



U.S. DEPARTMENT OF  
**ENERGY**

Savannah River Site

A Presentation to the  
Facilities Disposition and Site Remediation Committee  
Savannah River Site  
Citizens Advisory Board

**M-Area Chemical Oxidation (MACO)**  
**M-Area Operable Unit (MAOU)**  
**Small Arms Training Academy (SATA)**  
**Advanced Tactical Training Academy (ATTA)**

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Area Completion Project, DOE-SR  
Office of the Assistant Manager for Completion Project

June 8, 2010





## Purpose

**Provide a description to the Citizens Advisory Board Facilities Disposition and the Site Remediation Committee of:**

- **Status update of M-Area Chemical Oxidation**
- **Status update of M-Area Operable Unit**
- **Deactivation and decommissioning and remediation activities at the Small Arms Training Area**
- **Upgrades at the Advanced Tactical Training Area**





# Acronyms

• ABRP	A Burning Rubble Pile
• ATTA	Advanced Tactical Training Academy
• D&D	Deactivation and Decommissioning
• ft	foot / feet
• LLAZ	Lower Level Aquifer Zone
• MACO	M-Area Chemical Oxidation
• MAOU	M-Area Operable Unit
• MCB	Miscellaneous Chemicals Basin
• msl	mean sea level
• PCE	Tetrachloroethylene
• ppm	parts per million
• PSVE	Passive Soil Vapor Extraction
• SATA	Small Arms Training Academy
• SVE	Soil Vapor Extraction
• TCE	Trichloroethylene
• TCLP	Toxicity Characteristic Leaching Procedure
• ug/L	Micrograms per liter
• VOC	Volatile Organic Compound
• WSI	Wackenhut Services Incorporated





