



Environmental Remediation Services

FGGM – 83/OU-1 – Former Skeet Range

FGGM-87/OU-3 – Former NIKE Site

FGGM – 7/OU-5 – DRMO & Plume



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Contract Overview



Customer Name: Fort Meade/USAEC (U.S. Army Environmental Command)

Contracting Agency: MICC - FORT SAM HOUSTON

Contract: Unrestricted ERMA IDIQ - W91ZLK-13-D-0018-0002

Period of Performance: 28 Aug 2015 – 27 Aug 2020

Environmental Scope: Follow CERCLA process to implement remedies at three sites

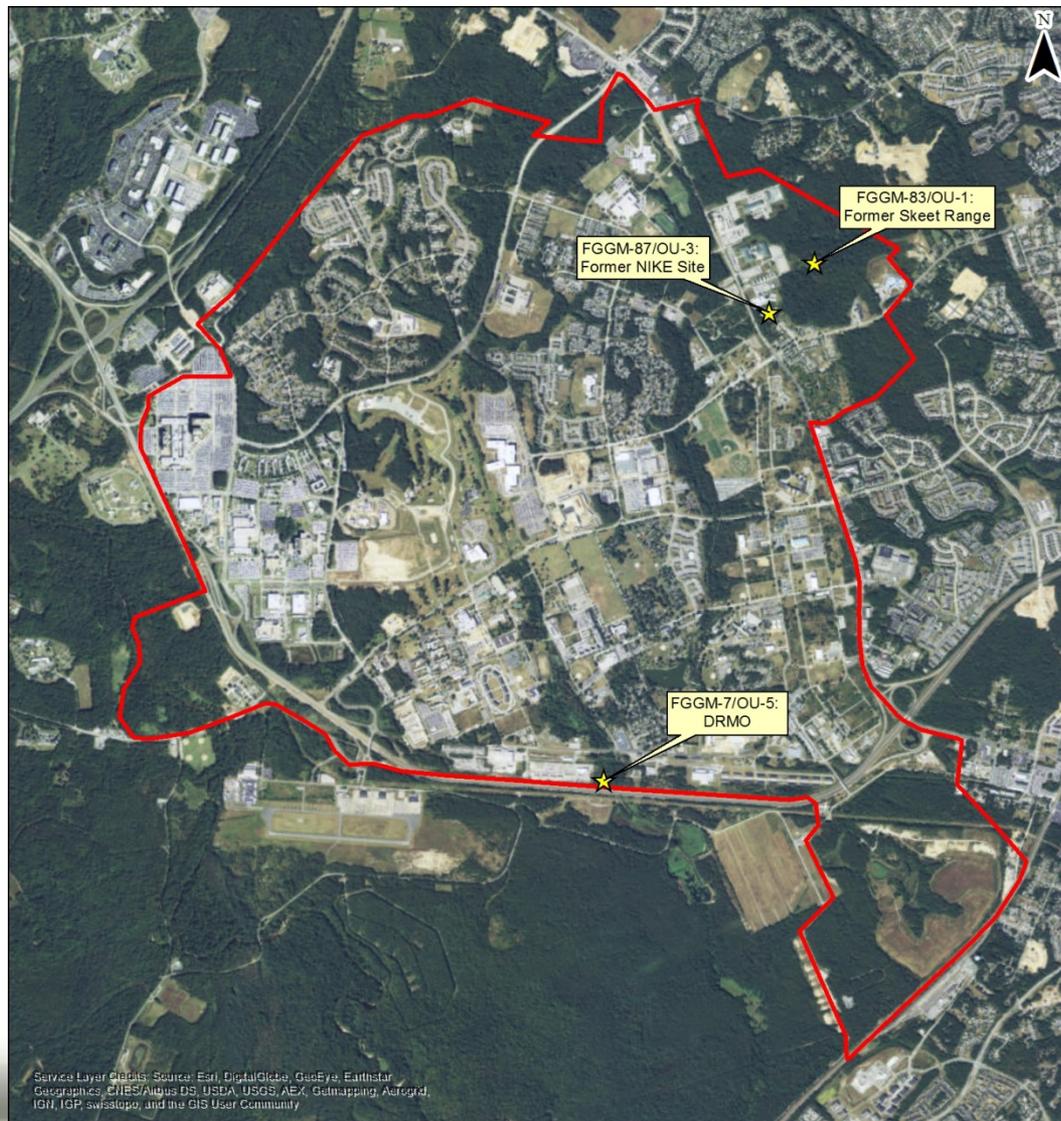
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Site Locations



