Agenda for June 25th Picatinny Arsenal Restoration Advisory Board

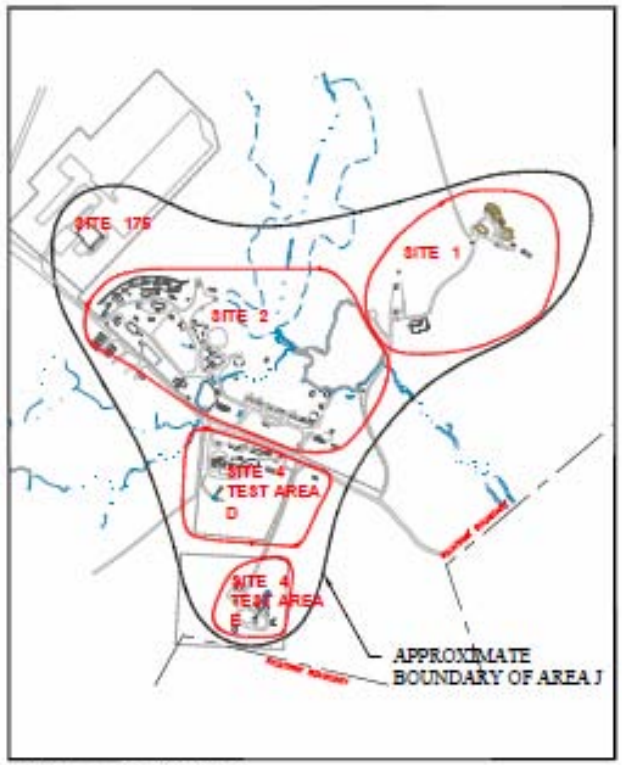
US Army Garrison
Picatinny Arsenal, NJ

- Attendance, Introductions & Correspondence
- Update on Burning Grounds (John Costea, Picatinny Deputy Garrison Commander)
- Old Business
- TAPP Contract and Financial Report
- Review of Next Edition of the Newsletter
- Update on Former DRMO Yard ICM (Ted Gabel, Picatinny; Tom Crone, ARCADIS)
- Updates on Group 3 Sites and Group 1 Sites (Tim Llewellyn, ARCADIS)
- Membership (new member and community co-chair election)
- Installation Restoration Program MMRP/Update in a Minute (if time allows; Ted Gabel, Picatinny)
- Synopsis and Next Meeting


Group 3 (PICA 008)

