



TETRA TECH EM INC.

May 17, 2007

Dear RAB Members,

On behalf of the Navy, enclosed please find the March 7, 2007 final RAB meeting minutes for your information and records.

If there are any questions regarding the enclosed minutes, please contact Carolyn Hunter at (415) 222-8297 or Carolyn.hunter@ttemi.com.

Sincerely,

Carolyn Hunter
Community Relations Specialist
Tetra Tech EMI

FINAL
MEETING MINUTES
RESTORATION ADVISORY BOARD
NAVAL WEAPONS STATION SEAL BEACH, DETACHMENT CONCORD
CONCORD, CALIFORNIA
MARCH 7, 2007

These minutes reflect general issues raised, agreements reached, and action items identified at the Restoration Advisory Board (RAB) meeting for Naval Weapons Station Seal Beach, Detachment Concord (NAVWPNSTA Seal Beach Det Concord), California. The meeting was held from 6:30 p.m. to 8:30 p.m. on March 7, 2007, at the Concord Police Department Community Meeting Room in Concord, California. Agreements and action items are described by topic under Sections I through VII and are summarized in Section VIII. A list of participants and their affiliations is included as Attachment A, and the meeting agenda is included as Attachment B.

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.

Public Comments

Ms. Williams opened the floor to public comments. No public comments were offered at this time.

April 2007 RAB Agenda Approval

Ms. Williams reviewed the proposed agenda for the April 4, 2007 RAB meeting.

The U.S. Department of the Navy (Navy) plans to provide the following presentation at the April 4 2007 RAB meeting:

- Site 30 Removal Action Work Plan (Tidal Area)

Mr. Ramsey stated that depending on how long the presentations and question and answers take, a presentation from tonight's RAB meeting may need to be postponed. Rick Weissenborn (Navy RAB Co-Chair) stated that if one of the Inland Area presentations needs to be moved, he would have to check with the Tidal Area Navy team to make sure it fits into their agenda. Mr. Weissenborn stated the Navy is committed to stay at the RAB meeting as long as it takes to answer all of the questions.

Ms. Williams stated there has been a low turnout of community RAB members attending the meetings during the past several months. Mr. Weissenborn suggested maybe the RAB meetings need to be scheduled every other month if the RAB members' interest is diminishing. Gregory Glaser (Danville resident) stated he would agree to meeting every other month if the rest of the RAB members decide it is a good idea. Lisa Anich (Friends of Mount Diablo Creek) stated that meeting on a monthly basis is valuable. Holding meetings during the evening is sometimes difficult for community members. Ms. Williams stated that she is going to get in contact with the RAB members and gauge their interest for meeting frequency.

Ms. Williams asked the RAB to approve the April 2007 agenda. The RAB voted to approve the April 4, 2007 meeting agenda.

II. FEBRUARY 2007 RAB MEETING MINUTES APPROVAL

Mr. Weissenborn asked the RAB for comments on the minutes from the meeting held on February 7, 2007. No comments were received on the February 7, 2007 RAB meeting minutes. The Navy will finalize the minutes from the February 7, 2007 meeting and distribute them to the RAB.

Action Item

1. The Navy will finalize and distribute the February 7, 2007 RAB meeting minutes.

III. COMMITTEE REPORTS AND ANNOUNCEMENTS

Ric Notini (City of Concord) announced the City of Concord is going to hold an open house on March 17, 2007 from 10:00 a.m. to 1:00 p.m. There will be nine different poster stations discussing various reuse related topics. All updates on the reuse process are on the City of Concord's website. Ms. Anich stated that she brought the flier for the open house to an event she attended at the Clayton Library.

Mr. Weissenborn stated the Navy issued the surplus determination for the Inland Area property on March 6, 2007 in the Federal Register.

IV. REMEDIAL PROJECT MANAGER (RPM) UPDATE

Navy Update

Mr. Weissenborn stated the Navy prepared an RPM Update handout for the Inland Area activities that have taken place since the last RAB meeting (Attachment C).

Mr. Weissenborn asked the RAB if they were interested in receiving a monthly written update from both the Inland Area and Tidal Area Navy teams, or if they were willing to receive updates every other month from the teams. Ms. Williams asked whether the Navy would let the RAB know via e-mail about any important issues that come up to keep everyone informed in between meetings. Mr. Weissenborn stated both the Tidal Area and Inland Area Navy teams will make sure to inform the RAB as issues come up. The Navy can organize an additional meeting if necessary. If the RAB members have concerns, they are welcome to contact the Navy and the regulatory agencies directly.

Environmental Protection Agency (EPA) Update

Phillip Ramsey (EPA) stated that EPA prefers keeping the Tidal Area and Inland Area RAB meetings combined because it is easier for the RAB members to attend one meeting instead of two. Mr. Ramsey also prefers the Inland Area and Tidal Area Navy teams prepare a combined monthly update for the RAB meetings.

Mr. Ramsey stated that he is working on comments to provide to the Navy on the Draft Final Military Munitions Response Program (MMRP) Preliminary Assessment (PA). Mr. Ramsey agrees with the Navy's recommendation for eight MMRP sites to go to the site investigation (SI) phase.

Mr. Ramsey stated he is preparing comments on the Site 30 Removal Action Work Plan.

Mr. Ramsey attended a 2-day site tour and scoping meeting to discuss the Munitions Response Program (MRP) sites in the Inland Area on February 20 to 21, 2007.

Department of Toxic Substances Control (DTSC) Update

Jim Pinasco (DTSC) stated DTSC and the California Department of Fish and Game provided the Navy with comments on the Draft Final MMRP PA. Mr. Glaser asked what the timeline is for the MMRP PA. Mr. Ramsey stated the Navy and regulatory agencies are in the process of scoping the SIs for the MRP sites in the Inland Area. Ellen Casados (Navy) stated that the Navy is planning on providing a presentation in July 2007 on the upcoming MRP work plans which will be completed by the end of 2007. Mr. Glaser asked if the regulatory agencies are ok with this timeline for the MRP sites. Mr. Ramsey stated the MRP documents are not tracked in the Site Management Plan, so EPA does not have any enforcement authority on those schedules. Mr. Weissenborn stated the MRP funding is under a program that is separate from the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) program sites. Currently, a majority of the MRP funding is being sent overseas for the war efforts. Mr. Weissenborn stated the Navy is doing what they can to move along the MRP SIs.

V. SITE 29 REMEDIAL INVESTIGATION (RI) WORK PLAN OVERVIEW

Shane DeGross (Sullivan International Group Inc.) and Tim Shields (Richard Brady and Associates) provided a presentation on the Site 29 RI Work Plan. The presentation is included as Attachment D.

Ms. Anich asked how far the borings would penetrate beneath the ground surface. Mr. DeGross stated that groundwater at Site 29 is approximately 58 feet below ground surface. Mr. Shields stated that the probes can reach up to 80 feet.

Mr. Glaser asked why the Navy is planning to collect surface samples with all of the Site Characterization and Analysis Penetrometer System (SCAPS) also planned. Mr. Shields stated the surface samples are proposed to address the potential contamination at the location of the storm drain outfall as well as to provide information for the risk assessments that will be included in the upcoming RI report.

Mr. Ramsey stated that the RPMs are going to Site 29 for a visit on March 8, 2007. The RPMs will examine the site and the buildings to get a perspective on the area addressed in the work plan.

VI. SITE 22A RI WORK PLAN OVERVIEW

Tom Shoff (Tetra Tech EM Inc.) provided a presentation on the Site 22A Work Plan Overview. The presentation is included as Attachment E.

Mr. Glaser asked whether the test results would show the specific type of arsenic that is present at Site 22A. Mr. Shoff stated the sampling results will show the amount of arsenic present in the soil but not the specific type. Ms. Casados stated that arsenic speciation was not necessary. If the arsenic level is higher than background, a risk assessment will be performed.