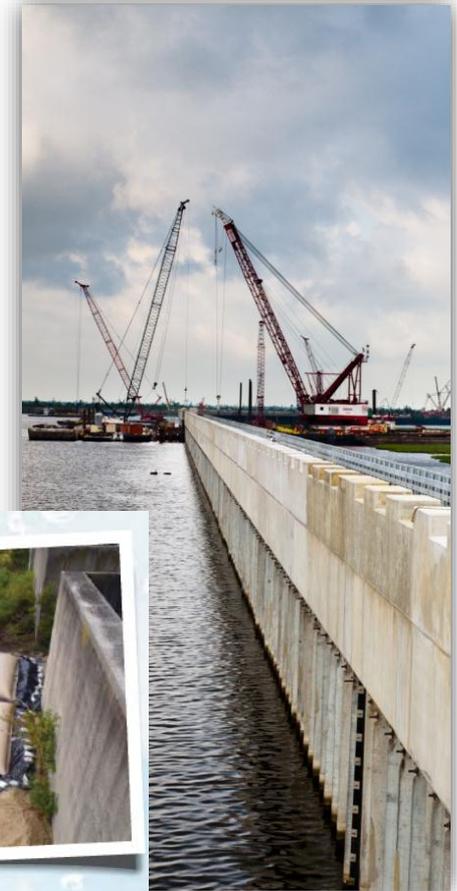


CB&I Federal Services, LLC



Who is CB&I?

- CB&I acquired Shaw Group in 2013
- Environmental, remediation, water and wastewater services for government and commercial clients
- Program management and design-build services for coastal, ports, marine, and transportation projects
- Military base and facility operations
- Ft. Meade work will be conducted out of Belcamp, MD office
- Currently conducting landfill repair work at CSL Cells 1 and 2

