



TETRA TECH EM INC.

March 6, 2009

Dear RAB Members,

On behalf of the Navy, enclosed please find the October 1, 2008 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.

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
OCTOBER 1, 2008

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 6:30 p.m. to 8:30 p.m. on October 1, 2008, at the Concord Senior Center 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.

The Navy Co-Chair, Darren Newton (Department of the Navy, Base Realignment and Closure [BRAC] Environmental Coordinator [BEC]), reviewed the agenda for the meeting on October 1, 2008.

Public Comments

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

II. AUGUST 2008 RAB MEETING MINUTES APPROVAL

Ms. Williams asked the RAB for comments on minutes from the RAB meeting held on August 6, 2008. 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 August 6, 2008.

III. RAB ANNOUNCEMENTS

Ms. Williams opened the floor to RAB announcements.

Edi Birsan (Concord resident) said he submitted comments on the Site 22A Remedial Investigation (RI). Mr. Newton responded the Navy will compile all comments received on the Site 22A RI into a response to comments (RTC), which will be attached to the Draft Final Site 22A RI as an appendix.

Mr. Newton announced that Lisa Anich (Friends of Mount Diablo Creek) has resigned from the RAB.

Phillip Ramsey (U.S. Environmental Protection Agency [EPA]) suggested that the Navy contact Linda Ballentine of the Contra Costa Conservation Resource District to check whether anyone from her organization would be interested in joining the RAB.

Navy Announcements/Action Item Follow-up

Mr. Newton reviewed the points of contact for the NAVWPNSTA Concord program, including the contacts for the Tidal Area and Inland Area.

Mr. Newton presented a new poster board that shows all of the current and former Inland Area ER sites. This revised map is based on a request by RAB member Mr. Birsan. Mr. Newton agreed to add the map to the Navy's website as well as to send it out the RAB electronically.

Mr. Newton announced the BRAC Program Management Office for the West has taken over ownership of the Inland Area from Naval Facilities Engineering Command (NAVFAC) as of October 1, 2008. NAVFAC also transferred the Tidal Area property to the U.S. Army on October 1, 2008.

Action Items

2. The Navy will post the Inland Area map on the Navy's website.
3. The Navy will send the Inland Area map to the RAB members electronically.

RAB Open Comment Period

Kent Fickett (Mount Diablo Audubon Society) announced the Local Reuse Authority (LRA) Community Advisory Committee (CAC) is finalizing its reuse alternatives, which will be submitted to the Concord City Council. He said the CAC holds a misperception that the Inland Area is extremely contaminated and will require substantial cleanup in preparation for transfer. Mr. Fickett said the RAB should identify a way to educate the CAC on the reality of the cleanup needs for the Inland Area. Mr. Newton said the Navy has been coordinating closely with the City of Concord to ensure they are aware of current site conditions. The Navy has provided the city ER documents for their consideration. Mike McGowan (Arc Ecology) introduced himself as a member of the Hunters Point Shipyard (HPS) RAB. The HPS RAB works closely with the City of San Francisco on its reuse plan. Mr. McGowan suggested the Navy produce an overlay of the City of Concord's reuse plans that the CAC can use with the base map to gain a better understanding of the ER needed for the Inland Area. Mr. Fickett suggested that cleanup costs be provided in a table on the map so the CAC can compare the areas with the funding needed to complete each site. Mr. Newton pointed out the Navy is continually updating the City of Concord. Mr. McGowan said that the feasibility study for each site will include cost-to-complete information that the City of Concord can access. Cindy Welles (Clyde resident) said the CAC might already have all of this information.

Mr. Birsan said that he has been attending the CAC meetings regularly for the past year and confirmed it does have all of the information from the Navy. The conflict is the Navy's ER goals do not coincide with the City of Concord's reuse plan. The City of Concord's developers will review the work that is necessary at the site and provide costs for achieving reuse standards at the site. Mr. Birsan said there is a substantial difference in the costs. Mr. Newton added the Navy and regulatory agencies are working together to ready each site for transfer to the City of Concord in compliance with all federal and state regulations. Mr. Newton also said that while the Navy's policy is that cleanup decisions should be made according to the current use of the property, the Navy is also preparing costs and remedial alternatives associated with achieving unrestricted reuse of each site. Mr. Fickett said the RAB should evaluate

whether the Navy's cost estimates for unrestricted reuse are comparable with the City of Concord's developers cost estimates.

