

Additional Evaluation of the RVAAP-05 Winklepeck Burning Grounds

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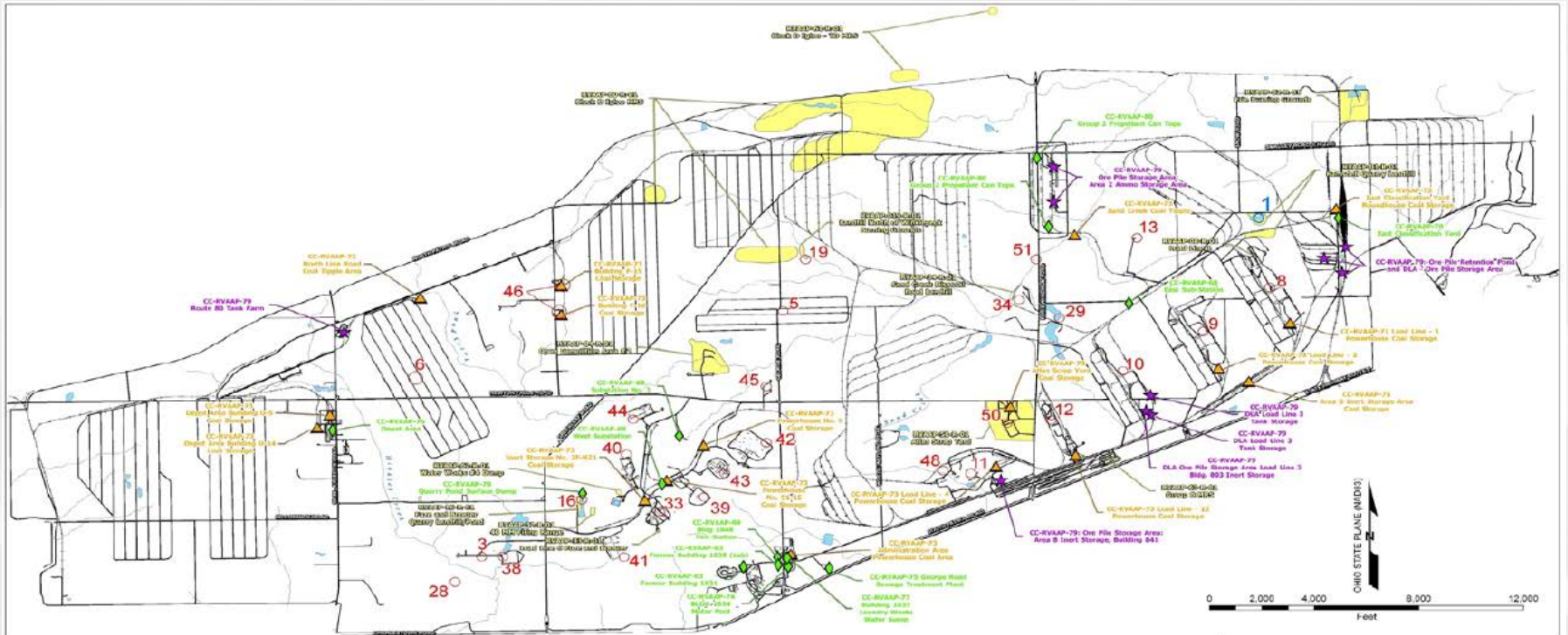
U.S. Army Corps of Engineers