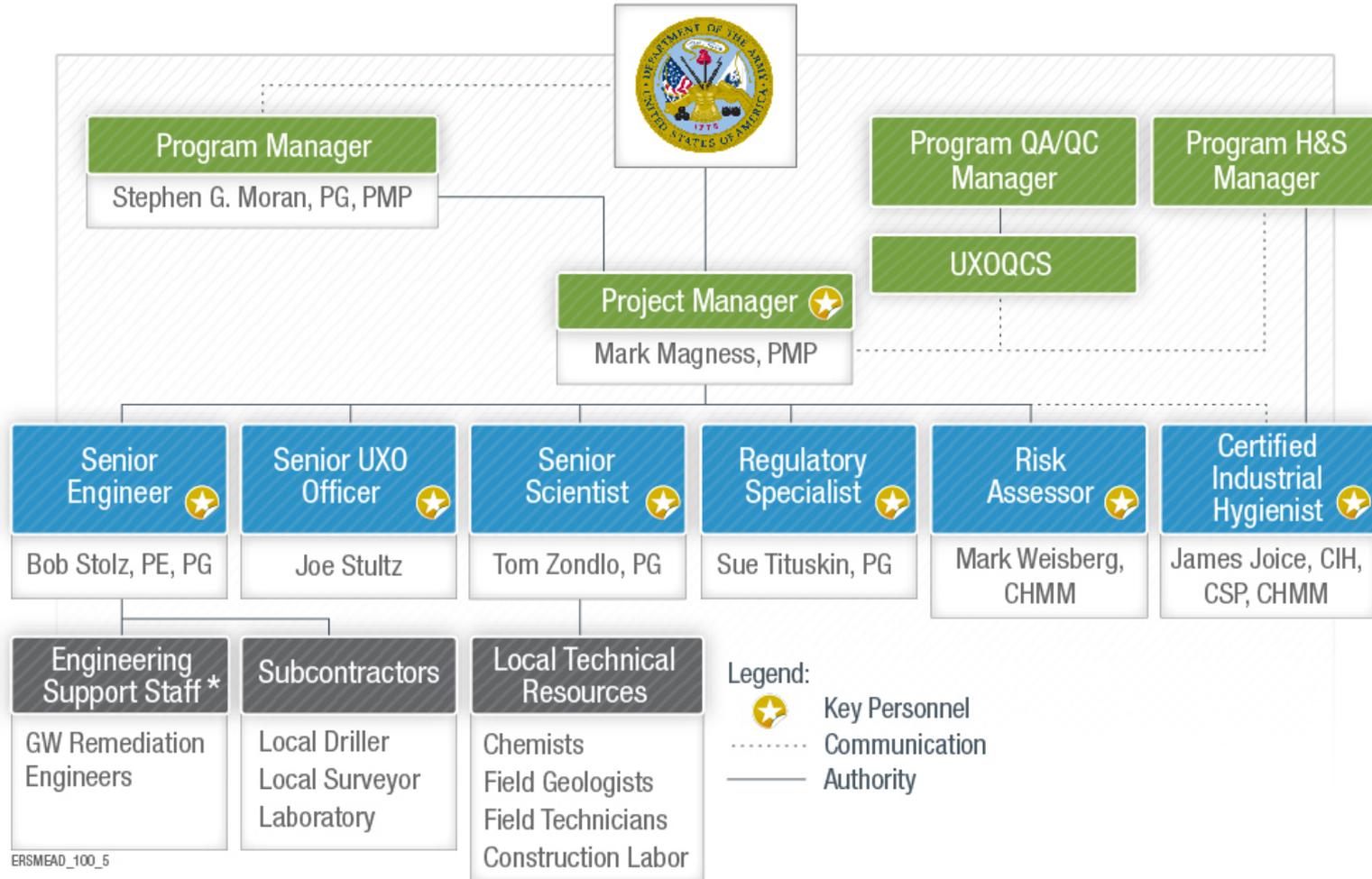




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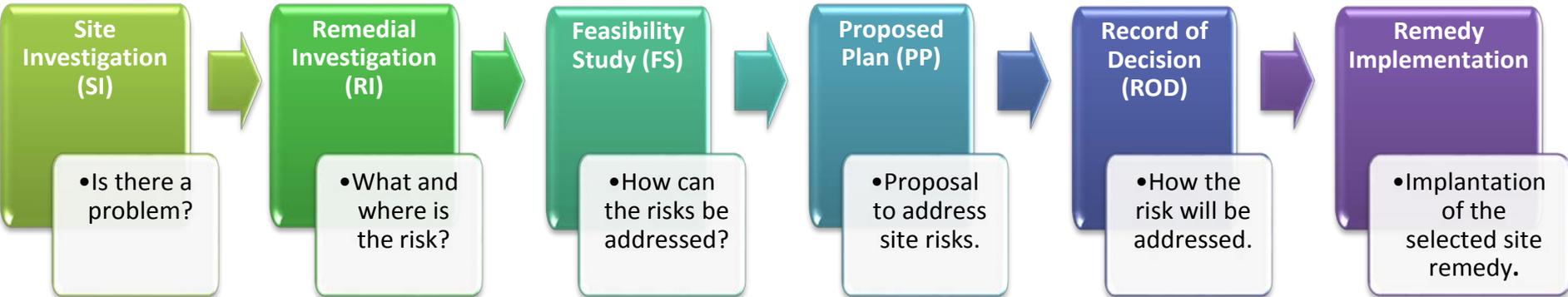