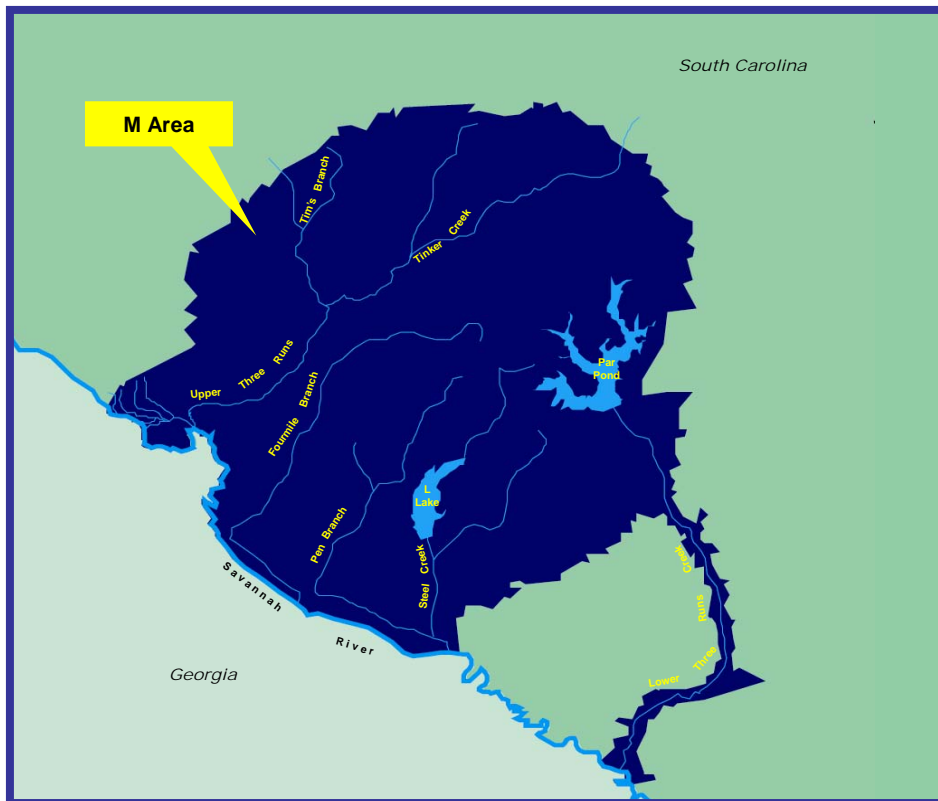
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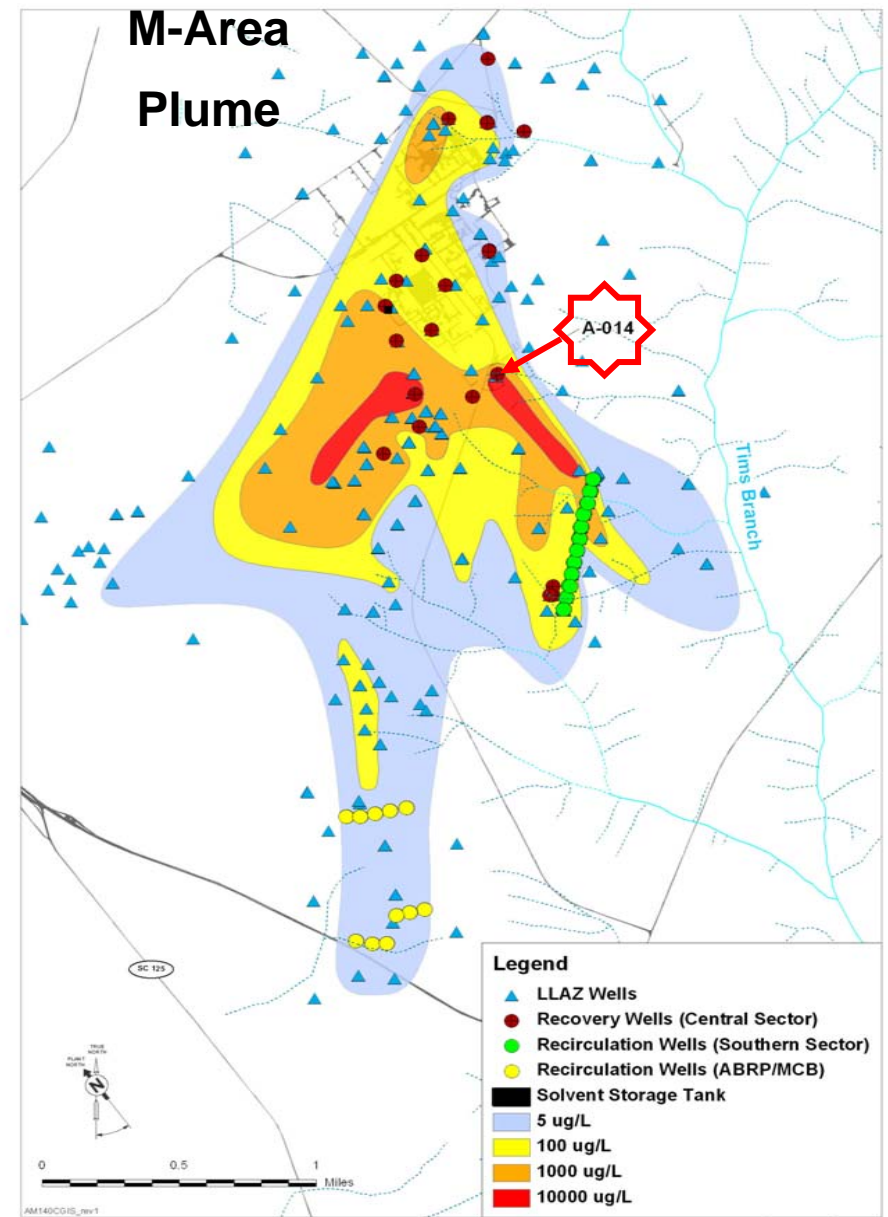
# M-Area Chemical Oxidation (MACO)