Mr. Glaser asked if the Navy has an estimated time frame for when the herbicide application ceased at Site 22A. Ms. Casados stated there were no records kept on the herbicide applications, but the use of arsenic in herbicides was banned starting in the 1980s. There are records from the 1940s that show that an arsenic containing herbicide was applied at the site, but there is no record for when that activity was

stopped. Mr. Weissenborn stated that pesticide application was governed by the Navy's pesticide control plan. The pesticide control plan documents were destroyed every 3 years so there are no historical pesticide control plan records available for review.

Mr. Glaser asked if EPA considers the Site 22A RI Work Plan an acceptable document. Mr. Ramsey stated that EPA is currently reviewing the Site 22A RI Work Plan and so far there are no major comments.

VII. SOLID WASTE MANAGEMENT UNITS (SWMUS) 2, 5, 7, AND 18 PILOT TEST FIELD WORK UPDATE

Wilson Doctor (Navy) provided a presentation on the SWMU 2, 5, 7, and 18 Pilot Test Field Work Update. The presentation is included as Attachment F.

Ms. Anich asked how the downgradient pilot test location was chosen. Mr. Doctor stated the Navy selected the specific downgradient location through past research about soil types at the site. Mr. Ramsey stated that EPA recommended performing a second pilot test near the former waste oil tank location. Greg Swanson (Tetra Tech EM Inc.) stated that the soil composition is similar throughout the SWMUs 2, 5, 7, and 18 site. Mr. Ramsey stated the purpose of conducting a pilot test is to see if the potential cleanup remedy could work for the site.

VIII. OTHER TOPICS, NEXT MEETING, AND ACTION ITEMS

The next RAB meeting is scheduled for 6:30 to 8:30 p.m. on Wednesday, April 4, 2007 at the Concord Police Station Community Room.

The following action items were generated during the RAB meeting on March 7, 2007

No.	Action Item	Target Date for Completion	Completion Date (or Status)
1	The Navy will finalize and distribute the February 7, 2007 RAB meeting minutes.	3/19/07	This action item was completed

ATTACHMENT A

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

MARCH 7, 2007

(One Page)

**ATTENDEES AND AFFILIATIONS
 RESTORATION ADVISORY BOARD MEETING
 NAVAL WEAPONS STATION SEAL BEACH, DETACHMENT CONCORD, CALIFORNIA
 MARCH 7, 2007**

<u>Name</u>	<u>Affiliation</u>	<u>Telephone</u>
Wayne Akiyama	Shaw Group	(925) 288-2003
Lisa Anich*	Friends of Mount Diablo Creek	(925) 689-2642
Luis Garcia-Bakarich	EPA	(415) 972-3237
Joanna Canepa	TtEMI	(425) 877-2806
Ellen Casados	U.S. Navy, BRAC PMO West	(619) 532-0968
Lik-See Chung	TN & Associates	(650) 504-5122
Diana Davis	EMS	(925) 939-0120
Shane DeGross	SulTech	(916) 436-8599
Wilson Doctor	U.S. Navy, BRAC PMO West	(619) 532-0928
Gregory Glaser*	Danville Resident	(925) 363-5570
Carolyn Hunter	TtEMI	(415) 222-8297
La Rae Landers	U.S. Navy, BRAC PMO West	(619) 532-0970
Sarah Ann Moore	U.S. Navy, BRAC PMO West	(619) 532-0965
Rick Notini	City of Concord	(925) 671-3024
Jim Pinasco	DTSC	(916) 255-3719
Phillip Ramsey	EPA	(415) 972-3006
Tim Shields	Richard Brady and Associates	(858) 496-0500
Tom Shoff	TtEMI	(415) 222-8347
Greg Swanson	TtEMI	(619) 321-6726
John Warmerdam	TtEMI	(415) 222-8254
Rick Weissenborn	U.S. Navy, BRAC PMO West	(619) 532-0952
Mary Lou Williams*	Concord Resident	(925) 685-1415

Notes:

<p>* BRAC PMO DTSC EPA TtEMI</p>	<p>Community Restoration Advisory Board (RAB) Member Base Realignment and Closure Program Management Office Department of Toxic Substances Control U.S. Environmental Protection Agency Tetra Tech EM Inc.</p>
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ATTACHMENT B

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

MARCH 7, 2007
(One Page)

AGENDA

NAVAL WEAPONS STATION SEAL BEACH (NWSSB) DETACHMENT CONCORD RESTORATION ADVISORY BOARD (RAB) MEETING

Wednesday, March 7, 2007
6:30 p.m. – 8:30 p.m.

Location: Concord Police Department Community Meeting Room
1350 Galindo Street, Concord, CA 94520

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- 6:30 – 6:45 Call to Order
- Welcome
 - Introductions
 - Public Comments
 - April 2007 Agenda Approval
- Lead: Community Co-chair
- 6:45 – 6:55 Approval of February 2007 Meeting Minutes
Review Unresolved Business
Lead: Navy Co-chair
- 6:55 – 7:30 Committee Reports/Announcements
- RAB Announcements, Reports or other business
 - Remedial Project Managers' Update (Navy/EPA/DTSC/RWQCB)
- 7:30 – 7:40 Break
- 7:40 – 7:55 Presentation: Site 29 Remedial Investigation (RI) Work Plan Overview (Inland Area)
Presenter: Shane DeGross, SulTech
- 7:55 – 8:15 Presentation: Site 22A RI Work Plan Overview (Inland Area)
Presenter: Tom Shoff, Tetra Tech EMI
- 8:15 – 8:30 Presentation: Solid Waste Management Units (SWMUs) 2, 5, 7, and 18 Pilot
Test Field Work Update (Inland Area)
Presenter: Greg Swanson, Tetra Tech EMI
- 8:30 Adjourn

NWSSB DETACHMENT CONCORD RAB Meetings are held the first Wednesday of every month, unless changed.

Information regarding the Environmental Restoration program at NWSSB Detachment Concord can be found at:

- NWSSB DETACHMENT CONCORD program prior to December 2005 -

<http://www.sbeach.navy.mil/Programs/Environmental/IR/IR.htm>

- NWSSB DETACHMENT CONCORD program after December 2005 -

<http://www.navybracpmo.org/brac2005/bracbases/ca/concord/default.aspx>;

In addition, a public voicemail is available for questions at (925) 246-4020

NAVFAC Public Affairs Officer: Mr. Lee Saunders, (619) 532-3100, lee.saunders@navy.mil

Lead RPM Tidal Area and Navy RAB Co-Chair for Tidal Area Meetings: Mrs. Angie Lind, (619) 532-4228,

angela.lind@navy.mil

BRAC Environmental Coordinator, and NAVY RAB Co-Chair for Inland Area Meetings: Mr. Rick Weissenborn (619) 532-0952,

richard.weissenborn@navy.mil

Community RAB Co-Chair: Mary Lou Williams, MLou1015@aol.com

ATTACHMENT C

**NAVY REMEDIAL PROJECT MANAGER'S UPDATE
RESTORATION ADVISORY BOARD MEETING
NAVAL WEAPONS STATION SEAL BEACH, DETACHMENT CONCORD, CALIFORNIA**

MARCH 7, 2007

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Navy RPM Update for 7 March 2007 Meeting of Naval Weapons Station, Detachment Concord Restoration Advisory Board (RAB)

Summary of Navy Remedial Project Manager (RPM) Activities since the last RAB Meeting held on Wednesday, 7 February 2007

Inland Area

Installation Restoration/Munitions Response Programs Sites

- 5 February 2007 - The Navy requested an extension for submitting the Draft Site 27 Work Plan. The draft work plan will be submitted by 28 March 2007.
- 5 February 2007 – The Draft FSP/QAPP for Site 22A Arsenic Investigation was submitted to the regulatory agencies for review. Comments are due 6 April 2007.
- 8 February 2007 – The Navy issued a request for a proposal (RFP) to write the Site 22 FS. Award of the contract is scheduled for 8 Apr 2007.
- 8 February 2007 – Held an internal kick-off meeting with the contractor and NOSSA for the Site 24A Pistol Range Site Investigation project.
- 20, 21 February 2007 – Held a DQO scoping meeting with the regulatory agencies on the Munitions SI Project. Follow-up telephone conference is scheduled for 12 April 2007.
- 8, 9 and 24 January 2007 – Received comments on the Draft Site 29 Work Plan from Cal Fish and Game, EPA, Water Board, and DTSC.
- 27 February 2007 - The Navy requested an extension for submitting the Draft Final Site 29 Work Plan. The draft final work plan will be submitted by 20 April 2007. The time extension is needed to address comments and incorporate the results of additional historical research. A site walk with the regulatory agencies is scheduled for 8 March 2007.

