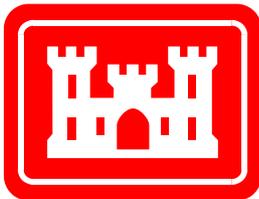




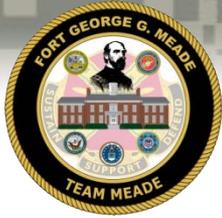
Fort George G. Meade

Restoration Advisory Board Meeting September 18, 2014

Preliminary Assessment/ Site Inspection (PA/SI) Update Southwest Areas of Interest (AOIs)



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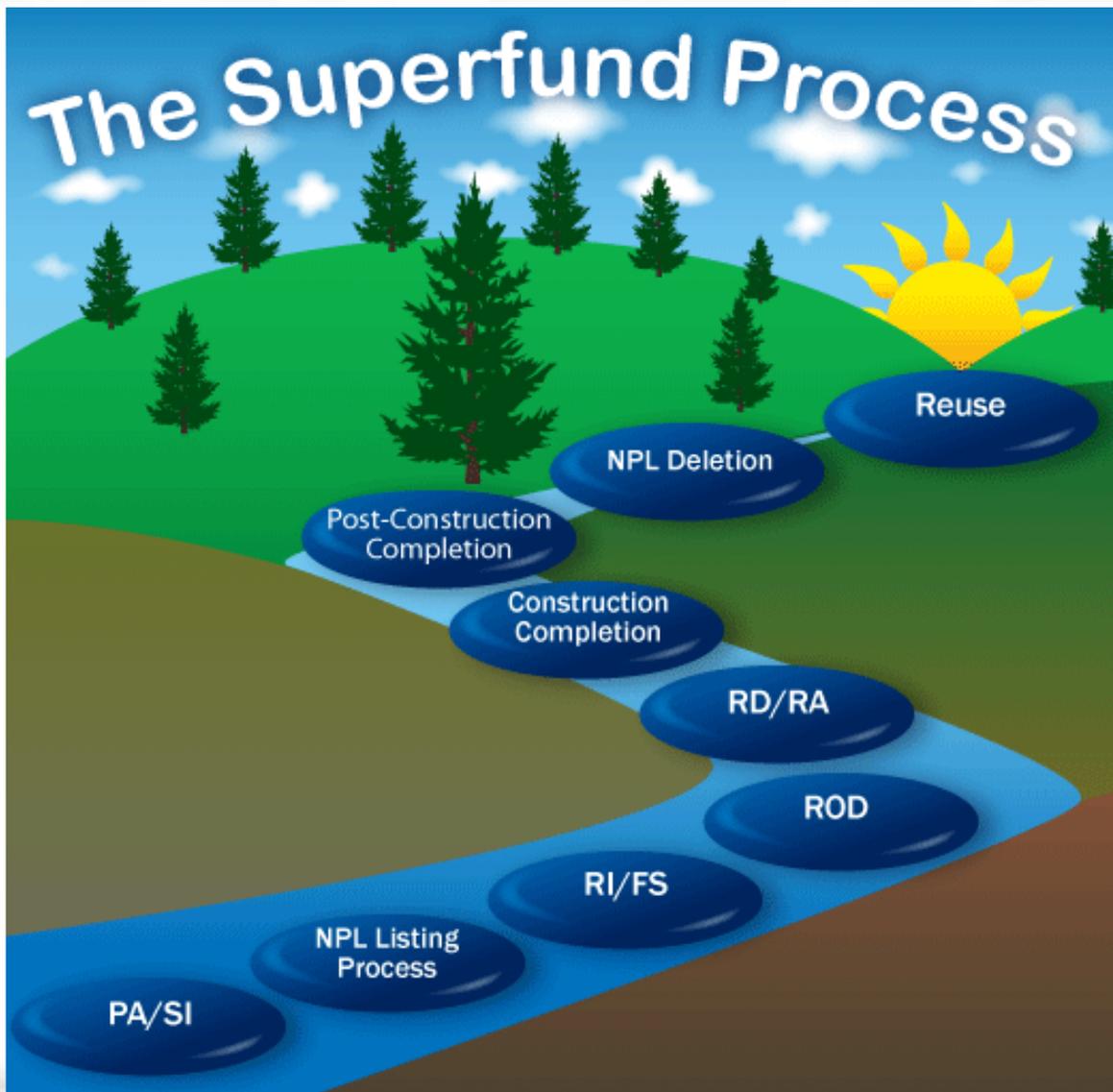
Ft Meade PA/SI



