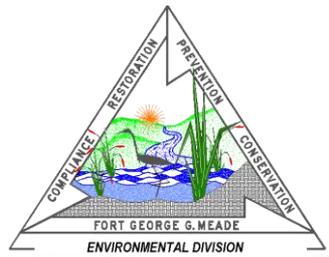




Fort George G. Meade

Proposed Plan Architect of the Capitol Site

Public Meeting August 7, 2014



ARMY STRONG.



Public Meeting Purpose



- U.S. Army is inviting the public to comment on the proposed environmental actions for the Architect of the Capitol Site.
- Comments may be submitted during the 30-day comment period beginning July 24th and ending August 22nd, 2014.
- Additional information on how to submit comments will be provided at the conclusion of this presentation.



Presentation Agenda



- ➔ • Status of the CERCLA Process for Architect of the Capitol Site
- Site Information
 - Location
 - History
- Field Investigations
 - Summary of Findings
- Remedial Alternatives
- Preferred Alternative
- Public Comment Period Information





Status of CERCLA* Process



- ✓ Remedial Investigation (RI) - characterization of site
- ✓ Feasibility Study (FS) - assessment of possible remedies
- ✓ Proposed Plan (PP) - solicit public input on preferred remedy
- ❑ Record of Decision (ROD) - legal documentation of remedy selection
- ❑ Remedial Design (RD) - remedy implementation plan
- ❑ Remedial Action (RA) - remedy implementation

*Comprehensive Environmental Response, Compensation, and Liability Act





Proposed Plan



- Provides information necessary to allow the public to participate in selecting the appropriate remedial alternative for Architect of the Capitol Site
- The Proposed Plan
 - Summarizes site history, investigations, and results of human health and ecological risk assessments
 - Describes remedial alternatives considered
 - Provides a comparative analysis of remedial alternatives based upon United States Environmental Protection Agency (USEPA) established criteria
 - Presents the preferred remedial alternative
 - Contains information on community participation
- Fact Sheets are available tonight



Presentation Agenda



- Status of the CERCLA Process for Architect of the Capitol Site
- ➔ • Site Information
 - Location
 - History
- Field Investigations
 - Summary of Findings
- Remedial Alternatives
- Preferred Alternative
- Public Comment Period Information





Architect of the Capitol Site Location





Site Use and History



- Historical Army Uses:
 - Multiple warehouse and storage areas
 - Transportation motor pool facility
- Property transferred from Army to Architect of the Capitol (AOC) effective September 1994
- Current Architect of the Capitol Uses:
 - Library of Congress document storage facility
 - Warehouse and storage areas
 - Transportation motor pool facility (Army lease)





Presentation Agenda



- Status of the CERCLA Process for Architect of the Capitol Site
- Site Information
 - Location
 - History
- ➔ • Field Investigations
 - Summary of Findings
- Remedial Alternatives
- Preferred Alternative
- Public Comment Period Information





Field Investigation -Soil



- Soil tested for numerous constituents: VOCs, SVOCs, metals, pesticides, and PCBs
- Only lead was identified in soil at concentrations driving a potential risk.
- Extensive vertical and horizontal grid sampling was completed to depths of 14 feet below ground surface to evaluate an initial elevated lead sample. Two small lead hot spot areas limited to depths of 7 and 10 feet below ground surface were identified.





Location of Lead Sampling Area



Horizontal and vertical soil sampling was completed in this area to delineate the extent of lead contamination.