20 February 2013

Restoration Advisory Board Meeting for

RVAAP/Camp Ravenna





LEGEND OF SITES

REG SITES (14 SITES)	RVAAAP SITES	LOAD LINE SITES	RVAAAP SITES	FACILITY-WIDE REVENDS	COMPLIANCE RESTORATION SITES (13 SITES)	DMRP SITES (11 SITES)	REG SITES (11 SITES)
RVAAAP-01	RVAAAP-03	LOAD LINE 9	RVAAAP-07	FACILITY-WIDE REVENDS	CC-RVAAAP-01	RAMDELL QUARRY LANDFILL MRS	REG-001
RVAAAP-02	RVAAAP-04	SAND CREEK DISPOSAL ROAD LANDFILL	RVAAAP-08	ELECTRIC SUBSTATIONS (E-WA-3)	CC-RVAAAP-02	ERIC BURNING GROUNDS MRS	REG-002
RVAAAP-03	RVAAAP-05	NAEA TEST AREA	RVAAAP-09	BUILDING 108 - FIRE STATION	CC-RVAAAP-03	ORION DEMONSTRATION AREA #2 MRS	REG-003
RVAAAP-04	RVAAAP-06	LOAD LINE 9	RVAAAP-10	EAST CLASSIFICATION YARD	CC-RVAAAP-04	PLUM AND ROCKING QUARRY MRS	REG-004
RVAAAP-05	RVAAAP-07	LOAD LINE 7	RVAAAP-11	FACILITY-WIDE SITES (44 SITES)	CC-RVAAAP-05	LANDFILL NORTH OF WANKLEPECK MRS	REG-005
RVAAAP-06	RVAAAP-08	LOAD LINE 3	RVAAAP-12	FACILITY-WIDE COAL STORAGE	CC-RVAAAP-06	40M FRINGE MRS	REG-006
RVAAAP-07	RVAAAP-09	LOAD LINE 2	RVAAAP-13	BUILDING 104 MOTOR POOL HYDRAULIC LIFT	CC-RVAAAP-07	FINETONE TEST EQUIPMENT MRS	REG-007
RVAAAP-08	RVAAAP-10	LOAD LINE 1	RVAAAP-14	GEORGE ROAD SEWAGE TREATMENT PLANT	CC-RVAAAP-08	SAND CREEK DUMP MRS	REG-008
RVAAAP-09	RVAAAP-11	LOAD LINE 4	RVAAAP-15	DEPOT AREA	CC-RVAAAP-09	JTLAS SCRAP YARD MRS	REG-009
RVAAAP-10	RVAAAP-12	LOAD LINE 32	RVAAAP-16	BUILDING F-11 AND F-16	CC-RVAAAP-10	BLOCK D SALD MRS	REG-010
RVAAAP-11	RVAAAP-13	BLDG 1200 AND DILUTION/SETTLING POND	RVAAAP-17	ANCHOR TEST AREA	CC-RVAAAP-11	BLOCK D HIGLO -TD MRS	REG-011
RVAAAP-12	RVAAAP-14	PUZE AND BOOSTER QUARRY LANDFILL/PONDS	RVAAAP-18	ATLAS SCRAP YARD	CC-RVAAAP-12	JARVIS WATERS IN DUMP MRS	REG-012
RVAAAP-13	RVAAAP-15	LANDFILL NORTH OF WANKLEPECK BURNING GROUND	RVAAAP-19	DUMP ALONG PARIS-WINDHAM ROAD	CC-RVAAAP-13	GROUP 8 MRS	REG-013
RVAAAP-14	RVAAAP-16	MUSTARD AGENT BURIAL SITE	RVAAAP-20	FACILITY-WIDE GROUNDWATER	CC-RVAAAP-14		REG-014
RVAAAP-15	RVAAAP-17	LANDFILL AND LOWER CORNER POND	RVAAAP-21		CC-RVAAAP-15		REG-015

**RAYENNA ARMY AMMUNITION PLANT
RAYENNA, OHIO**

FIGURE 12
RVAAAP/CAMP
RAYENNA
FACILITY MAP

US Army Corps of Engineers
Louisville District

Some WBG History

- Approximately 70 Burn Pads were used
- Burned explosives from heavy projectiles
- RDX; Comp B; 2,4,6-TNT; propellant
- lead oxide, lead thiocyanate, antimony sulfide, black powder, sludge, sawdust
- Explosives contaminated crates & bags
- Domestic waste from the installation



Investigation and Response

- 1996 to 2009
- Preliminary Assessment
- Remedial Investigation
- Focused Feasibility Study and ROD
- 2005 Removal Actions
- 2008: 7294 cy of soils removed from Pads 61/61A, 67, and 70



MEC Items Included

- 40-mm grenades found in western portion of WBG, likely kickouts from OD-2
- 40-mm grenades around Pad 60 probably not kickouts
- Shrapnel and metallic munitions fragments
- 19 MEC items found during 2008 removal



Current Use

- The remedial actions were performed so that the AOC could be used as a MK19 Range.
- The MK19 Range has been constructed and is being used for training.



Current Restrictions

- Per the RD (July 25, 2008) “...prohibit all digging or excavation activities, except for: routine maintenance of roads, ditches, and culverts; ground surface repairs by authorized range personnel in support of range activities; and, digging along target array areas by authorized range personnel to a depth of 1 foot BGS...”



Moving Forward

- Although remedial actions were conducted for WBG, the associated restrictions placed on the AOC limit the use and future development of the AOC. Additional development of the AOC as a Multi-Purpose Machine Gun (MPMG) range is planned and the site must be further assessed to allow more flexibility.