- Last RAB update of the PA/SI was July 2014.
- A Preliminary Assessment/Site Inspection (PA/SI) is an installation wide environmental study.
- The PA was conducted to assess the status of sites for closure, or, where appropriate, recommend the collection of additional data (the SI) to determine if the site can be closed or if it needs to be carried further in the CERCLA process.



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PA/SI

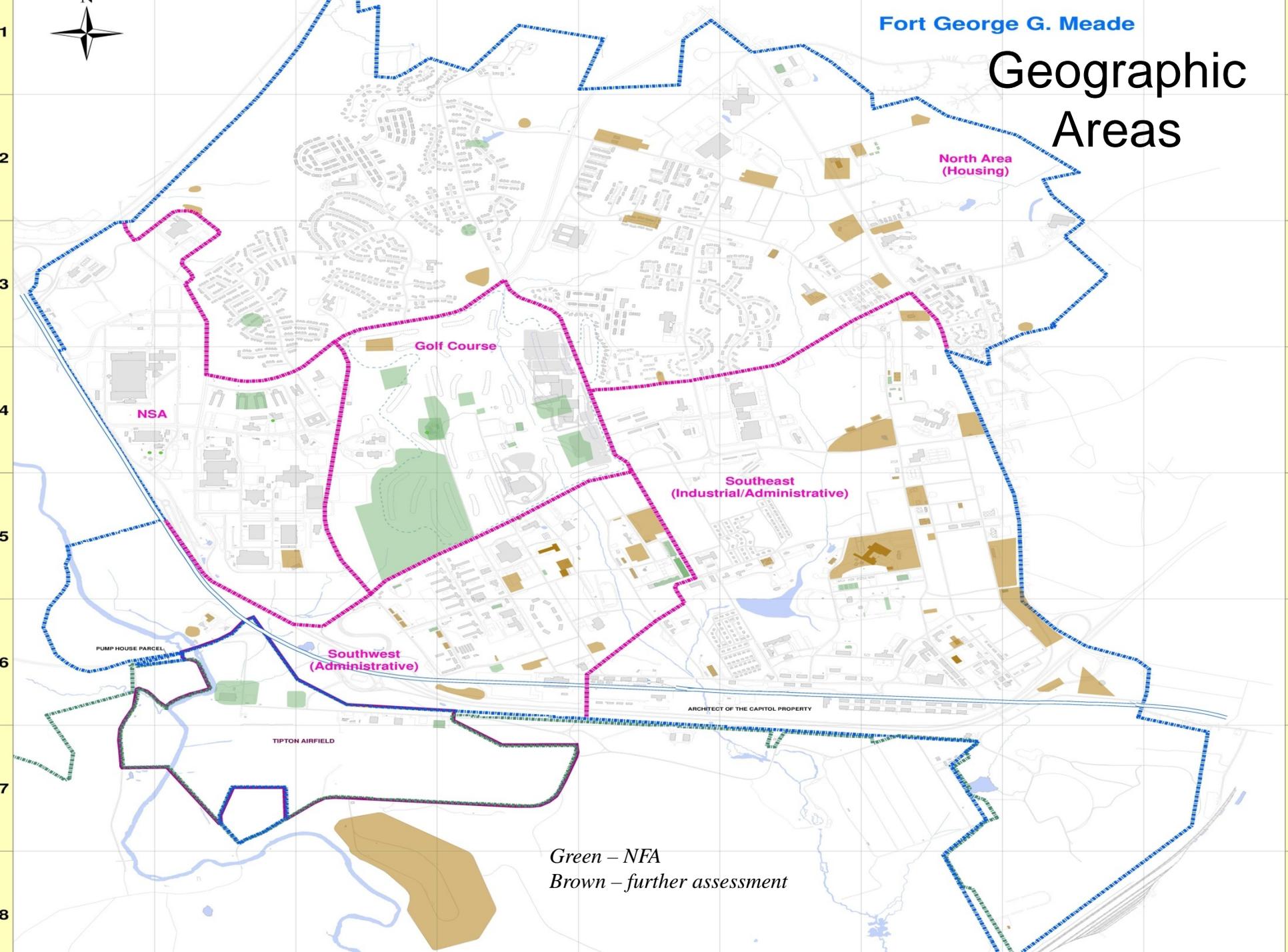
Areas of Interest (AOIs)