SWMUs 2, 5, 7 & 18

- 19 February 2007 – Field work began to implement the groundwater pilot study at SWMUs 2, 5, 7, and 18.

ATTACHMENT D

**SITE 29 REMEDIAL INVESTIGATION WORK PLAN OVERVIEW PRESENTATION
RESTORATION ADVISORY BOARD MEETING
NAVAL WEAPONS STATION SEAL BEACH, DETACHMENT CONCORD, CALIFORNIA**

MARCH 7, 2007

(9 Pages)



IRP Site 29

**BRAC
PMO**

Site 29 Remedial Investigation Work Plan

Naval Weapons Station Seal Beach Detachment Concord

Restoration Advisory Board

March 7, 2007

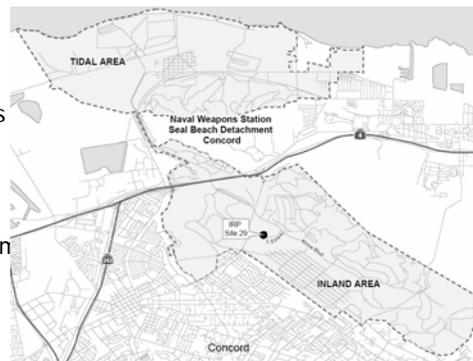
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IRP Site 29 Introduction

**BRAC
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- Background
 - Historical Operations
 - Environmental Investigations
- Triad Work Plan
 - Trenching
 - Site Characterization and Analysis Penetrometer System (SCAPS)
 - Groundwater monitoring
- RI Reporting
 - Schedule



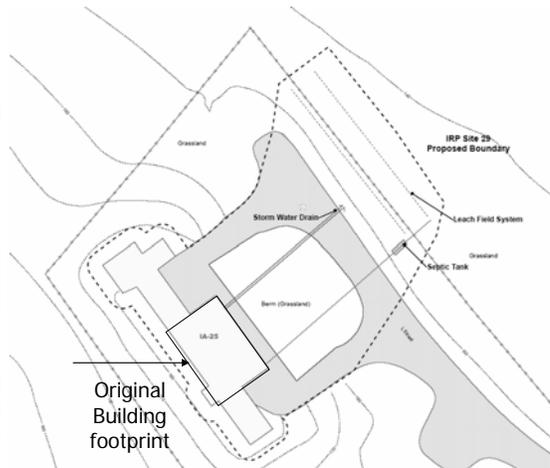
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IRP Site 29 Historical Background

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- Constructed in the mid 1940's
- Primary function was munitions manufacturing and testing facility
- Remodeled in the 1970's to handle explosives



3



IRP Site 29 Investigation History

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- 1990 Site Investigation
 - Metals, pesticides and organic compounds found in surface soils, but determined no long term human health risk
- 1997 Resource Conservation and Recovery Act (RCRA) Facility Investigation Confirmation Study
 - Recommended Solid Waste Management Unit 13 (septic system) for *No Further Action* under RCRA
 - Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) further investigation of soils beneath the building was recommended
- 1997 Septic Tank Closure Report
 - Volatile organic compounds (VOCs) detected in septic tank sludge
 - Tank was pumped, cleaned and decommissioned

4



IRP Site 29 Investigation History (continued)

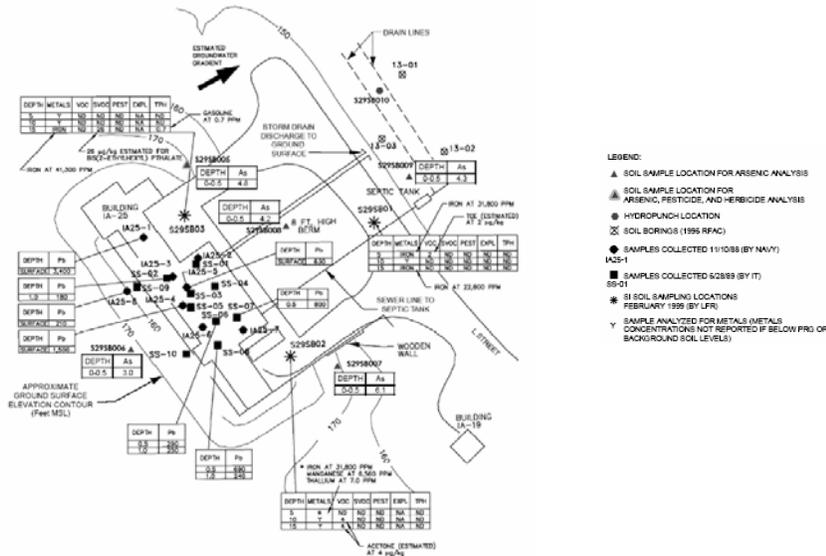
**BRAC
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- 1999 Site Investigation for Subsurface Soils
 - Indicated unacceptable risk to human health for unrestricted residential exposure
 - Risk assessment was sufficient to proceed with a Focused Feasibility Study
- 2003 Draft Final Feasibility Study
 - Put on hold pending further evaluation of groundwater
- 2004 Arsenic Investigation
 - EPA requested additional sampling for arsenic, pesticides and herbicides
 - Detected arsenic concentrations (3.0 mg/kg to 6.1 mg/kg) were within background levels
 - Herbicides and pesticides not detected
- 2005/2006 Additional Groundwater Sampling
 - Detections of TCE (solvent) at 4,300 µg/L and 1,600 µg/L
 - Remedial Investigation triggered



IRP Site 29 Previous Sample Locations

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IRP Site 29
Triad Remedial Investigation Work Plan

**BRAC
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Field Work Performed in Three Steps

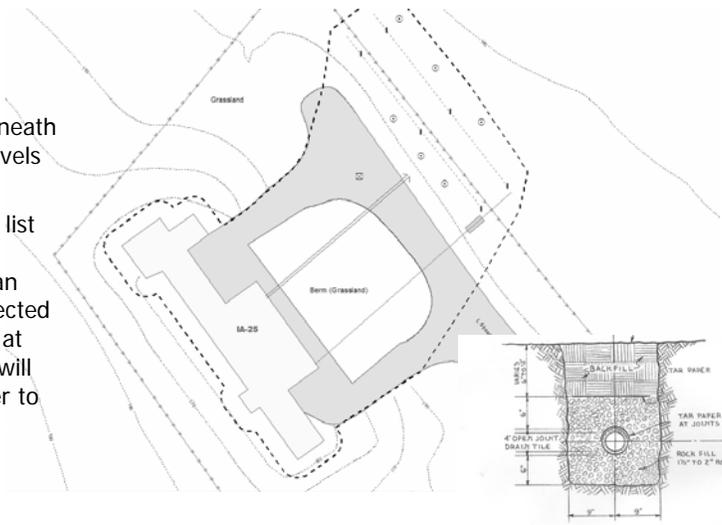
1. Trenching and surface soil sampling
2. SCAPS investigation, subsurface soil, soil gas and grab groundwater
3. Groundwater monitoring



IRP Site 29
Field Work – Trenching and Surface Soil Sampling

**BRAC
 PMO**

- Sample near surface drain outfall and beneath leach field gravels
- Select analyte list for future sampling. If an analyte is detected above criteria at the source, it will be carried over to steps 2 and 3.

