-109	Direct push, vertical	1	8	Suspected release	Assess ⁶⁰ Co and refine conceptual models 1, 2, and 4	Fair	High
F	G2	Bldg C-801 chemical drain	Direct push, vertical	1	8	Suspected release site	Assess release of PUREX waste, ¹³⁷ Cs and ⁹⁹ Tc, and ⁶⁰ Co and refine conceptual models 1, 2, and 4	Good	Moderate to high
G	G2	Between Bldg C-801 and 241-C-103	Direct push, vertical	1	8	Suspected transfer line release site	Assess release and ⁶⁰ Co and refine conceptual models 1, 2, and 4	Good	High
H	G5	Northeast side of E-91	Direct push, vertical	1	8	Surface release	Surface exposures and assess ⁶⁰ Co and surface release conceptual Model	Good	High
I	G5	Northeast side of E-115	Direct push, vertical or slant	1	8	Surface release	Surface exposures and assess ⁶⁰ Co and surface release conceptual model, refine conceptual models 1, 2, and 4	Good	High
J	G3	241-C-104	Direct push, slant	1	8	Tank release	Assess suspected release and refine conceptual models 1, 2, and 4	Fair	High
K	G2	241-C-108	Direct push, vertical or slant	1	8	Transfer line leak, hot dry well (09-02)	Assess suspected release and refine conceptual models 1, 2, and 4	Poor	High
L	G2	241-C-103 and 241-C-106	Drywell logging and direct push, vertical	2 / log drywells	8	Potential transfer line leak and tank over fill	Update logging data for ⁶⁰ Co, ¹³⁷ Cs, uranium, and moisture and assess potential release and refine conceptual models 1, 2, and 4	Fair	Moderate

RPP-PLAN-39114, Rev. 1

Handwritten notes:
 Top of Bldg 2-25 or 2-26

Table ES-1. Sample Plan WMA C Phase 2 Characterization for RFI/CMS (3 sheets)

Map Design.	Group ^a	Location	Deployment	Number of Holes	Average Number of Samples	Known or Suspected Event	Objective	Access Availability	Ecology/ Stakeholder Interest
M	G7	241-C-104, 108, 109, 110, 111, and 112	Drywell logging	N/A	N/A		Update logging data for ⁶⁰ Co, ¹³⁷ Cs, uranium, and moisture	Fair to good	Moderate
N	G8	UPR-86, UPR-82 and UPR-81	SGE	N/A	N/A		Test SGE, define plume at unplanned releases (UPR)-82 and -86; refine conceptual models 1, 2, and 4	Good	High
O	G9	WMA C	SGE	N/A	N/A		3-D vision of suspected releases – may lead to supplemental sample locations	Good	High
P	G1	UPR-81	Balance of direct pushes to complete characterization	3	8	Known release site	Characterize release and refine conceptual models 1, 2, and 4	Good	High
Q	G6	UPR-82	Direct push through center of UPR-82	1	8	Known release site	Penetrate center of mass, and refine conceptual models 1, 2, and 4	Good	High
R	G2	241-C-301 Catch Tank	Direct push vertical	1	8	Unlined concrete catch tank	Assess potential catch tank release and refine conceptual models 1, 2, and 4	Good	Moderate to high
S	G5	UPR-72 and C-8 Drain	Direct push vertical	1	8	Buried radioactive material and French drain from 241 CR Building are in this area	Assess presence of buried material and potential releases to C-8 drain and refine conceptual models 1, 2, and 4	Good	Moderate to high
T	TBD	TBD, based on SGE data for entire WMA	TBD, direct push vertical and/or slant	TBD	TBD	Previously unknown release sites	TBD	TBD	Moderate to high
U	G3	C-110	Direct push, slant	1	8	Tank leak and/or tank over fill. Loss through spare inlet	Characterize C-110 release and conceptual models 1, 2, and 4	Fair	High

Table ES-1. Sample Plan WMA C Phase 2 Characterization for RFI/CMS (3 sheets)

