

Proposed Plans for Soil, Sediment, and Surface Water at

Anchor Test Area and Building 1200

Ravenna Army Ammunition Plant
Ravenna, Ohio

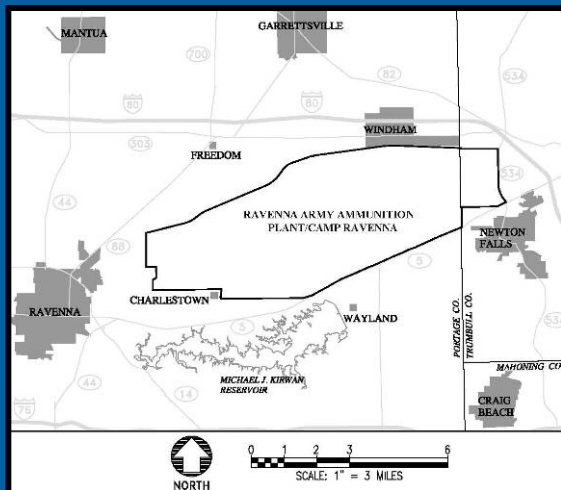
Presented by:

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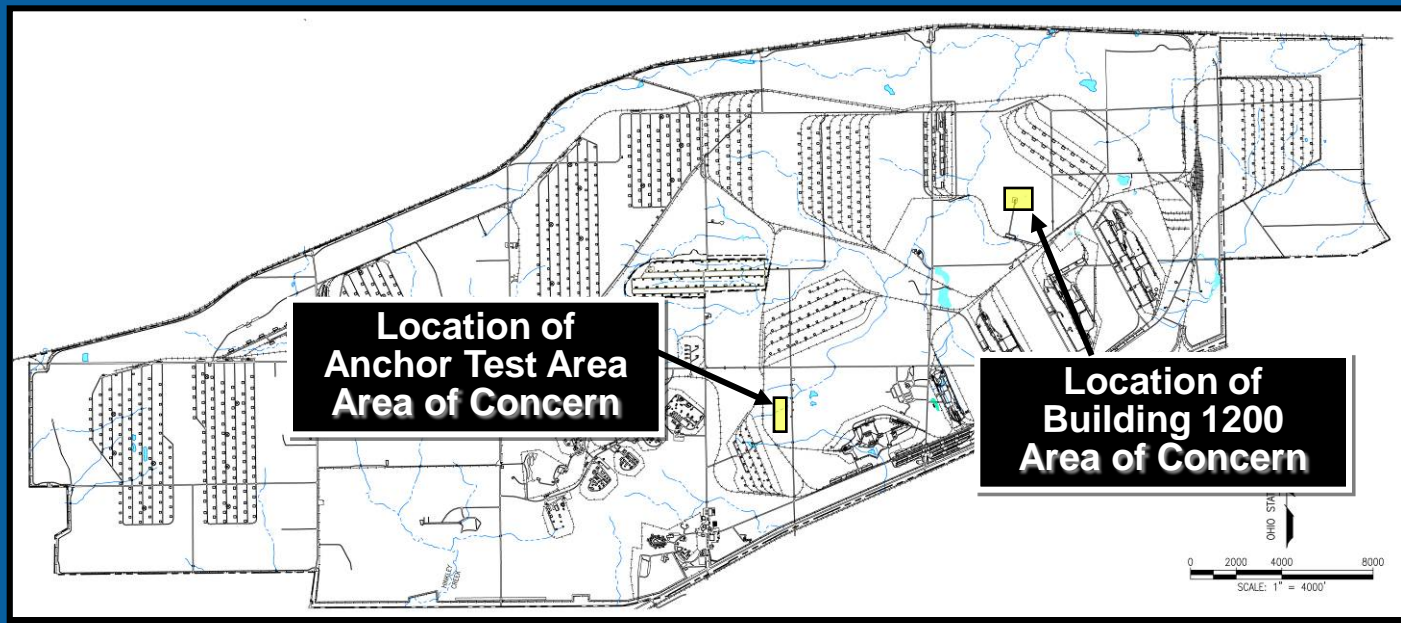
August 7, 2013