CERCLA Process



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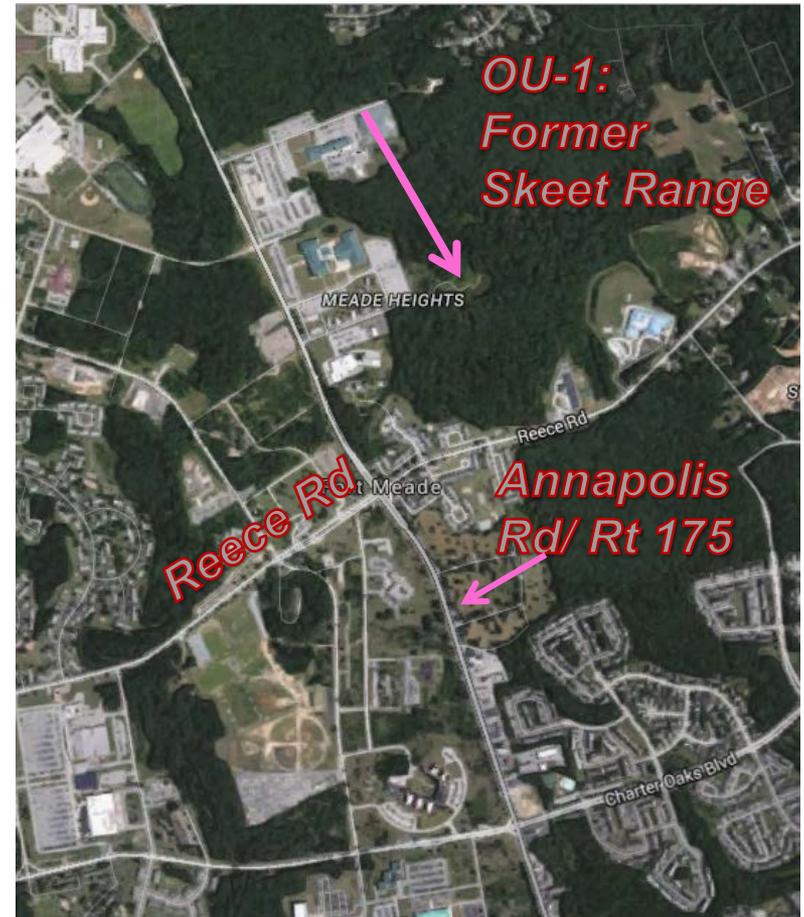




FGGM-83/OU-1, Former Skeet Range



- FGGM-83, a former trap and skeet range used from 1975 to 1994
- RI field work was conducted in 2010, and the RI Report was finalized in 2013
- The RI evaluated all media on site, polycyclic aromatic hydrocarbons (PAHs) (in soil and sediment) and total lead (in soil) were detected at concentrations exceeding regulatory criteria



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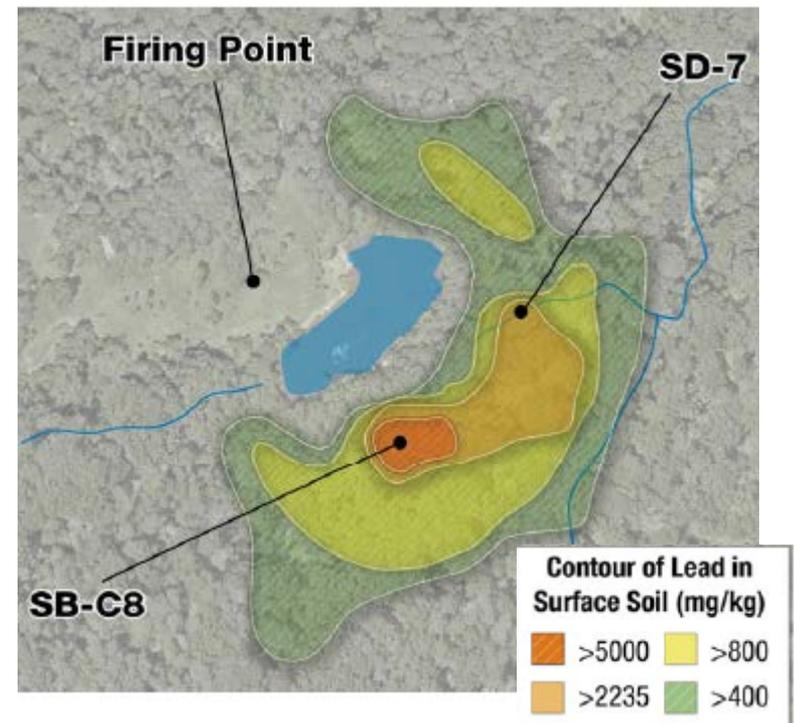
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FGGM-83/OU-1, Former Skeet Range



- No unacceptable risk to human health exists due to lead in soil based on the reasonably anticipated future land use of military/industrial.
- No unacceptable risk to human health for current or future receptors exists due to PAHs in soil or sediment.
- The screening-level ecological risk assessment concluded there is potential for adverse ecological effects from lead and lead shot, and an evaluation of the need for additional study and/or alternatives for the Site is warranted.