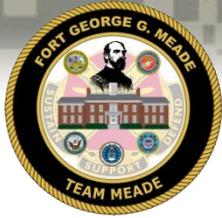
- AOIs were geographically grouped
 - Golf Course
 - North
 - Southeast
 - **Southwest**
 - South of Route 32



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Geographic Areas



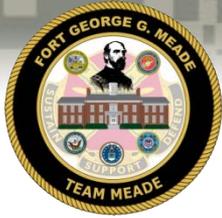


Southwest AOIs

- 26 Southwest AOIs
- No further action (NFA) approval for 10 Southwest AOIs during PA stage
- Field work for the remaining 16 Southwest AOIs completed
- Lab data received and validated and Risk-Based Screening performed on the results
- Draft Report for Southwest AOIs submitted to EPA and MDE. Comments received.



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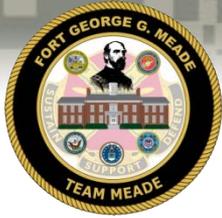
SI Southwest AOIs



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- Building 4587
- Building 4680
- Building 6513
- Building 6522
- Building 6530
- Building 8480
- Building 8485
- Building 8486
- Buildings 8549, 8550, and 8551
- Motor Pool-1/ Wash Rack-4
- Motor Pool-2
- Motor Pool-3/ Wash Rack-2
- Motor Pool-4
- Motor Pool-5
- Wash Rack 3
- Fill – 1988



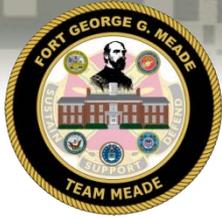


AOIs Recommended for NFA Based on SI



- Building 6513
- Building 6522
- Building 6530
- Building 8480
- Motor Pool-2
- Motor Pool-3/ Wash Rack-2
- Motor Pool-4
- Wash Rack 3
- Fill – 1988