Presentation Agenda

- Two Areas of Concern – Anchor Test Area (ATA) and Building 1200 (B1200)
- Historical Operations
- Previous Investigations
- Scope and Role of the Response Actions
- Feasibility Study and Evaluation of Alternatives
- Preferred Alternative
- Public Participation
- Questions



Anchor Test Area AOC is RVAAP-48
Building 1200 AOC is RVAAP-13



Anchor Test Area

Site Features



- Approximately 0.5 acres in size
- Heavily overgrown with trees and shrubs
- No perennial surface water or drainage features
- Sediment and surface water are not present at ATA

Anchor Test Area

Historical Operations



- Operational information is relatively limited.
- Used for testing of explosives-driven soil anchoring devices.
- Metal rods driven into the ground and attached via a cable to stabilize or anchor them to the ground.
- Dirt mounds were used as blast walls.

Anchor Test Area

Previous Investigations



- 1998 Relative Risk Site Evaluation

- Identified soil and groundwater as media of concern.
- Sediment and surface water was not identified.
- Surface soil and subsurface soil samples were collected.

Conclusions:

- ATA was classified as a “medium priority” AOC.
- Identified potentially contaminated surface soil.

- 2004 Characterization of 14 Areas of Concern

- Surface and subsurface soil samples were collected using incremental sampling method (ISM).
- An initial assessment of nature and extent of contamination was performed.
- A human health risk and ecological risk screening were conducted.

Conclusions:

- Metals in soil were identified as potential risk to human health and the environment.
- Recommended a full risk assessment be performed to assist in overall management decision for the AOC.

Anchor Test Area

Previous Investigations (continued)



- 2010 Remedial Investigation
 - Collected surface soil and subsurface soil to supplement findings of the previous investigations.
 - Confirmed the lack of perennial surface water and sediment.
 - Provided a full evaluation of nature and extent of contamination.
 - Human health risk assessment identified Arsenic as a chemical of concern (COC) in surface soil (0-1 ft bgs).
 - Ecological risk assessment did not identify important or significant ecological places or resources.

Conclusions:

- No further sampling is required to characterize soil at ATA as the Nature and Extent of contamination was defined.
- No further action is required to protect ecological resources.
- Remediation of Arsenic in surface soil is required to be protective of human health.



Anchor Test Area

Scope and Role of Response Action



- The overall goal of the RVAAP Installation Restoration Program is to clean up previously contaminated areas to reduce contamination that may cause risks to human health or the environment.
- The Ohio Army National Guard intends to conduct Military Training at Anchor Test Area.
- The proposed remedy addresses soil contamination at ATA. Sediment and surface water do not exist at this AOC.
- Groundwater is to be addressed under future decisions.

The Remedial Action Objective for Anchor Test Area is to prevent: (1) National Guard Trainee exposure to identified COCs in soil above CUGs; (2) adverse ecological effects from previous AOC activities; and (3) negative groundwater impacts from contaminant migration from source media (e.g., soil).