Architect of the Capitol Site Elevated Lead Area

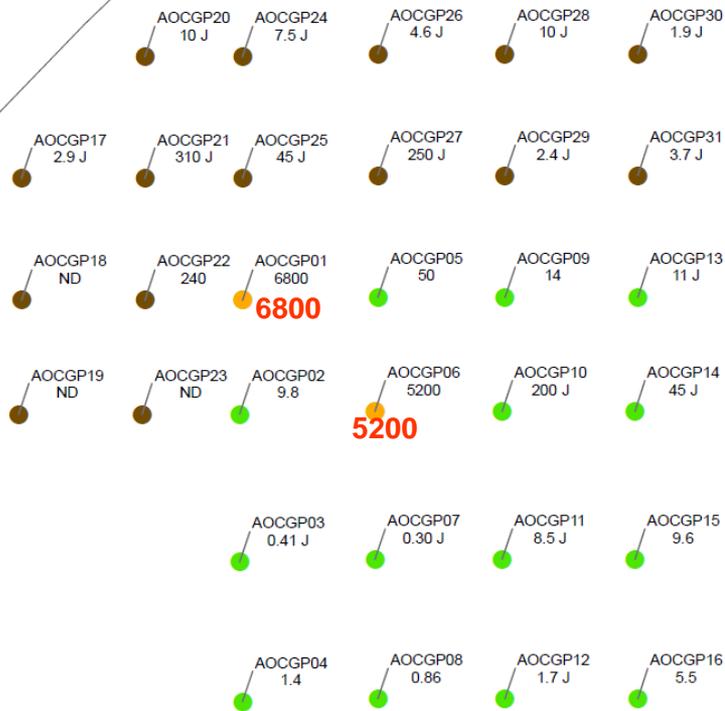


“Hot Spot” Evaluation at Depth - 7 ft & 10 ft

At 7 ft BGS

Avg Pb Conc = 427 mg/kg

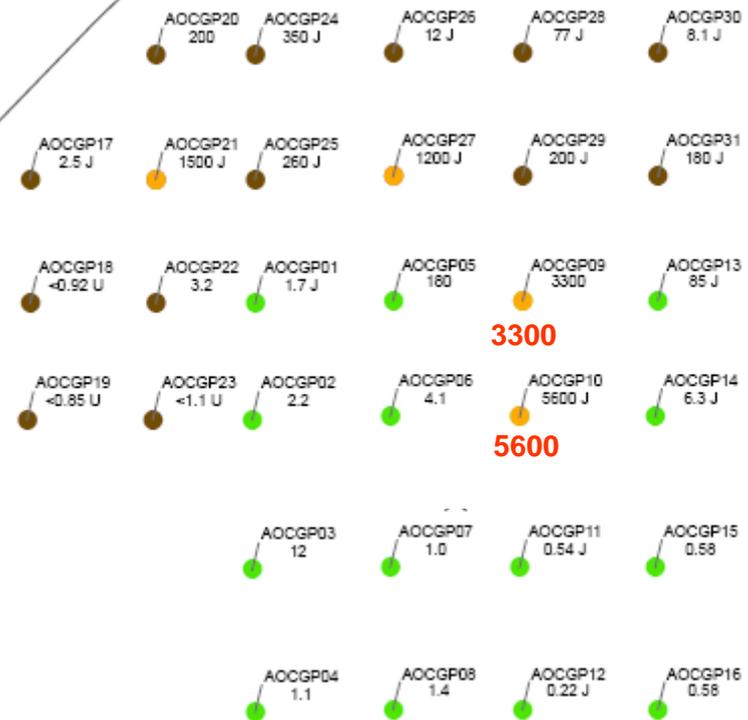
(all samples at 7 ft)



At 10 ft BGS

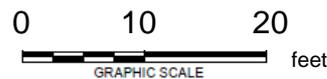
Avg Pb Conc = 425 mg/kg

(all samples at 10 ft)



LEGEND:

- SOIL BORING LOCATION - ROUND 1
- SOIL BORING LOCATION - ROUND 2
- DETECTION ABOVE CRITERIA



mg/kg = milligrams per kilogram (equivalent to parts per million)

Average lead concentration across only the 7 feet or 10 feet depth interval slightly exceed the 400 mg/kg residential soil RSL (regional screening level) and the 418 mg/kg preliminary remedial goal.



Field Investigation - Groundwater



- Groundwater was tested for VOCs, SVOCs, pesticides, PCBs, and total and dissolved metals.
- Shallow groundwater at the Architect of the Capitol Site is impacted by VOCs originating from nearby parcels and being investigated/remediated under separate CERCLA actions, including:
 - VOCs in groundwater on the western edge of Architect of the Capitol Site originating from OU-5/DRMO and;
 - VOCs in groundwater on the eastern side of Architect of the Capitol Site originating from OU-4.
- Actions related to the VOC groundwater contamination are being handled separately as part of the OU-4 and OU-5 investigations.