IV. REMEDIAL PROJECT MANAGERS (RPM) UPDATE

Navy Update

Mr. Newton introduced Charles Perry, the new Lead RPM for the Navy. Mr. Perry is also the Lead RPM for Treasure Island. Mr. Perry presented the Navy RPM update on the ER Program activities that have occurred at the Inland Area since the last Inland Area RAB meeting, held in August 2008. Mr. Perry discussed a few of the key items on the Navy RPM Update handout (see Attachment D).

Mr. Perry announced the Navy will host a public meeting to accept oral and written comments on the Proposed Plan (PP) for Solid Waste Management Units (SWMU) Sites 2, 5, 7, and 18 on October 22, 2008, from 6:30 p.m. to 8:30 p.m. at the Concord Senior Center. The Navy has hired a court reporter to transcribe the comments provided at the public meeting. Mr. Perry also stated that the public comment period for the proposed plan is from October 7th through November 6th, and that comments may be submitted any time during the comment period. The Navy will respond to all substantive comments received during the comment period in a responsiveness summary, which will be included as an appendix to the Record of Decision (ROD).

Mr. Perry said the Navy issued the Annual Amendment to the Site Management Plan (SMP) for the Inland Area on September 23, 2008. There was an incorrect link that has been fixed, and the Final Annual Amendment to the SMP was reissued.

The Navy printed a public notice in the *Contra Costa Times* for the Areas of Potential Interest sites to solicit personnel who may have worked at any of the sites and who would be willing to be interviewed.

Mr. Perry said the Navy also issued a press release soliciting information from the public for the Historical Radiological Assessment (HRA). Mr. Birsan said that he provided the Navy with a list of people to contact to obtain additional information for the HRA. Mr. Newton confirmed the Navy received the information and followed up with the contacts Mr. Birsan provided. Mr. Birsan requested an update on the HRA before the draft is issued in March 2009. Mr. Newton responded the Navy will review the various milestones and identify the next RAB HRA update.

EPA Update

Mr. Ramsey said EPA issued a letter to the Navy on September 16, 2008 concurring with the Annual Amendment to the SMP. The Final Annual Amendment to the SMP is in conjunction to the congressional approval for funding for fiscal year 2009. Mr. Newton said the Navy schedules the ER work 2 years out to secure funding. If the funding is not awarded, the Navy and regulatory agencies will meet and re-prioritize the ER work.

Mr. Ramsey continued that EPA provided comments on the Site 23A Explosive Ordnance Disposal (EOD) Supplemental Preliminary Assessment (PA) on September 18, 2008.

Mr. Ramsey said the RPMs held a teleconference call on the Site 24A Draft Final Site Inspection (SI) Work Plan (WP) before the Navy issued it.

Mr. Ramsey said EPA provided the Navy with comments on the PP for SWMU Sites 2, 5, 7 and 18.

Mr. Ramsey stated EPA reviewed the Draft Site 22A RI.

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

Alan Friedman (Water Board) said the regulatory agencies are working with the Navy to cleanup the ER sites prior to transfer of the Inland Area to the City of Concord.

Mr. Birsan asked if the Water Board is concerned with the red legged frog and California tiger salamander, which are both special status amphibians that live in the Inland Area. Mr. Friedman said the California Department of Fish and Game and the U.S. Fish and Wildlife Service are the natural resource trustee agencies involved with the ER of the Inland Area. Those agencies review and comment on the documents produced by the Navy. Mr. McGowan said that, although there are endangered species at the Inland Area, there are various ways to conduct cleanup in a manner that protects endangered species.

V. SITE 27 TIME CRITICAL REMOVAL ACTION (TCRA) UPDATE

Mr. Perry and Yohji Ono (Tetra Tech) presented an update on the Site 27 TCRA (Attachment E).

Ms. Williams asked about the depth of the Underground Storage Tank (UST) excavation at Building IA-36. Mr. Ono responded the UST excavation was approximately 15 feet below ground surface. Ms. Williams asked if the Navy was concerned with chlordane throughout Site 27. Mr. Newton said that chlordane was found only around the perimeter of Buildings IA-20 and IA-36 at Site 27. Mr. Perry added the removal action is driven by the metal concentrations found in the soil that may pose unacceptable risk to the environment, but the chlordane, while not a driver of the TCRA, is collocated with the elevated metals and will be removed during the TCRA.