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FGGM-83/OU-1, Former Skeet Range



Proposed Path Forward:

- Prepare Feasibly Study to evaluate Remedial Alternatives
- Remedial Action Objectives (Final RI, 2013):
 - Limit the exposure of potential human receptors to Site soil that exceeds an unacceptable risk based upon unrestricted use until such time as potential unacceptable risk to residential human receptors is appropriately mitigated
 - Ensure potential ecological receptor exposure to lead in site soil is reduced to the extent feasible based on evaluation consistent with CERCLA regulatory standards, and considering resultant level of ecological harm compared to risk reduction benefit
- Prepare Proposed Plan and Decision Document to present Preferred Alternative to stakeholders and to document selected remedy
- Implement remedy



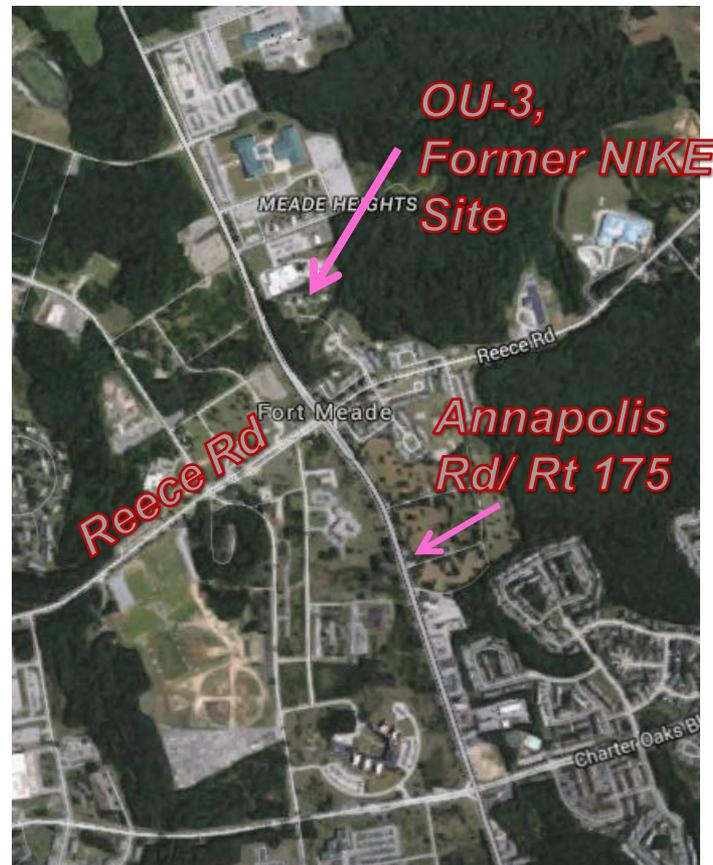
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FGGM-87/OU-3, Former NIKE Site



- Ft. Meade's Nike missile program utilized the buildings at FGGM-87 from 1955 to 1972.
- The RI has been in progress since 2006. The most recent field work was conducted in 2010, RI will be finalized.
- Soil, groundwater, surface water, and sediment have all been evaluated at FGGM-87, and human health and ecological risk assessments have been performed.



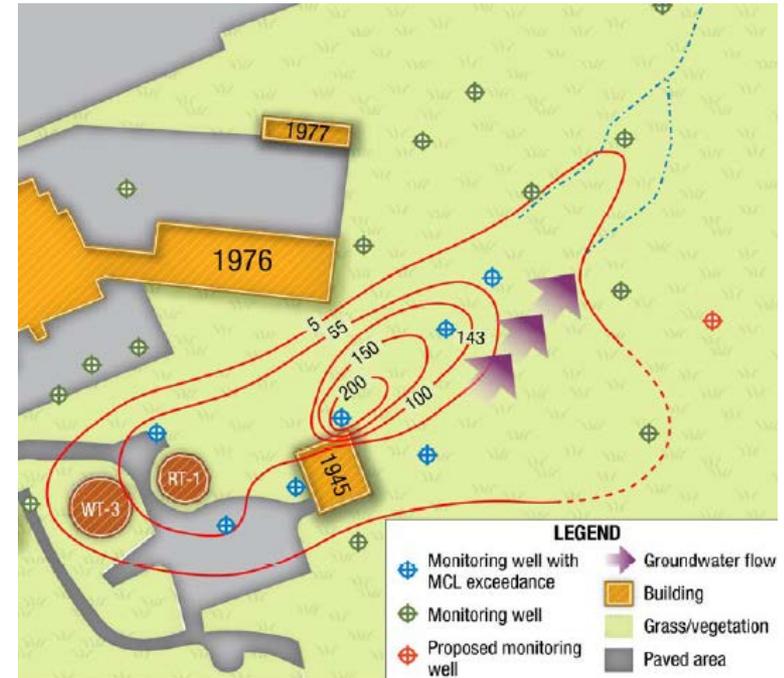
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FGGM-87/OU-3, Former NIKE Site