Field Investigation – Groundwater (cont.)



- **Metals in Groundwater:**
 - Elevated concentrations of total and dissolved metals were detected at Architect of the Capitol Site in shallow groundwater.
 - The concentrations are generally comparable to upgradient (background) samples.
 - There is no indication of a current or former source for the metals concentrations on the Architect of the Capitol parcel and there is no identifiable plume.
- Shallow groundwater is not used for drinking water or any other use, but under a hypothetical future use scenario, there would be elevated risks if commercial workers or hypothetical residents were to use the shallow water for drinking water purposes due to concentrations of: aluminum, arsenic, chromium, cobalt, and iron.





Risk Assessment



- Current Use:
 - No unacceptable risks for human health and the environment for current users (commercial workers, construction/utility workers).
- Likely Future Use:
 - No unacceptable risks for human health and the environment for the reasonably anticipated future uses (commercial workers, construction/utility workers)





Risk Assessment (cont.)



- Hypothetical Future Use:
 - If groundwater is used for drinking water, unacceptable risks are indicated from groundwater ingestion by hypothetical future residents or commercial workers (metals).
 - If the site was regraded to allow for exposure to soils at 7 or 10 feet below ground surface, unacceptable risks are indicated for hypothetical residents or commercial workers (lead).

Note: Neither residential use nor use of shallow groundwater for potable purposes are anticipated for the Architect of the Capitol property, so these are considered hypothetical scenarios.





Presentation Agenda



- Status of the CERCLA Process for Architect of the Capitol
- Site Information
 - Location
 - History
- Field Investigations
 - Summary of Findings
- ➔ • Remedial Alternatives
- Preferred Alternative
- Public Comment Period Information





Feasibility Study



- Site advanced to an FS to evaluate remedies associated with:
 - Metals in groundwater under a hypothetical drinking water use scenario, and
 - Lead in soil under a hypothetical regrading scenario with exposure to two small hot spot areas currently at 7 and 10 feet below ground.





Remedial Alternative Evaluation



SOLDIERS • FAMILIES • CIVILIANS

As required by law, the alternatives were evaluated against nine criteria:

- 1. Overall protection of human health and the environment.** Determines if the alternative provides adequate protection and describes how the alternative eliminates, reduces or controls risks.
- 2. Compliance with applicable or relevant and appropriate requirements (ARARs).** Determines if the alternative meets all Federal and State environmental laws.
- 3. Long-term effectiveness and permanence.** Determines the alternative's ability to provide reliable protection of human health and the environment over time.
- 4. Reduction of toxicity, mobility, and volume through treatment.** Refers to the preference for an alternative that reduces health hazards, the movement of harmful substances, or the quantity of harmful substances at the site.





Remedial Alternative Evaluation



5. **Short-term effectiveness.** Addresses time needed to complete the alternative, and any adverse effects to human health or the environment during implementation.
6. **Implementability.** Addresses the technical and administrative feasibility of an alternative, including the availability of materials and services.
7. **Cost effectiveness.** Evaluates the estimated capital, operating and maintenance costs of each alternative in comparison to other, equally protective alternatives. (30 years)
8. **State/Support agency acceptance.** [The Army is the lead regulatory agency] Indicates whether the State agrees with, opposes, or has no comment on the preferred alternative.
9. **Community acceptance.** Assessed after the public comment period. Includes components of the alternatives that the public supports, has reservations about, or opposes.





Feasibility Study (Soil)



- FS evaluated 3 options for lead in soil:
 - Alternative 1 for Soil: No Action as required by CERCLA
 - Alternative 2 for Soil: LUCs including measures to prevent access to lead in subsurface soil
 - Alternative 3 for Soil: Hot spot excavation to dig up and dispose of the lead-contaminated soil off-site.