US Army Garrison

Picatinny Arsenal, NJ



AREA J SITE PLAN

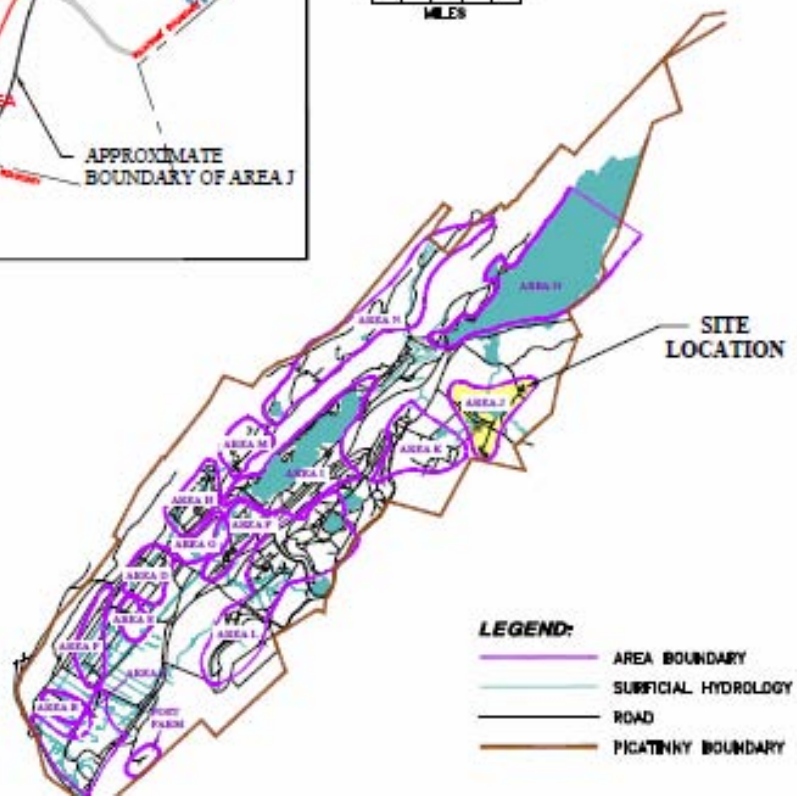
0 1,000

SCALE: 1"=1,000'

LOCATION OF PICATINNY

0 50

MILES



0 8,000

SCALE: 1"=8,000'

N

Site Background and History

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Picatinny Arsenal, NJ

- Active from 1947 to 1962
- Rocket Fuel and Rocket Component Test Area
- Some training activities 1980's and 1990's
- Most buildings demolished in the 1980's
- Site 2 currently active as a Homeland Security Training Facility

Status of CERCLA Process

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Picatinny Arsenal, NJ

- ✓ Remedial Investigation (Characterization of Site)