- Sediment and surface water in downgradient intermittent creek. Trichloroethene (TCE) detected below the 30 µg/L USEPA water quality criteria.
- Sediment samples included in the ecological risk assessment - concluded no unacceptable risks from sediment to ecological receptors.
- Groundwater Constituents Of Concern (COCs) include arsenic, cobalt, TCE, and bis (2-Ethylhexyl) phthalate (BEHP).
- In 2009, the shallow TCE plume was mapped as approximately 200 feet wide, 750 feet long, and 10 ft. thick (saturated zone from 15-25' bgs) with a maximum TCE concentration of 244 µg/L.



TCE Plume as mapped in 2009



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FGGM-87/OU-3, Former NIKE Site



Proposed Path Forward:

- Collect additional groundwater samples to finalize RI
- Finalize RI and prepare Feasibility Study to evaluate Remedial Alternatives
- Proposed Remedial Action Objective:
 - Reduce TCE mass
- Prepare Proposed Plan and Decision Document to present Preferred Alternative to stakeholders and to document selected remedy
- Implement remedy



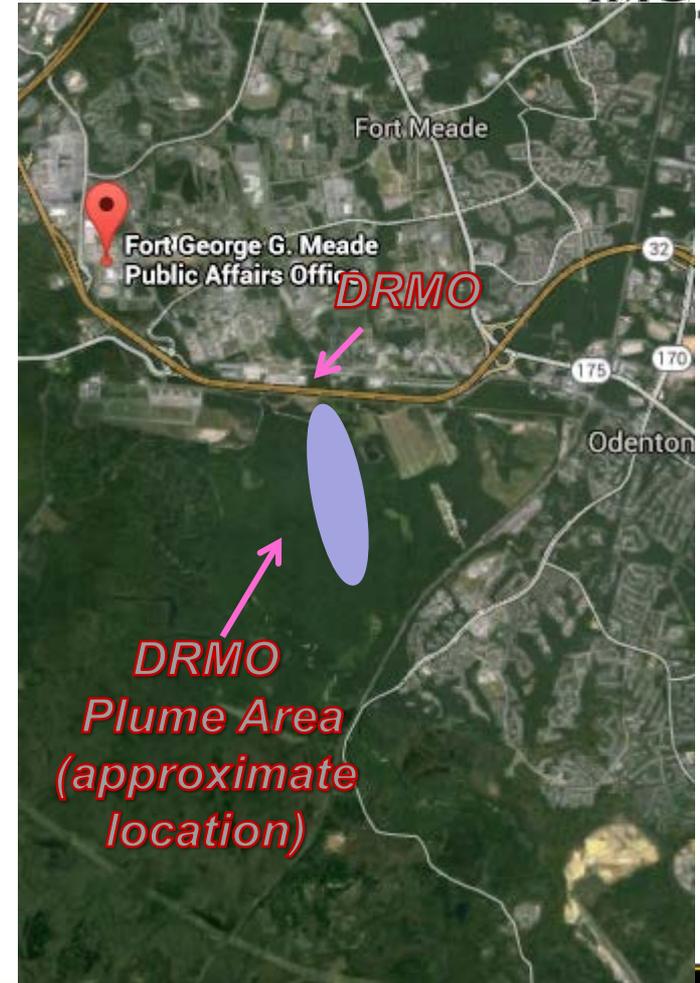
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FGGM-7/OU-5, DRMO & Plume



- Source of contamination was buried drums at the Defense Reutilization and Marketing Office (DRMO) Site.
- Drums were discovered and removed from the site along with impacted soil in 1995.
- The resulting contamination is a long dispersed Tetrachloroethene (PCE) groundwater plume that extends more than 7,000 feet from the DRMO property off-Post onto the Department of the Interior property.
- The PCE plume is within the Lower Patapsco Aquifer, which extends to an approximate depth of 225 feet below ground surface.