Feasibility Study (Groundwater)



- FS evaluated 2 options for metals in groundwater:
 - Alternative 1 for Groundwater: No Action as required by CERCLA
 - Alternative 2 for Groundwater: Land Use Controls (LUCs) to control access to groundwater in the future and long-term monitoring (LTM)





Remedial Alternative Evaluation



- **Alternative SL-1: No Action**

- Not protective under possible future use scenarios
- Does not meet ARARs,
- No long-term effectiveness or permanence,
- No reduction in toxicity or mobility,
- Effective in short-term because there is no risk under current land use,
- Readily implemented, and
- No cost.



Remedial Alternative Evaluation



- **Alternative SL-2: LUCs**

- Human health risk controlled for future use scenarios
- Complies with ARARs identified,
- Long-term effectiveness through control of exposure,
- No reduction in toxicity or mobility,
- Effective in short-term because there is no risk under current land use,
- Readily implemented, and
- Low to moderate cost.





Remedial Alternative Evaluation



- **Alternative SL-3: Hot Spot Soil Excavation with Off-Site Disposal**
 - Protective of human health through removal of impacted soil
 - Complies with ARARs identified,
 - Effective in the long-term through removal of impacted media,
 - Soil removed, but no treatment, so no reduction in toxicity or mobility,
 - Effective in short-term because there is no risk under current land use,
 - Low complexity to implement, and
 - Low to moderate cost.





Remedial Alternative Evaluation



- **Alternative GW-1: No Action**

- Not protective under possible future use scenarios
- Does not meet ARARs,
- No long-term effectiveness or permanence,
- No reduction in toxicity or mobility,
- Effective in short-term because there is no risk under current land use,
- Readily implemented, and
- No cost.





Remedial Alternative Evaluation



- **Alternative GW-2: LUCs and LTM of Groundwater**

- Human health risk controlled for future use scenarios
- Complies with ARARs identified,
- Long-term effectiveness through control of exposure with long-term maintenance of LUCs,
- No reduction in toxicity or mobility, but active treatment at adjoining sites should affect groundwater quality
- Effective in short-term because there is no risk under current land use,
- Readily implemented, and
- Low to moderate cost.





Presentation Agenda



- Status of the CERCLA Process for Architect of the Capitol
- Site Information
 - Location
 - History
- Field Investigations
 - Summary of Findings
- Remedial Alternatives
- ➔ • Preferred Alternative
- Public Comment Period Information





Preferred Alternatives



Soil

Alternative SL-3: Hot Spot Soil Excavation with Off-Site Disposal

- Excavate and dispose of lead impacted soil in two 10 ft x 20 ft hot spot areas
- Post-excavation confirmatory sampling.

Groundwater

Alternative GW-2: LUCs and LTM of Groundwater

- LUCs to prohibit drilling wells for potable use of shallow groundwater and regular groundwater sampling at on-site monitoring wells. The five-year review process and the annual land use inspections will be used to document that the remedy remains protective.

Soil Remedy

Hot Spot Excavation Areas at 7 ft & 10 ft

At 7 ft BGS

Avg Pb Conc in red box = **6,300** mg/kg

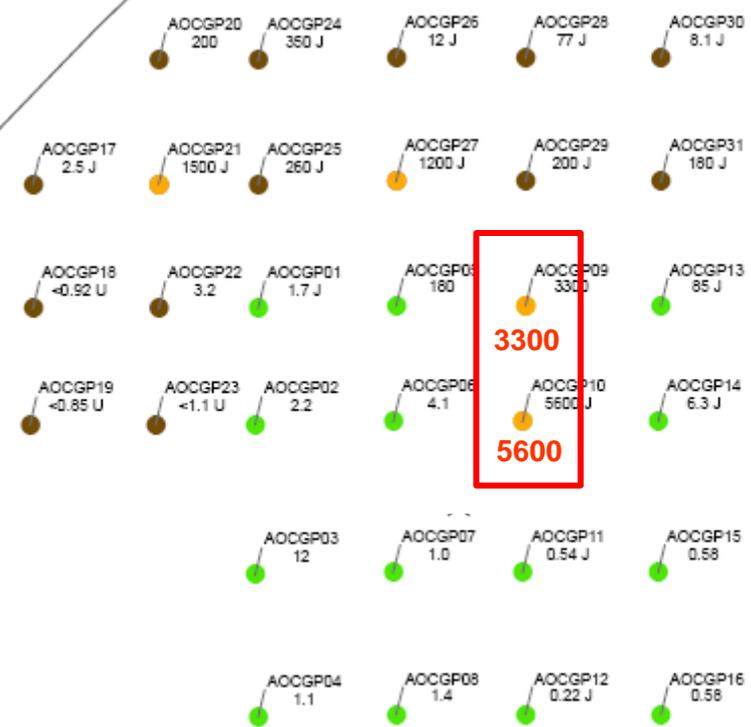
(only GP01/GP06 subarea at 7 ft)