Mr. Fickett asked where the excavated soil at Site 27 will be held. Mr. Ono said the excavated soil will be placed in a stockpile so the Navy can collect samples and characterize the waste, which will determine the type of landfill that will accept the soil. Mr. Ono said the soil pile will be completely covered while the Navy collects the confirmation samples and coordinates the disposal.

Mr. Birsan asked if the Navy has sampled beneath Building IA-36. Joanna Canepa (Tetra Tech) responded that soil samples were collected beneath the building. No chemical releases were indicated under the building.

Mr. Fickett asked when the Navy plans to remove the buildings in the Inland Area. Mr. Newton said the Navy will not remove any of the buildings in the Inland Area. A no further action ROD will be prepared for Site 27 once the TCRA is complete.

Mr. McGowan asked why mercury was not assessed in mice onsite. Ms. Canepa said the Navy evaluated risk to the harvest mouse from mercury at Site 27.

Mr. Birsan asked if depleted uranium, which was used at the Former NWS SBD Concord in the 1980s, was evaluated in soils at Site 27. Mr. Ramsey said that Building IA-36 was a materials testing laboratory, which is why metals have been found in the soil. Mr. Birsan said that the military was not careful in disposing of contaminants such as depleted uranium and does not want the Navy to overlook major issues at the site. Mr. Newton said the Navy conducted research on the uses of Site 27, and there is no indication that depleted uranium would be present. The Navy is assessing the entire Inland Area in the HRA. The Navy will address any issue discovered during the research for the HRA.

VI. SITE 22A DRAFT RI UPDATE

Sylwester Kosowski (Navy RPM) and Tom Shoff (Tetra Tech) presented the Site 22A Draft RI update. The presentation is included as Attachment F.

Mr. Fickett said that Mr. Birsan provided the Navy with comments on the Site 22A Draft RI. Mr. Fickett asked when the Navy will provide Mr. Birsan responses to his comments. Mr. Newton said the Navy has 60 days to respond to the comments received on the Site 22A Draft RI and publish the Draft Final RI. All of the comments received and the Navy's responses will be included in an appendix to the Draft Final Site 22A RI. Comments from the regulatory agencies and the public are due to the Navy by November 20, 2008. The RAB agenda for the February 4, 2009 will include an update of Site 22A RI

Mr. Fickett asked about City of Concord plans for reuse of Site 22A. Mr. Birsan said that Site 22A is slated for open space or a recreational park. Mr. Perry said the Navy's human health risk assessment for the industrial land use incorporates a scenario in which a person spends 5 days of every week at the site for 30 years, which is conservative for open space use.

Mr. Fickett asked if the Navy assessed amphibians in soil. Mr. Shoff stated amphibians were assessed, and arsenic did not pose an unacceptable risk to amphibians.

Mr. Birsan mentioned a 1947 newspaper article that discusses Site 22 being sprayed for fire control. Mr. Shoff said the Navy's characterization samples showed that there is arsenic at Site 22 as a result of the historical fire control spraying, and the spraying was targeted at the magazine structures.

Action Item

4. The RAB agenda for February 4, 2009 will include an update of Site 22A RI.

VII. OTHER TOPICS, NEXT MEETING, AND ACTION ITEMS

Mr. Newton asked if the RAB is interested in a year-end gathering in December 2008. The RAB agreed to hold a holiday event at the Concord Police Station in the Community Room on December 3, 2008. The Navy will send out an e-mail to the RAB to coordinate the holiday event on December 3, 2008.

The agenda for February 4, 2009, includes the following presentation:

- Site 22A RI Update

Action Item

5. The Navy will send out an e-mail to the RAB to coordinate the holiday event on December 3, 2008.

The following action items were generated during the RAB meeting on October 1, 2008.

No.	Action Item	Target Date for Completion	Responsible Person	Completion Date (or Status)
1	The Navy will finalize and distribute the August 6, 2008, RAB meeting minutes.	10/20/08	C. Hunter	This action item was completed.
2	The Navy will post the Inland Area map on the Navy's website.	10/30/08	D. Newton	This action item was completed.
3	Mr. Newton will send the Inland Area map to the RAB members electronically.	10/2/08	C. Hunter	This action item was completed.
4	The RAB agenda for the February 4, 2009 will include an update of the Site 22A RI.	2/4/09	S. Kosowski	This action item was completed.
5	The Navy will send out an e-mail to the RAB to coordinate the holiday event on December 3, 2008.	11/7/08	C. Hunter	This action item was completed.