Work Plan for Additional Evaluation

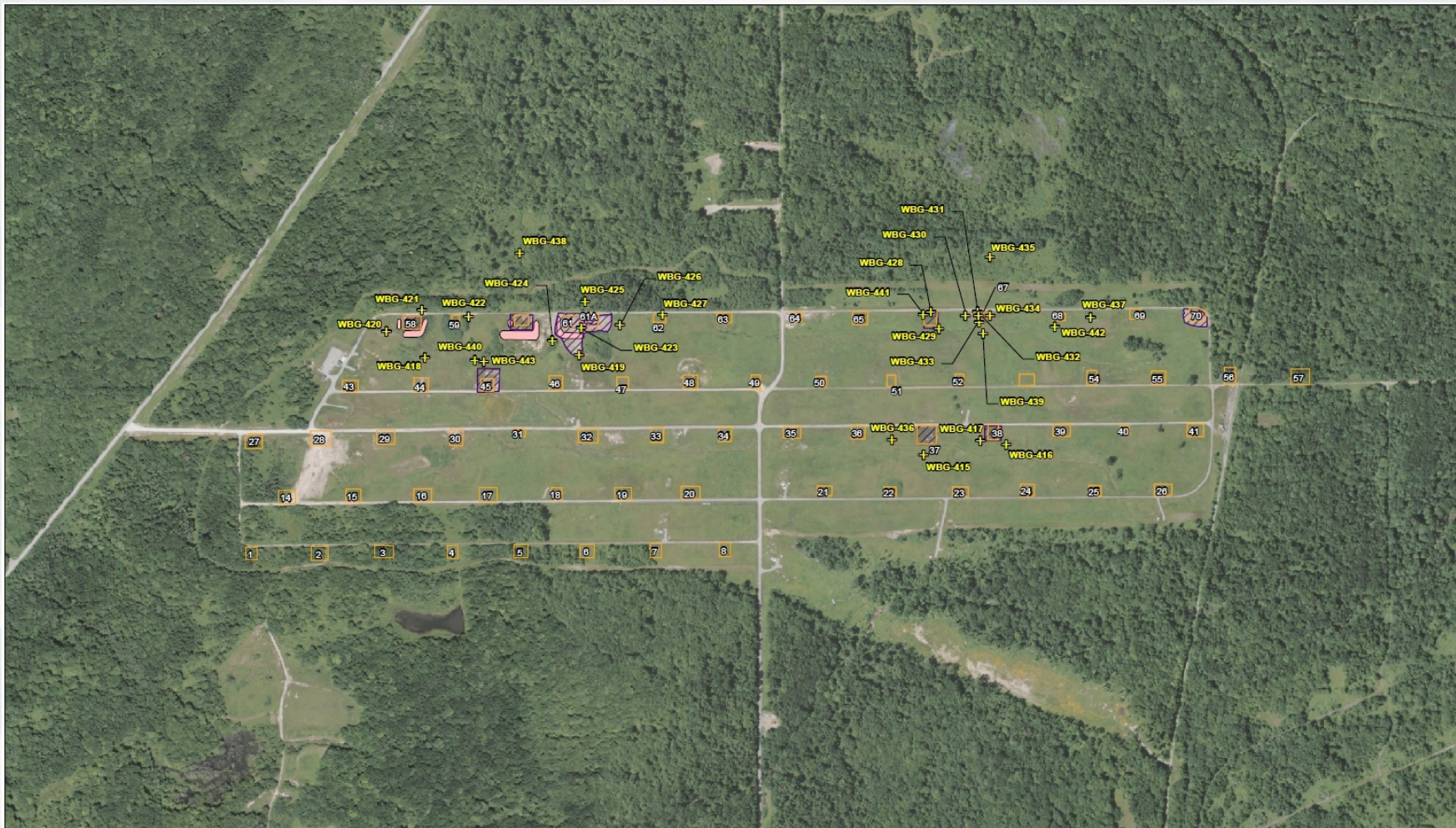
- The Work Plan for Additional Evaluation of the RVAAP-05 Winklepeck Burning Grounds was completed in October 2012.
- Ohio EPA worked with us on format.
- This work plan identified data gaps in defining the full extent of chemical contamination and then developed a sampling scheme to address these data gaps.



Chemicals for Additional Evaluation

- 2,4,6 – TNT; 3 – Nitrotoluene, RDX
- Benzo(a)pyrene
- Barium, Cadmium, Hexavalent Chromium





Explanation:

- Soil Screening Level Exceedance
- Soil Screening Level Non-Exceedance
- ◆ Sediment Screening Level Exceedance
- ◇ Sediment Screening Level Non-Exceedance
- ▲ Cleanup Level Exceedance
- 4 21 Exceedance/Non-Exceedance Depth (Feet)
- Exceedance Boundary
- Former Burn Pads
- ▨ Previous Removal Actions
- ▭ Berm
- ⊕ Proposed Sample Location
- 4 21 Sample Depths (Feet)

FIGURE 2-1. Proposed Sample Locations for Additional Analysis Where Potential Data Gaps Were Identified

0 250 500 1,000
 Feet



Sampling Field Work

- Sampling field work was conducted during the week of 26 November 2012 by USACE LRL Personnel and a Drilling subcontractor.
- UXO tech cleared all sample locations.
- Soil samples were collected and sent to laboratories for processing and analysis.



Drillers Using Direct Push Rig to Obtain Soil Boring



USACE Collecting Samples from Soil Borings



Sampling Analytical Results

- Analytical results were received from the laboratory on 3 January 2013.
- The analytical results were studied and screened to determine if the sampling and analysis adequately filled data gaps.
- USACE determined that data gaps were filled, therefore additional sampling is not anticipated.



Risk Assessment Assumptions Document

- A Risk Assessment Assumptions Document is currently being prepared.
- This document describes the assumptions and the steps of the Risk Assessment that will be conducted on the data collected for the Additional Evaluation of the WBG and applicable data collected from previous studies.



Sampling and Evaluation Report

- A report will be prepared to:
 - ▶ Document field sampling activities
 - ▶ Present analytical results
 - ▶ Assess risk at Winklepeck Burning Grounds to determine if any additional remediation is required

Draft Report due 18 August 2013.



Questions?