Anchor Test Area

Feasibility Study

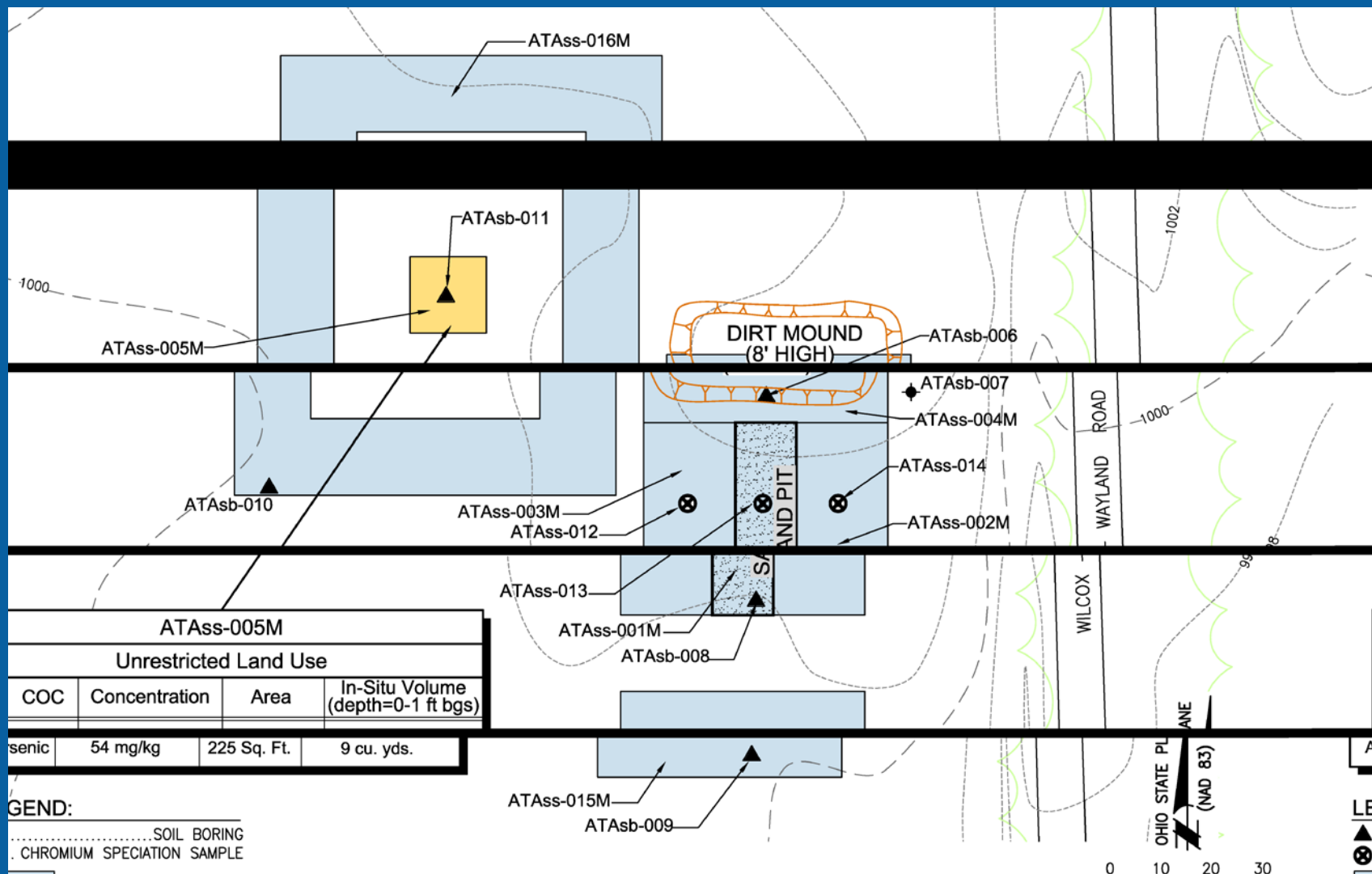


- Established the cleanup goal for Arsenic as 15.4 mg/kg (background concentration) to be protective of the National Guard Trainee and Resident Farmer.
- Screened cleanup technologies to address soil contaminated with Arsenic.
- Developed and analyzed the following potential alternatives:
 - 1) No Action (required by CERCLA)
 - 2) Attain Unrestricted Land Use
 - Removes soil contamination.
 - Chemical concentration in soil is protective of the National Guard Trainee and Resident Farmer.
 - Future land use controls are not required.

Alternative 2: Attain Unrestricted Land Use

- Excavate an estimated 14 yd³ (ex situ) of surface soil (0-1 ft bgs).
- Test and dispose of excavated soil at an off-site, licensed landfill.
- Confirm that soil above cleanup goals is removed.
- Restore with approved clean soil and seed the area to establish vegetation.

Anchor Test Area Planned Soil Excavation



Building 1200 Area of Concern

Historical Operations



- Originally designated as the Ammunition Sectioning Area.
- Three buildings (Buildings 1200, S-4605, and T-4602) served as a quality assurance inspection station for production line munitions.
- Munitions disassembled, inspected, and explosive material removed using steam melt-out process prior to off-site disposition.