At 10 ft BGS

Avg Pb Conc in red box = **4,450** mg/kg

(only GP09/GP10 subarea at 10 ft)



LEGEND:

- SOIL BORING LOCATION - ROUND 1
- SOIL BORING LOCATION - ROUND 2
- DETECTION ABOVE CRITERIA



The red boxes indicate hot spots for lead representing the greatest potential risk to a potentially exposed population.

mg/kg = milligrams per kilogram (equivalent to parts per million)

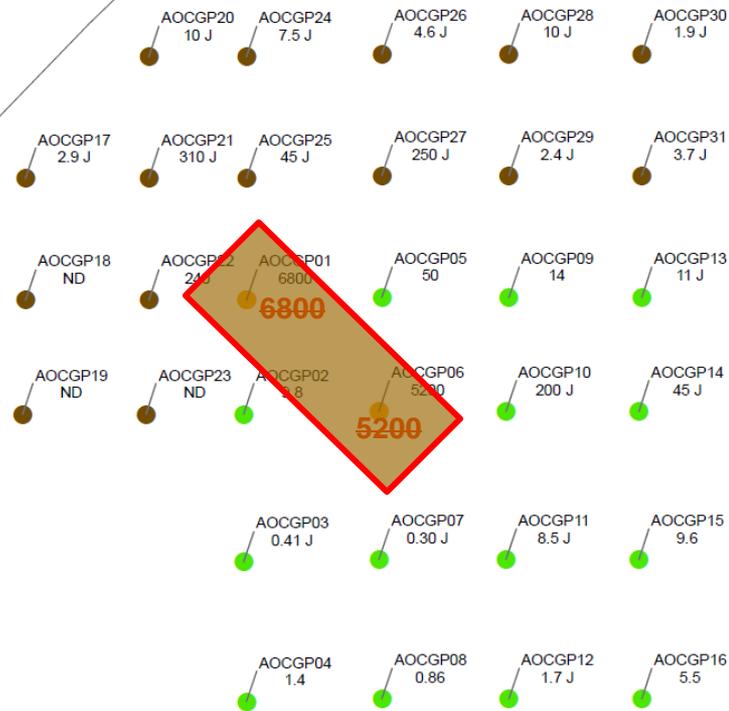
Soil Remedy

After Excavation Area is Suitable For Unrestricted Use

At 7 ft BGS

Avg Pb Conc = **43** mg/kg

(all remaining samples after removal of GP01 and GP06 at 7 ft)



At 10 ft BGS

Avg Pb Conc = **148** mg/kg

(all remaining samples after removal of GP09 and GP10 at 10 ft)



Assumes the hot spot areas (red boxes) have been excavated and backfilled with clean fill. Now the average lead concentrations across the study area are <400 mg/kg.

mg/kg = milligrams per kilogram (equivalent to parts per million)



Presentation Agenda



- Status of the CERCLA Process for Architect of the Capitol Site
- Site Information
 - Location
 - History
- Field Investigations
 - Summary of Findings
- Remedial Alternatives
- Preferred Alternative
- Public Comment Period Information





Proposed Plan



- The PP is available for public review from July 24th to August 22nd in the Administrative Record located:

Fort Meade Environmental Division
4215 Roberts Avenue, Room 320
Fort Meade, MD 20755
Monday – Friday: 8 am to 4 pm

Anne Arundel County Library(West County Area Branch)
1325 Annapolis Road
Odenton, MD 21113
Mon-Th: 9 am-9 pm; Fri & Sat: 9am-5 pm

<http://www.ftmeade.army.mil/environment/cleanup/programsites/aoc/aoc.html>

- Public comments will be reviewed and considered before remedy selection is finalized and documented in the ROD.
- The ROD for the Architect of the Capitol Site will be finalized in December 2014.





