



TETRA TECH EM INC.

June 5, 2009

Dear RAB Members,

On behalf of the Navy, enclosed please find the April 1, 2009 final RAB meeting minutes for your information and records.

If there are any questions regarding the enclosed minutes, please contact Carolyn Hunter at (510) 302-6297 or [Carolyn.hunter@ttemi.com](mailto:Carolyn.hunter@ttemi.com).

Sincerely,

Carolyn Hunter  
Community Relations Specialist  
Tetra Tech EMI

**FINAL**  
**MEETING MINUTES**  
**RESTORATION ADVISORY BOARD**  
**INLAND AREA ENVIRONMENTAL RESTORATION PROGRAM**  
**FORMER NAVAL WEAPONS STATION SEAL BEACH DETACHMENT CONCORD**  
**CONCORD, CALIFORNIA**  
**APRIL 1, 2009**

These minutes reflect general issues raised, agreements reached, and action items identified at the Restoration Advisory Board (RAB) meeting for the Inland Area Environmental Restoration (ER) Program at the Former Naval Weapons Station Seal Beach Detachment Concord (NAVWPNSTA Concord), California. The meeting was held from 6:00 p.m. to 7:45 p.m. on April 1, 2009, at the Concord Police Station in Concord, California. Agreements and action items are described by topic under Sections I through VI and are summarized in Section VII. A list of participants and their affiliations is included as Attachment A, and the meeting agenda is included as Attachment B. Handouts at the meeting also are included as attachments to these minutes.

**I. WELCOME, INTRODUCTIONS, PUBLIC COMMENT, AND AGENDA APPROVAL**

**Welcome and Introductions**

The RAB Community Co-Chair, Mary Lou Williams (Concord resident), called the RAB meeting to order and initiated a round of introductions for attendees.

Sarah Ann Moore (Department of the Navy Deputy Base Closure Manager) said that she will be standing in as the Base Realignment and Closure Environmental Coordinator (BEC) for NAVWPNSTA. The Navy has selected a BEC for NAVWPNSTA Concord who will likely start in June 2009.

**Public Comments**

Ms. Williams opened the floor to public comments. No comments were received.

**II. FEBRUARY 2009 RAB MEETING MINUTES APPROVAL**

Ms. Williams asked the RAB for comments on minutes from the RAB meeting held on February 4, 2009. No comments were received. The Navy will finalize the minutes and distribute them to the RAB.

**Action Item**

1. The Navy will finalize and distribute the RAB meeting minutes for February 4, 2009.

**III. RAB ANNOUNCEMENTS**

Ms. Williams opened the floor to RAB announcements. Charles Perry (Navy Lead RPM) said that a list of proposed RAB presentation topics for 2009 was prepared. RAB members can provide any feedback on the proposed RAB presentation topics for 2009 to Mr. Perry.

Edi Birsan (Concord resident) asked if the Navy is on schedule to present the Historical Radiological Assessment (HRA) at the RAB meeting on June 3, 2009. Ms. Moore confirmed the Navy is on schedule to present the Draft HRA to the RAB in June 2009.

### **RAB Open Comment Period**

Mr. Birsan said that he would like to distribute copies of the February 2009 NAVWPNSTA Concord Environmental Restoration Program fact sheet to the community. Mr. Birsan requested the Navy provide him 30 copies of the February 2009 NAVWPNSTA Concord fact sheet for his distribution to the Concord community. Ms. Moore confirmed the Navy will provide 30 copies of the February 2009 NAVWPNSTA Concord fact sheet to Mr. Birsan. Ms. Moore said the Navy will make sure additional copies of future fact sheets are available for the RAB members and regulatory agencies.

### **Action Item**

2. The Navy will provide 30 copies of the February 2009 NAVWPNSTA Concord Environmental Restoration Program fact sheet to Mr. Birsan.

## **IV. REMEDIAL PROJECT MANAGERS (RPM) UPDATE**

### **Navy Update**

Charles Perry (Navy Lead RPM) discussed a few of the key items on the Navy RPM Update handout (see Attachment D).

Mr. Perry said the Navy issued the NAVWPNSTA Concord Environmental Restoration Program fact sheet to the community in February 2009.

He also said the Navy issued the Draft Final Remedial Investigation (RI) for Site 22A on February 24, 2009. In addition, Mr. Perry said the Navy issued the Draft Proposed Plan (PP) for Site 22 to the regulatory agencies for review on March 6, 2009.

Continuing, Mr. Perry said the Navy installed new wells at Site 29 and conducted the first quarter of groundwater sampling on March 18 through 20, 2009.

Mr. Perry said the Navy submitted an extension request letter on the Draft Final RI for Site 22A to U.S. Environmental Protection Agency (EPA) on March 26, 2009. Mr. Perry said the Navy will issue change pages for the response to comments (RTC) on the Draft RI for Site 22A. Mr. Birsan asked if the RTC for the Draft RI will address his questions on the six bunkers that were not included in the document. Mr. Perry responded the Navy will provide responses to all of Mr. Birsan's written comments.

Finally, Mr. Perry said the Navy issued the Draft Record of Decision (ROD) for the Solid Waste Management Units (SWMU) Sites 2, 5, 7, and 18 on March 27, 2009.

### **EPA Update**

Phillip Ramsey (EPA RPM) said EPA is reviewing the Draft Final RI and RTCs for Site 22A. The RTC for the Draft Site 22A RI did not provide much detail on munitions handling in the Site 22A magazine groups.

Mr. Ramsey continued that the Navy is issuing the HRA in June 2009 and will meet with the regulatory agencies to brief them on the contents of the document before the draft is issued.

He said EPA has received the Draft PP for Site 22 and will submit comments before the comment deadline.

Finally, Mr. Ramsey said EPA will begin reviewing the Draft ROD for SWMU Sites 2, 5, 7, and 18 in April 2009.

#### **San Francisco Bay Regional Water Quality Control Board (Water Board)**

Alan Friedman (Water Board) said he reviewed documents and met with the Navy to discuss the various sites at NAVWPNSTA Concord during February and March 2009.

#### **Department of Toxic Substances Control (DTSC)**

Jim Pinasco (DTSC) said he participated in a teleconference call meeting with the Navy and regulatory agencies to discuss the Draft Final RI for Site 22A. Mr. Pinasco said the regulatory agencies will discuss the RTCs that the Navy will provide for the Draft RI for Site 22A.

#### **City of Concord**

Bruce Knopf (City of Concord) stated the City of Concord is doing additional work to address comments received on the Draft Environmental Impact Report (EIR). The City of Concord issued a newsletter to the residents that discusses the timeline for completing the Final EIR. Ms. Williams said she received the city's newsletter and she thought it was excellent. Mr. Knopf mentioned that the newsletter is available on the City of Concord website.

### **V. SITE 29 UPDATE PRESENTATION**

Julie Crosby (Navy RPM) introduced the Site 29 update presentation. Shane DeGross and Tim Shields (Richard Brady and Associates) presented the Site 29 groundwater investigation (Attachment E).

Mr. Birsan asked when Site 29 was active. Mr. DeGross said Site 29 was active in 1945.

Mr. Birsan asked whether the water table at Site 29 was at a consistent level during drought years such as the early 1990s. Mr. Shields said that the Navy is evaluating quarterly groundwater samples at Site 29 to monitor the water table during all seasons to make sure any seasonal changes are noted. Water level data did not exist for Site 29 prior to 2006.

Mr. Ramsey said the Site Characterization and Analysis Penetrometer System (SCAPS) Membrane Interface Probe results show the solvents in the dissolved phase in groundwater in the general vicinity of the septic tank as well as south of the septic tank. SCAPS data were not collected around Building IA-19 and behind IA-25 because of access limitations with the SCAPS truck. Mr. Ramsey said the results show that contamination may be coming from near Building IA-25, where solvents may have been disposed.

Mr. Birsan asked if there is a possibility that Seal Creek was affected when activity occurred at Site 29. Mr. Ramsey explained that the building at Site 29 was used for fuse testing. No historical data show that solvents have moved out of the immediate vicinity of Site 29. Mr. DeGross said that the RI for Site 29 will assess whether groundwater intersects with or otherwise affects Seal Creek.

## **VI. SITE INSPECTION FIELD WORK UPDATE FOR THE EAGLES NEST EXPLOSIVE ORDNANCE DISPOSAL (EOD) AND FORMER INLAND AREA BURN AREA SITES**

Dennis Parker (Navy RPM) introduced the Site Inspection (SI) field work update for the Eagles Nest Explosive Ordnance Disposal (EOD) and Former Inland Burn Area Sites. Steve DelHomme (Tetra Tech EM Inc. [Tetra Tech]) presented the SI field work update for the Eagles Nest EOD and Former Inland Burn Area Sites presentation. The presentation is included as Attachment F.

Ms. Williams asked about the white material shown on the photograph of the Former Inland Burn Area. Mr. DelHomme said that the white material is powder that is left over immediately after explosives are detonated. Once the Navy completed a detonation, the powder was cleaned up from the site. Ms. Williams asked about the limit of 50 pounds of explosives per detonation by the Navy. Mr. DelHomme confirmed that maximum volume of explosive material that was handled at the Former Inland Burn Area was 50 pounds per detonation.

Harry Byrne (Concord resident) asked if there were health concerns for the workers who cleaned up the burn site after the detonations. Mr. Ramsey said the preliminary assessment (PA) indicated that military prisoners were used to clean up the burned material after the detonations. Information on health concerns for cleanup of detonated material was not included in the PA.

Mr. Birsan asked if there were any ecological concerns at the EOD and Former Inland Burn Area sites. Joanna Canepa (Tetra Tech) said that ecological concerns will be evaluated in an ecological risk assessment that will be performed prior to beginning the RI phase at the EOD and Former Inland Burn Area sites.

Mr. Parker added that because munitions debris is not generally found in a specific pattern substantial excavating and sifting through the soil will be needed to evaluate the nature and extent of munitions at EOD and Former Inland Burn Area sites. Any munitions debris excavated during the RI phase will be properly decommissioned and disposed.

Mr. Ramsey said that EPA raised a perchlorate issue at Site 13 (now known as the Former Inland Burn Area) in 2003, when the site was slated for no further action. Concentrations of perchlorate reported in groundwater samples collected in 2005 were less than action levels. Mr. DelHomme said that all historical data available to the Navy on the sites will be summarized in the SI report.

Mr. Birsan said that the fire department would have likely been present at the detonations and past fire logs could be reviewed for further information. Mr. DelHomme responded that the Navy reviewed all of the fire logs during the PA phase for the MRP sites. The fire logs did not provide much detailed information.

## **VII. OTHER TOPICS, NEXT MEETING, AND ACTION ITEMS**

The agenda for June 3, 2009, includes the following presentations:

- Draft HRA Update
- SWMU Sites 2, 5, 7, and 18 Draft ROD

Mr. Perry said that the RAB presentation topics for 2009 are based on the Site Management Plan for NAVWPNSTA Concord. If the schedule changes, the Navy will update the proposed RAB presentation

topic outline. The RAB can inform the Navy of any additional topic suggestions or comments on the outline.

Mr. Perry said that the RAB meetings will continue to be held from 6:00 p.m. to 7:45 p.m. at the Concord Police Department. If the 6:00 p.m. start time becomes a problem for RAB members, they can inform the Navy, and alternative meeting locations can be assessed.

The following action item was generated during the RAB meeting on April 1, 2009.

<b>No.</b>	<b>Action Item</b>	<b>Target Date for Completion</b>	<b>Responsible Person</b>	<b>Completion Date (or Status)</b>
1	The Navy will finalize and distribute the February 4, 2009, RAB meeting minutes.	4/27/09	C. Hunter	This action item was completed.
2	The Navy will provide 30 copies of the February 2009 NAVWPNSTA Concord Environmental Restoration Program fact sheet to Mr. Birsan.	4/3/09	C. Hunter	This action item was completed.

**ATTACHMENT A**

**ATTENDEES AND AFFILIATIONS**  
**RESTORATION ADVISORY BOARD MEETING**  
**FORMER NAVAL WEAPONS STATION SEAL BEACH DETACHMENT CONCORD**

**APRIL 1 2009**

(1 Page)

**ATTENDEES AND AFFILIATIONS  
RESTORATION ADVISORY BOARD MEETING  
FORMER NAVAL WEAPONS STATION SEAL BEACH  
DETACHMENT CONCORD, CALIFORNIA**

**APRIL 1, 2009**

<u>Name</u>	<u>Affiliation</u>	<u>Telephone</u>
Edi Birsan*	Concord Resident	(510) 812-8180
Beth Byrne	Concord Resident	(925) 686-4815
Harry Byrne	Concord Resident	(925) 686-4815
Joanna Canepa	Tetra Tech	(425) 877-2806
Byron Clamor	Navy, BRAC PMO West	(619) 532-0933
Julie Crosby	Navy, BRAC PMO West	(619) 532-0929
Shane DeGross	Richard Brady and Associates	(916) 436-8599
Steve DelHomme	Tetra Tech	(832) 251-5163
Alan Friedman	Water Board	(510) 622-2347
Gregory Glaser*	Danville Resident	(925) 820-2562
Carolyn Hunter	Tetra Tech	(415) 222-8297
Bruce Knopf	City of Concord	(925) 671-3024
Sarah Ann Moore	Navy, BRAC PMO West	(619) 532-0965
Dennis Parker	Navy, BRAC PMO West	(619) 532-0954
Charles Perry	Navy, BRAC PMO West	(619) 532-0911
Jim Pinasco	DTSC	(916) 255-3719
Philip Ramsey	EPA	(415) 972-3006
Tim Shields	Richard Brady and Associates	(858) 436-0500
Mary Lou Williams*	Concord Resident	(925) 685-1415
Shon Wolf*	Clyde Resident	(925) 686-5924

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Notes:

*	Community Restoration Advisory Board (RAB) Member
BRAC PMO	Base Realignment and Closure Program Management Office
DTSC	Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
Tetra Tech	Tetra Tech EM Inc.
Water Board	San Francisco Bay Regional Water Quality Control Board

**ATTACHMENT B**

**AGENDA  
RESTORATION ADVISORY BOARD MEETING  
FORMER NAVAL WEAPONS STATION SEAL BEACH  
DETACHMENT CONCORD, CALIFORNIA**

**APRIL 1, 2009**

(2 Pages)

## INLAND AREA AGENDA

### FORMER NAVAL WEAPONS STATION SEAL BEACH DETACHMENT CONCORD INLAND AREA RESTORATION ADVISORY BOARD (RAB) MEETING

Wednesday, April 1, 2009

6:00 p.m. – 7:45 p.m.

