

AR
PBOW
Res 2
Burning Ground

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March 14, 2005

Attn: CELRN-EC-R-M (Linda Ingram)
U.S. Army Corps of Engineers
Nashville District
110 Ninth Ave. South, Rm. 682 Annex
Nashville, TN 37203

Subject: Plum Brook Ordnance Works, Addendum to the **2BG SAP** for Additional Soil Sampling – Draft

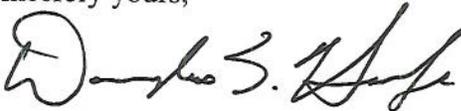
Dear Linda,

Enclosed find four (4) copies of the above mentioned document.

This document defines the sampling protocols and proposed locations for additional surface soil sampling to be performed west of the burn layer boundary at Reservoir No. 2 Burning Ground.

As you are aware, we are planning mobilization for the additional soil investigation work on 4/20/05 with the **fieldwork occurring from 4/21 thru 5/2**. If you have any question, please contact me.

Sincerely yours,



Doug Hodge

Attachments

- Cc: Rick Meadows-CELRH (3 copies)
Ron Nabors-OEPA (2 copies)
Laurie Moore-OEPA (1 copy)
Robert Lallier-NASA (2 copies)
Michael Filips-CENWO (1 copy)
Dennis Druck-USCHPPM (1 copy)
Mark Bohne-PBOW RAB (1 copy)

Addendum to the Site Specific Sampling Plan

Remedial Investigation, Part 1, at Reservoir No. 2 Burning Ground

Introduction

This addendum has been prepared to address the sampling strategy for additional surface soil samples at Reservoir No. 2 Burning Ground. Data collected during the May 2004 sampling event indicates contamination exceeding the PRGs is present in surface soil west of the burn area. As presented in the Draft Site Characterization Report, Figure 4-2 (attached), PCBs, lead, nitroaromatics, and PAHs are present at elevated levels. The extent of contamination has not been adequately defined to the west and south; therefore, additional surface soil samples are proposed.

Scope and Objectives

Ten additional surface soil locations are proposed, Figure A-1. The proposed locations have been selected to provide further delineation to the west and south of the contamination area. Five locations have been placed 25 feet from the contamination zone as follows:

- BH-25 – placed 25 feet northeast of BH-24. The contamination zone is currently bounded to the north by BH-14. BH-25 is designed to reduce the gap between the existing data points and to provide delineation to the northeast.
- BH-26 – placed 25 feet west of BH-24 to provide further delineation to the west.
- BH-27 – placed 25 feet north west of BH-23 to provide further delineation to the west.
- BH-28 – placed 25 feet west of BH-12 to provide further delineation to the west.
- BH-29 – placed 25 feet south of BH-12 to provide further delineation to the south.

Five locations have been placed 50 feet from the contamination zone to provide additional delineation should any of the first five locations exceed the PRGs. Locations BH-30, BH-31, BH-32, BH-33, and BH-34 are evenly spaced to the west and south of the contamination area.

Surface soil samples will be submitted to an off-site laboratory and analyzed for PCBs, lead, nitroaromatics, and PAHs. This list represents those analytes which exceeded the PRGs.

Sampling is scheduled for mid April 2005 to be performed in conjunction with the Acid Areas 2 & 3 Round 2 groundwater sampling.

Sampling Methods

One surface soil sample will be collected from 0 to 1 feet bgs at each of the ten proposed locations in accordance with the Site-Wide SAP. Samples will be collected with a stainless steel hand auger equipped with disposable stainless steel sleeves. Each sample will be homogenized in a glass bowl using a stainless steel spoon.

Decontamination of the hand auger will be performed between sample locations as specified in the Site-Wide SAP. Dedicated bowls and spoons will be used for each sample.

QA/QC samples will be collected in accordance with the Site-specific QAPP, to include field duplicates, matrix spike/matrix spike duplicates, and a QA sample to be submitted to a separate laboratory.

Sample handling, preservation, packing, and shipping will be in accordance with the Site-Specific QAPP.

Land surveying will be performed for each of the ten locations in accordance with the Site-Wide SAP.

Data Reporting

Analytical results will be used to update the figures and text discussion as presented in the Draft Site Characterization Report. An Interim Final Site Characterization Report will be submitted, which will address comments from the draft report and will include the additional soil data and associated conclusions.

05/21/04		
Qual.	PRG	
J	16000	
NJ	62	

05/21/04		
Qual.	PRG	Bkg.
J	16000	
J	400000	48600
J	220	

PBOW-04-SO-2BG-BH24A(0-1) - 05/22/04			
Analyte	Value	Qual.	PRG
Benzo(a)pyrene	89.5 ug/Kg	NJ	62
Lead (total)	590000 ug/Kg	J	400000
PCB-1260 (Aroclor 1260)	2630 ug/Kg	J	220

04/21/04		
Qual.	PRG	Bkg.
J	16000	
NJ	62	
J	400000	48600
J	220	

PBOW-04-SO-2BG-BH23A(0-1) - 05/22/04			
Analyte	Value	Qual.	PRG
2,4,6-Trinitrotoluene	2270000 ug/Kg		16000
PCB-1260 (Aroclor 1260)	44400 ug/Kg	J	220