Building 1200 Area of Concern

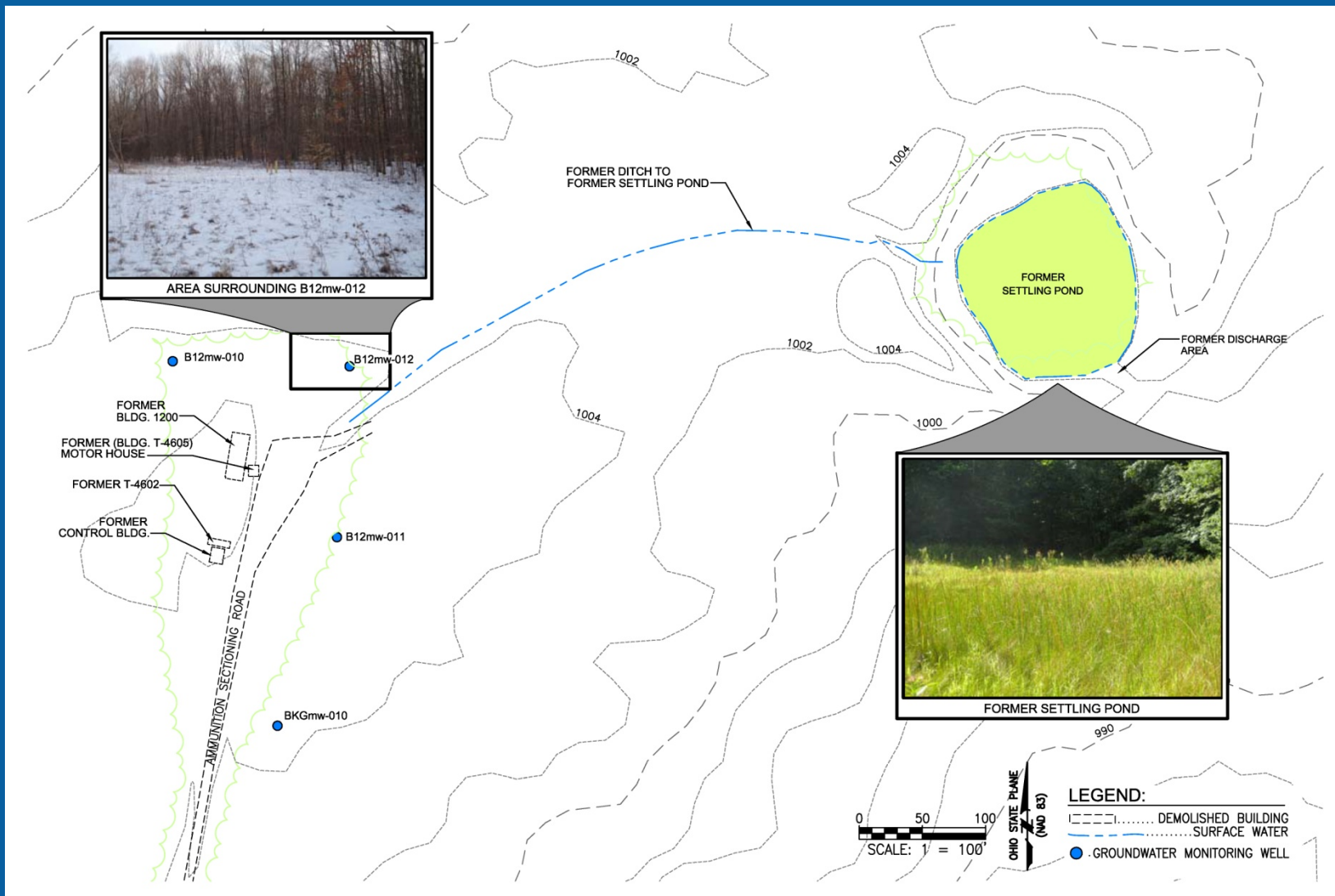
Site Features



- Approximately 8 acres in size.
- Three former buildings at the AOC were demolished in 2004 and 2005.
- The area of the former buildings is bare and surrounded by a heavily vegetated area with trees.
- A ditch from the former building location connects to a former 0.5 acre unlined settling pond.