# MACO Demo Project



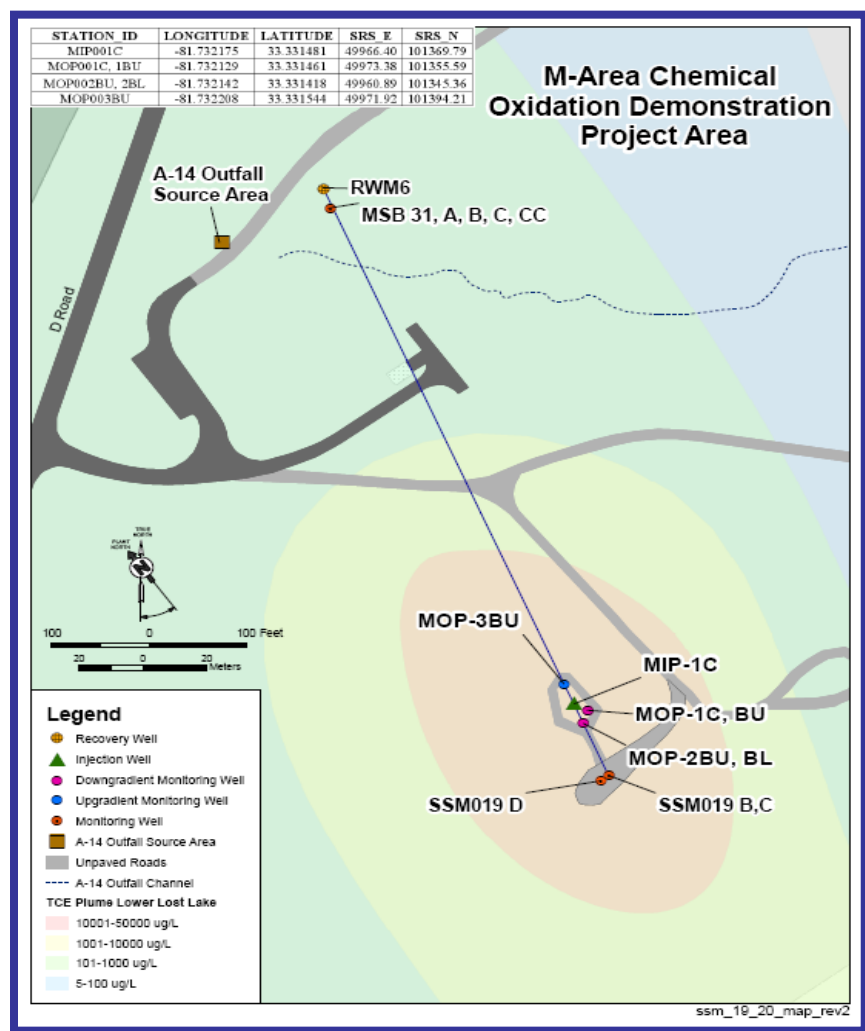
## Site Location



A/M-Area Composite TCE Plume with Sources and Remediation Technologies



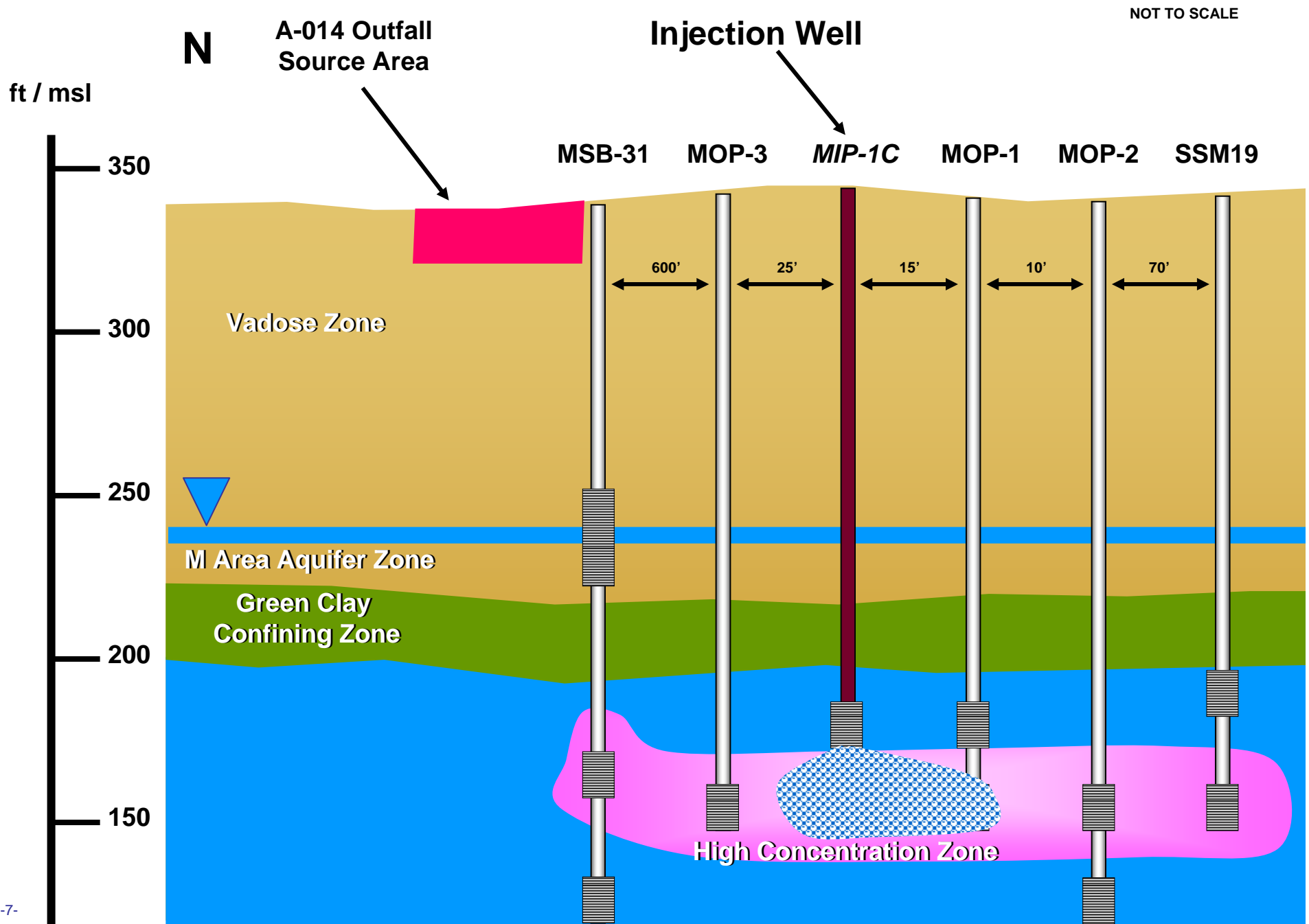
# MACO Demo Project

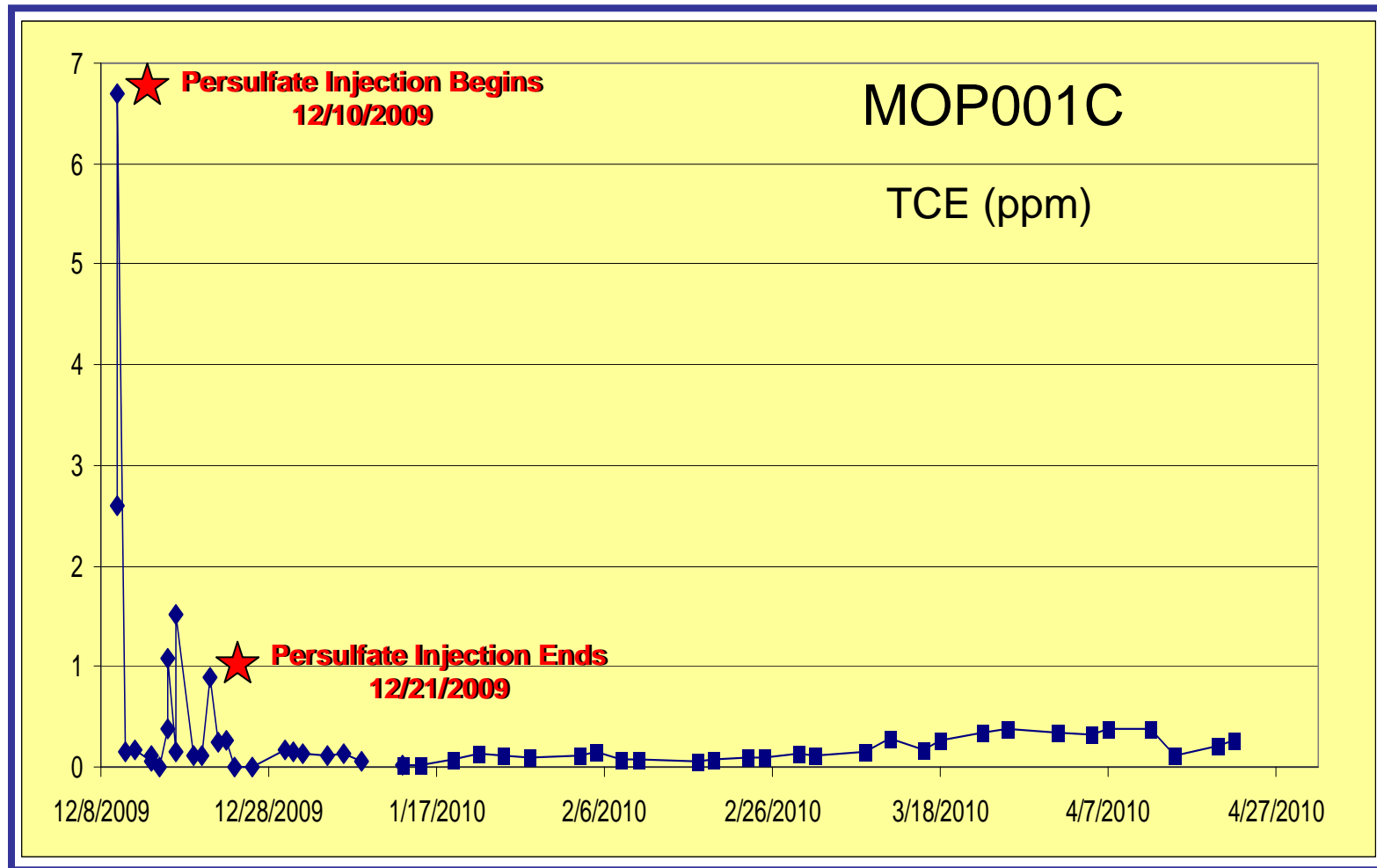


- Project Site
- M-Area PCE / TCE contamination plume
- Southeast of A-14 Outfall Source Area



# MACO Site Cross Section









## MACO Summary and MACO II

- TCE concentrations remain less than 1 ppm for 4 months after injection
- MACO II Tentative Plan