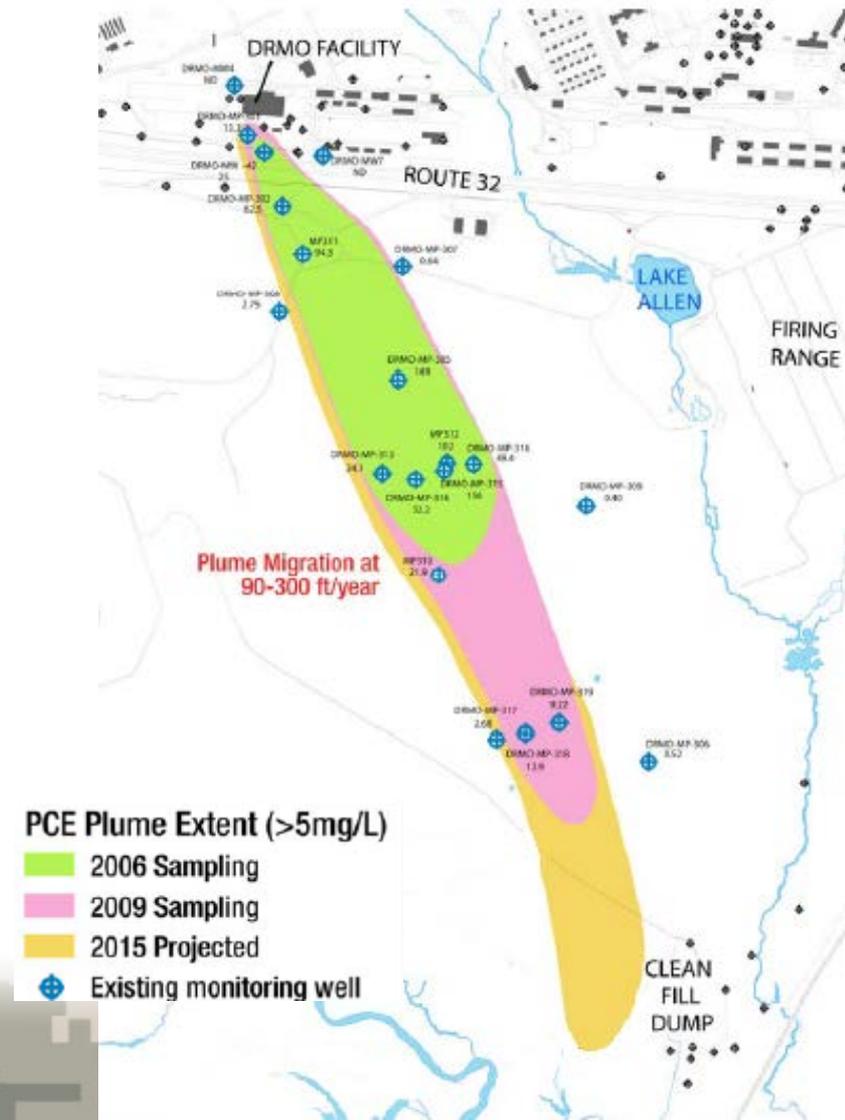
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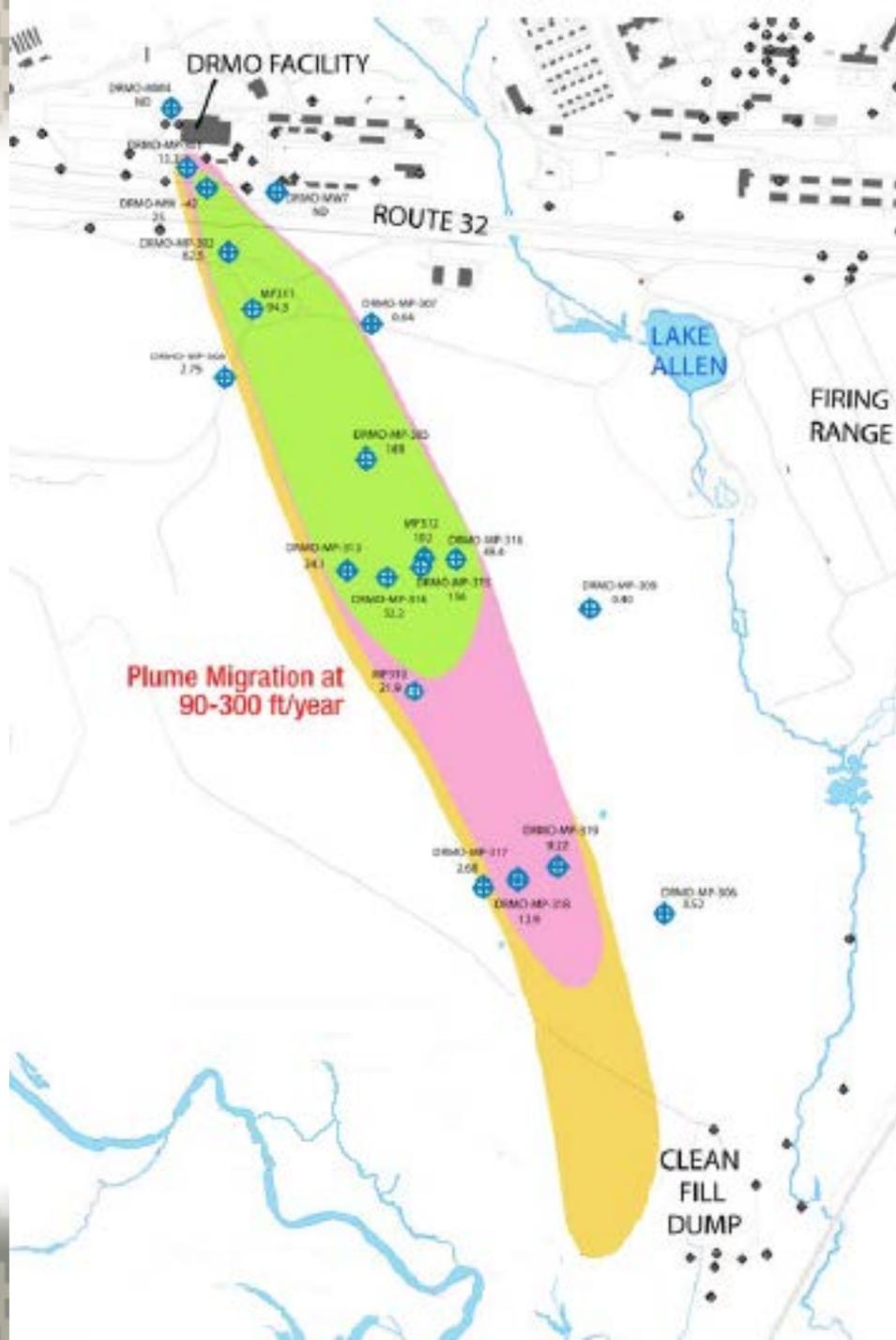