Location: Concord Police Station Community Room

1350 Galindo Street

Concord, CA 94520

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- 6:00 – 6:15      Call to Order
- Welcome
  - Introductions/Agenda Review
  - Approval of February 2009 Meeting Minutes (Last Inland Area Meeting)
  - Public Comment Period
- Lead: Community Co-chair
- 6:15 – 6:20      Announcements
- Review of Action Items
- Lead: Navy Co-chair
- 6:20 – 6:30      Committee Reports/Announcements
- RAB Announcements, Reports or other business (Community Co-chair)
  - RAB Open Comment Period
  - Remedial Project Managers' (RPM) Update (Navy/EPA/DTSC/RWQCB)
  - City of Concord Update
- 6:30 – 6:40      Break
- 6:40 – 7:15      Presentation: Site 29 Update  
Navy: Julie Crosby Remedial Project Manager
- 7:15 – 7:35      Presentation: Site Inspection Field Work Update for the Eagles Nest Explosive Ordnance Disposal (EOD) and Former Inland Burn Area Sites  
Navy: Dennis Parker, Remedial Project Manager
- 7:35 – 7:45      Meeting Evaluation and Topic Suggestions of Future Meetings  
Next RAB Meeting: June 3, 2009  
June 2009 Agenda Approval
- 7:45              Adjourn

*\*Next RAB Meeting\**

- Inland Area: June 3, 2009

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*NAVWNPSTA CONCORD RAB Meetings are held the first Wednesday of every month, unless changed.  
Information regarding the Environmental Restoration program at Former NWS SBD Concord can be  
found at:*

<http://www.bracpmo.navy.mil/basepage.aspx?baseid=39&state=California&name=concord>

*Base Closure Manager: Mr. John Hill (619) 532-0985, [john.m.hill@navy.mil](mailto:john.m.hill@navy.mil)*

*Community RAB Co-Chair: Ms. Mary Lou Williams, [Mlou1015@aol.com](mailto:Mlou1015@aol.com)*

**ATTACHMENT C  
NAVY REMEDIAL PROJECT MANAGERS' UPDATE  
RESTORATION ADVISORY BOARD MEETING  
FORMER NAVAL WEAPONS STATION SEAL BEACH  
DETACHMENT CONCORD, CALIFORNIA**

**APRIL 1, 2009**

**(1 Page)**



***Navy Remedial Project Manager (RPM) Update for 1 April 2009 Meeting of Former Naval Weapons Station Seal Beach Detachment Concord***

Summary of Navy Base Realignment and Closure (BRAC)  
Inland Area RPM activities since the last RAB meeting held on  
Wednesday, 4 February 2009

**Installation Restoration/Munitions Response Programs Sites**

- February 17, 2009 – Submitted a fact sheet for the NAVWPNSTA Seal Beach Detachment Concord Environmental Restoration Program.
- February 24, 2009 – Submitted the Draft Final Remedial Investigation for IR Site 22A.
- March 6, 2009 – Submitted the Draft Proposed Plan for Site 22.
- March 18-20, 2009 – Developed new wells at Site 29.
- March 19-24, 2009 – Conducted 1<sup>st</sup> quarter groundwater sampling at Site 29.
- March 26, 2009 – Submitted Draft Sampling and Analysis Plan for Remedial Investigation at IR Site 29.
- March 26, 2009 – Submitted Schedule Extension Letter for IR Site 22A Draft Final Remedial Investigation Report to extend the agency review period on the Draft Final Report by 30 days.
- March 27, 2009 – Submitted Draft Record of Decision for Solid Waste Management Unit Sites 2, 5, 7, and 18.

**ATTACHMENT D**

**SITE 29 UPDAEPRESENTATION  
RESTORATION ADVISORY BOARD MEETING  
FORMER NAVAL WEAPONS STATION SEAL BEACH  
DETACHMENT CONCORD, CALIFORNIA**

**APRIL 1, 2009**

(23 Pages)



# Site 29 Groundwater Investigation Update



**Shane DeGross & Timothy Shields**  
**Richard Brady & Associates, San Diego**

**Julie Crosby**  
**U.S. Navy Base Realignment and Closure**  
**Program Management Office West**

**Restoration Advisory Board Meeting**  
**Inland Area**

**April 1, 2009**



# Objective



To determine nature and extent of solvent contamination in soil, soil gas, and groundwater for a Remedial Investigation

---Triad was the means to accomplish the objective---





# Presentation Overview



- Historical Operations
- What is the Triad Approach?
- Completed Field Investigation Components
  - Leach Field Trenching
  - Site Characterization and Analysis Penetrometer System (SCAPS)
  - Monitoring Well Installation and Quarterly Monitoring
- Conceptual Site Model Refinement
  - SCAPS Membrane Interface Probe (MIP) Results
- Well Installation and Sampling
- Remedial Investigation Report Schedule



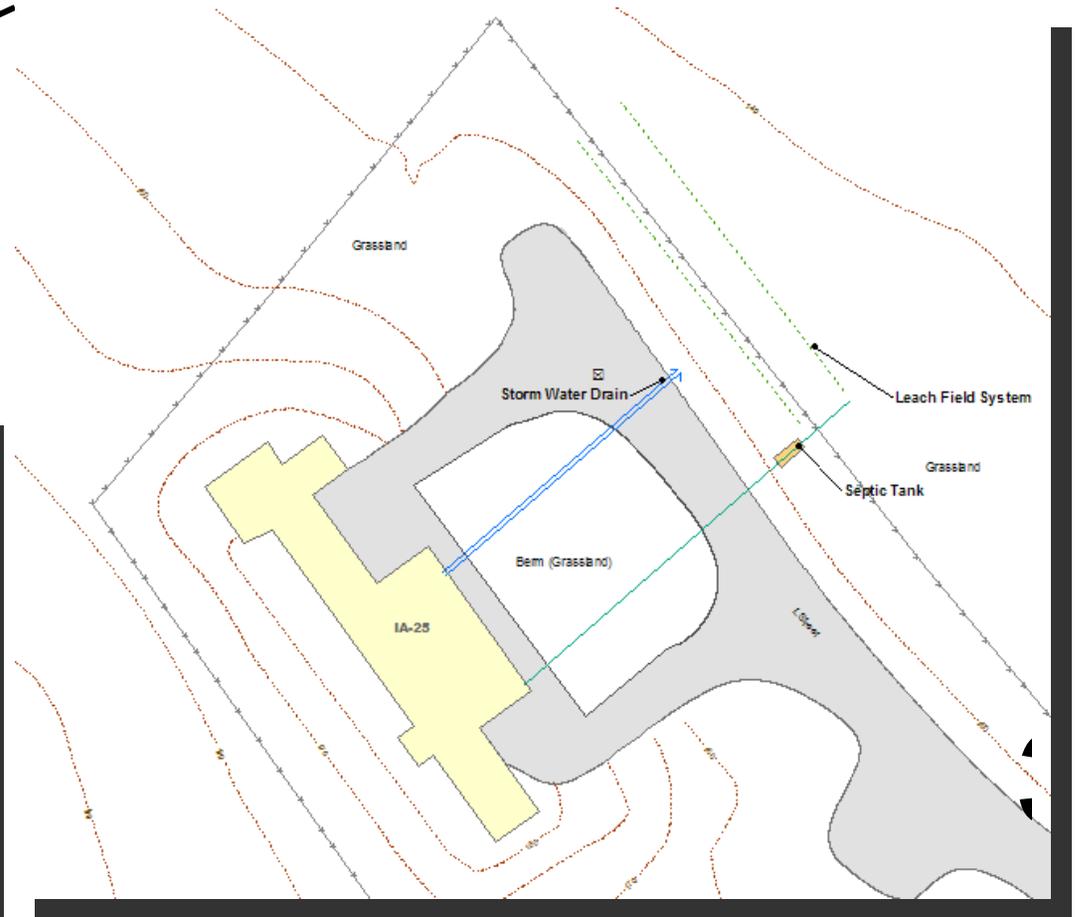
# Key Definitions

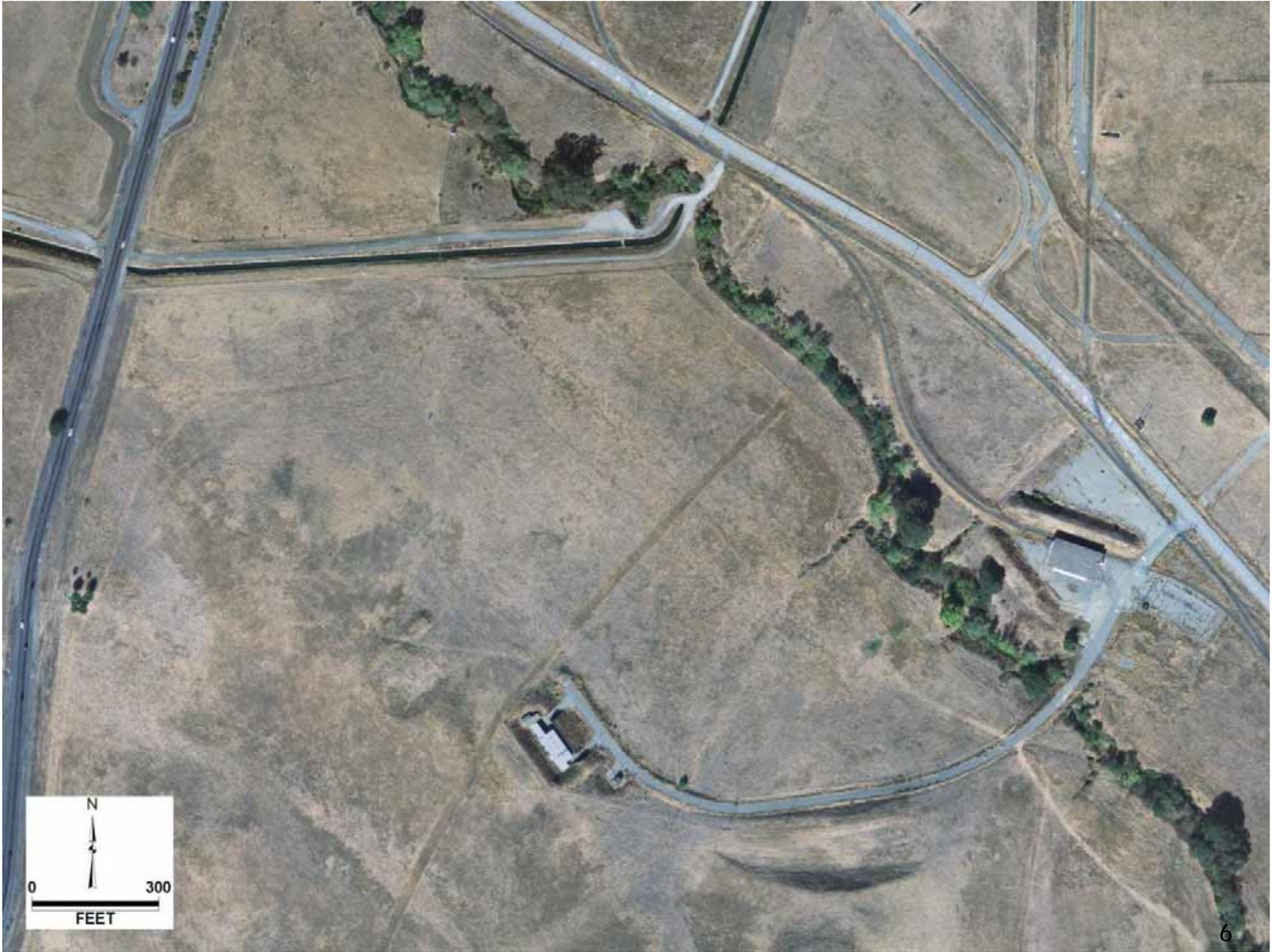


- CPT
  - Cone penetrometer test – measurement of strain properties at the tip and sleeve of the drive rod that can be correlated to general soil type
- CSM
  - Conceptual Site Model - A synthesis of what is known about the site that is pertinent to the decision-making process
- MIP
  - Membrane Interface Probe – near real time VOC sensor with a much higher sensitivity than standard/commercial MIP
- SCAPS
  - Site Characterization and Analysis Penetrometer System
- VOCs
  - Volatile organic compounds. At this site these are typically solvents of which TCE (trichloroethene) is the most prominent.