  - Push-Pull Test
    - Determine destruction versus dilution at MACO I
  - Vadose Injection near A-014 Outfall



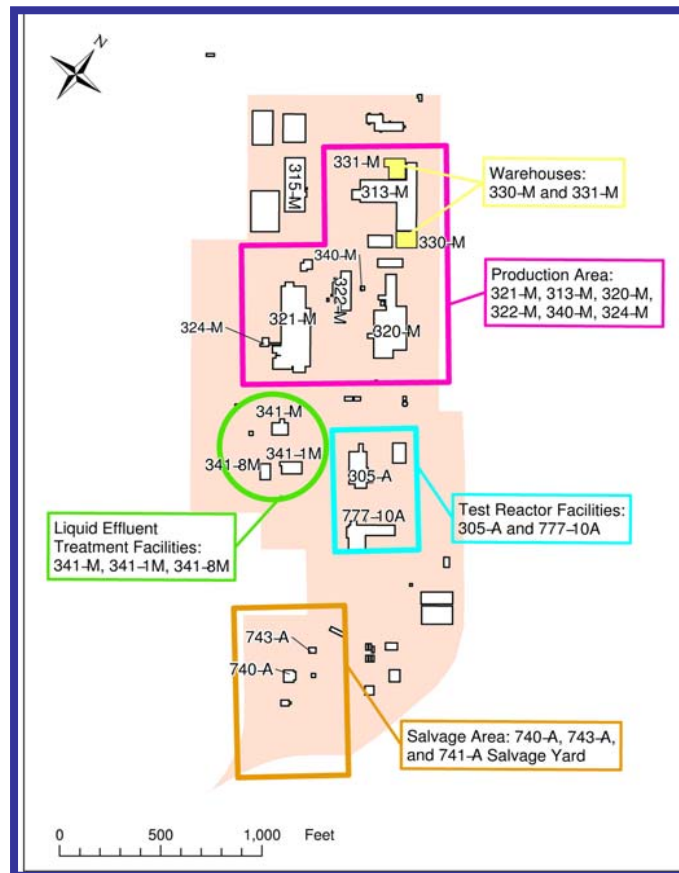


# M-Area Operable Unit (MAOU)





# MAOU Background



- Produced and tested uranium fuel and target assemblies from 1952 and 1988
- Operable unit includes Production Area, Test Reactor Facilities, Liquid Effluent Treatment Plant, and Salvage Yard Area





## Progress to Date



- Deactivation and decommissioning of 23 buildings completed
- Early actions in the Production Area and the Salvage Yard completed
  - Removal of radioactively and hazardous soil, concrete, and sewer lines







## Final Remediation Action



- Grouted 14 manholes along inactive process sewer lines
- Constructed two passive soil vapor extraction (PSVE) cells and loaded with 4,355 cubic yards of VOC contaminated soils for treatment
- Installed four soil vapor extraction wells to address remaining contaminant migration at 313M, 320M, and 321M
- Activities completed August 10, 2009 through March 24, 2010