FGGM-7/OU-5, DRMO & Plume



- RI field work initiated in 2006 but RI is not yet final.
- PCE concentrations in groundwater were as high as 156 $\mu\text{g/L}$ in 2009 (exceeding the MCL of 5 $\mu\text{g/L}$).
- Data Gaps include the following:
 - Current PCE concentrations
 - Current plume delineation
 - Additional analytical parameters





PCE Plume Extent (>5mg/L)

- 2006 Sampling
- 2009 Sampling
- 2015 Projected
- ⊕ Existing monitoring well



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FGGM-7/OU-5, DRMO & Plume



Proposed Path Forward:

- Collect baseline round of samples, install additional monitoring wells, and collect additional groundwater samples to fill data gaps
- Finalize RI and prepare Feasibility Study to evaluate Remedial Alternatives
- Proposed Remedial Action Objectives:
 - Prevent down gradient migration of PCE
 - Remove PCE mass
- Prepare Proposed Plan and Decision Document to present Preferred Alternative to stakeholders and to document selected remedy
- Implement remedy



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Schedule of Activities



- **FGGM-83 – Skeet Range**
 - Internal Draft FS – Oct-2015
 - Regulatory submission of Draft FS – Dec-2015
 - Final FS – April 2016
 - PP/ROD – Spring-2017
 - Achieve RC – Oct-2018
- **FGGM-87 (NIKE) and FGGM-7 (DRMO)**
 - Internal Draft RI/FS Work Plan – Oct-2015
 - Regulatory submission of draft RI/FS Work Plans - December 2015
 - RI field activities –Spring-2016
 - Final RI/FS – Spring-2017
 - PP/ROD – Spring-2018
 - Achieve RIP – Fall-2019 (FGGM-87), Spring-2020 (FGGM-7)



Points of Contact



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