# Site 29 Historical Operations







# What is the Triad Approach?



Systematic Planning: Team approach to historical review and project planning

Dynamic Work Strategies: Flexible work plan, developing conceptual site model

Real Time Field Measurements:

- Trenching across the leach field
- SCAPS combined with CPT and MIP
- Groundwater monitoring



## Objective

To determine nature and extent of solvent contamination in soil, soil gas, and groundwater for a Remedial Investigation

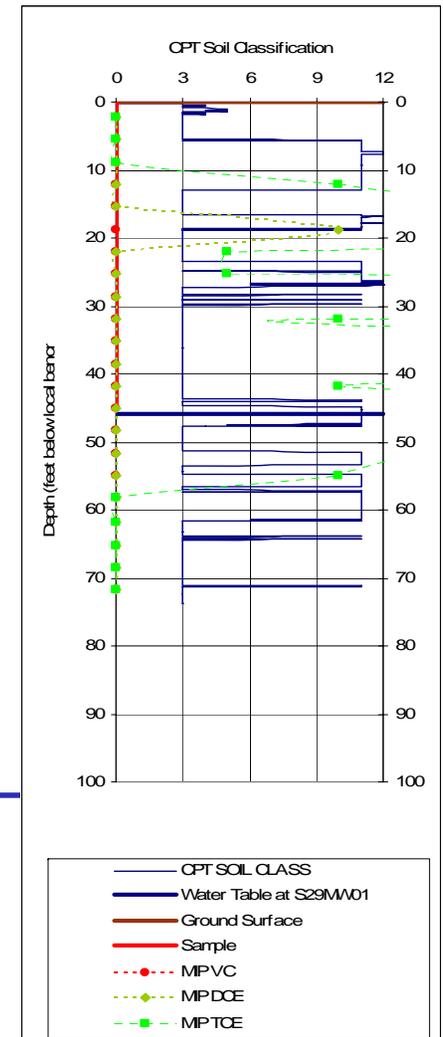
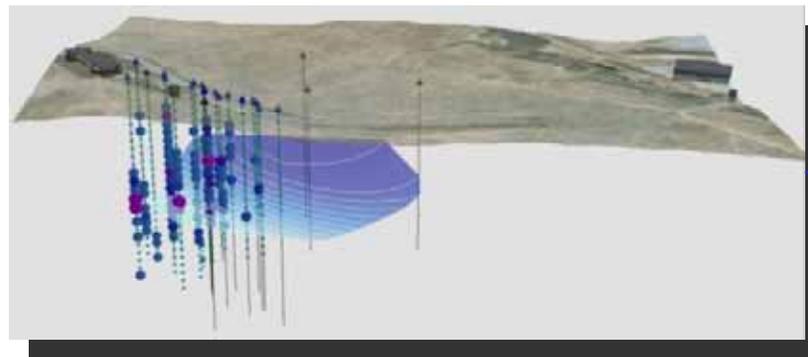


# Triad Success



The Triad process enabled:

- Reduction of the analytical suite of chemicals
- Rapid site characterization
  - SCAPS Membrane Interface Probe (MIP) results
- Accurate geologic conceptual site model
- Informed monitoring well placement





# Investigation Chronology



May / June 2007

- Trenching

July 2007

- 1<sup>st</sup> SCAPS Deployment

September 2007

- Well Installations

September 2007 –  
October 2008

- 4 Quarters of Groundwater Monitoring

November & December  
2008

- 2<sup>nd</sup> SCAPS Deployment

February 2009

- Well Installations

March & July 2009

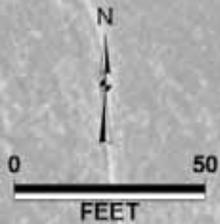
- 2 Quarters of Groundwater Monitoring

# Trench Sampling Beneath Leach Field

## Original Analytical Suite:

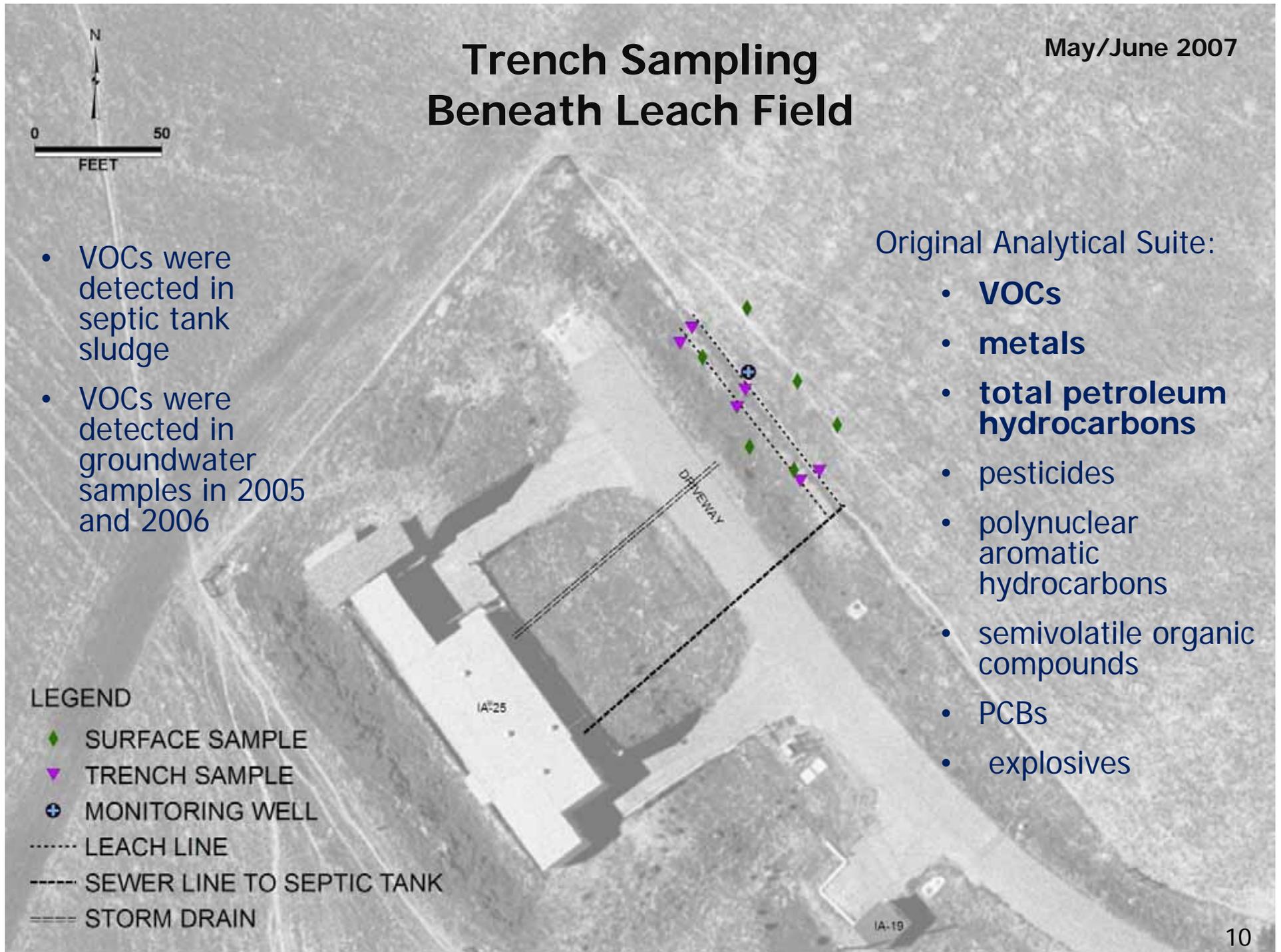
- VOCs were detected in septic tank sludge
- VOCs were detected in groundwater samples in 2005 and 2006

- VOCs
- metals
- total petroleum hydrocarbons
- pesticides
- polynuclear aromatic hydrocarbons
- semivolatile organic compounds
- PCBs
- explosives



### LEGEND

- ◆ SURFACE SAMPLE
- ▼ TRENCH SAMPLE
- ⊕ MONITORING WELL
- LEACH LINE
- SEWER LINE TO SEPTIC TANK
- ==== STORM DRAIN





# Leach Field Trenching Determining the Initial Analytical Suite



Using a backhoe to uncover leach lines



Sampling beneath leach lines

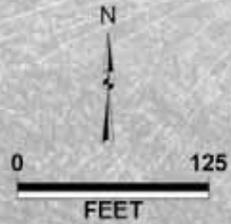


Soil sampling at six locations  
beneath leach lines



Initial groundwater sampling

# 1<sup>st</sup> SCAPS Deployment Initially Define Nature and Extent of VOCs



- Allowed for rapid characterization in lieu of blind well placement
- Revealed that the leach field was not the primary source for TCE
- Likely source(s) was surface disposal



## LEGEND

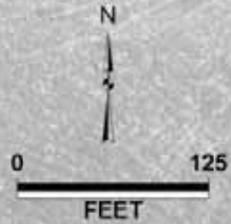
- SCAPS PUSH LOCATION
- MONITORING WELL

## TCE MIP RESPONSE

- ND
- 1-100 ppb
- 101-1,000 ppb
- 1,001-10,000 ppb
- 10,001 - 100,000 ppb
- 100,001 - 1,000,000 ppb



# Well Installation and Groundwater Monitoring – TCE Results



## 5 New Wells

- At the water table
- 3 Downgradient
- 1 Within the Plume
- 1 Upgradient

S29MW01
8/2/2005 4,300
5/19/2006 1,600
5/29/2007 8,000
10/31/2007 1,400
2/7/2008 1,100
5/8/2008 710
8/6/2008 1,600

S29MW06
10/31/2007 0.5U
2/8/2008 0.5U
5/9/2008 0.5U
8/6/2008 0.5U

S29MW05
10/30/2007 0.5UJ
2/8/2008 0.09J
5/9/2008 0.5U
8/5/2008 0.1J

S29MW02
10/30/2007 0.5U
2/7/2008 0.5U
5/8/2008 0.5U
8/5/2008 0.5U

S29MW03
10/30/2007 690
2/8/2008 150
5/7/2008 330
8/5/2008 470

S29MW04
10/31/2007 0.5U
2/8/2008 0.1J
5/7/2008 0.5U
8/7/2008 0.3J

## LEGEND

⊙ SCAPS PUSH LOCATION

⊕ MONITORING WELL

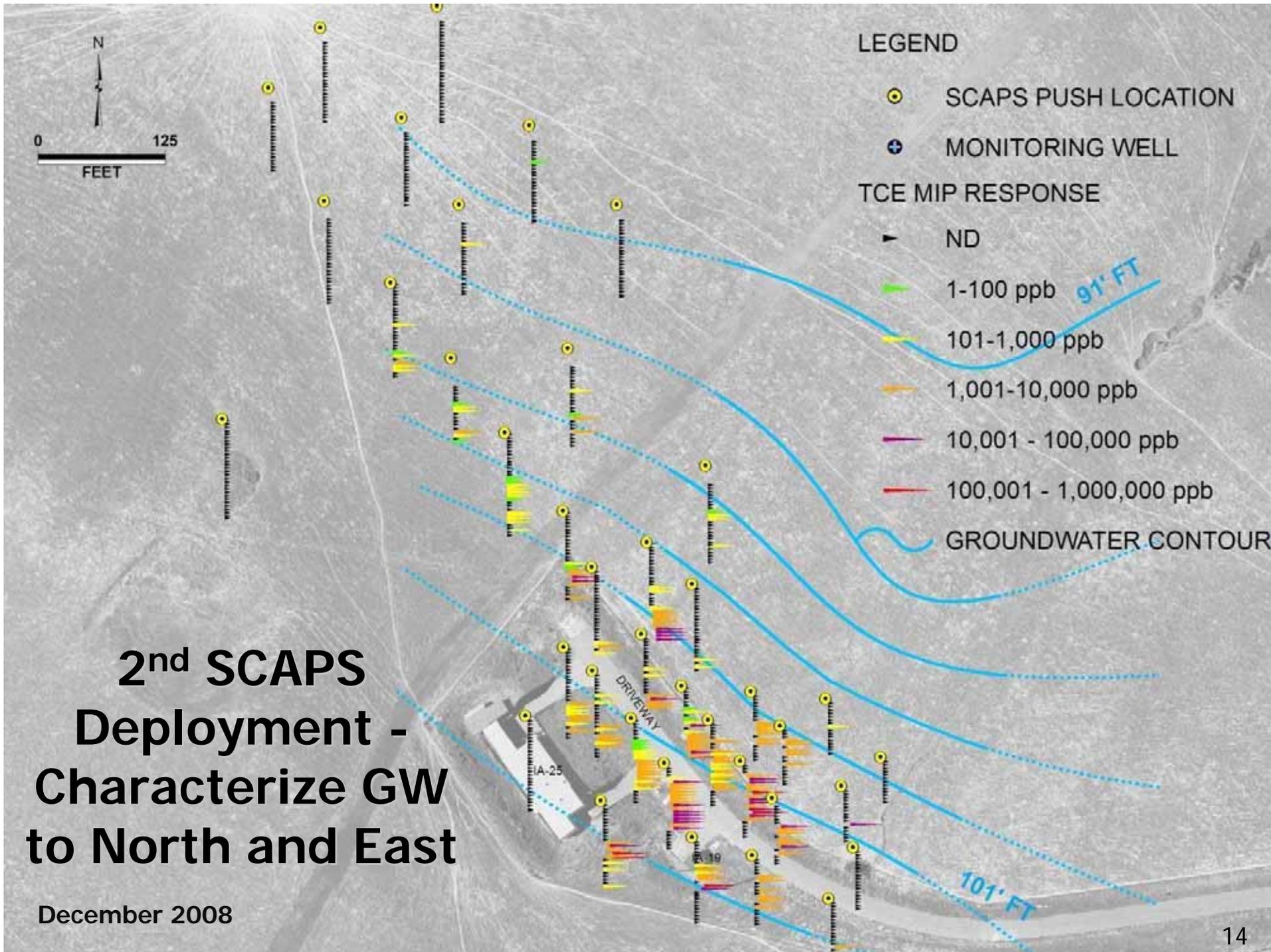
~ GROUNDWATER CONTOUR

Result units are µg/L  
 U = Not detected at reporting limit  
 J = Estimated detection  
 Tapwater PRG 1.7 µg/L  
 Maximum Contaminant Level 5.0 µg/L