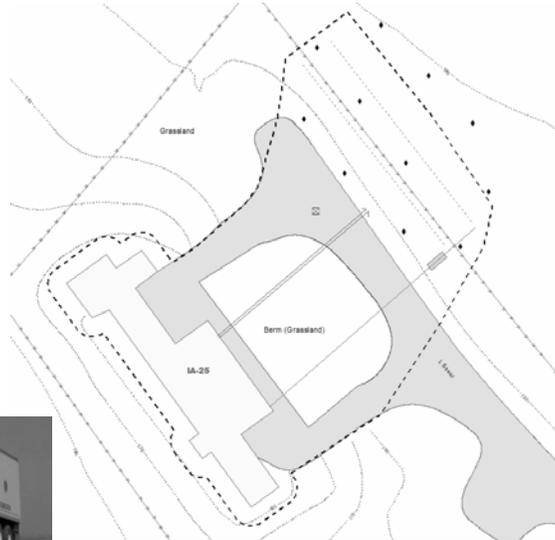




IRP Site 29 Field Work – SCAPS

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- 11 initial CPT borings
- Step-out borings will be determined in the field
- Grab groundwater samples will be collected
- Bounding soil samples will be collected where MIP registers 'non-detect'



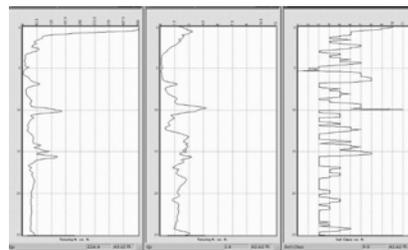
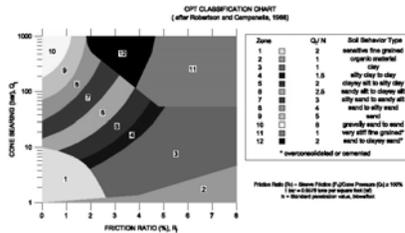
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Soil Classification Cone Penetrometer Test (CPT)

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- Standard CPT tip resistance and sleeve friction data are collected according to ASTM standards
- CPT data is analyzed by computer, and soil classifications are displayed in real time with the contaminant sensor data

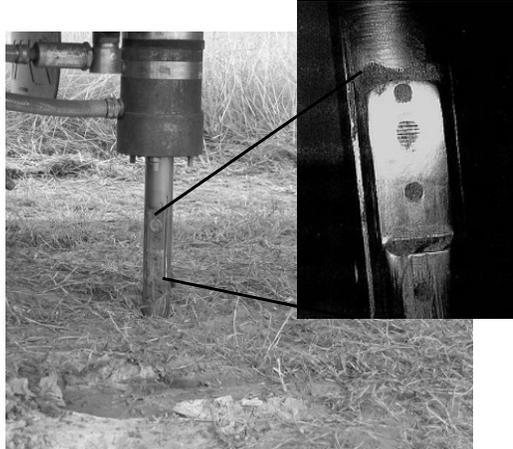
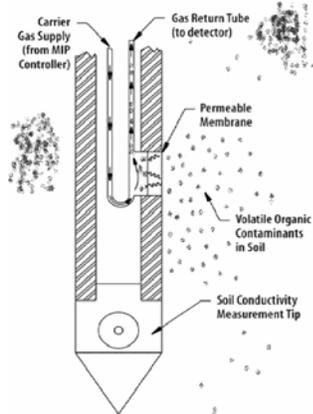


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Volatile Organic Compounds Membrane Interface Probe (MIP)

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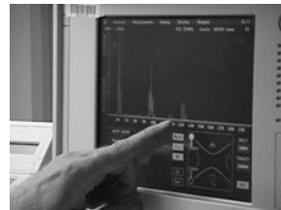
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Direct Sampling Ion Trap Mass Spectrometer

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- Creates gas-phase ions
- Separates the ions based on mass-to-charge ratio
- Measures the quantity of ions of each mass-to-charge ratio
 - Has a large responsive range – can take high levels of contaminants without overloading the system
 - Is fast, with minimal sample preparation. 3 minutes or so for an analysis.
 - Is a durable machine that can be deployed in the field.
- EPA Method 8265

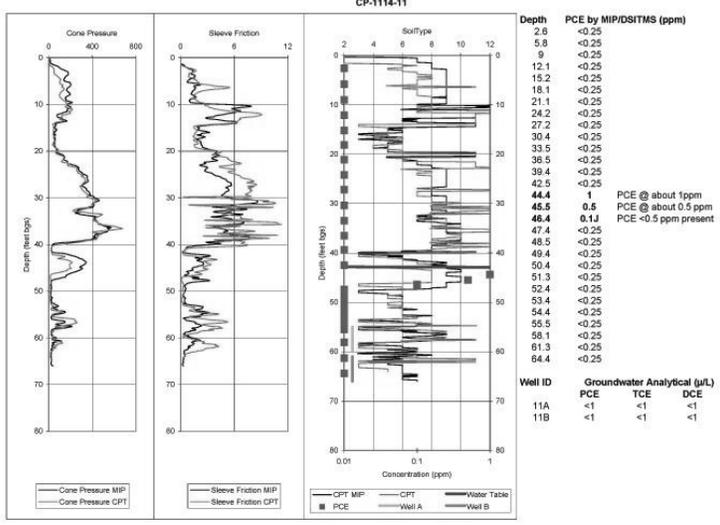


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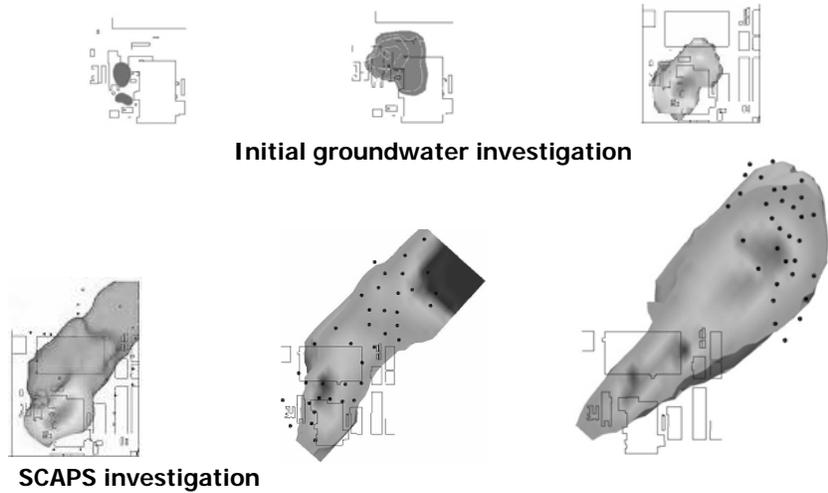
SCAP Log – A Detailed Vertical Profile

BRAC PMO



SCAPS Technology Demonstration

BRAC PMO





IRP Site 29
Field Work – SCAPS (continued)

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Soil and Soil Gas Sampling

- Probes placed at the 3 highest MIP detections in 11 CPT locations
- Soil samples collected at the same depth interval as soil gas

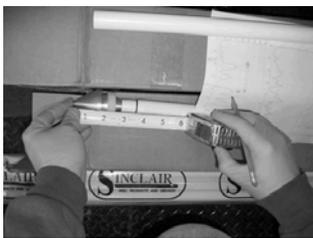
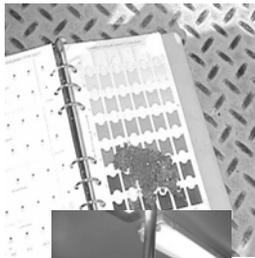
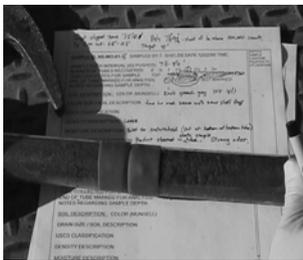


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SCAPS Collects Samples to Corroborate
Real-Time Sensor Data

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- Soil samples are collected and compared to MIP and CPT data
- Groundwater samples are collected and groundwater elevations are measured