- ✓ Feasibility Study (Assessment of possible remedies)
- ✓ Pilot scale testing (Field assessment of possible remedies)
- ❑ Proposed Plan (Public document to solicit input on preferred remedy)
- ❑ Record of Decision (Final legal document selecting remedy)
- ❑ Remedial Action (Implement Remedy)

Summary of RI

– Sites 1 and 4 have minimal environmental issues

– Chemical constituents documented at Site 2 :

- Groundwater (Carbon Tetrachloride and Trichlorethene)
- Surface Water in the G2 Pond (Low Level VOCs)
- Wetland area at the G2 pond (isolated metals)
- Isolated surface soils (metals)

Site 2

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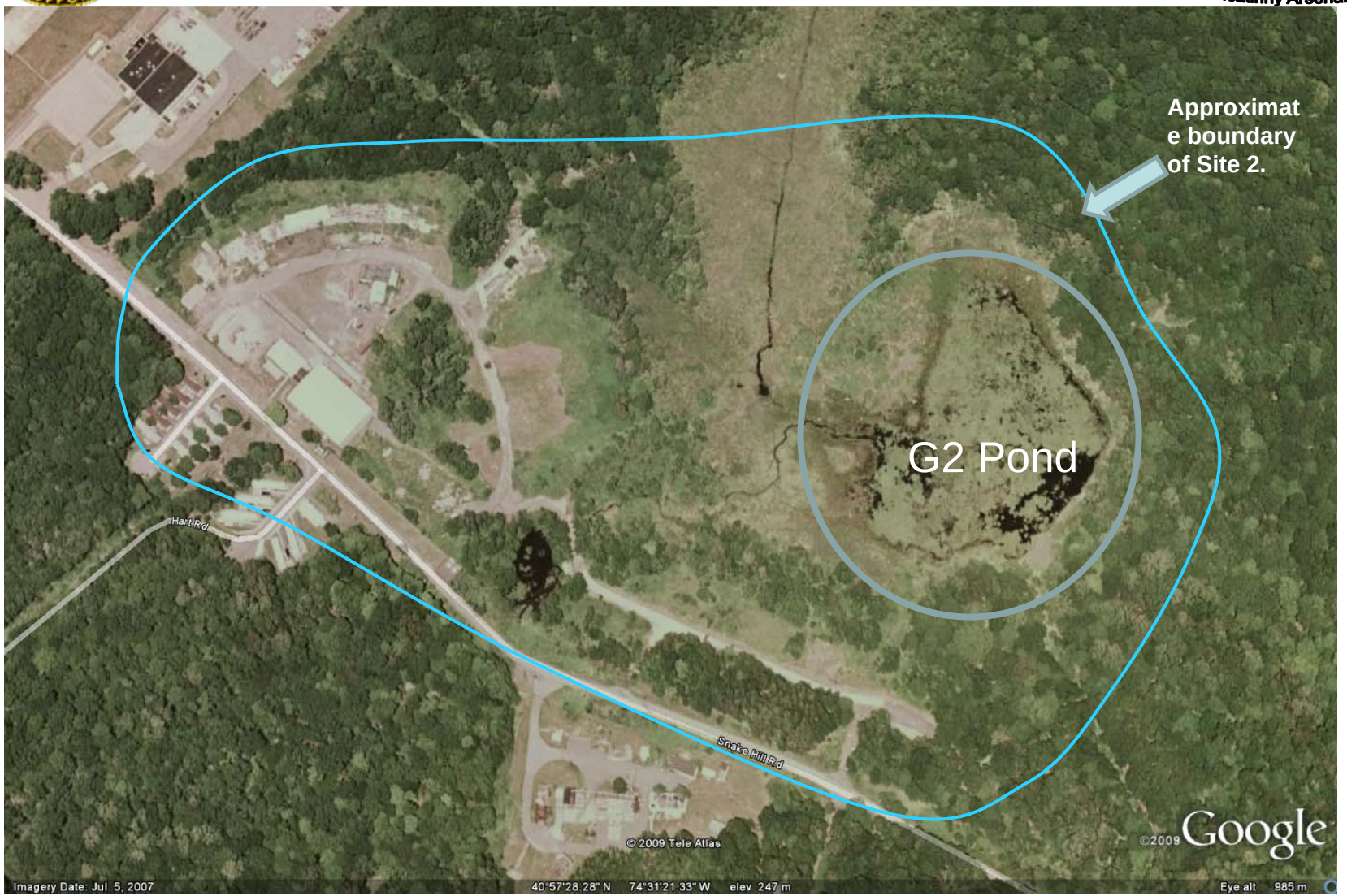