91' FT

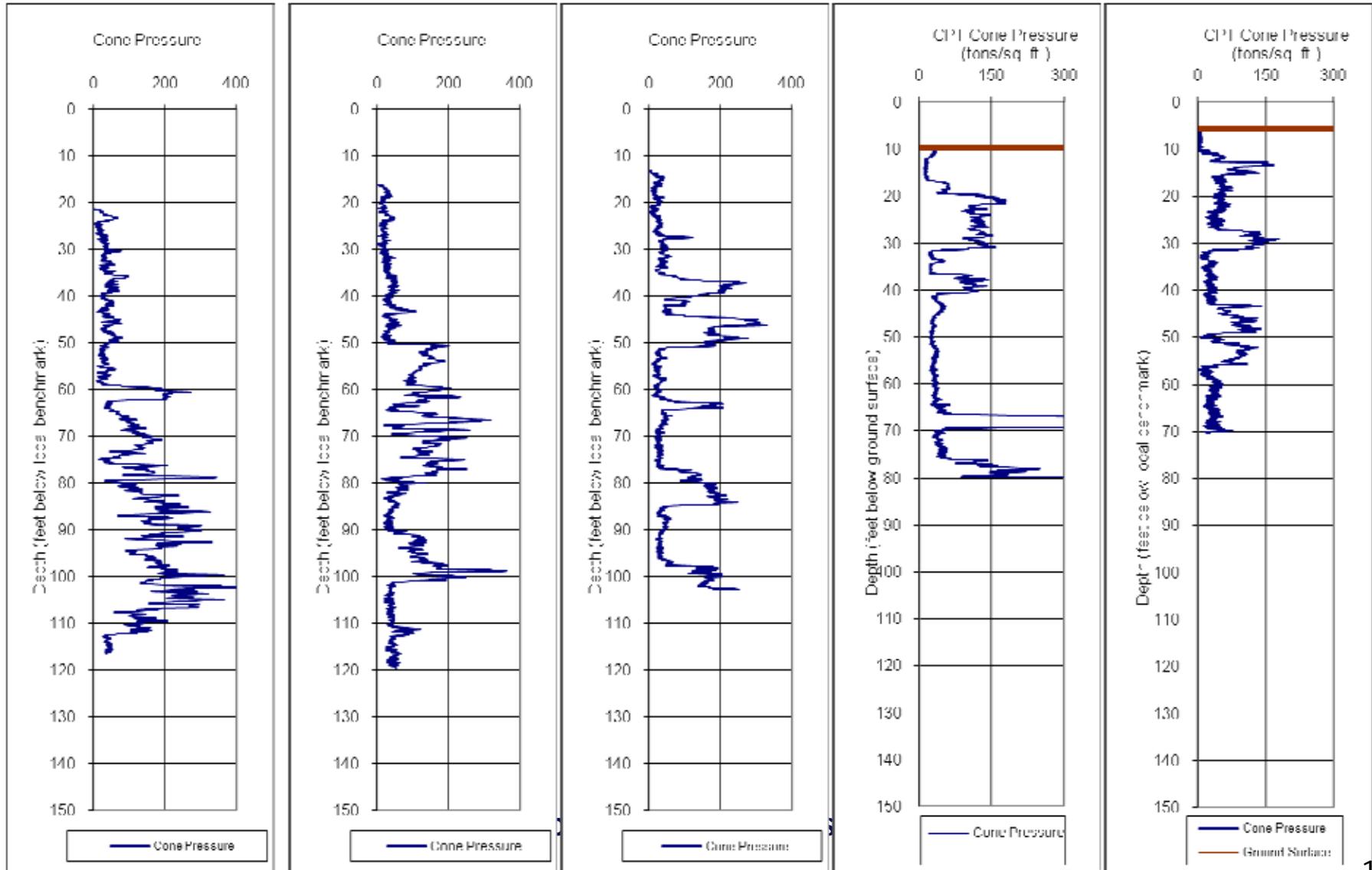
101' FT





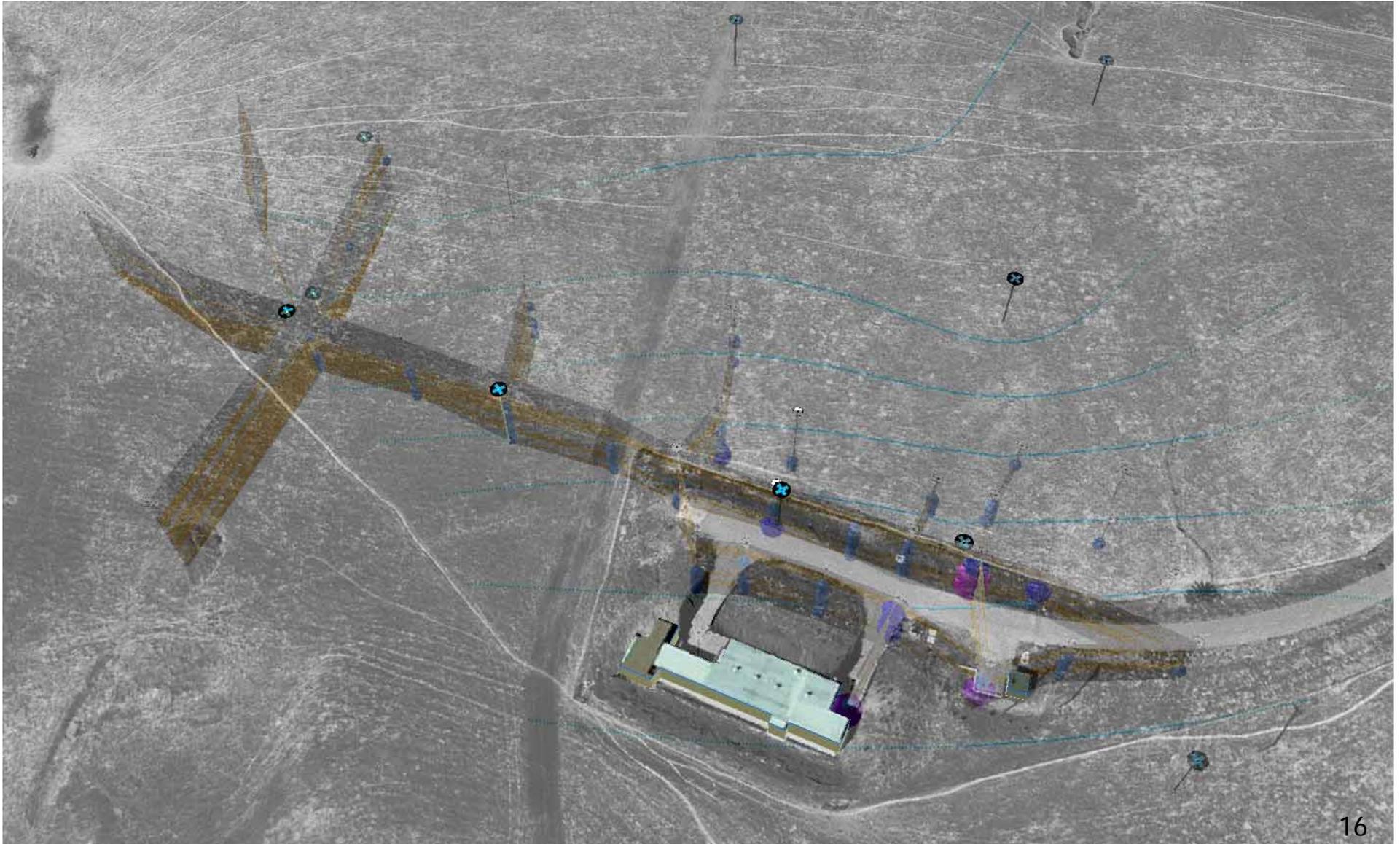


# Conceptual Site Model Refinement



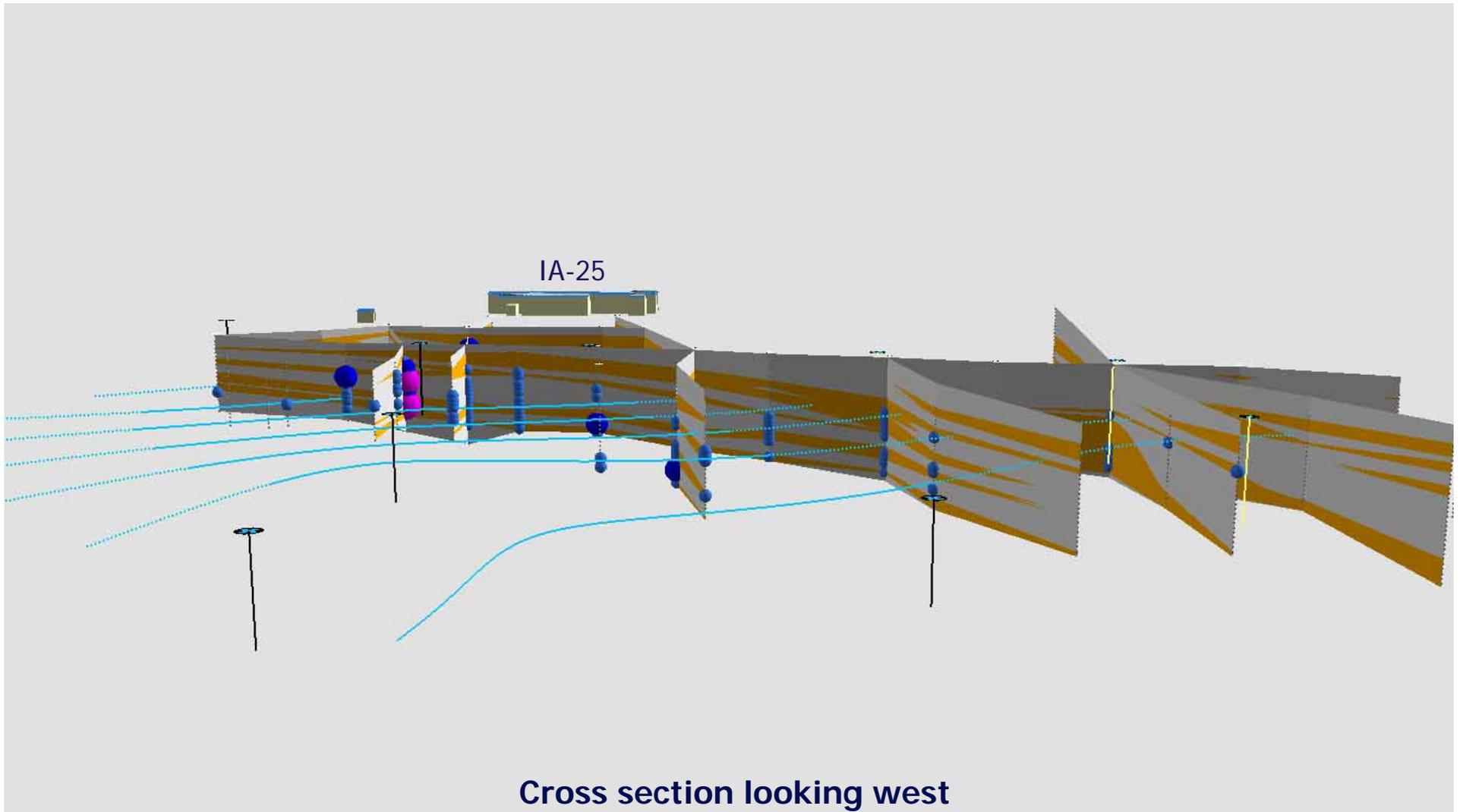


# Conceptual Site Model Refinement



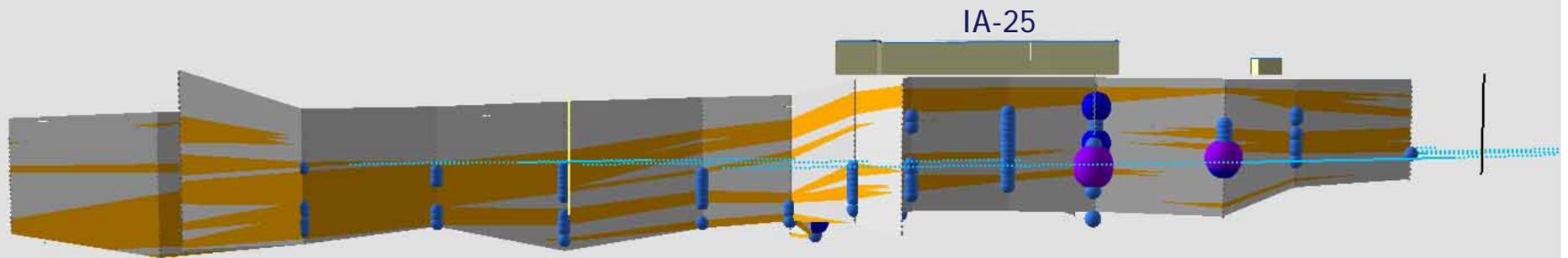


# Conceptual Site Model Refinement





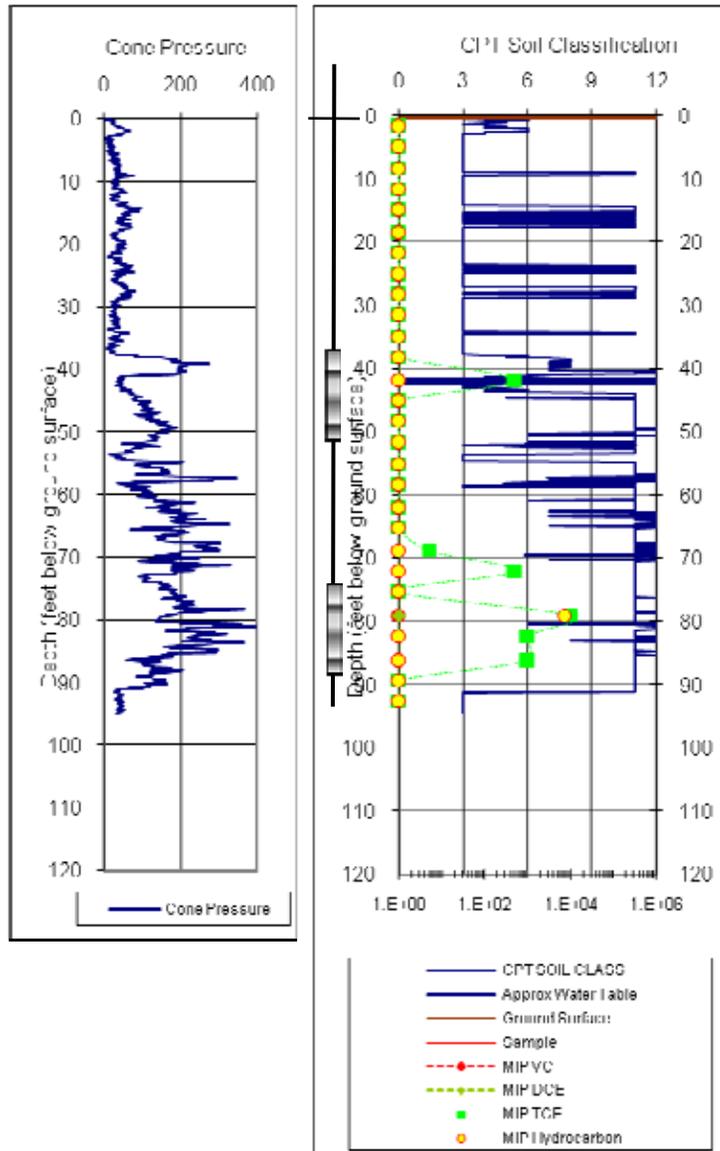
# Conceptual Site Model Refinement



Cross section looking east



# Well Construction Rationale



Wells placed to determine extent of TCE contamination

3 Additional water table wells

- at the water table (~40 feet bgs)
- 2 cross-gradient, 1 downgradient

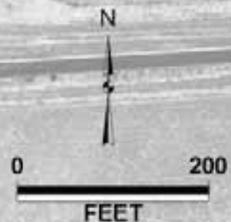
1 deep well

- Screened from 75 to 90 feet bgs
- Cross-gradient

CPT Logs Used to Place Well Screens

- ID coarse-grained zones for screen
- ID zones of higher TCE response

# MIP TCE Response Water Table



## LEGEND

- ⊕ MONITORING WELL
- ⦿ SCAPS PUSH LOCATION

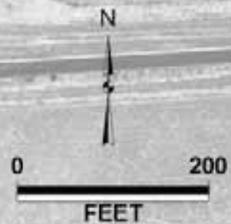
90-80 FT MSL

## TCE RESPONSE

- NON DETECT
- 1 - 500 ppb
- 501 - 1,000 ppb
- 1,001 - 10,000 ppb
- 10,001 - 100,000 ppb
- 100,001 - 600,000 ppb
- GROUNDWATER CONTOUR



# MIP TCE Response At Depth



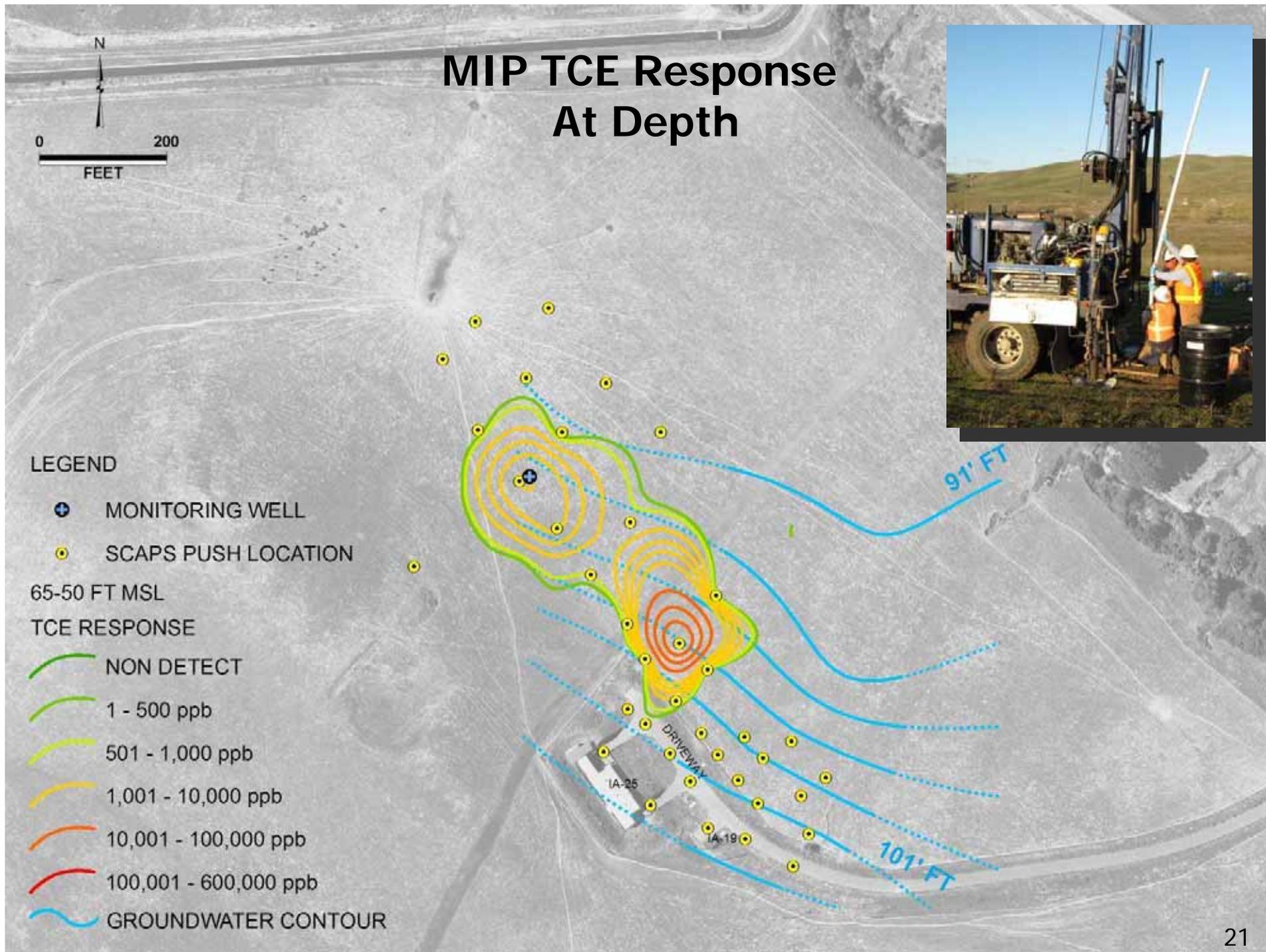
## LEGEND

- ⊕ MONITORING WELL
- SCAPS PUSH LOCATION

65-50 FT MSL

## TCE RESPONSE

- NON DETECT
- 1 - 500 ppb
- 501 - 1,000 ppb
- 1,001 - 10,000 ppb
- 10,001 - 100,000 ppb
- 100,001 - 600,000 ppb
- GROUNDWATER CONTOUR





# Conclusions and Path Forward



## Nature and extent of groundwater contamination is defined by MIP

TCE is observed in coarse grained geologic units trending to the north and west (unexpected)

Contamination limited to TCE and daughter products