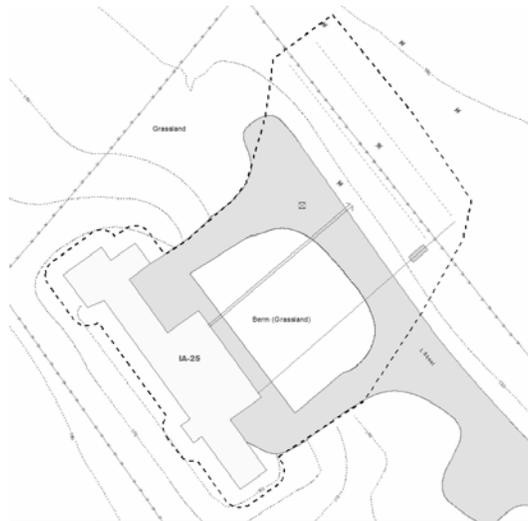
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IRP Site 29 Field Work – Groundwater Monitoring

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- Wells decided upon SCAPS results
- Analytical suite determined by Step 2 SCAPS investigation
- Quarterly monitoring for 1 year



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IRP Site 29 Remedial Investigation

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- IRP Site 29 Boundary Revision
 - Encompass the leach field and building area
 - Potentially to be revised upon completion of field work
- Draft RI Report, Fall 2008
- Final RI Report, Spring 2009
- Draft FS, Fall 2009
- Final FS, Spring 2010

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ATTACHMENT E

**SITE 22A REMEDIAL INVESTIGATION WORK PLAN OVERVIEW PRESENTATION
RESTORATION ADVISORY BOARD MEETING
NAVAL WEAPONS STATION SEAL BEACH, DETACHMENT CONCORD, CALIFORNIA**

MARCH 7, 2007

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Concord Naval Weapons Station

**BRAC
PMO**

Site 22A Remedial Investigation Groups 1 through 5 Magazine Areas

Naval Weapons Station Seal Beach
Detachment Concord

By
Tom Shoff

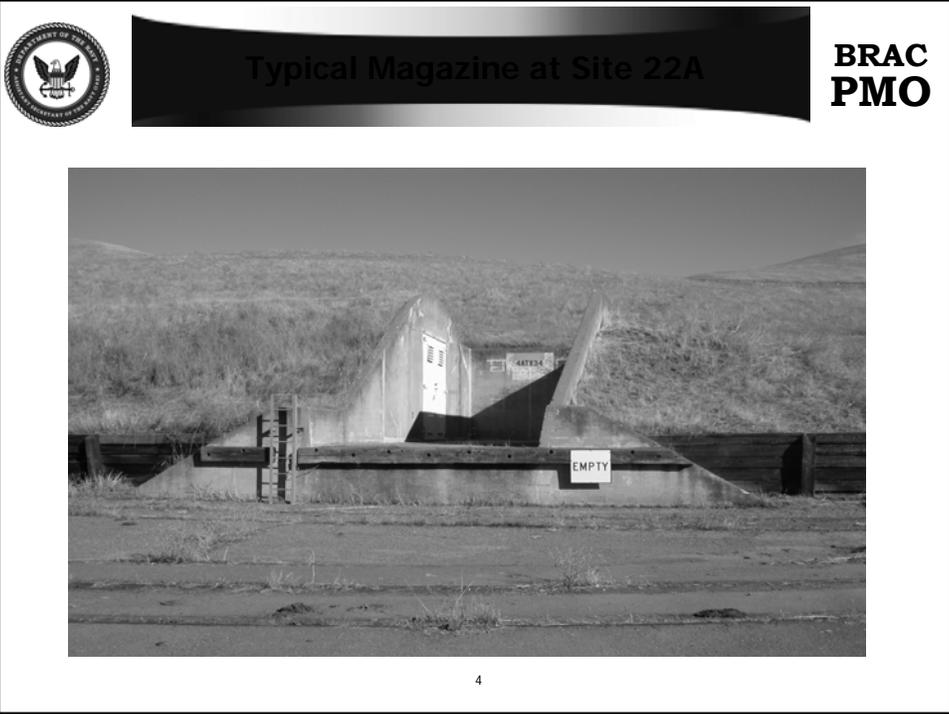
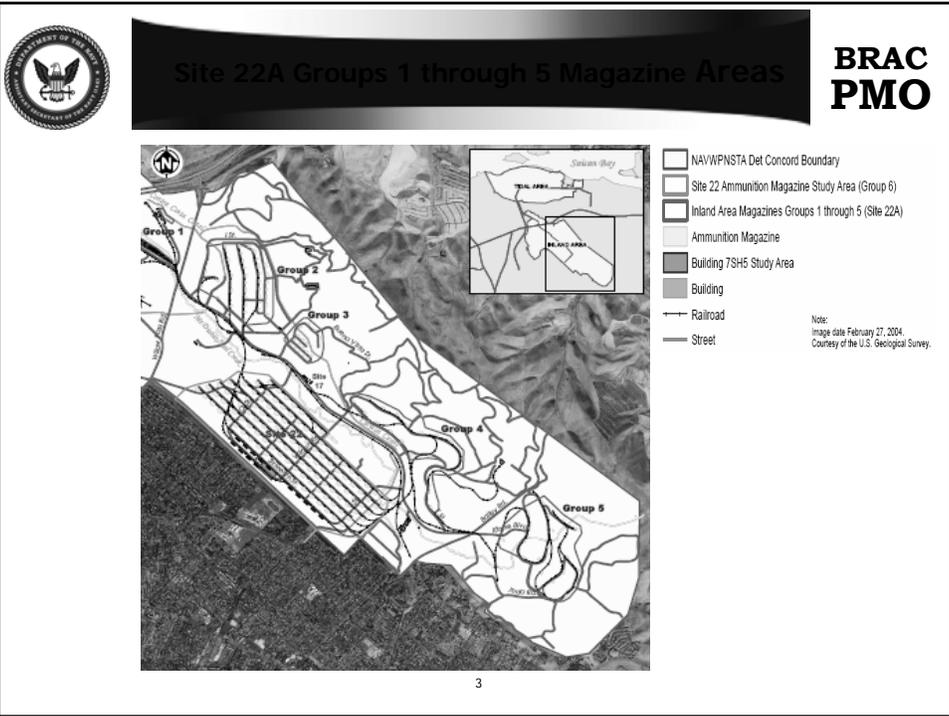
RAB Meeting
March 7, 2007



Presentation Overview

**BRAC
PMO**

- Review of Site 22A History
- Overview of Previous Investigation and Sampling Results
- Overview of Proposed Sampling Approach
- Overview of Remedial Investigation
- Schedule
- Questions





Site 22A Description

**BRAC
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Site 22A consists of five magazine areas:

- Group 1: 6 magazines; 2.4 acres
- Group 2: 39 magazines; 154 acres
- Group 3: 17 magazines; 39 acres
- Group 4: 20 magazines; 124 acres
- Group 5: 20 magazines; 185 acres

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Site History

**BRAC
PMO**

- Mid-1940s to 2000: Magazines were used to store ammunitions and explosives
- Herbicides containing arsenic were applied around the magazines to control weeds and reduce fire hazards during the late 1940s
- The magazines are currently not in use
- The Navy currently leases the area that encompasses the magazines for cattle grazing

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Previous Investigation

**BRAC
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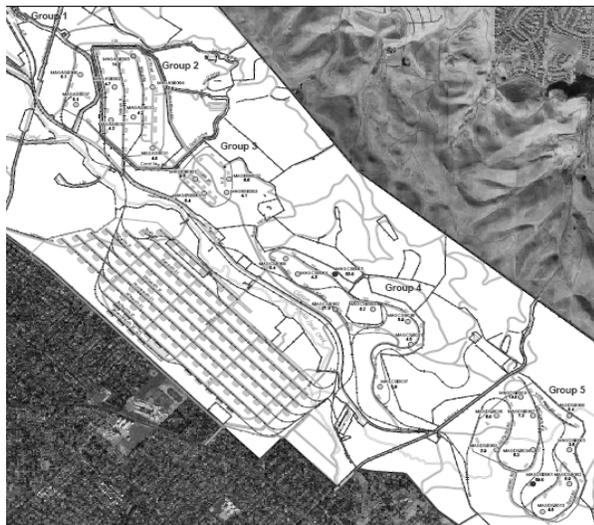
- Sampling: Surface soils samples have been collected from 30 locations at Groups 2 through 5 Magazine Areas in December 2005
- Results: Arsenic was detected in 4 of 30 samples at concentrations above the background level (10 ppm). The 4 samples that exceeded background were collected within 50 feet of a magazine.
 - Group 2: 1 sample at 14 ppm
 - Group 3: None above background
 - Group 4: 2 Samples at 27 ppm and 53 ppm
 - Group 5: 1 Sample at 69 ppm