G2 Pond Sediment

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- 2 samples with elevated metals (samples 2SD-5 and 2SD-7)
  - Manganese 1630 mg/kg vs. 1025 mg/kg standard
  - Silver 450 and 500 mg/kg vs. 36 mg/kg standard
- Both human health and ecological risk assessments run as well as studies of the health of the wetland fauna and flora

G2 Pond Sediments

US Army Garrison
Picatinny Arsenal, NJ

- **Current Conditions**
  - No sign of drums, drum remnants, or other waste materials
  - Wetland areas show no sign of stressed vegetation
  - Fauna and flora shown to be un-impacted by metals detections

G2 Pond Sediments

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– No action proposed
  - No risk
  - No evidence of impacts
  - Would destroy wetland fauna and flora in order to save it

Summary of RI

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Chemical constituents documented at Site 2 :

- Groundwater : Carbon Tetrachloride and Trichlorethene
- Surface Water in the G2 Pond (Low Level VOCs)
- Wetland area at the G2 pond (isolated metals)
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Site 2 VOC Plumes

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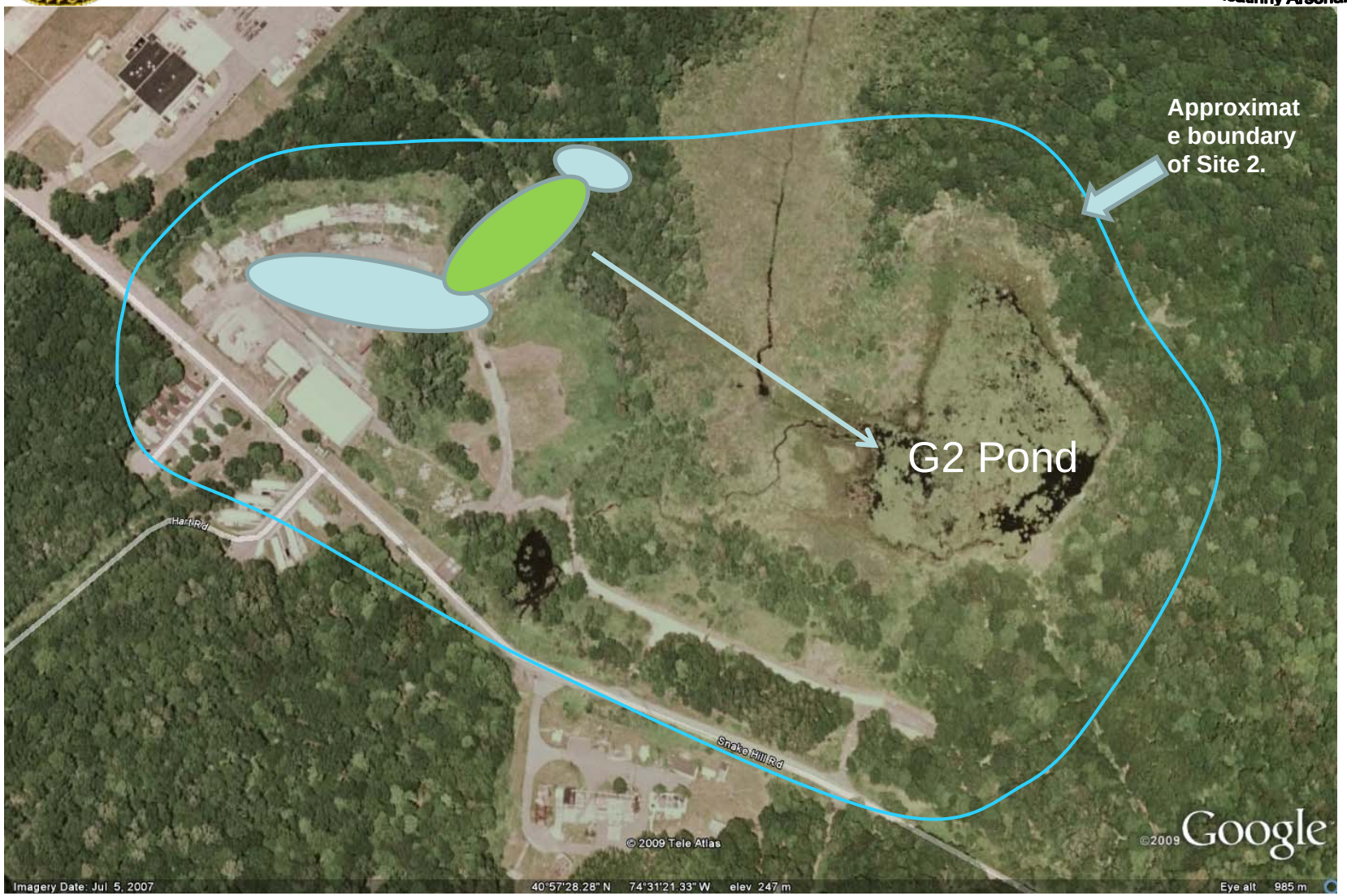
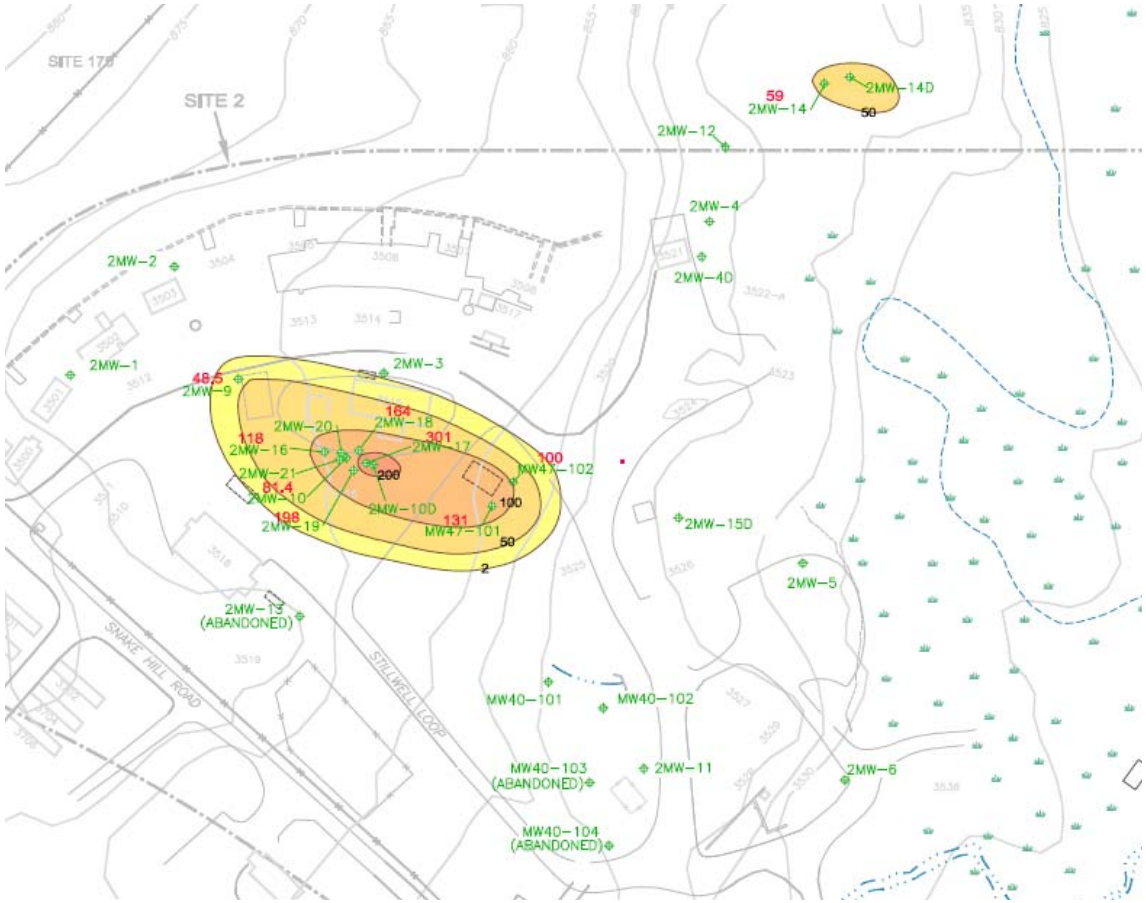