05/20/04		
Qual.	PRG	Bkg.
	3.9	
NJ	62	
J	400000	48600
J	220	

PBOW-96-SO-2BG-2BGSO08-1220-(0-.5) - 10/01/96			
Analyte	Value	Qual.	PRG
2,4,6-Trinitrotoluene	210 mg/Kg		16
Benzo(a)pyrene	130 ug/Kg	J	400
Benzo(b)fluoranthene	820 ug/Kg	J	400
Lead (total)	603 mg/Kg		220
PCB-1260 (Aroclor 1260)	1400 ug/Kg		48.6

05/20/04		
Qual.	PRG	Bkg.
NJ	62	
J	220	

PBOW-04-SO-2BG-BH12A(0-1) - 05/22/04			
Analyte	Value	Qual.	PRG
Benzo(a)pyrene	229 ug/Kg	NJ	62
Dibenz(a,h)anthracene	124 ug/Kg	NJ	62
PCB-1260 (Aroclor 1260)	5330 ug/Kg		220

05/20/04	
Qual.	PRG
NJ	62
J	220

05/20/04	
Qual.	PRG
	3.9
NJ	62



Legend

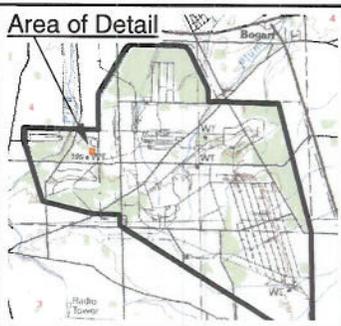
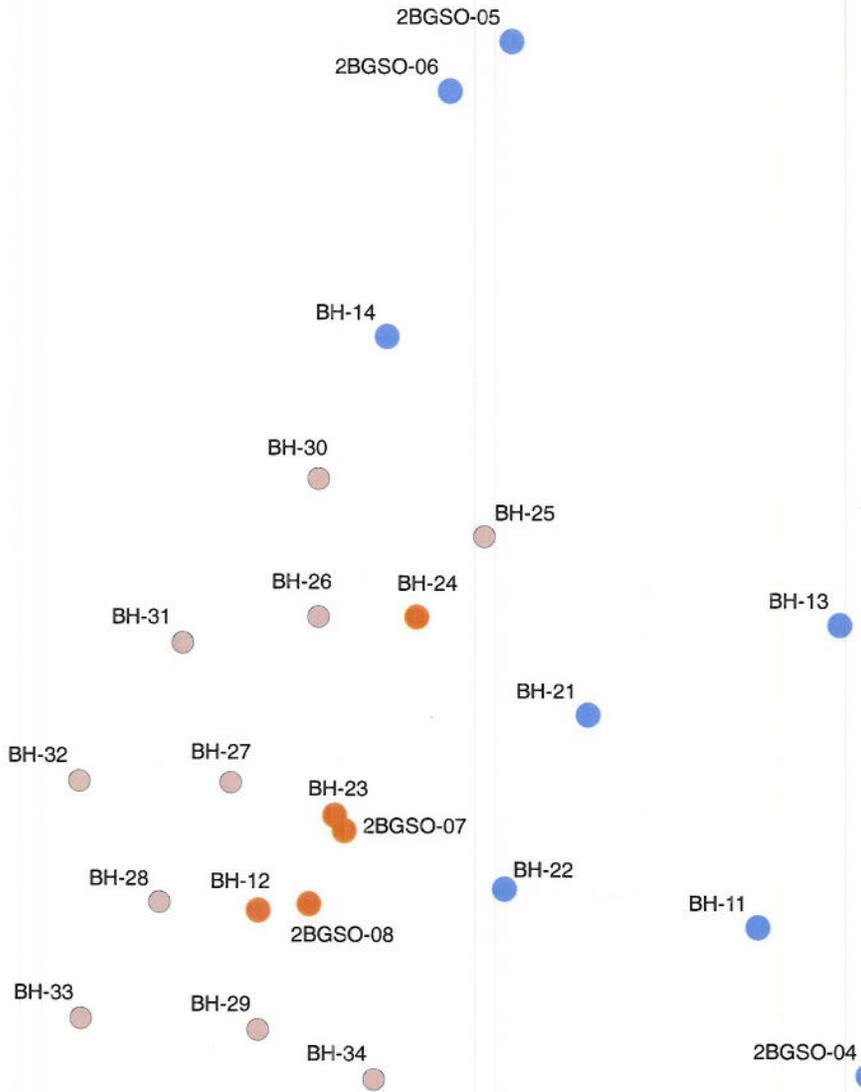
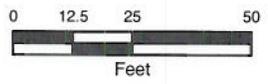
- DPT Locations—Jacobs 2004
- DPT Locations—1996 SI
- Surface Soil Only—Jacobs 2004
- - - - - Interpreted Burn Pit Boundary Based on Trenching Data
- ~ ~ ~ ~ ~ Creek, Ditch, Conveyance

Sources
Data mapped to Ohio State Plane North NAD83, map grid units in feet.



Distribution of Contaminants Exceeding PRG's in Surface Soil

Plum Brook Ordnance Works
Sandusky, Ohio



- Legend**
- Surface Soil Sample Above PRG's
 - Surface Soil Sample Below PRG's
 - Proposed Surface Soil Sample
 - - - Interpreted Burn Pit Boundary Based on Trenching Data



JE JACOBS

Additional Surface Soil Sampling Locations

Plum Brook Ordnance Works
Sandusky, Ohio

03/14/05 NZ Y:\GIS\PlumBrook\Projects\RES2\BurningGround_Addendum_3_05\ArcMap\Additional_Surface_Soil.mxd

Figure A-1