Conceptual Site Model updated to reflect new data and understanding of site conditions

## Path Forward

Finish quarterly groundwater sampling

Collect soil gas samples for risk assessment (fill data gaps)

Prepare the Remedial Investigation



# Investigation and Report Schedule



March 2009

- Quarterly Groundwater Monitoring

July 2009

- Last Round of Quarterly Groundwater Monitoring

July 2009

- Shallow Soil Gas Sampling
- Building IA-25 Soil Sampling

May 2010

- Draft Remedial Investigation Report

February 2011

- Final Remedial Investigation Report

**ATTACHMENT E**

**SITE INSPECTION FIELD WORK UPDATE FOR THE EAGLES NEST EXPLOSIVE  
ORNDANCE DISPOSAL AND FORMER BURN AREA SITES PRESENTATION  
RESTORATION ADVISORY BOARD MEETING  
FORMER NAVAL WEAPONS STATION SEAL BEACH  
DETACHMENT CONCORD, CALIFORNIA**

**APRIL 1, 2009**

(27 Pages)

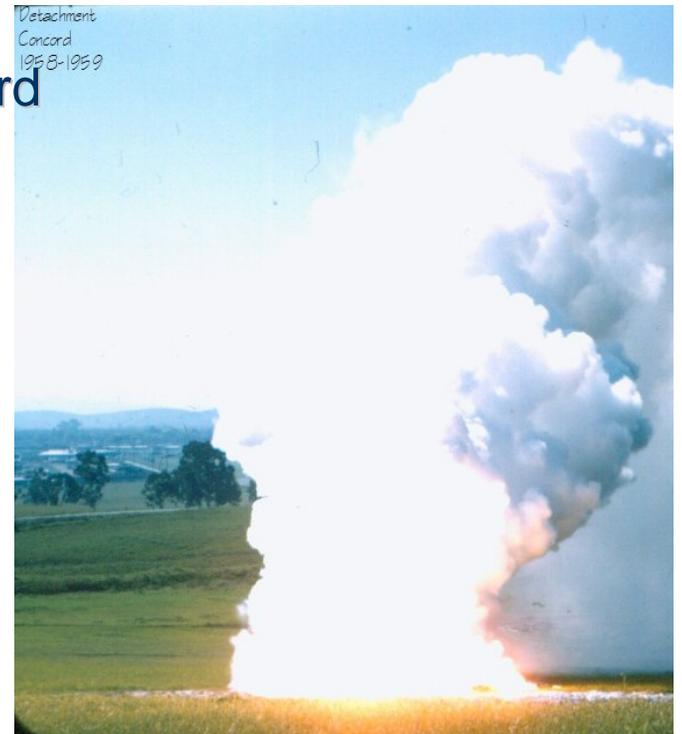


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# Former Inland Burn and Eagle's Nest Site Inspections

Former Naval Weapons Station  
Seal Beach Detachment Concord

Restoration Advisory Board  
April 1, 2009





## Presentation Overview

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- Update of the Concord Site Inspections for the Inland Area
- Inland Area Site Inspection Preliminary Results
- Schedule
- Questions



## MRP Background

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- Preliminary Assessments
  - Records Review
  - Site Inspections
  - Personnel Interviews
- Site Inspections
  - Planning Meetings
  - Work Plans
  - UXO Clearance Sweeps
  - Geophysical Investigations
  - Munitions Constituents Sampling
  - Data Evaluation