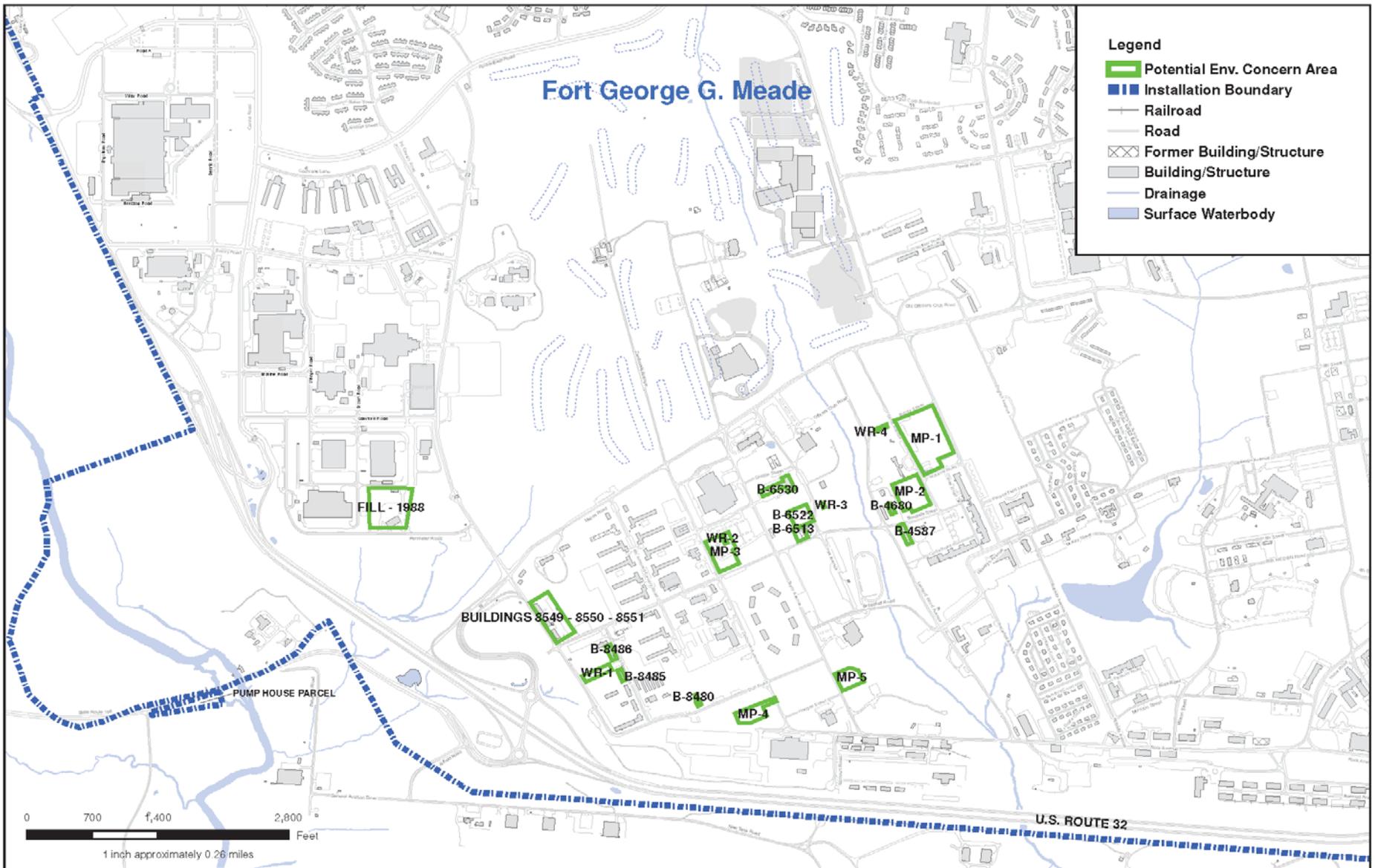


AOIs May Require Further Action Based on SI



- Building 4587
- Building 4680
- Building 8485
- Building 8486
- Buildings 8549, 8550, 8551
- Motor Pool-1/ Wash Rack-4
- Motor Pool-5





- Legend**
- ▭ Potential Env. Concern Area
 - Installation Boundary
 - Railroad
 - Road
 - Former Building/Structure
 - Building/Structure
 - Drainage
 - Surface Waterbody

0 700 1,400 2,800
 Feet
 1 inch approximately 0.26 miles

CLIENT	USACE, Baltimore District		
NOTES	Outlines of sites are arbitrary.		
REVISION NO	0	GIS BY	AER 9/20/2013
SCALE	1:16,800	CHK BY	JK 9/20/2013
		PM	JK 9/20/2013



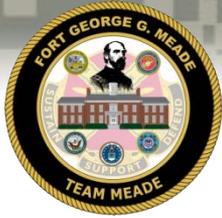
TITLE	Southwest Sites Areas of Interest	
	12420 Milestone Center Drive Germentown, MD 20876	Figure 1-2