CT Plume – 2007



Maximum CT concentration (South) – 301 ppb
Maximum CT concentration (North) – 59 ppb

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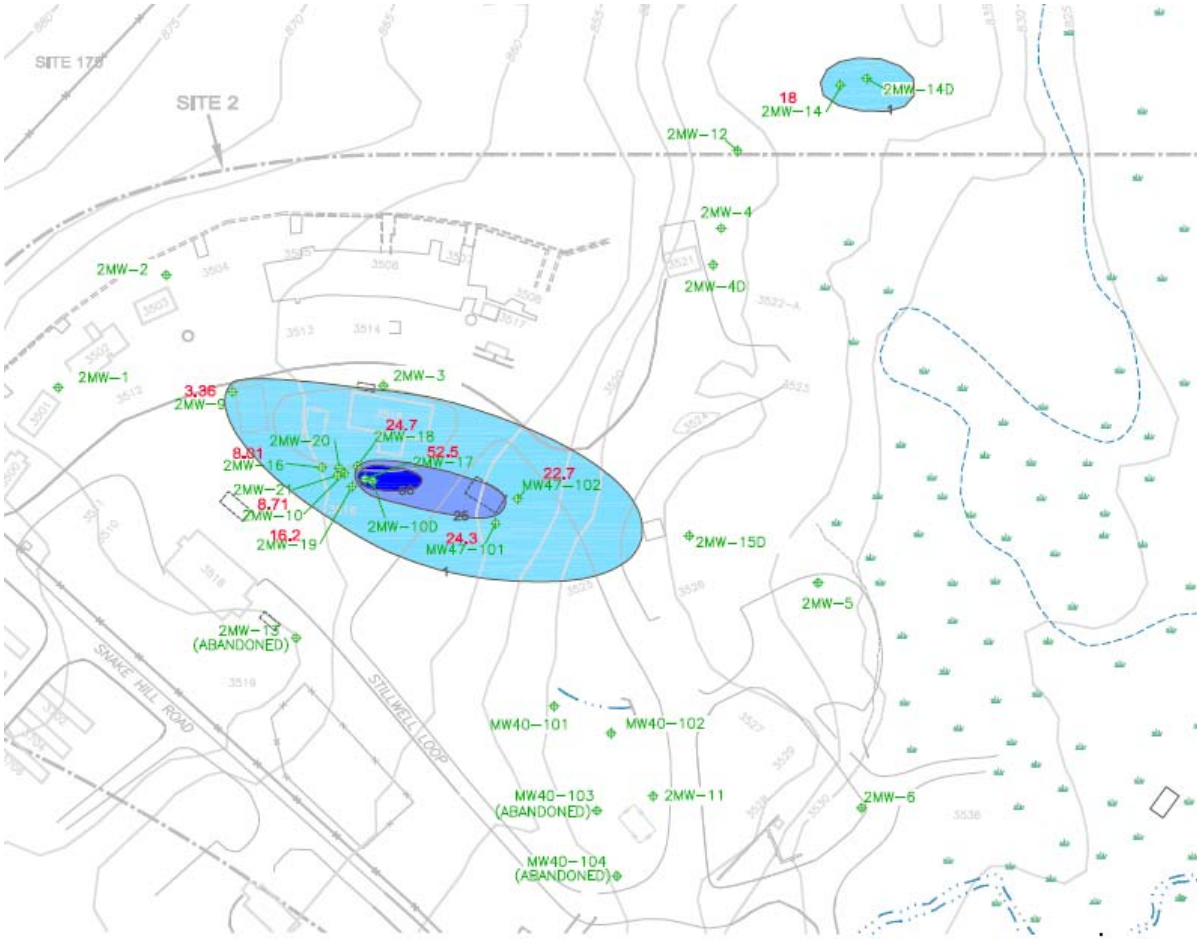
TCE – 2007



Maximum TCE concentration (South) – 52.5 ppb
Maximum TCE concentration (North) – 18 ppb

Remedy Evaluation

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- Recommended remedy for groundwater
  - In-situ bio remediation with emulsified vegetable oil (EVO)
  - Similar technology to Area B (molasses injections) but EVO is more viscous and forms longer lasting treatment zones in subsurface
  - VOC in groundwater flows through the EVO treatment zones and is destroyed in the subsurface by biological processes

EVO Pilot Test Data

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Picatinny Arsenal, NJ

Pilot test conducted August 2007:

- 400 gallons EVO injected August 2007 (18 ft radius)
- Pre-injection data and post injection data 10 months later May 2008

2MW17 (15 foot radius)	Pre injection	Post injection
CT	302ppb	<1ppb
TCE	52.5ppb	6.28ppb
TOC	1.85ppm	641ppm

2MW-22 (18 foot radius)	Pre injection	Post injection
CT	213ppb	<1ppb
TCE	53.5ppb	<1ppb
TOC	2.17ppm	128ppm

Proposed Remedy

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Three treatment lines at South Plume Area

One treatment line at North Plume Area

Injection frequency once every 2 years

Up to 1,600 gallons at each injection well during each injection (Wells at 30 foot spacings)