Building 1200 Area of Concern

Site Features (continued)



Building 1200 Area of Concern

Previous Investigations



- 1989 RCRA Facility Assessment
 - A visual inspection of known AOCs and identified new AOCs and solid waste management units.
 - B1200 showed high potential for release of contamination to groundwater, surface water, and soil.

Conclusions:

- Recommended soil, sediment, and surface water sampling of the ditch and settling pond.

- 1996 Preliminary Assessment
 - Provided history, process operations, and activities conducted at AOCs (including B1200) with known or suspect environmental concerns.

Conclusions:

- Categorized as high priority warranting further action.
- Identified explosives and metals as potential contaminants.

Building 1200 Area of Concern

Previous Investigations



- 1996 Phase I Remedial Investigation

- Collected two surface soil samples adjacent to former process buildings.
- Collected seven sediment samples from the drainage ditch and former settling pond.
- All samples analyzed for metals, volatile organic chemicals (VOCs), semi-volatile organic compounds (SVOCs), pesticides, PCBs, cyanide, and explosives.

Conclusions:

- No widespread contamination was detected in soil.
- Identified the AOC as medium priority.

- 2004 Characterization of 14 Areas of Concern

- Surface soil (0-1 ft bgs) samples were collected using ISM.
- Sediment and geotechnical samples were collected.
- Three groundwater wells were installed.
- A human health risk and ecological risk screening were conducted.

Conclusions:

- Numerous chemicals (metals, SVOCs, VOCs, explosives, and propellants) were identified as potential risk to human health and/or the environment.
- Recommended a full risk assessment be performed to assist in overall management decision for the AOC.

Building 1200 Area of Concern

Previous Investigations (continued)



- 2010 Remedial Investigation

- Collected surface soil (0-1 ft bgs), subsurface soil, sediment, and surface water samples to supplement findings of the previous investigations.
- Provided a full evaluation of nature and extent of contamination.
- Human health risk assessment identified Manganese as a chemical of concern (COC) in surface soil (0-1 ft bgs).
- Ecological risk assessment concluded that no further action is required to protect ecological resources.

Conclusions:

- No further sampling is required to characterize soil at B1200, as nature and extent of contamination was defined.
- No further action is needed to address ecological resources.
- Remediation of Manganese in surface soil is required to be protective of human health.



Building 1200 Area of Concern

Scope and Role of Response Action



- The overall goal of the RVAAP Installation Restoration Program is to clean up previously contaminated areas to reduce contamination that may cause risks to human health or the environment.
- The Ohio Army National Guard intends to conduct Military Training at the Building 1200 AOC.
- The proposed remedy addresses soil contamination at B1200. Sediment and surface water do not pose a risk to human health or the environment.
- Groundwater is to be addressed under future decisions.

The Remedial Action Objective for the Building 1200 AOC is to prevent: (1) National Guard Trainee exposure to identified COCs in soil above CUGs; (2) adverse ecological effects from previous AOC activities; and (3) negative groundwater impacts from contaminant migration from source media (e.g., soil).

Building 1200 Area of Concern Feasibility Study



- Established the cleanup goal for Manganese as 1,450 mg/kg (background concentration) to be protective of the National Guard Trainee and Resident Farmer.
- Screened cleanup technologies to address soil contaminated with Manganese.
- Developed and analyzed the following potential alternatives:
 - 1) No Action (required by CERCLA)
 - 2) Attain Unrestricted Land Use
 - Removes soil contamination.
 - Chemical concentration in soil is protective of the National Guard Trainee and Resident Farmer.
 - Future land use controls are not required.