Review



- Maximum detected concentrations (MDCs) of individual chemical compounds are compared to the most current EPA (2014) residential (if soil) or tap water (if groundwater) regional screening levels (RSLs).
- Chemicals become COPCs if the MDC is greater than RSLs.
- Risk calculated for each COPC
- Cumulative risk for the AOI compared to site-specific thresholds:
 - Cancer risk - 5×10^{-5}
 - Non-cancer hazard index – 0.5



Key for Following Slides



- Figure of site with all historic and PA/SI sampling.
- Calculated cancer and non-cancer risk for media (usually groundwater [GW]) that requires further investigation.
 - GW includes total and dissolved metals results, if collected.
- Chemical compounds that contribute the most to the elevated risk levels.

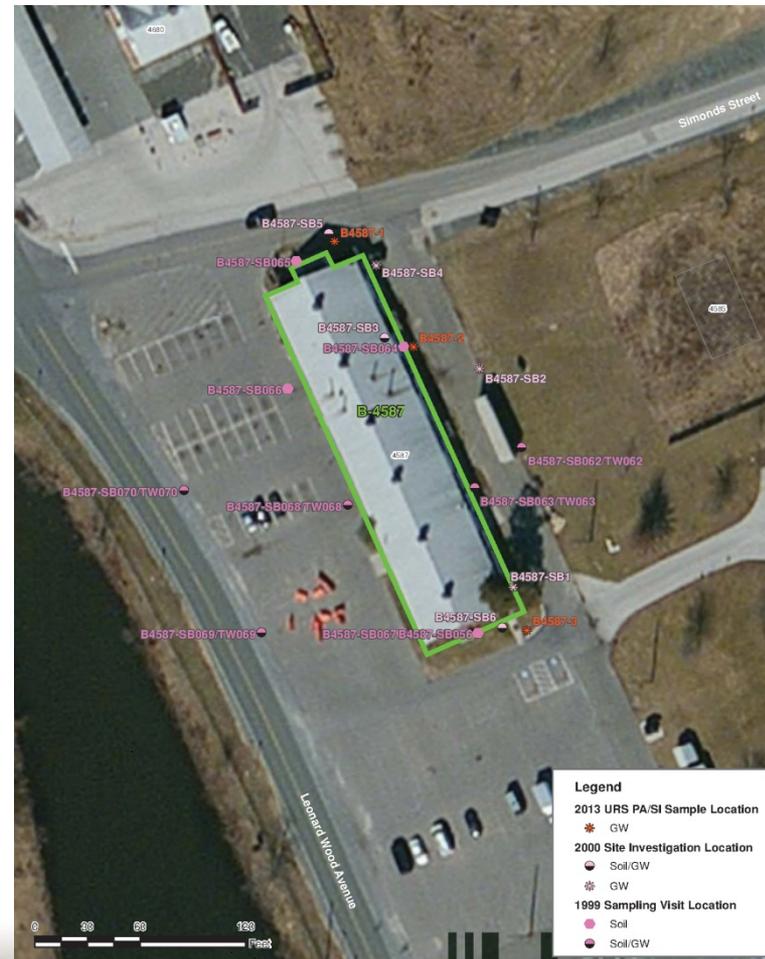


Building 4587



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- GW Total 1.2×10^{-4} , 1.1; GW Dissolved 1.0×10^{-4} , 1.1
- Benzene (32 ug/L) in one sample.
- MCL = 5 ug/L