Conceptual Design

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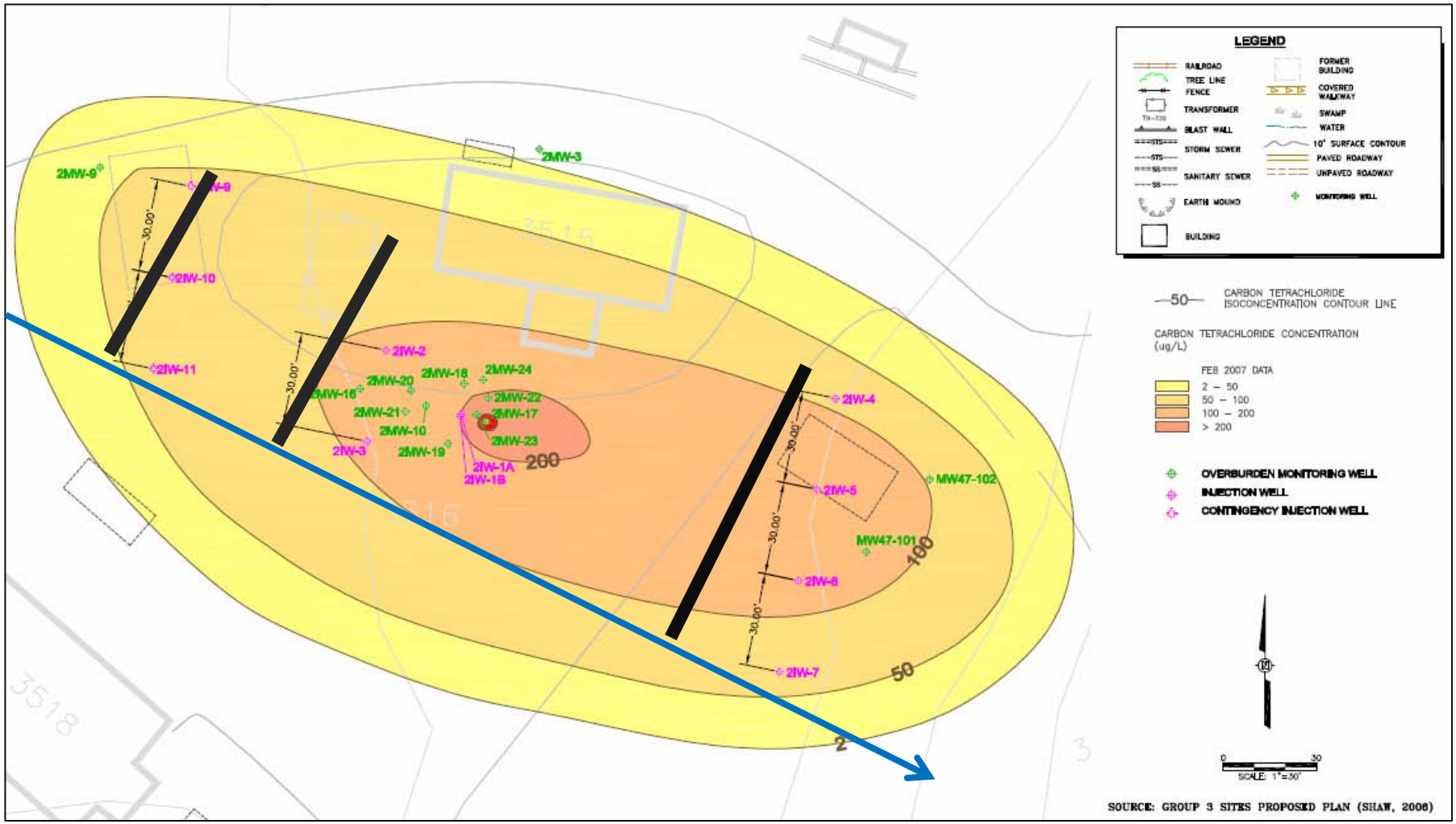
Picatinny Arsenal, NJ