## MAOU Path Forward

- Start operation of the passive SVE cells and the conventional SVE wells: **June 23, 2010**
- Submit the Revision 0 Post-Construction Report:  
**August 18, 2010**





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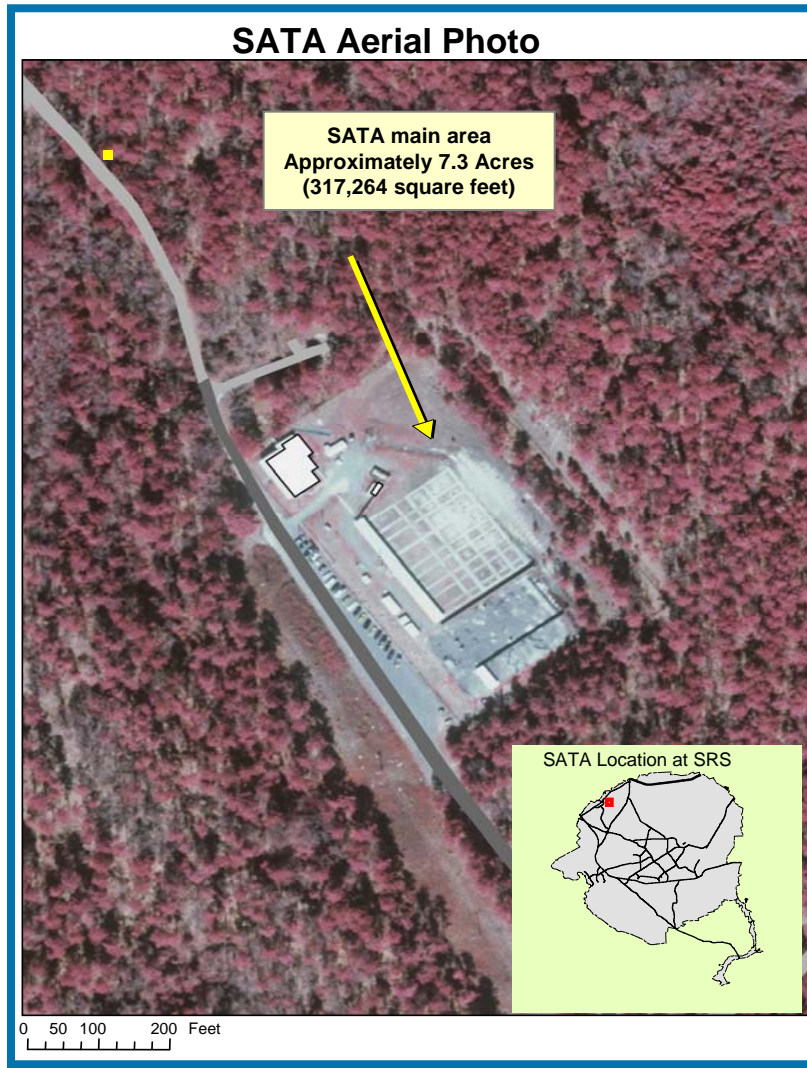
# Small Arms Training Area (SATA)