## Site Inspections For FIB/RSE and Eagle's Nest

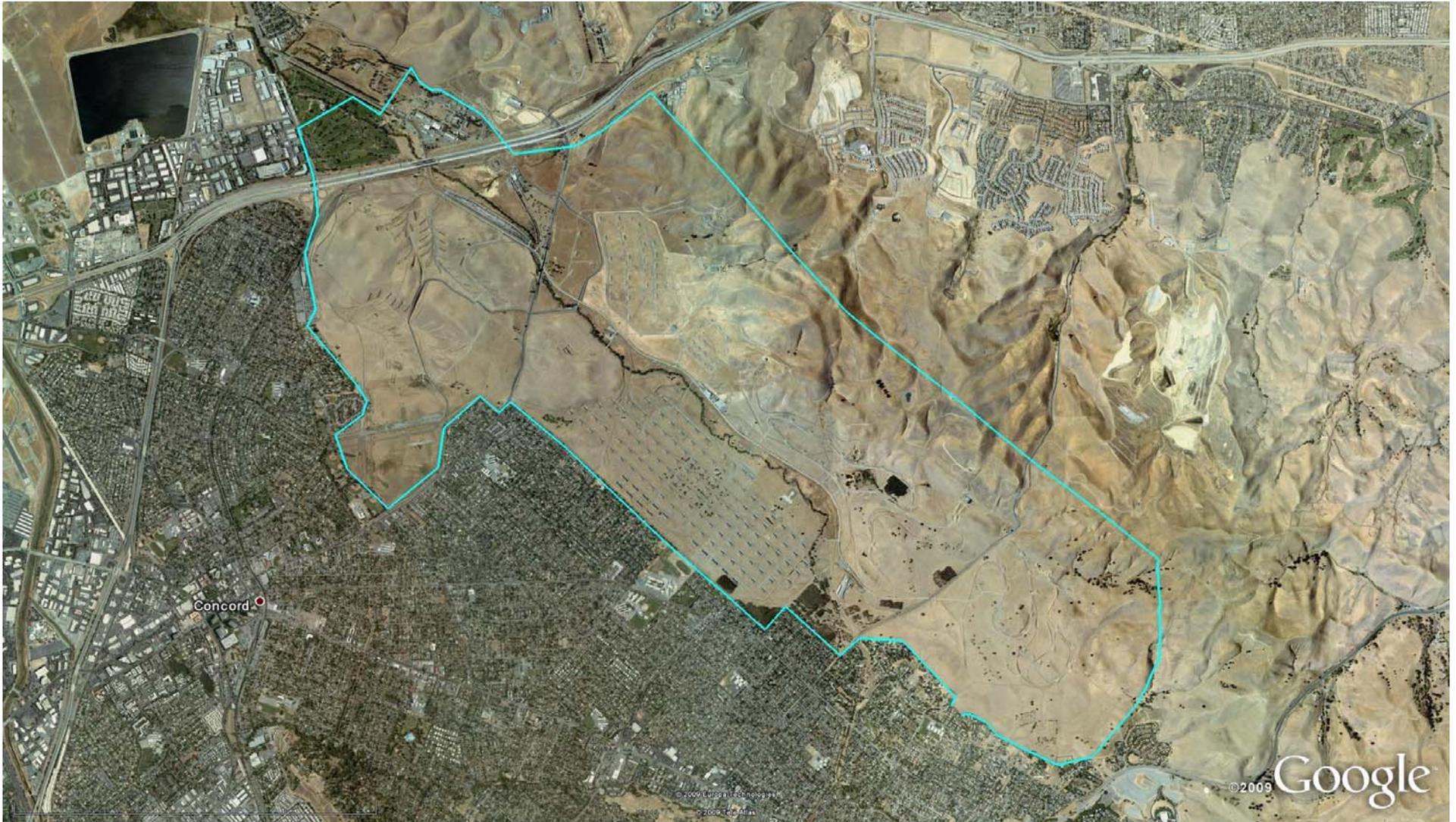
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- The Preliminary Assessment recommended Site Inspections for the Former Inland Burn/Railroad Sidings Excavations and Eagle's Nest EOD Areas
- Site Inspections were performed for these two sites; the Site inspections will recommend that both sites proceed to a Remedial Investigation.



# Inland Area

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# Inland Area

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# Inland Area

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## Former Inland Burn Area

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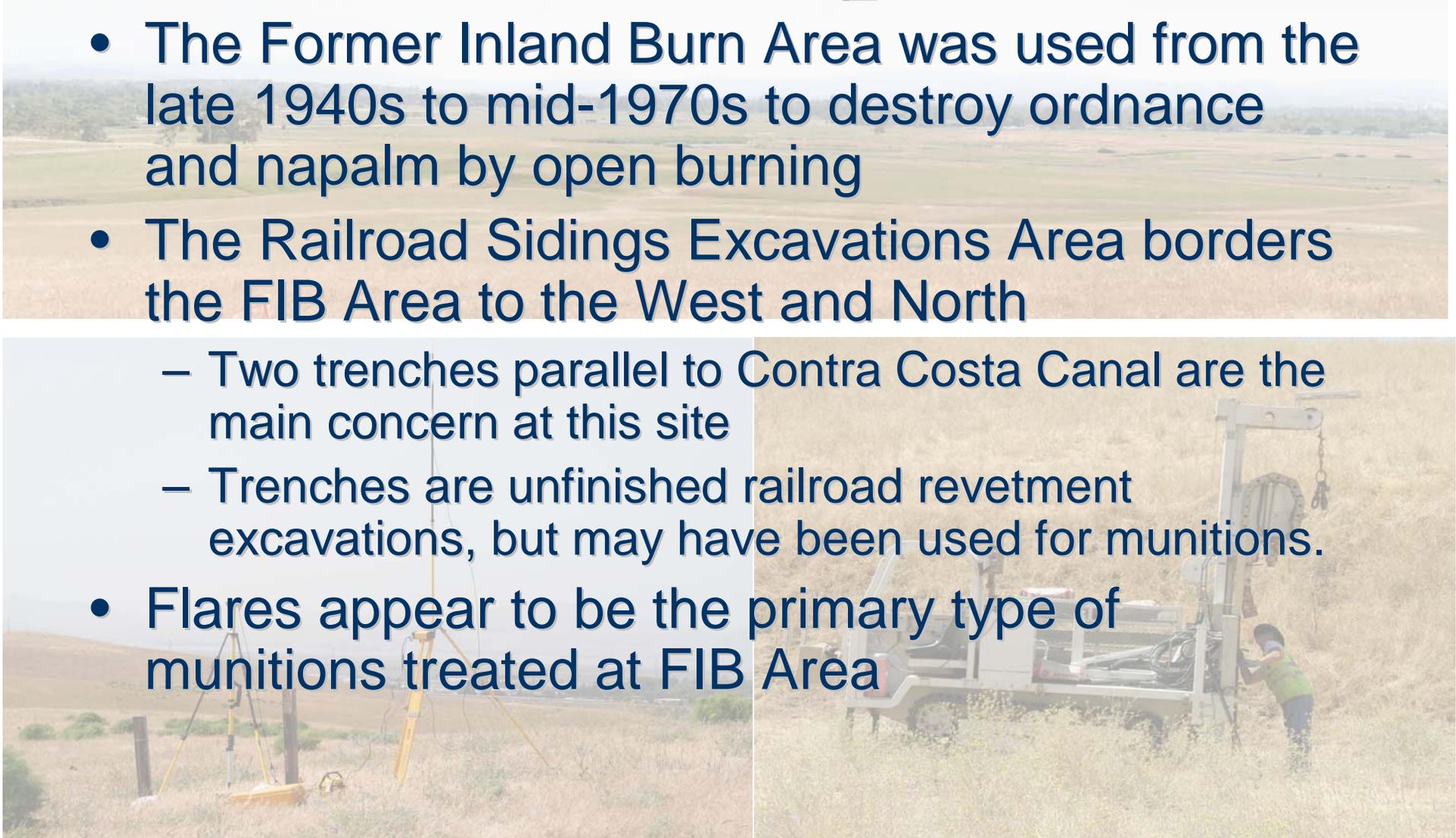




## Former Inland Burn Area

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- The Former Inland Burn Area was used from the late 1940s to mid-1970s to destroy ordnance and napalm by open burning
- The Railroad Sidings Excavations Area borders the FIB Area to the West and North
  - Two trenches parallel to Contra Costa Canal are the main concern at this site
  - Trenches are unfinished railroad revetment excavations, but may have been used for munitions.
- Flares appear to be the primary type of munitions treated at FIB Area





## Former Inland Burn Area

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## Former Inland Burn Area

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## Former Inland Burn Area

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## Former Inland Burn Area

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## Inland Area

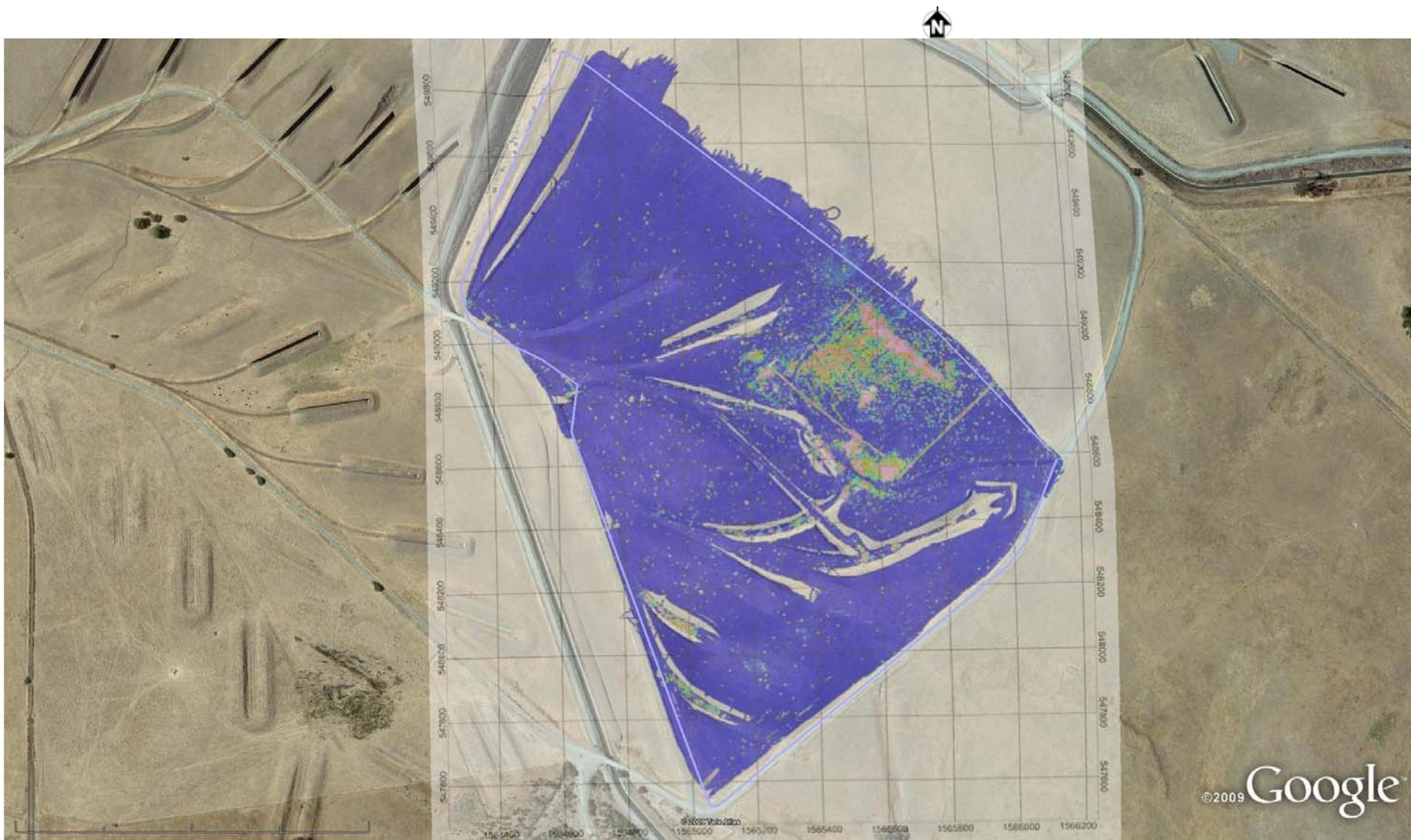
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# FIB/RSE Geophysical Investigation Summary