Building 1200 Area of Concern

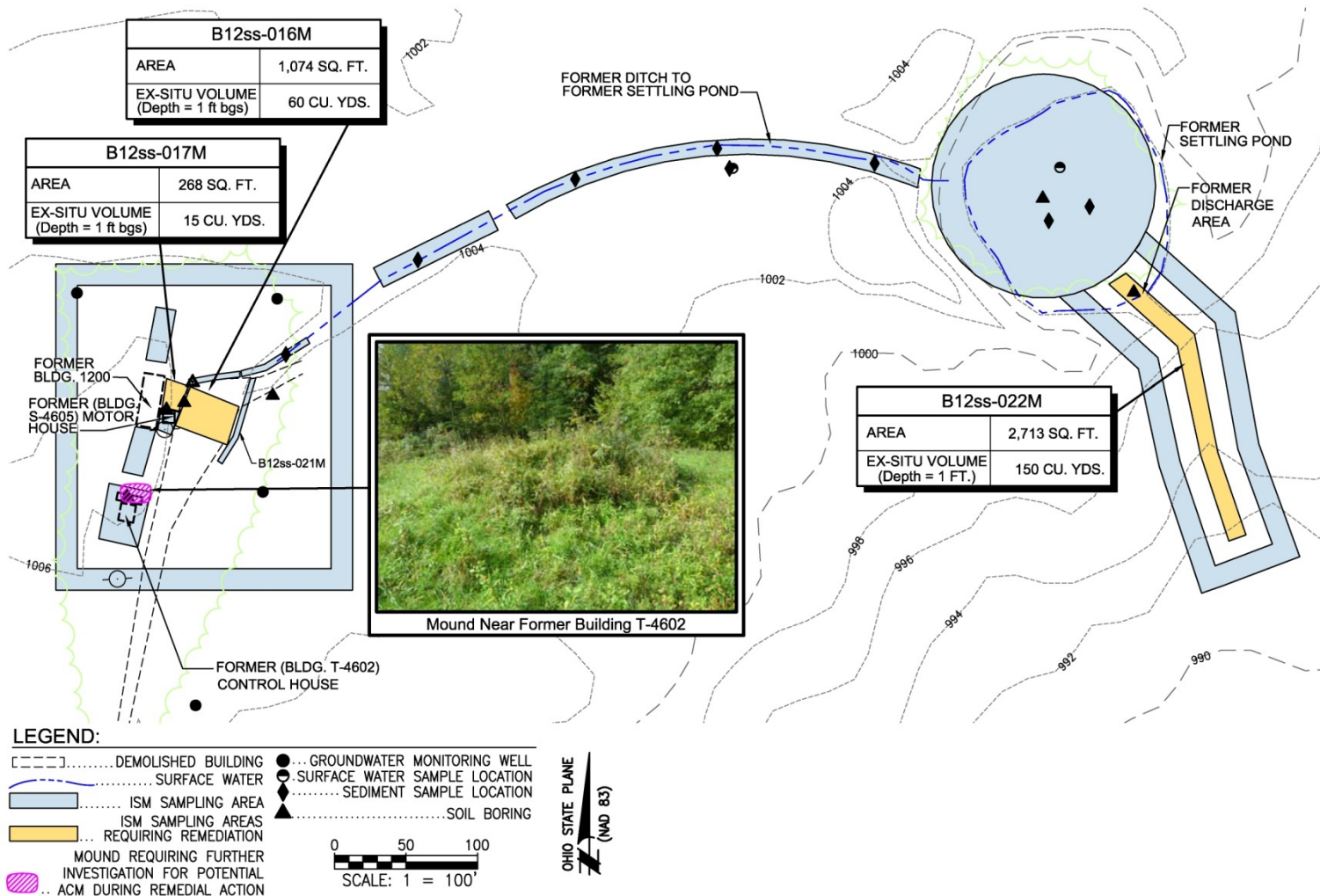
Preferred Alternative



Alternative 2: Attain Unrestricted Land Use

- Excavate an estimated 225 yd³ (ex situ) of surface soil (0-1 ft bgs) from three different areas at the AOC.
- Test and dispose of excavated soil at an off-site, licensed landfill.
- Confirm that soil above cleanup goals is removed.
- Investigate mound near former Building T-4602 to see if asbestos-containing material (ACM) is present. Remove and dispose if ACM is present.
- Restore with approved clean soil and seed the area to establish vegetation.

Building 1200 Area of Concern Planned Soil Excavation



Public Participation

Your Comments and Inputs are Appreciated!



- Public participation is an important component of remedy selection.
- The U.S. Army is soliciting input from the community as part of its public participation responsibilities under Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).
- The comment period extends until August 13, 2013.

Questions?