## Location and Background

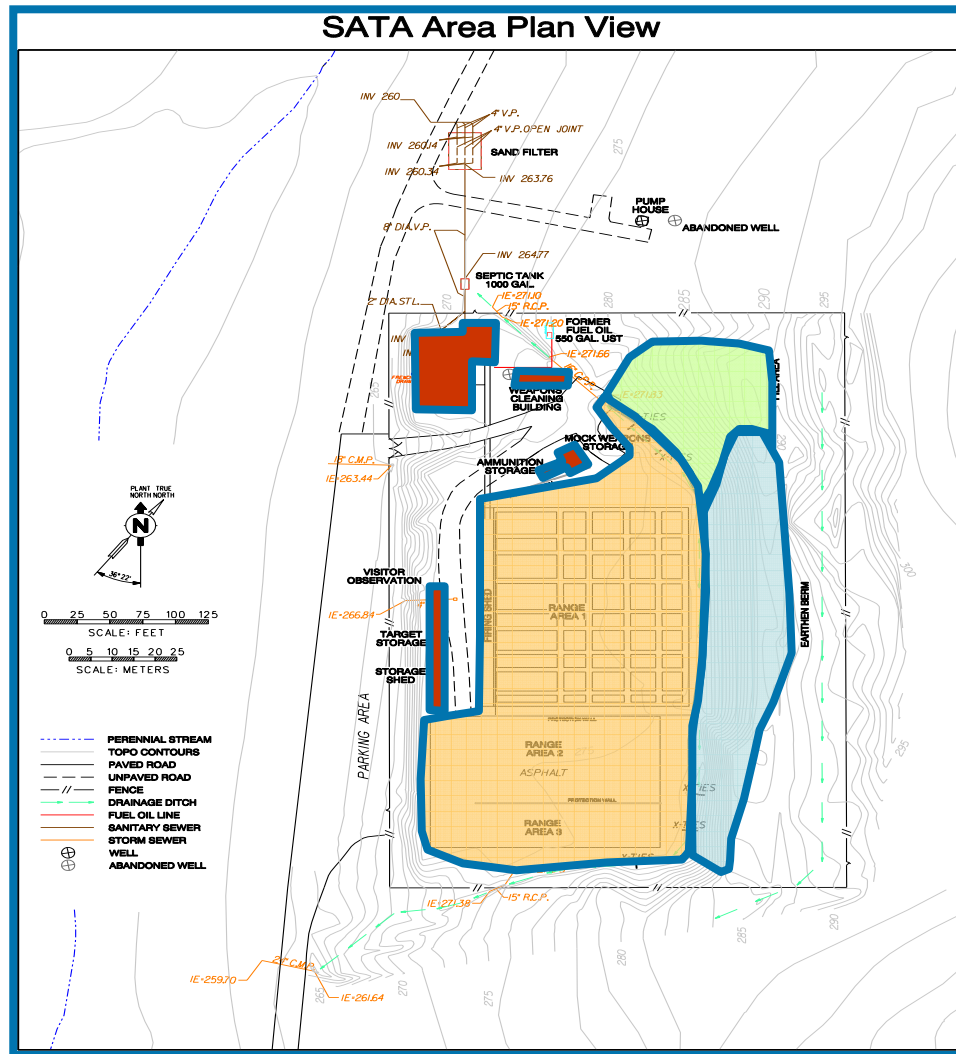


- **Constructed in 1950's as a Small Arms Training Area (SATA)**
- **Used for security qualifications and testing**
- **Consists of:**
  - Three ranges
  - Administrative / Control building
  - Weapons cleaning shed
  - Storage buildings / structures
- **Lead present in soil**
  - Hazard to industrial worker
  - 4.8 times greater than regional screening level
  - Exceeds TCLP threshold
    - Hazardous
  - Approximately 11,000 cubic yards of contaminated soil





# Removal Action General Scope



- **Lead Contaminated Soil Removal**



## Berm



## Fill Area



## Between Firing Position and Berm

- **D&D of Buildings**



## Administrative / Control / Storage



## SATA Scope of Work

- Admin/Control building and other ancillary facilities will be Deactivated and Decommissioned (D&D'ed)
- Storage containers will be D&D'ed or relocated at the Advanced Tactical Training Area (ATTA)
- Ballistic walls will be D&D'ed or relocated at ATTA
- Mobile targets will be relocated at ATTA
- Concrete sidewalks and equipment pads will be removed
- Lead contaminated soil will be excavated and shipped offsite for disposal





# Schedule

- **Soil Characterization** **07/07/2010**
- **Start D&D** **06/01/2010**
- **Excavation Start** **08/18/2010**
- **Complete D&D** **12/31/2010**
- **Site Restoration** **06/29/2011**