Map Design.	Group ^a	Location	Deployment	Number of Holes	Average Number of Samples	Known or Suspected Event	Objective	Access Availability	Ecology/ Stakeholder Interest
M	G7	241-C-104, 108, 109, 110, 111, and 112	Drywell logging	N/A	N/A		Update logging data for ⁶⁰ Co, ¹³⁷ Cs, uranium, and moisture	Fair to good	Moderate
N	G8	UPR-86, UPR-82 and UPR-81	SGE	N/A	N/A		Test SGE, define plume at unplanned releases (UPR)-82 and -86; refine conceptual models 1, 2, and 4	Good	High
O	G9	WMA C	SGE	N/A	N/A		3-D vision of suspected releases -- may lead to supplemental sample locations	Good	High
P	G1	UPR-81	Balance of direct pushes to complete characterization	3	8	Known release site	Characterize release and refine conceptual models 1, 2, and 4	Good	High
Q	G6	UPR-82	Direct push through center of UPR-82	1	8	Known release site	Penetrate center of mass, and refine conceptual models 1, 2, and 4	Good	High
R	G2	241-C-301 Catch Tank	Direct push vertical	1	8	Unlined concrete catch tank	Assess potential catch tank release and refine conceptual models 1, 2, and 4	Good	Moderate to high
S	G5	UPR-72 and C-8 Drain	Direct push vertical	1	8	Buried radioactive material and French drain from 241 CR Building are in this area	Assess presence of buried material and potential releases to C-8 drain and refine conceptual models 1, 2, and 4	Good	Moderate to high
T	TBD	TBD, based on SGE data for entire WMA	TBD, direct push vertical and/or slant	TBD	TBD	Previously unknown release sites	TBD	TBD	Moderate to high
U	G3	C-110	Direct push, slant	1	8	Tank leak and/or tank over fill. Loss through spare inlet.	Characterize C-110 release and conceptual models 1, 2, and 4	Fair	High

AI

RPP-PLAN-39114, Rev. 1

Handwritten:
 TMA on 9-25-09
 Briefing
 8/26

APPENDIX I - SINGLE-SHELL TANK SYSTEM WASTE RETRIEVAL AND CLOSURE PROCESS

Handwritten notes:
 2.1
 2.2
 2.3
 2.4

Figure I-1.
 Single-Shell Tank Waste Management Area (WMA)
 Waste Retrieval and Closure Process