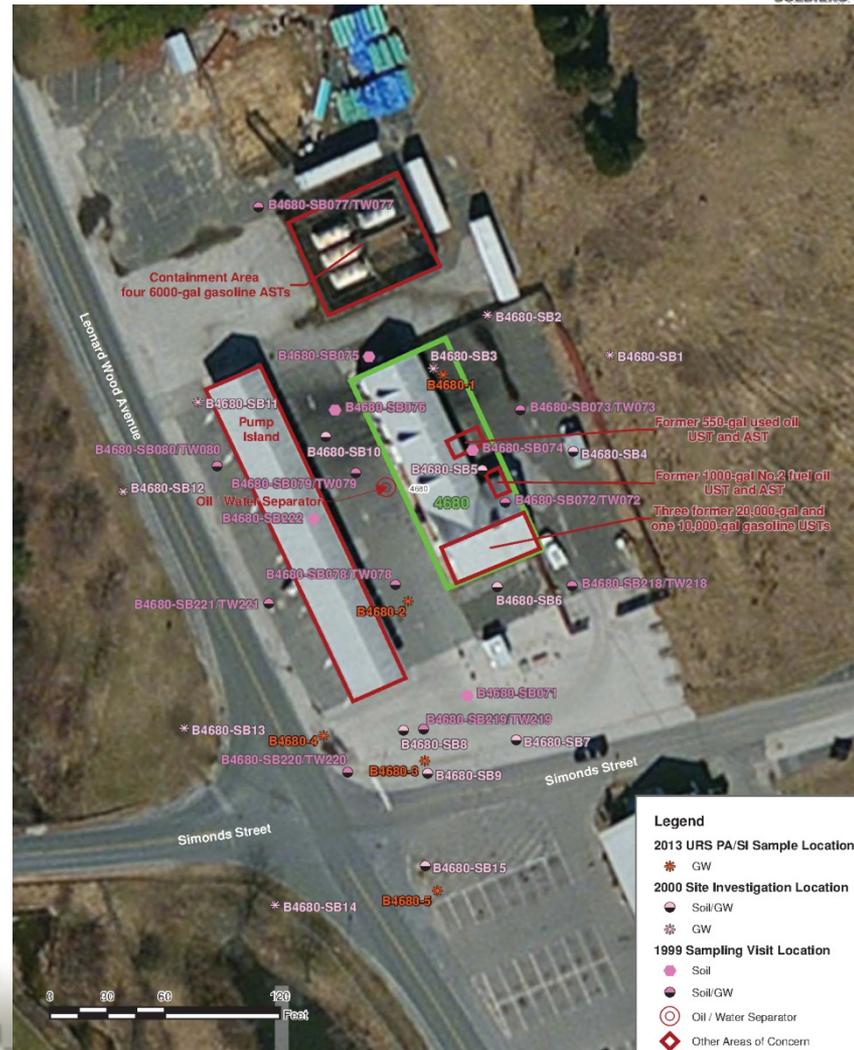


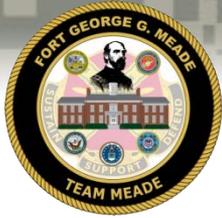
Building 4680



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- GW Tot 3.5×10^{-3} , 69.7;
GW Dissolved 3.5×10^{-3} , 69.8
- Cancer risk – benzene, naphthalene, ethylbenzene, and arsenic
- Non-cancer risk – 1,2,4-trimethylbenzene, naphthalene, benzene, xylenes, toluene, and some metals





Building 4680 (continued)