Written Comments



- Comments will be accepted until August 22nd, 2014.
- Send comments to any one of the following:

Ms. Mary Doyle

U.S. Army Garrison- Fort George G. Meade

Public Affairs Office

4409 Llewellyn Ave.

Fort Meade, MD 20755

mary.l.doyle14.civ@mail.mil

(301)-677-1361

Mr. John Burchette

USEPA Region III

1650 Arch Street

Philadelphia, PA 19103-2029

burchette.john@epa.gov

Dr. Elisabeth Green

Maryland Department of Environment

1800 Washington Blvd, Suite 625

Baltimore, MD 21230-1719

elisabeth.green@maryland.gov





Questions/Comments?





Acronyms



| | |
|--------|--|
| ARAR | Applicable or Relevant and Appropriate Requirements |
| CERCLA | Comprehensive Environmental Response, Compensation and Liability Act |
| DoD | Department of Defense |
| FS | Feasibility Study |
| LTM | Long Term Monitoring |
| LUC | Land Use Control |
| MCL | Maximum Contaminant Level |
| MDE | Maryland Department of the Environment |
| PP | Proposed Plan |





Acronyms (Cont'd)



| | |
|-------|--------------------------------------|
| RA | Remedial Action |
| RD | Remedial Design |
| RI | Remedial Investigation |
| ROD | Record of Decision |
| USEPA | U.S. Environmental Protection Agency |





Glossary



Administrative Record: This is a collection of documents (including plans, correspondence and reports) generated during site investigation and remedial activities. Information in the Administrative Record is used to select the preferred remedial alternative and is available for public review.

Applicable or Relevant and Appropriate Requirements (ARARs): The requirements found in federal and State environmental statutes and regulations that a selected remedy must attain. These requirements may vary among sites according to the remedial actions selected.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): This federal law was passed in 1980 and is commonly referred to as the Superfund Program. It provides for liability, compensation, cleanup, and emergency response in connection with the cleanup of inactive hazardous waste disposal sites that endanger public health and safety or the environment.

Feasibility Study (FS): This CERCLA document reviews the risks to humans and the environment at a site, and evaluates multiple remedial technologies for use at the site. Finally, it identifies the most feasible Response Actions.





Glossary (Cont'd)



Long Term Monitoring (LTM) – LTM is conducted to monitor the performance of the remedy over time. LTM includes groundwater sampling and reporting.

Land Use Controls (LUCs) – LUC are physical, legal, or administrative mechanisms that restrict use of or limit access to, real property, to manage risks to human health and the environment. Physical mechanisms encompass a variety of engineered remedies to contain or reduce contamination and/or physical barriers to limit access to real property, such as fences or signs.

Operation and Maintenance (O&M): Annual post-construction cost necessary to ensure the continued effectiveness of a Response Action.

Preferred Remedy– The remediation approach that appears to best meet acceptance criteria; the remedial option proposed for implementation in the ROD.

Record of Decision (ROD): This legal document is signed by the Army and the USEPA and will be reviewed by the MDE for concurrence. It provides the cleanup action or remedy selected for a site, the basis for selecting that remedy, public comments, responses to comments, and the estimated cost of the remedy.





Glossary (Cont'd)



Remedial Investigation (RI): An investigation under CERCLA that involves sampling environmental media such as air, soil, and water to determine the nature and extent of contamination and human health and environmental risks that result from the contamination.



U.S. Army Garrison Fort George G. Meade
Directorate of Public Works-Environmental Division
4215 Roberts Ave, Room #320
Fort Meade, Maryland 20755-7068

Points of Contact:

Mr. George B. Knight, PG, Environmental Restoration Manager

301.677.7999

george.b.knight7.civ@mail.mil

Ms. Denise Tegtmeyer, PE, Senior Project Manager, Osage of Virginia, Inc.

301.677.9559

denise.a.tegtmeyer.ctr@mail.mil



ARMY STRONG.