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December 2005 Investigation Results

**BRAC
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- Concentration of Arsenic in Surface Soil
- Less Than or Equal to 10 mg/kg
 - Greater than 10 mg/kg and Less than or Equal to 22 mg/kg
 - ⊗ Greater than 22 mg/kg and Less than or Equal to 39 mg/kg
 - Greater than 39 mg/kg
- Ammunition Magazine
 - Magazine Area Boundary
 - Site 22 Boundary
 - NAVWPNSTA Seal Beach Det Boundary
 - Building 7SH5 Study Area
 - Building
 - Street
 - Railroad
 - Fence Line

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Current Investigation

**BRAC
PMO**

Study Questions:

- Were arsenic-containing herbicides applied only around magazines or were they applied throughout the magazine areas?
- Has arsenic in surface soil (above background) migrated to deeper soils?
- Has arsenic in surface soil (above background) migrated to ditches or low-lying areas?
- Does the arsenic-contaminated soil pose a risk to human health or the environment?

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Sampling Approach

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A Two Tier Sampling Approach is Proposed:

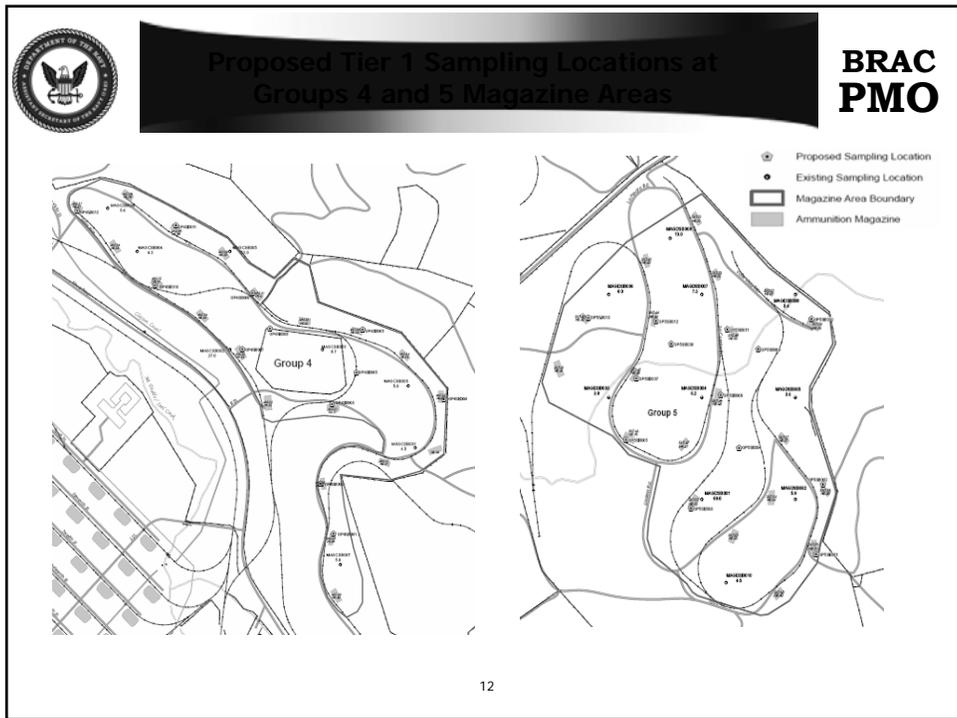
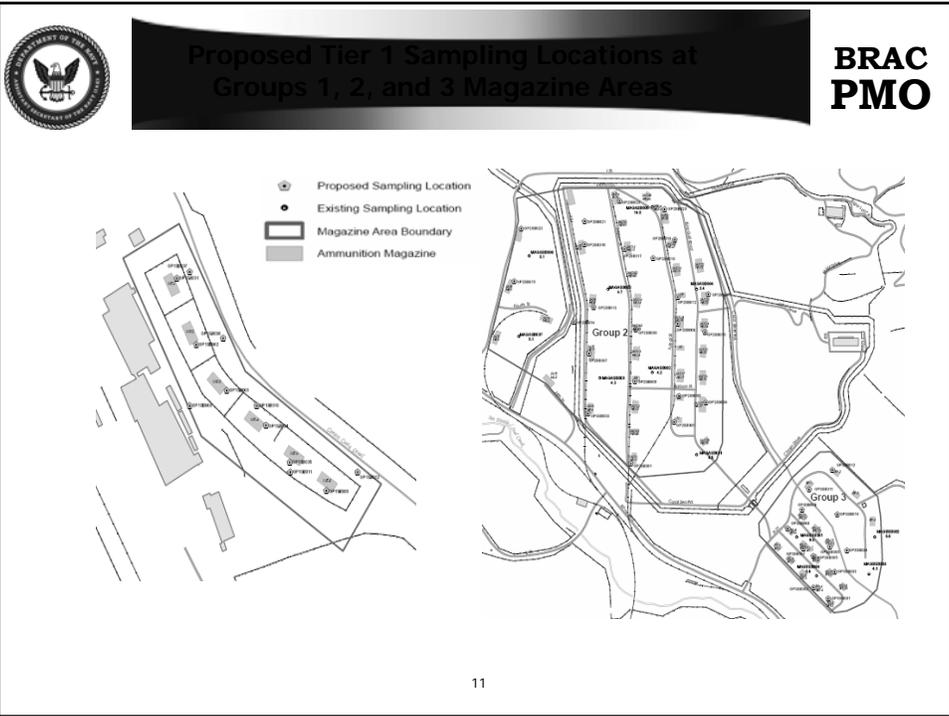
Tier 1 Sampling

- Collect 56 surface soil samples within 5 feet of the magazines
- Collect 30 surface soil samples in open-grassland areas

Tier 2 Sampling

- Collect samples from depths of 1.5, 3, 5, and 10 feet at 9 locations where the highest arsenic concentrations were detected in surface soils
- Collect 12 surface soil samples within ditches downstream from Tier 1 sampling locations
- Additional surface soil samples will be collected away from the elevated concentrations (step-out sampling) to define the horizontal extent of arsenic contamination

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Soil Sampling in Ditches

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Remedial Investigation Report

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Both Human Health and Ecological Risk will be assessed. The risk assessments for Site 22A will be conducted similar to the Site 22 risk assessments :

- Human Health Risk: Does the arsenic in soil pose an unacceptable risk to current or future users of the property?
 - Compare arsenic concentrations to background
 - Assess cancer and noncancer risk of arsenic under current land use (ranchers and agricultural workers) and future reuse scenarios (unrestricted, commercial/industrial workers, and construction workers)
- Ecological Risk: Does the arsenic in soil pose an unacceptable risk to the environment (plants, invertebrates, amphibians, birds, and mammals)?

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Schedule for Site 22A

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- February 5, 2007 - Draft Sampling and Analysis Plan was submitted to the regulatory agencies
- April 6, 2007 – Comments due on SAP
- June 5, 2007 – Draft Final SAP Submittal
- July 5, 2007 – Final SAP Submittal
- July 16, 2007 – Field Sampling begins
- January 24, 2008 – Draft Remedial Investigation report will be submitted to the regulatory agencies

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Questions ?