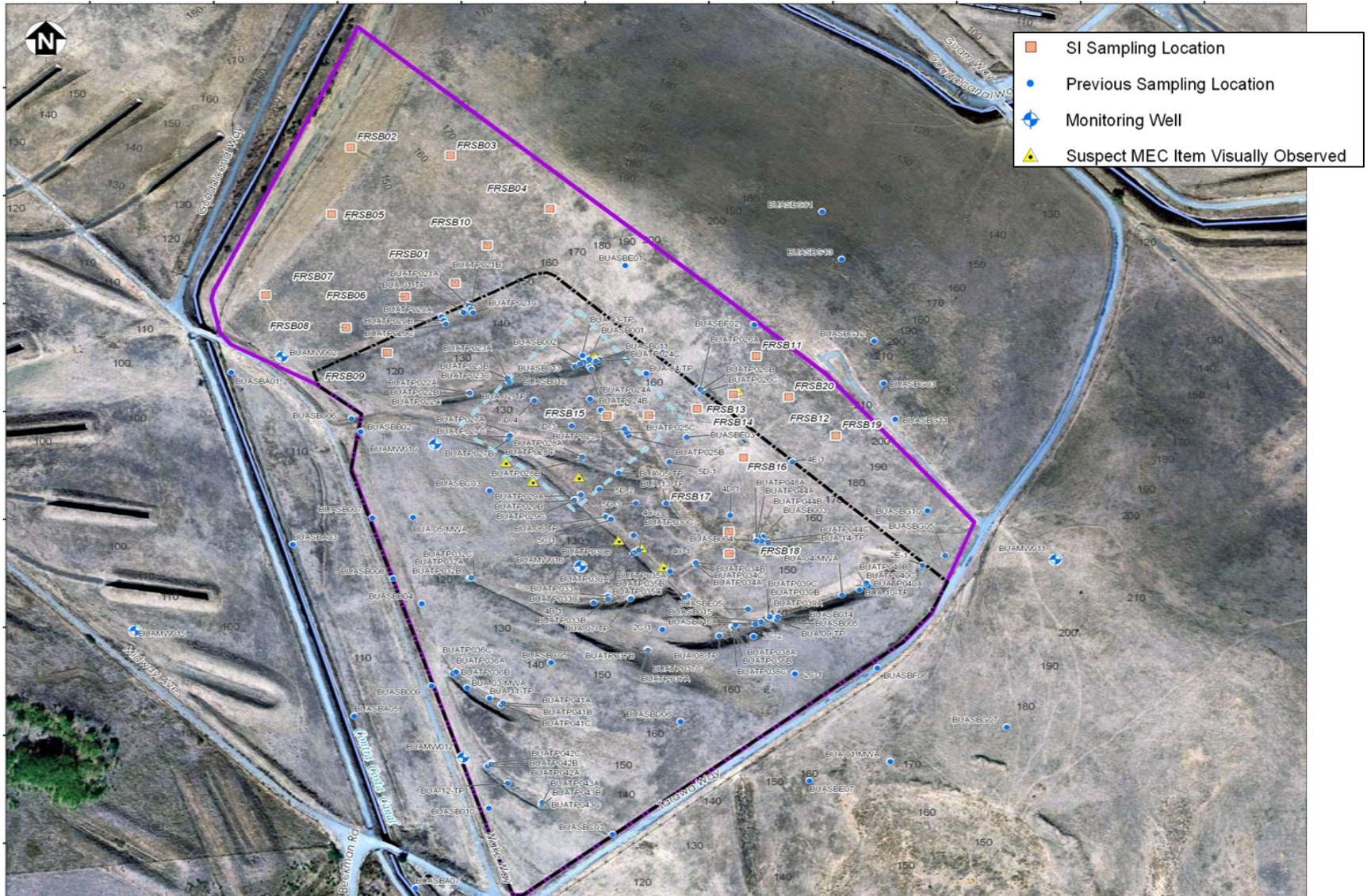
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# FIB/RSE MC Sampling Locations

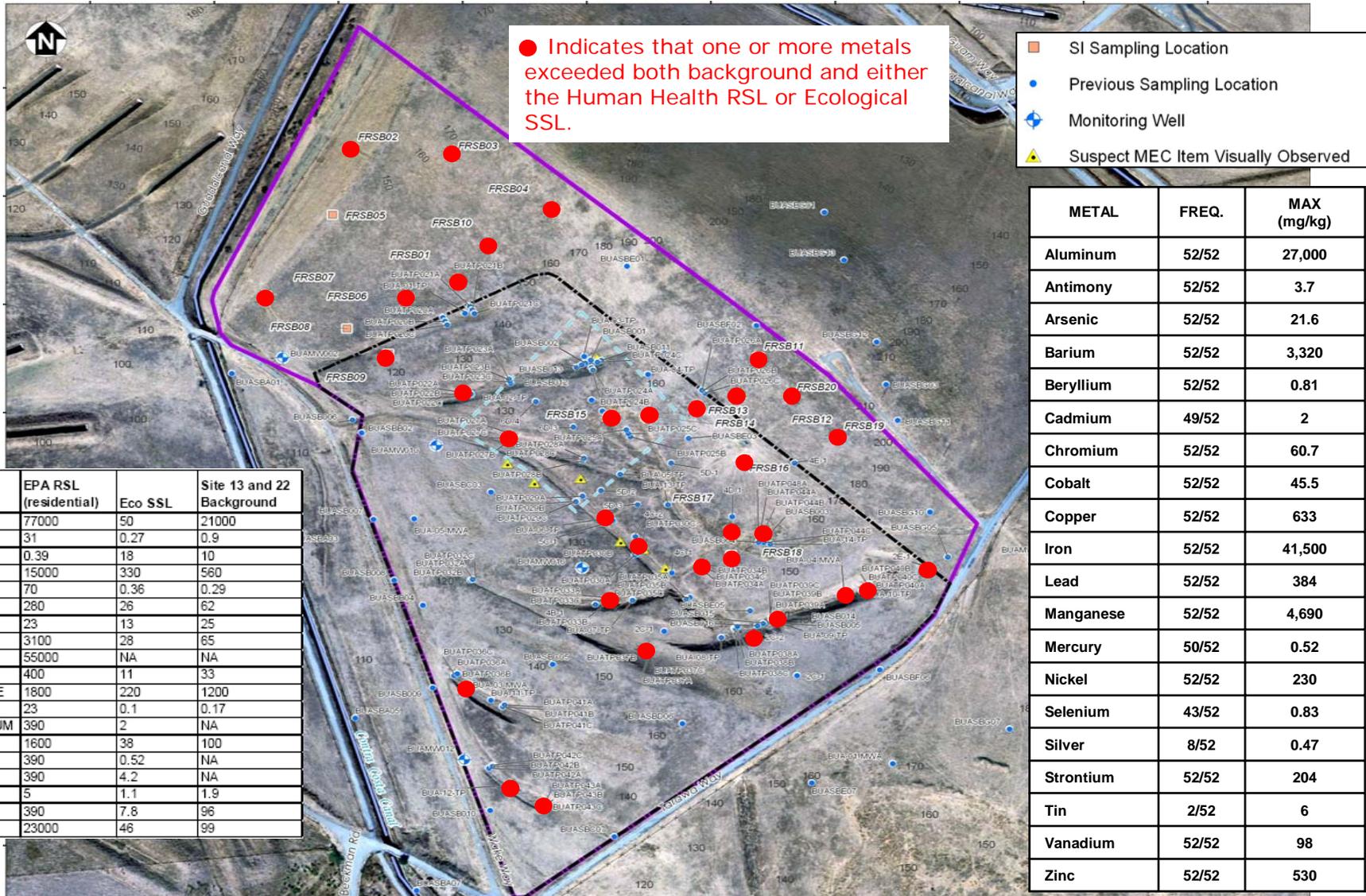
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# FIB/RSE MC Sampling Summary

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ANALYTE	EPA RSL (residential)	Eco SSL	Site 13 and 22 Background
ALUMINUM	77000	50	21000
ANTIMONY	31	0.27	0.9
ARSENIC	0.39	18	10
BARIUM	15000	330	560
CADMIUM	70	0.36	0.29
CHROMIUM	280	26	62
COBALT	23	13	25
COPPER	3100	28	65
IRON	55000	NA	NA
LEAD	400	11	33
MANGANESE	1800	220	1200
MERCURY	23	0.1	0.17
MOLYBDENUM	390	2	NA
NICKEL	1600	38	100
SELENIUM	390	0.52	NA
SILVER	390	4.2	NA
THALLIUM	5	1.1	1.9
VANADIUM	390	7.8	96
ZINC	23000	46	99

METAL	FREQ.	MAX (mg/kg)
Aluminum	52/52	27,000
Antimony	52/52	3.7
Arsenic	52/52	21.6
Barium	52/52	3,320
Beryllium	52/52	0.81
Cadmium	49/52	2
Chromium	52/52	60.7
Cobalt	52/52	45.5
Copper	52/52	633
Iron	52/52	41,500
Lead	52/52	384
Manganese	52/52	4,690
Mercury	50/52	0.52
Nickel	52/52	230
Selenium	43/52	0.83
Silver	8/52	0.47
Strontium	52/52	204
Tin	2/52	6
Vanadium	52/52	98
Zinc	52/52	530



## Eagle's Nest

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## Eagle's Nest Looking North

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## Eagle's Nest

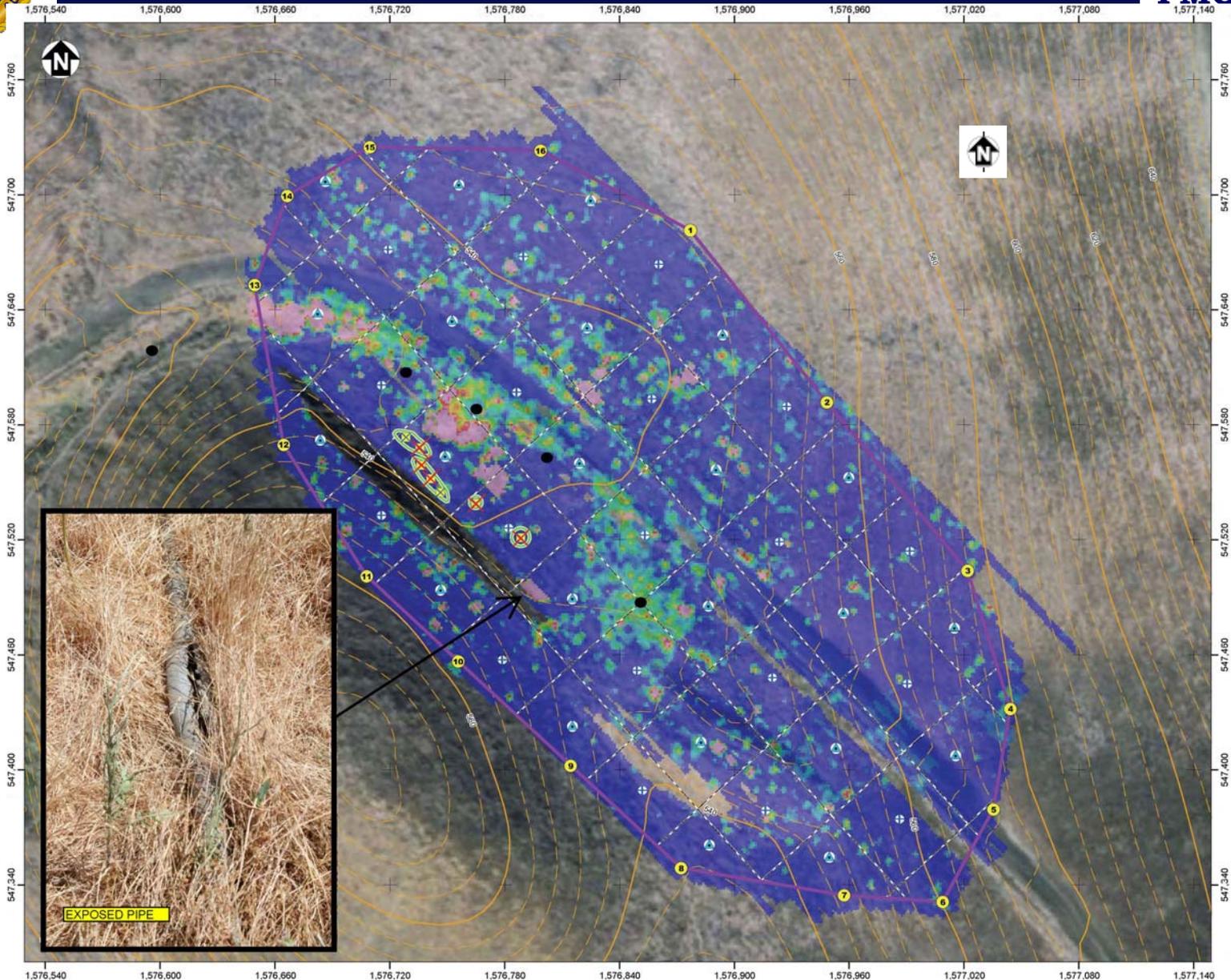
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- Eagle's Nest Explosive Ordnance Disposal Area was used as an emergency burn or detonation site from 1959 to the 1970s
- Maximum of 50 pounds of explosives allowed