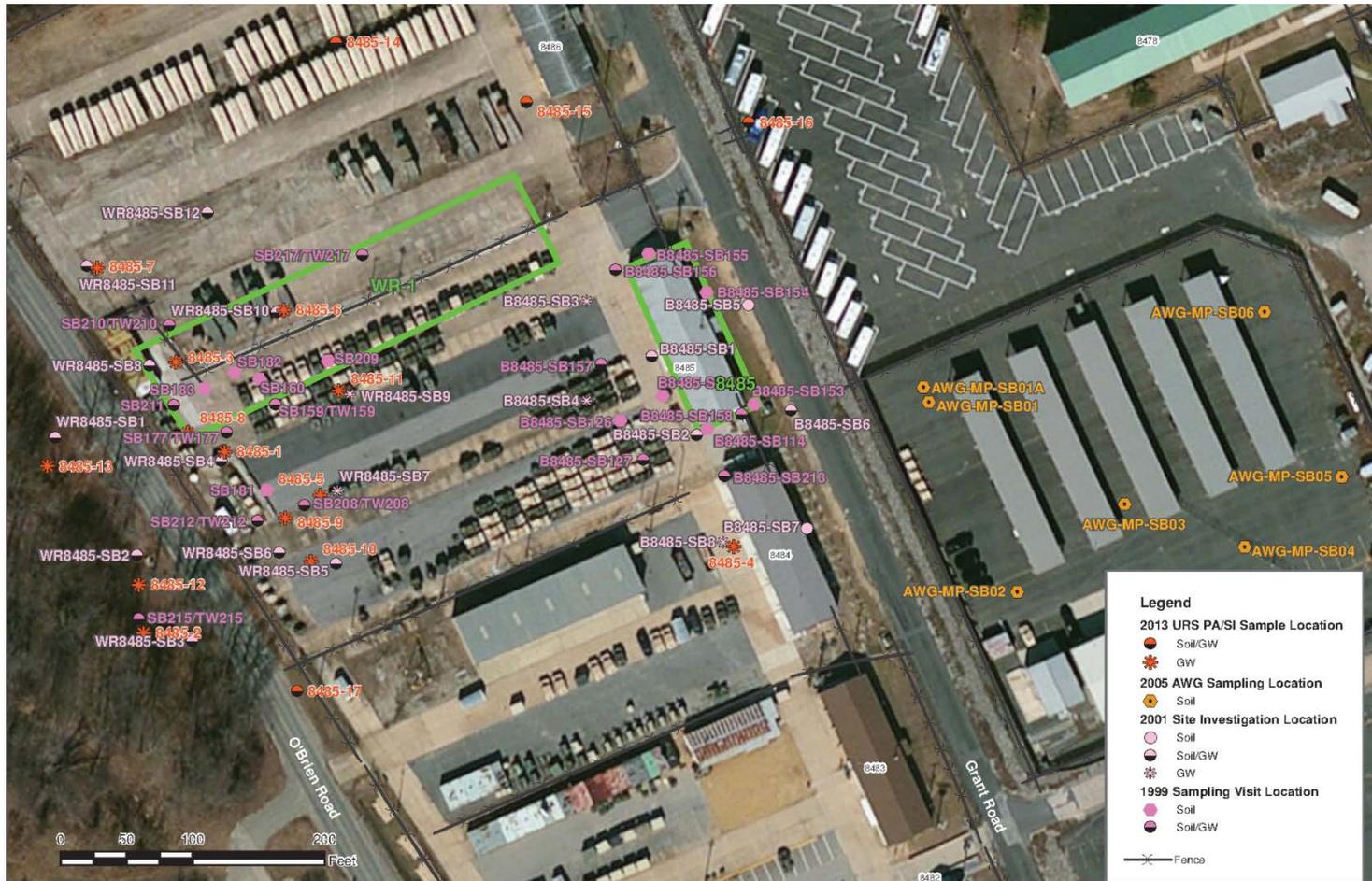
- After eliminating BTEX and PAHs from the risk analysis, the cancer risk estimate is 8.7×10^{-5} and the non-cancer hazard estimate is 1.8
- If MDE site for TPH constituents, an SSI with RA may result in NFA under CERCLA for the non-fuel related constituents



Building 8485



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Building 8485



- GW Total 3.7×10^{-3} , 89.7; GW Dissolved 3.6×10^{-3} , 89.6
- Cancer risk – naphthalene, arsenic, benzene, chromium, ethylbenzene, and benzo(a)pyrene
- Non-cancer risk – naphthalene, arsenic, iron, 2-methylnaphthalene, 1,2,4-trimethylbenzene, iron, benzene, dibenzofuran, manganese, thallium, 1,3,5-trimethylbenzene, xylenes, and cobalt