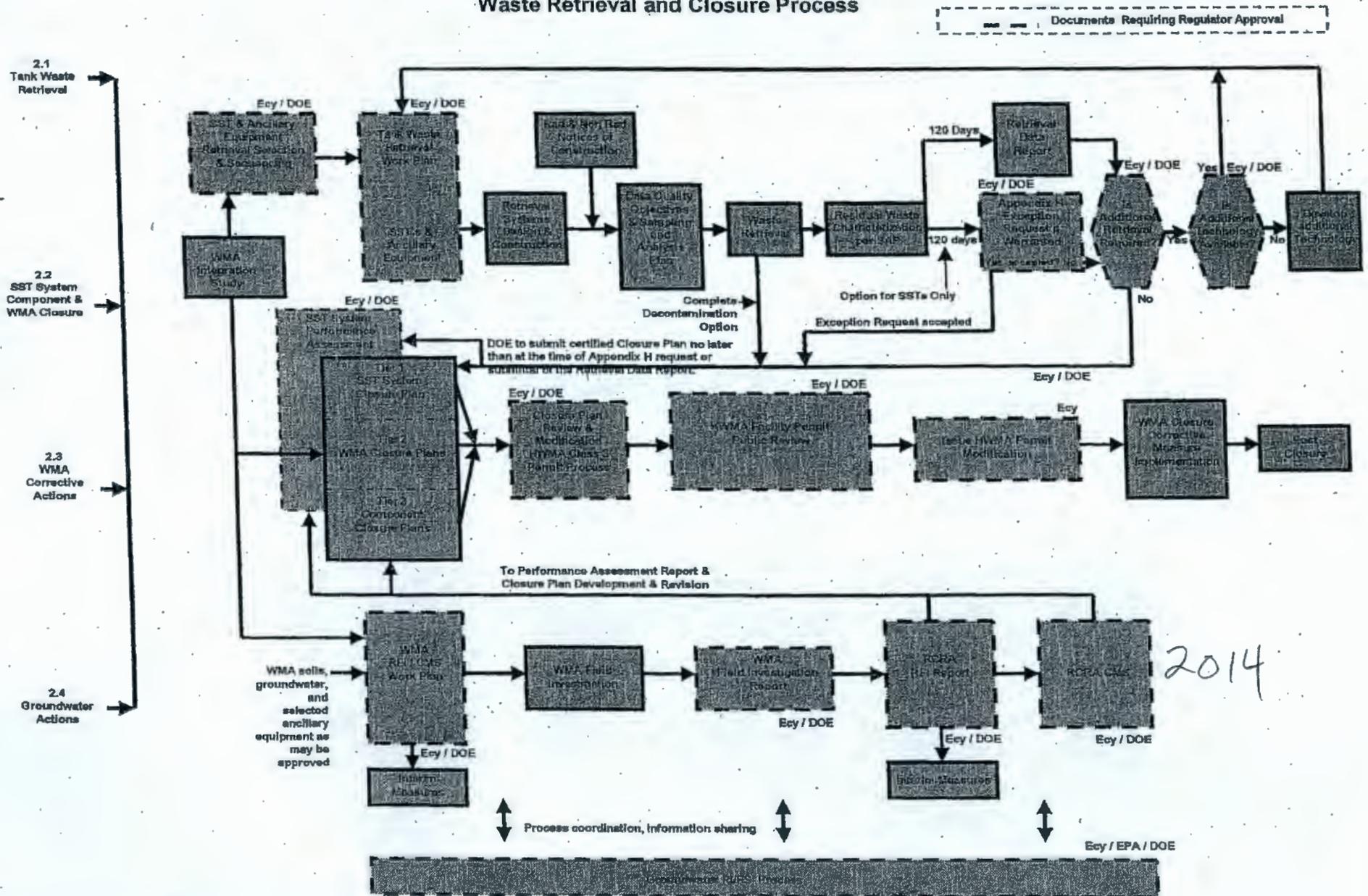
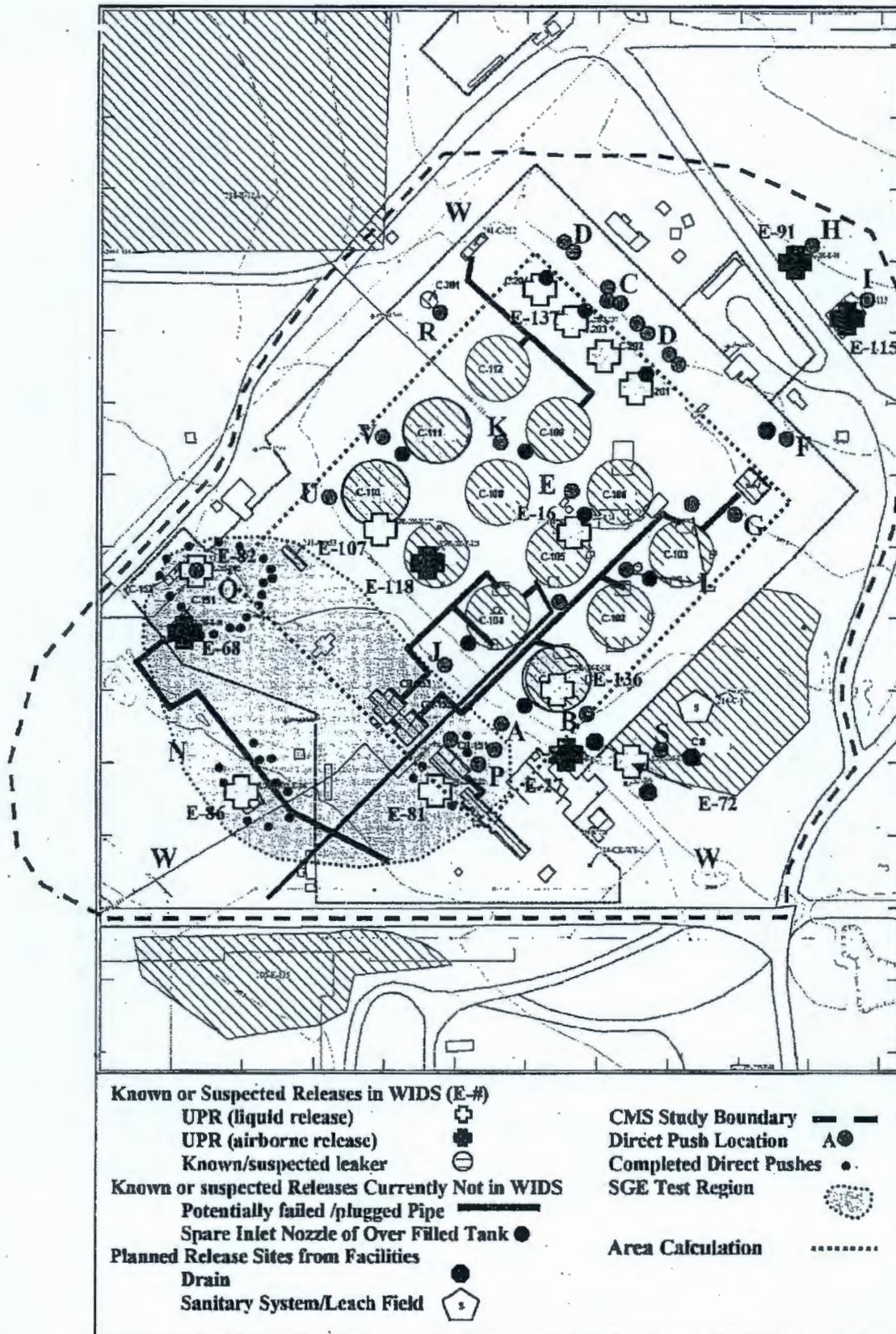