# Eagle's Nest Geophysical Investigation Summary

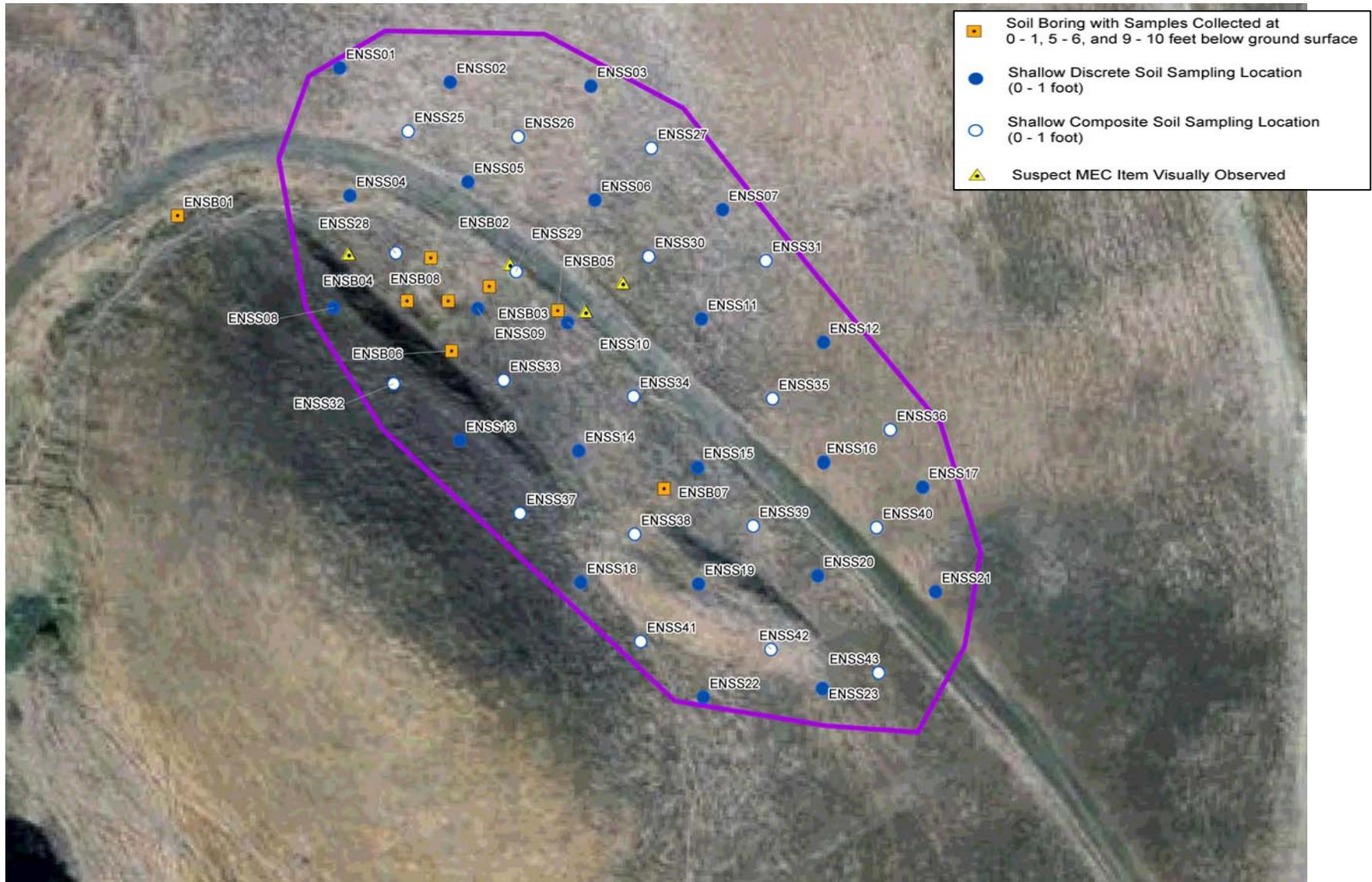
**BRAC**  
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# Eagle's Nest EOD MC Sampling Locations

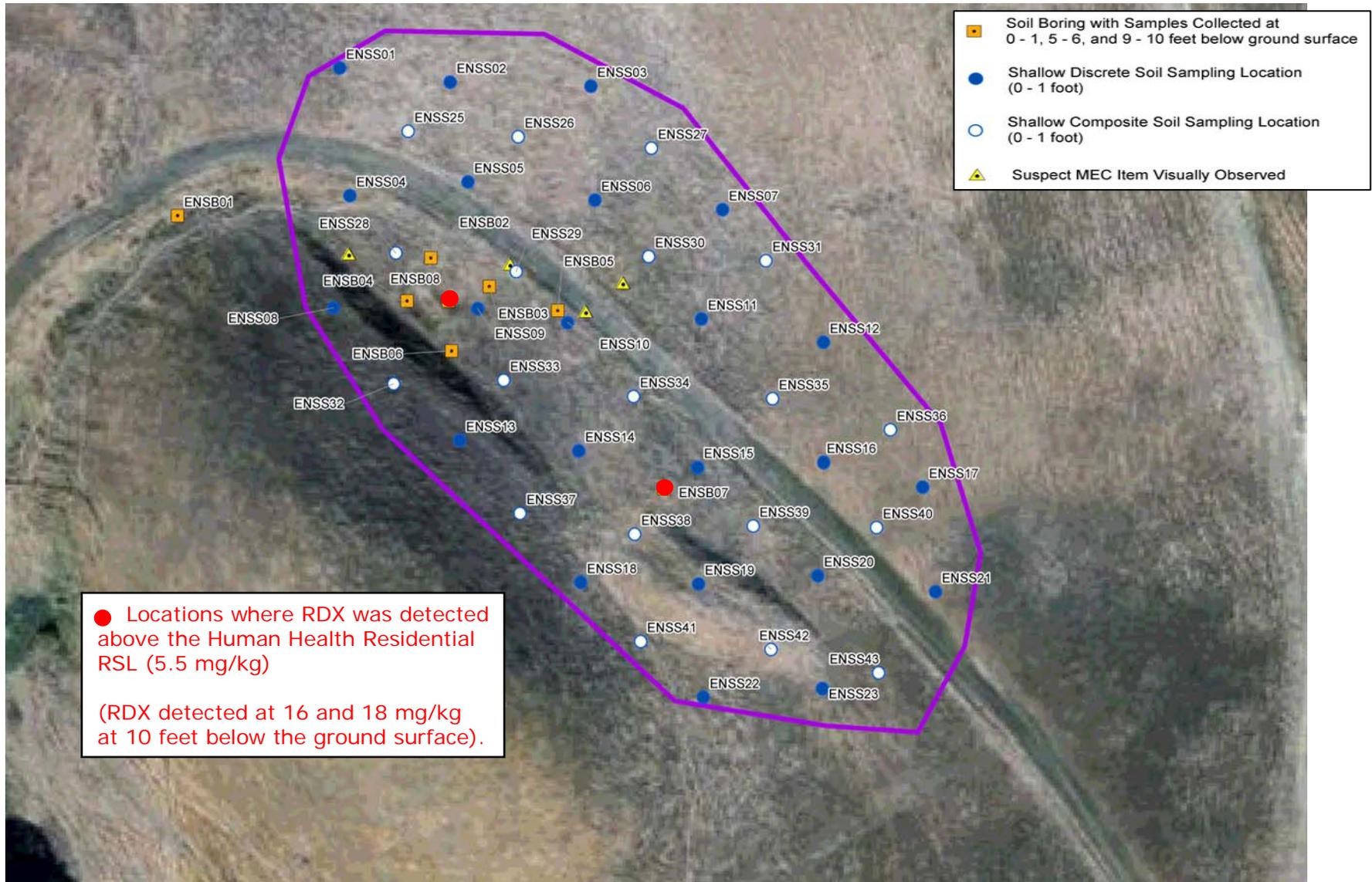
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# Eagle's Nest EOD Explosives Summary

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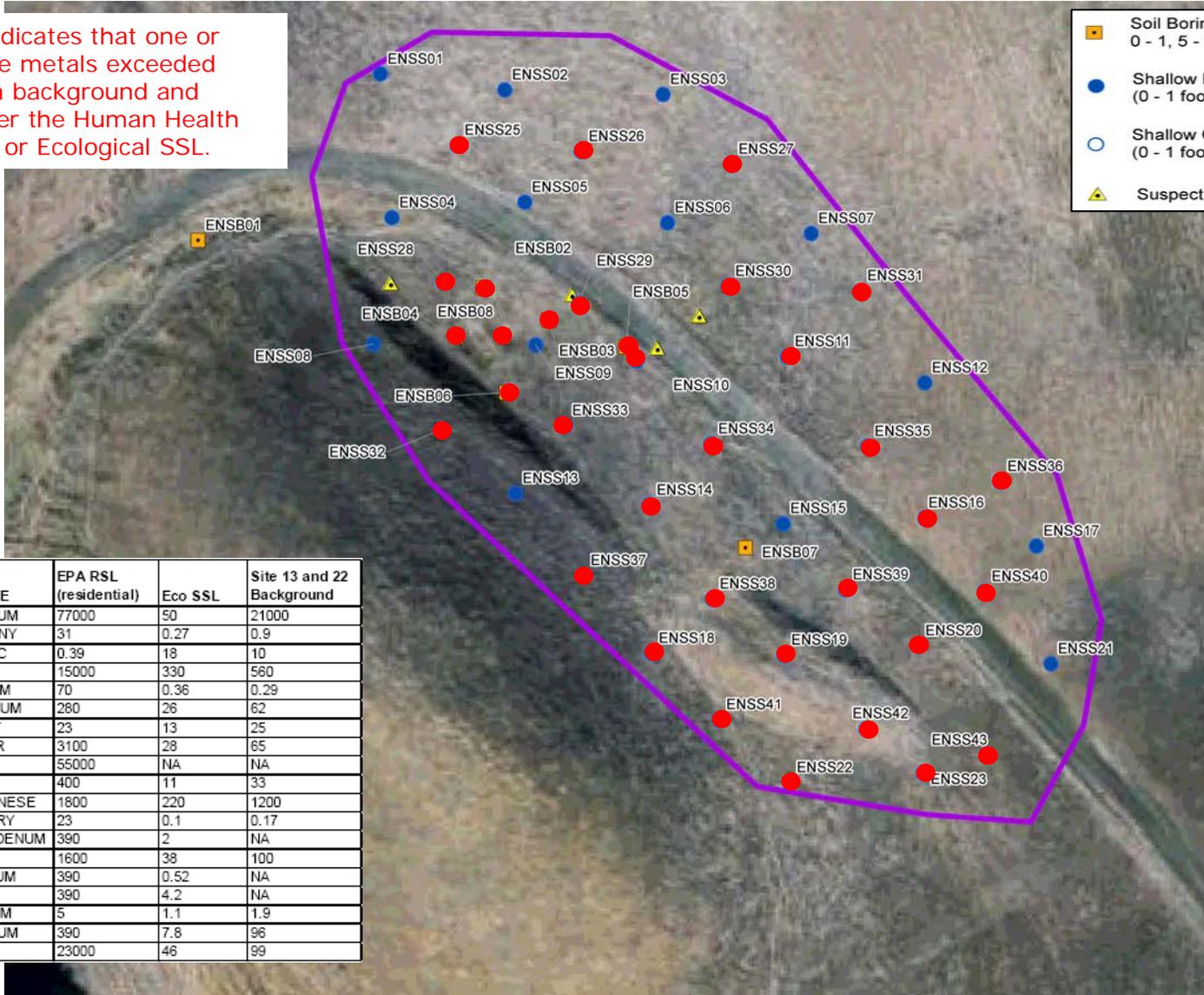


# Eagle's Nest EOD Metals Summary

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● Indicates that one or more metals exceeded both background and either the Human Health RSL or Ecological SSL.

- Soil Boring with Samples Collected at 0 - 1, 5 - 6, and 9 - 10 feet below ground surface
- Shallow Discrete Soil Sampling Location (0 - 1 foot)
- Shallow Composite Soil Sampling Location (0 - 1 foot)
- ▲ Suspect MEC Item Visually Observed



ANALYTE	EPA RSL (residential)	Eco SSL	Site 13 and 22 Background
ALUMINUM	77000	50	21000
ANTIMONY	31	0.27	0.9
ARSENIC	0.39	18	10
BARIUM	15000	330	560
CADMIUM	70	0.36	0.29
CHROMIUM	280	26	62
COBALT	23	13	25
COPPER	3100	28	65
IRON	55000	NA	NA
LEAD	400	11	33
MANGANESE	1800	220	1200
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MOLYBDENUM	390	2	NA
NICKEL	1600	38	100
SELENIUM	390	0.52	NA
SILVER	390	4.2	NA
THALLIUM	5	1.1	1.9
VANADIUM	390	7.8	96
ZINC	23000	46	99

ANALYTE	FREQ.	MAX (mg/kg)
Aluminum	70/70	22,500
Antimony	2/70	7
Arsenic	70/70	9.6
Barium	70/70	239
Beryllium	70/70	0.97
Cadmium	70/70	2
Chromium	70/70	31.1
Cobalt	70/70	48.7
Copper	70/70	457
Iron	70/70	32,800
Lead	70/70	132
Manganese	70/70	2,310
Mercury	30/70	0.056
Nickel	70/70	30.3
Selenium	68/70	1.6
Silver	32/70	0.86
Strontium	70/70	183
Tin	Feb-70	14.3
Vanadium	70/70	66
Zinc	70/70	150



## Path Forward

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- **Risk Assessment**

- Primarily for metals at both sites to determine if there is unacceptable risk.
- Result will affect the method of soils handling during RI intrusive investigations.

- **Remedial Investigation**

- Determine the extent of RDX at Eagle's Nest and if it poses a risk.
- Intrusively investigate MEC items to determine if a hazard exists.



## Schedule

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- Geophysical field work was completed on schedule in July, 2008.
- MC sampling was completed on schedule in August, 2008
- Draft SI Reports to agencies in April, 2009
- Regulatory Agency Review – 60 days
- Modify Draft Final SI Report by Aug, 2009
- Finalize SI Report Due Nov, 2009
- Remedial Investigation Work Plan for Eagles Nest and FIB Area is starting



Questions?

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## Project Team:

- Dennis Parker - RPM, Navy
- Steve DelHomme, P.E.- Tetra Tech, PM
- Ralph Basinski - MRP Expert, Tetra Tech
- Ralph Brooks - UXO Coordinator, Tetra Tech
- Jeff Eddo - Geophysics Expert, Tetra Tech