Building 8486



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- GW Tot 3.3×10^{-3} , 88.8;
GW Dissolved 3.3×10^{-3} ,
88.8
- Cancer risk –
naphthalene and
arsenic
- Non-cancer risk –
naphthalene, 2-
methylnaphthalene,
iron, arsenic,
manganese,
dibenzofuran, 1,1-
biphenyl, and cobalt





Buildings 8549, 8550, 8551



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- Subsurface soil 1.2×10^{-4} , 0.1
- Cancer risk – PAHs
- GW Total 7.8×10^{-4} , 37.4; GW Dissolved 1.4×10^{-4} , 37.0
- Cancer risk – chromium, arsenic, chloroform, and TPH-GRO
- Noncancer risk – TPH-DRO, TPH-GRO, arsenic, chromium, and cobalt



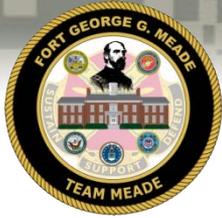


Motor Pool-1/ Wash Rack-4



- Surface soil 4.9×10^{-4} , 0.2
- Cancer risk – PAHs (benzo(a)pyrene, benzo(a)fluoranthene, and benzo(a)anthracene)
- Lead in 1 sample at 650 mg/kg (action level is 400 mg/kg)
- ProUCL derived mean concentration - 85.3 mg/kg
- Lead is not a COPC for this AOI





Motor Pool-5



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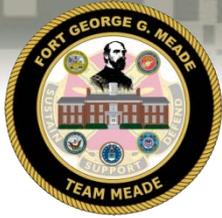
- GW Total 1.1×10^{-4} , 0.9
- Cancer risk – arsenic
- Noncancer risk – arsenic, iron, naphthalene, and manganese
- SSI with RA may result in NFA





Next Step in the Process

- Submit response to comments on the Draft Report.
 - For each AOI, one of the following actions will be taken:
 - No Further Action (NFA) Determination
 - Remedial Investigation/Feasibility Study (RI/FS)



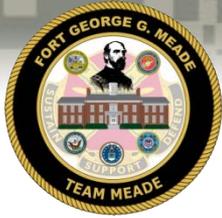
Overall PA/SI Status



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- North – comments received on Draft report, Army addressing comments
- Southeast – Draft report submitted, waiting for comments
- Southwest – comments received on Draft report, Army addressing comments
- South of Route 32– comments received on Draft report, Army addressing comments
- Golf Course – complete





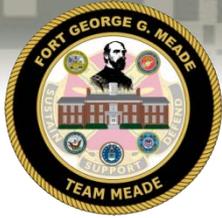
Next RAB Meeting Update for PA/SI North Areas of Interest





Questions?

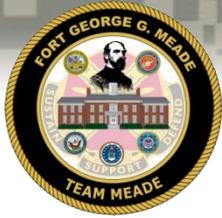




Acronyms and Abbreviations



- AOs – Areas of Interest
- BTEX – Benzene, Toluene, Ethylbenzene, Xylene
- CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act
- COPC – Chemicals of Potential Concern
- DRO – Diesel Range Organics
- EPA – U.S. Environmental Protection Agency
- GRO – Gasoline Range Organics
- GW – Groundwater
- MDCs – Maximum Detected Concentrations
- MDE – Maryland Department of the Environment
- NFA – No Further Action
- PA – Preliminary Assessment



Acronyms and Abbreviations (continued)



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- PAH – Polycyclic Aromatic Hydrocarbon
- ProUCL – EPA’s statistical calculation tool (UCL - upper confidence limit)
- RA – Risk Assessment
- RAB – Restoration Advisory Board
- RI – Remedial Investigation
- FS – Feasibility Study
- RSLs – Regional Screening Levels
- SI – Site Inspection
- SSI – Supplemental Site Investigation
- TPH – Total Petroleum Hydrocarbon
- ug/L – micrograms per liter





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