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ATTACHMENT F

**SOLID WASTE MANAGEMENT UNITS 2, 5, 7, AND 18 PILOT TEST
FIELD WORK UPDATE PRESENTATION
RESTORATION ADVISORY BOARD MEETING
NAVAL WEAPONS STATION SEAL BEACH, DETACHMENT CONCORD, CALIFORNIA**

MARCH 7, 2007

(8 Pages)



Overview of Pilot Test Solid Waste Management Unit Sites 2, 5, 7 & 18

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Overview of Pilot Study
Solid Waste Management Unit Sites
2, 5, 7 & 18

Naval Weapons Station Seal Beach Detachment Concord
Restoration Advisory Board Meeting
March 7, 2007

Presented by:
Wilson Doctor, Navy Remedial Project Manager
Greg Swanson, Tetra Tech EMI Project Manager

1



Background on the SWMUs Site

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- A plume of chlorinated solvents originated from a waste oil tank near Building IA-12
- A Remedial Investigation was completed in 2004 and a Draft Final Feasibility Study Report was submitted in 2005
- A key recommendation from the Feasibility Study was to conduct a pilot test of the most promising technology
- The most promising technology for the site was determined by the Navy to be air sparging/soil vapor extraction (AS/SVE)

2



Overview of Presentation

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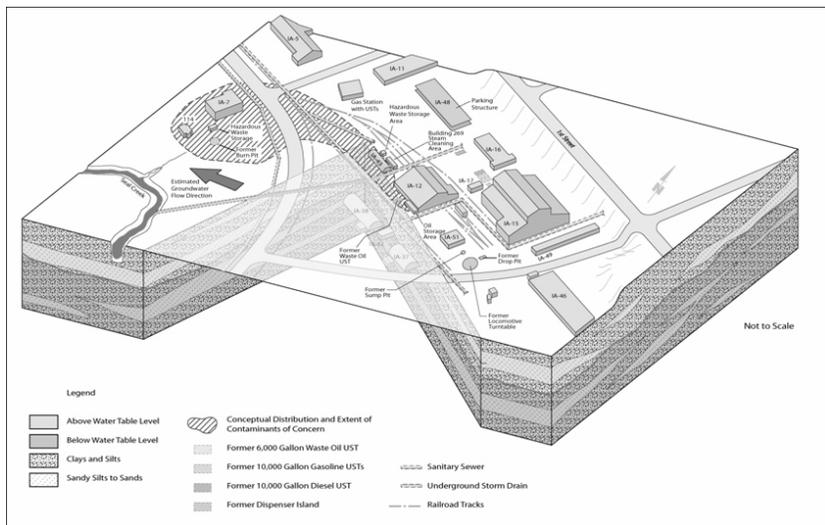
- **Site Conceptual Model**
- **Principles of air sparging and soil vapor extraction**
- **Pilot test plan and status**
 - **Pilot testing locations and layout**
 - **Groundwater sampling**
 - **Schedule for field work (ongoing)**

3

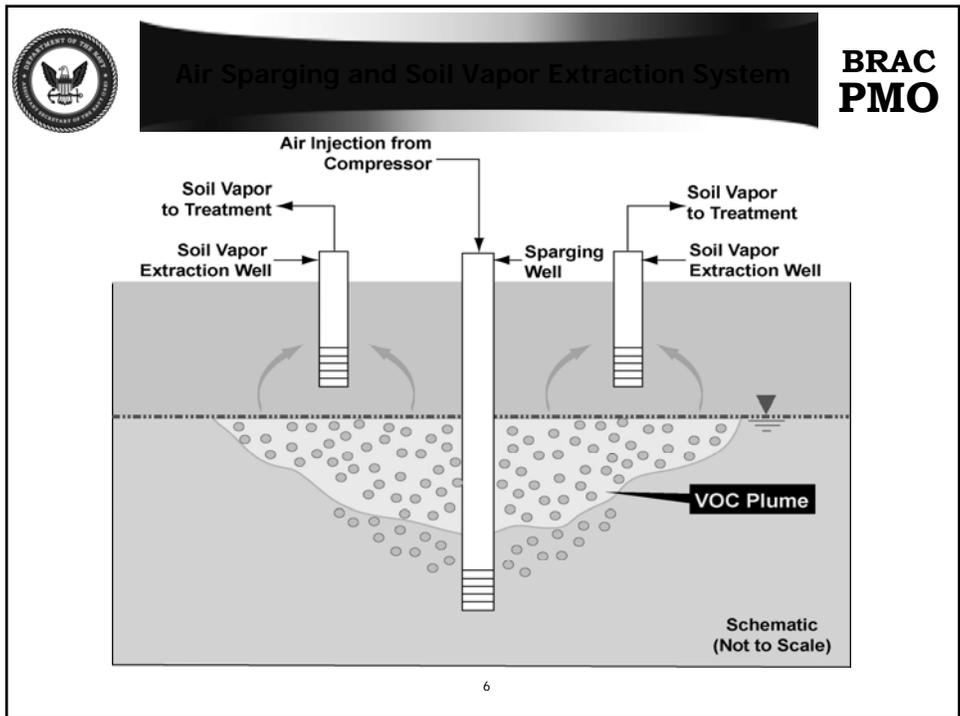
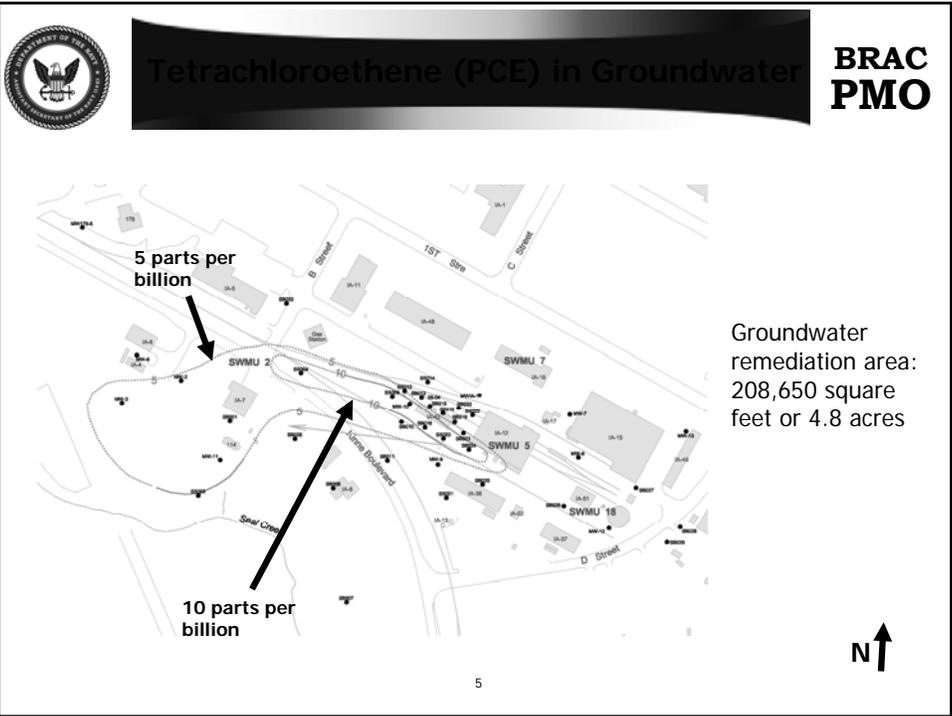


Site Conceptual Model

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AS/SVE Testing Approach

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- All procedures and tests will be in accordance with the Final Sampling and Analysis Plan (submitted January 2007)
- The objectives of the Pilot Test are:
 - to evaluate the overall feasibility of AS/SVE at the site
 - to provide design information for a full-scale system, if AS/SVE is chosen as the preferred alternative to remediate the site
- The Pilot Test will be conducted at two locations:
 - On the upgradient end of the plume, which is in a less permeable geology
 - Toward the downgradient end of the plume, where the geology is more permeable