Conceptual Design

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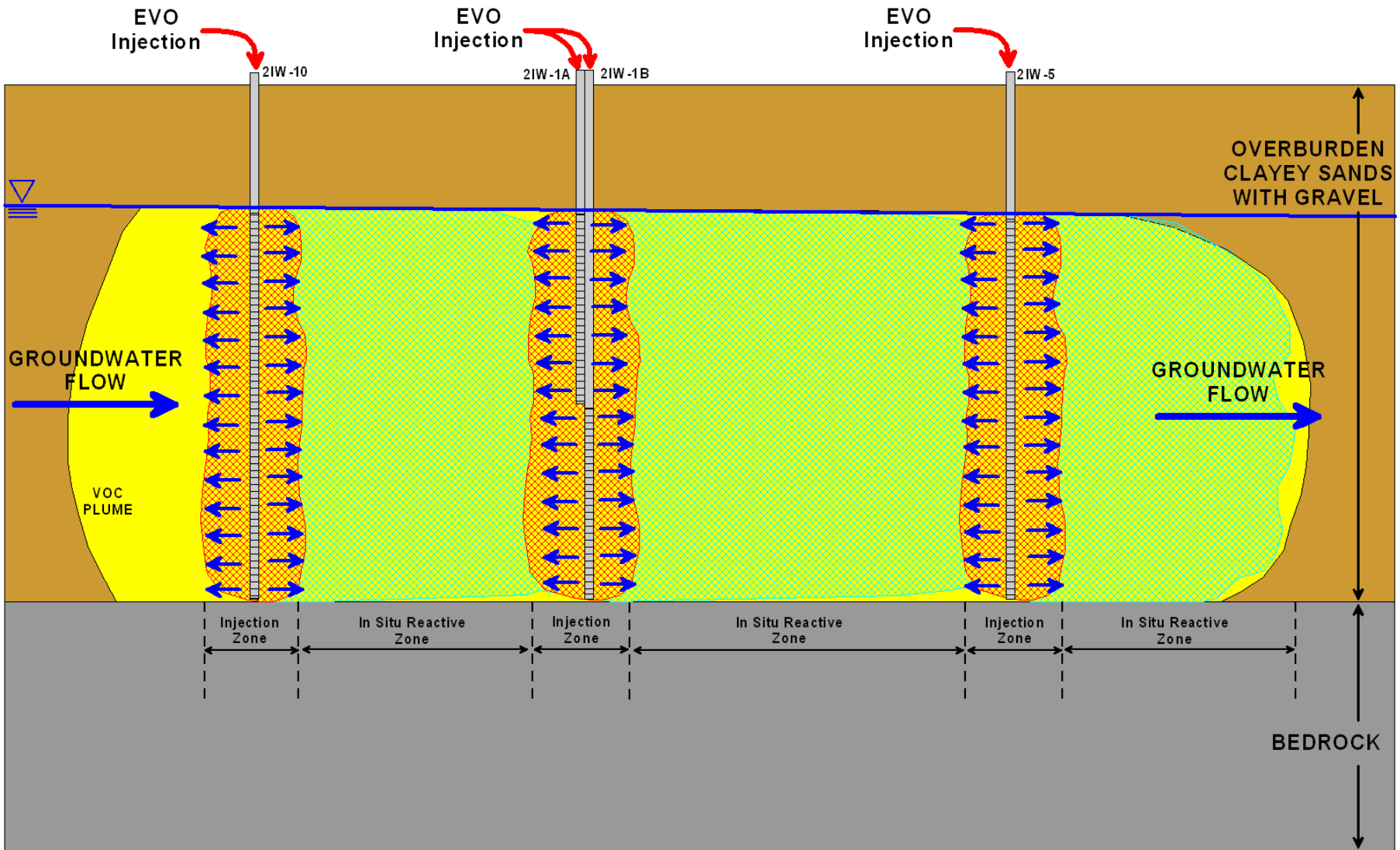

Remedy Objectives

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- Reduce VOC concentrations to less than 50 ug/l with 7 years in surficial aquifer plumes.

- After EVO treatment, MNA timeframe to reduce CT/TCE to below its action levels is approximately 40 yrs but most of the mass is treated within 7 years

Surface Water Remedy

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- Carbon Tetrachloride and TCE both detected (8.8 and 5.9 ppb) along with low levels of degradation compounds

- Surface water will be monitored regularly until groundwater response action actions result concentrations consistently below the New Jersey Surface Water Quality Criteria.

Group 3 Schedule

US Army Garrison
Picatinny Arsenal, NJ

- Proposed Plan
  - Initial submittal to Army 4/09
  - Draft Final to Agencies 6/09
  - Public Meeting targeted on or about 8/09

- ROD
  - Draft Final to Agencies 8/09
  - Final signed ROD 1/10

Area B (PICA 205)
CNN Film Clip

US Army Garrison
Picatinny Arsenal, NJ

Link to CNN.com