# Advanced Tactical Training Area (ATTA)





# Background



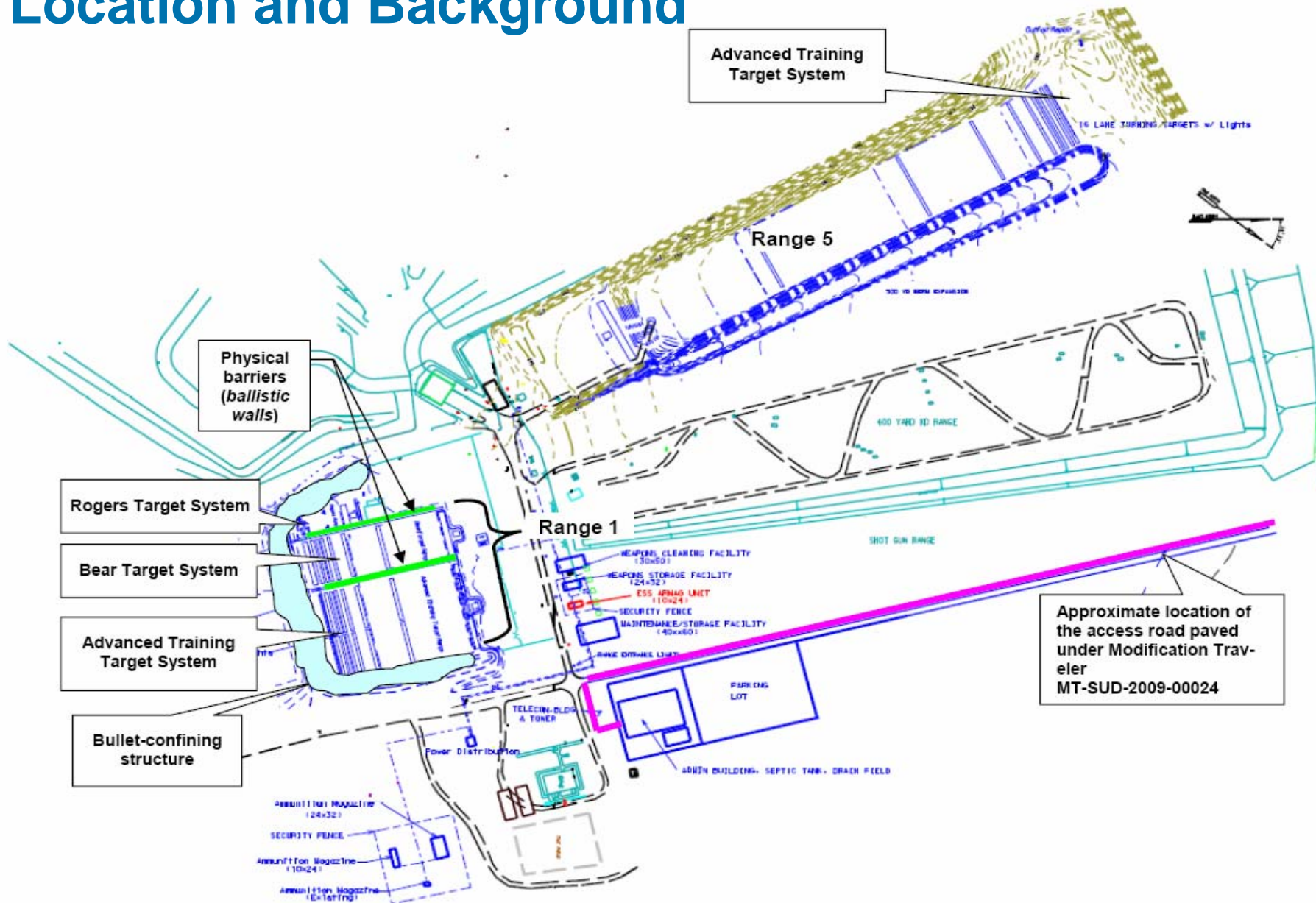
**The ATTA was  
constructed in 1984 for  
advanced weapons and  
tactical training of the  
Site's security force**







# Location and Background





## ATTA Scope of Work

**This project will relocate and establish several functions that are currently located at the Small Arms Training Academy (SATA) to the Advanced Tactical Training Academy (ATTA) for the SRS Site Security Contractor (WSI). The functions to be relocated include, as depicted in the figure listed below, showing the ATTA site locations and modifications.**

- **Design and build an approximately 8400 square feet Administration Training Building**
- **Repair and maintain the access road to ATTA range**
- **Provide a fiber optic cable or wireless communications circuit**
- **Design and build a weapons cleaning facility**
- **Procure and install a weapons storage facility**
- **Procure and install a maintenance storage facility**
- **Procure and install two ammunition magazine storage vaults at ATTA**
- **Relocate the BEAR target system currently at SATA to ATTA range**
- **Relocate the Rogers Range currently at SATA to ATTA range**





# ATTA Schedule

- **Construction Start** **11/08/10**
- **Construction Complete** **07/20/11**