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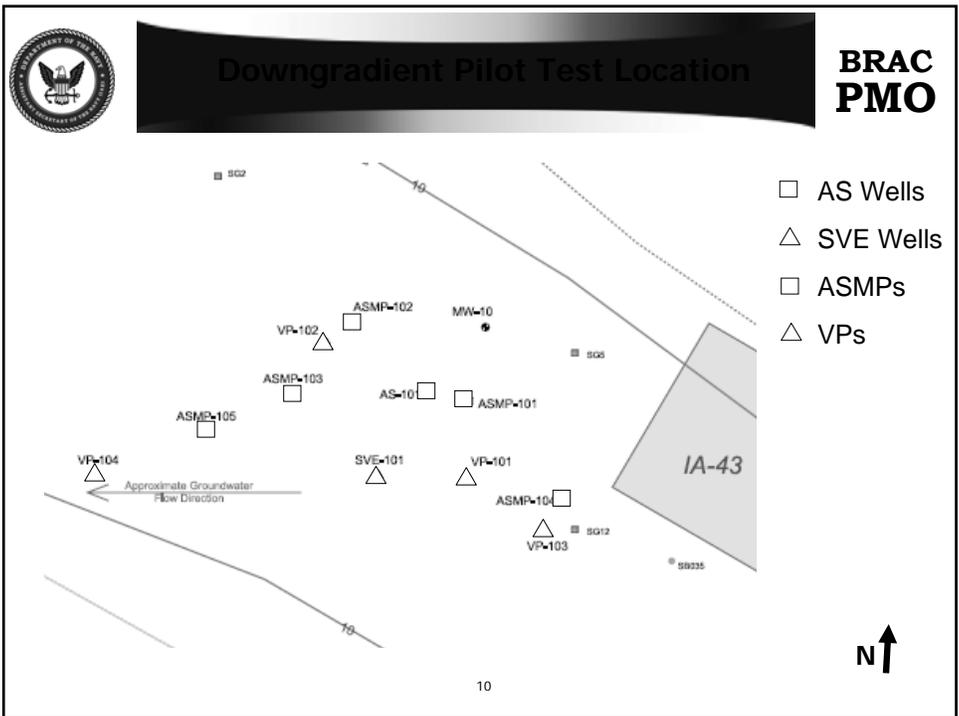
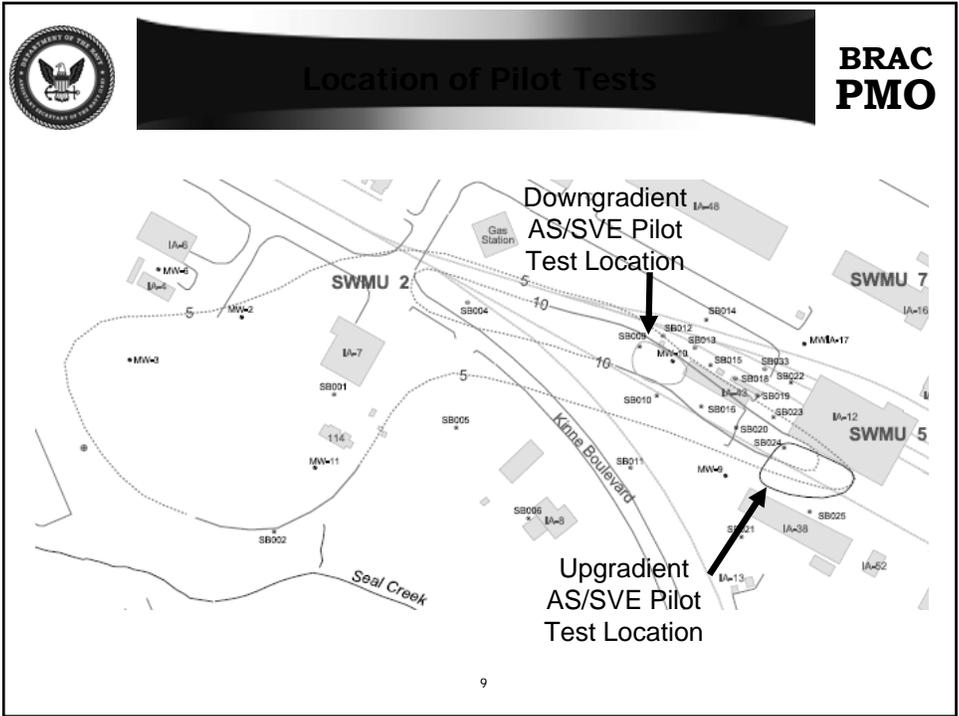


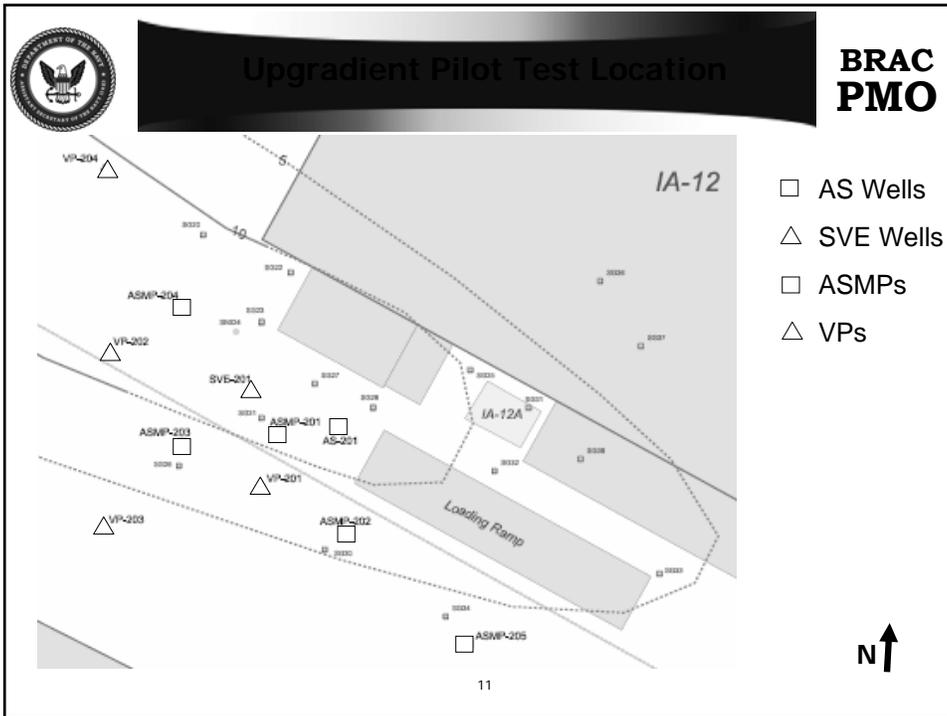
Air Sparge and Soil Vapor Extraction Testing

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- Each pilot test location will consist of:
 - 1 AS Well
 - 1 SVE Well
 - 5 Air Sparge Monitoring Points (ASMPs)
 - 4 Vapor Monitoring Points (VPs)
- Each pilot test will consist of 3 individual tests
 - SVE Test to determine vacuum influence and optimal flow rate
 - AS Test to determine the extent of the unsaturated zone that is in contact with the injected air
 - Combined AS/SVE Test to assess the effectiveness of the overall system

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-
- Groundwater Sampling during the Pilot Test**
- BRAC PMO**
- Prior to the pilot test, Navy will conduct a complete round of groundwater sampling to provide current information on the plume
 - Navy will install and sample one new groundwater monitoring well to delineate the downgradient edge of the plume
 - Navy will conduct post-test groundwater sampling to evaluate the impact of the pilot test on contaminant levels
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Pilot Test Schedule

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Date	Activity	Status
February 12 – 26, 2007	Well installation	Complete
February 22 – 27, 2007	Baseline Groundwater Sampling	Complete
February 27 – 28, 2007	SVE test at downgradient location	Complete
March 1 – 2, 2007	AS test at downgradient location	Complete
March 4 – 6, 2007	AS/SVE test at downgradient location	Complete
March 7, 2007	Post-test groundwater sampling at downgradient location	In progress
March 8 – 9, 2007	SVE test at upgradient location	Scheduled
March 9 – 10, 2007	AS test at upgradient location	Scheduled
March 12 – 14, 2007	AS/SVE test at upgradient location	Scheduled
March 15, 2007	Post-test groundwater sampling at upgradient location	Scheduled



AS/SVE Pilot Test Equipment

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Next steps

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- **Conduct Pilot Test (field work to be completed this month)**
- **Pilot Test Summary Report**
- **Revised Draft Final Feasibility Study Report**

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Questions?

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