Figure 4-2. Sample Locations for Phase 2 Characterization

1
2



3

Lyon, Jeffery (ECY)

From: Brownell.Helen@epamail.epa.gov
Sent: Wednesday, July 08, 2009 8:01 AM
To: Lyon, Jeffery (ECY)
Subject: Re: WMA-C Soil Characterization for Closure

Jeff - The week of August 24-28 works for most people in the office. Please go ahead and invite Dave Bartus. It's not necessary to provide us a copy of the work plan. Times I would suggest are: 8/24 afternoon, 8/25 morning, 8/26 any time, 8/27 afternoon.

Helen Brownell
Office Manager
U.S. EPA Hanford Project Office
(509)376-6865
(509)376-2396 (fax)
brownell.helen@epa.gov

"Lyon, Jeffery
(ECY)"
<JLY0461@ECY.WA.
GOV>

07/07/2009 06:44
PM

To
Helen Brownell/R10/USEPA/US@EPA
cc
Rod Lobos/R10/USEPA/US@EPA, Craig
Cameron/R10/USEPA/US@EPA, Dennis
Faulk/R10/USEPA/US@EPA, Larry
Gadbois/R10/USEPA/US@EPA, "Lober,
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<Robert.W.Lober@orp.doe.gov>,
<Susan.J.Eberlein@rl.gov>,
"Whalen, Cheryl (ECY)"
<CWHA461@ECY.WA.GOV>, "Barnes,
Michael (ECY)"
<miba461@ECY.WA.GOV>, "Jackson,
Zelma (ECY)" <ZJAC461@ECY.WA.GOV>
Subject
WMA-C Soil Characterization for
Closure

Helen, I have been working on getting a TPA briefing together from the Ecology Tank Farms Project for EPA. This briefing will be for the Soil Characterization Work Plan in Waste Management Area C (WMA-C), TPA milestone M-45-60, DOE's Phase 2 RFI/CMS Work Plan for WMA-C.

• Our original date for the briefing (July 13) was not confirmed, and I would like to propose July 23rd as our preferred alternate choice. The next dates available are August 24 - 28, and then September 8-11. The delay in time is due to the conflicting schedules at our end.

I also would like to ask anyone if they believe that it is appropriate to extend the invitation to Mr. Bartus?

This Phase 2 Work Plan will be the soil characterization necessary to provide information to make a closure decision in WMA-C.

My intent is to provide information and the WMA-C RFI Work Plan to get EPA comments and to meet EPA expectations outlined in the MOU and the TPA.

Our focus for the briefing is to address:

(1) Appendix I- Section 3.1 (SST System Closure Regulatory Integration Strategy, page I-9);

(2) TPA Action Plan, Lead Regulatory Agency Concept (page 7), Section 5.1 (page 5-1), Section 6.3 (Page 6-5), and by reference from 6.3 - Section 7.4.2 (page 7-17) - functionally equivalent information gathered in the CERCLA process through the RI as described in Section 7)

(3) MOU for WA State, Dept. of Ecology and EPA

If EPA would like to receive a copy of the WMA-C Phase 2 Work Plan. Please let me know.

Dennis suggested that I contact you to coordinate a meeting date and time. Can you help us out?

Thanks

Jeffery J. Lyon
NWP Specialist, TPA Project Manager
3100 Posrt of Benton Boulevard
Richland, Washington 99352

Phone - Office: (509) 372-7914; Cell: (509) 539-1996

Hallelujah, grace like rain falls down on me - Todd Agnew, "Grace Like Rain"

Lyon, Jeffery (ECY)

Subject: Updated: Briefing for WMA C closure - soil characterization
Location: EPA Handford Office changed to Ecology room 3A

Start: Wed 8/26/2009 1:00 PM
End: Wed 8/26/2009 5:00 PM
Show Time As: Tentative

Recurrence: (none)

Meeting Status: Meeting organizer

Organizer: Lyon, Jeffery (ECY)
Required Attendees: Barnes, Michael (ECY); Jackson, Zelma (ECY); 'BROWNELL, HELEN@EPA.GOV'; 'Robert Lober'; 'Susan Eberlein'; Whalen, Cheryl (ECY); 'Bartus, Dave'; Cameron.Craig@epamail.epa.gov; FAULK.DENNIS@EPA.GOV; Jentzen, Brenda (ECY)
Optional Attendees: 'Helen Brownell/R10/USEPA/US'

Categories: Important

EPA, Ecology approved date and time.
Does this work for WRPS and USDOE?