ATTACHMENT A

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

OCTOBER 1, 2008

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

OCTOBER 1, 2008

<u>Name</u>	<u>Affiliation</u>	<u>Telephone</u>
Wayne Akiyama	Shaw Group	(925) 256-6746
Edi Birsan*	Concord Resident	(510) 812-8180
Joanna Canepa	Tetra Tech	(425) 877-2806
Kent Fickett*	Mt. Diablo Audubon Society	(925) 254-5156
Alan Friedman	Water Board	(510) 622-2347
Carolyn Hunter	Tetra Tech	(415) 222-8297
John Kaiser	Water Board	(510) 622-2368
Sylwester Kosowski	Navy, BRAC PMO West	(619) 532-0981
Mike McGowan	Arc Ecology	(415) 643-9111
Darren Newton	Navy, BRAC PMO West	(619) 532-0963
Yohji Ono	Tetra Tech	(415) 222-8301
Dennis Parker	Navy, BRAC PMO West	(619) 532-0954
Charles Perry	Navy, BRAC PMO West	(619) 532-0911
Tom Shoff	Tetra Tech	(415) 222-8347
Philip Ramsey	EPA	(415) 972-3006
Cindy Wells*	Clyde Resident	(925) 685-2698
Mary Lou Williams*	Concord Resident	(925) 685-1415
Shon Wolf*	Clyde Resident	(925) 686-5942

Notes:

*	Community Restoration Advisory Board (RAB) Member
BRAC PMO	Base Realignment and Closure Program Management Office
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**

OCTOBER 1, 2008

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INLAND AREA AGENDA

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

Wednesday, October 1, 2008
6:30 p.m. – 8:30 p.m.
Location: Concord Senior Center
2727 Parkside Circle
Concord, CA 94519

- 6:30 – 6:45 Call to Order
- Welcome
 - Introductions/Agenda Review
 - Approval of August 2008 Meeting Minutes (Last Inland Area Meeting)
 - Public Comment Period
- Lead: Community Co-chair
- 6:45 – 6:50 Announcements
- Review of Action Items
- Lead: Navy Co-chair
- 6:50 – 7: 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
- 7:30 – 7:40 Break
- 7:40 – 8:05 Presentation: Site 27 Time Critical Removal Action Update
Navy RPM: Charles Perry
- 8:05 – 8:25 Presentation: Site 22A Draft Remedial Investigation Update
Navy RPM: Sylwester Kosowski
- 8:25 – 8:30 Meeting Evaluation and Topic Suggestions of Future Meetings
Next RAB Meeting: November 5, 2008 (Tidal Area)
February 2009 Agenda Approval
- 8:30 Adjourn

Next RAB Meetings

- Tidal Area: November 5, 2008
- Inland Area: February 4, 2009

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:

<http://www.bracpmo.navy.mil/brac2005/bracbases/ca/concord/default.aspx>

BRAC Environmental Coordinator: Mr. Darren Newton (619) 532-0963, Darren.newton@navy.mil

Community RAB Co-Chair: Ms. Mary Lou Williams, Mlou1015@aol.com

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

OCTOBER 1, 2008

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Navy Remedial Project Manager (RPM) Update for 1 October 2008 Meeting of Naval Weapons Station Detachment Concord Restoration Advisory Board (RAB)

Summary of Navy Base Realignment and Closure (BRAC)
Inland Area RPM activities since the last RAB meeting held on
Wednesday, 6 August 2008

Installation Restoration/Munitions Response Programs Sites

- August 6, 2008 – Completed soil sampling for the Military Munitions Response Program (MMRP) Site Inspection at the Former Inland Burn/Railroad Siding Excavation Area, Black Pit at Red Rock, Eagles Nest EOD, and the HE-5 Area.
- August 12, 2008 – Met with the regulatory agencies to discuss the Site 29 (Building IA-25) Data Gaps Investigation and future sampling requirements.
- August 25, 2008 – Received comments on the Draft Site 22 (Main Magazine Area) Feasibility Study (FS) Report from the Regulatory Agencies and RAB. The Draft Final Site 22 FS Report scheduled for October 2008.
- August 29, 2008 - Researched and identified more than ten additional local and regional organizations (with focus on veterans) to expand the distribution of the Historical Radiological Fact Sheet #1. Distributed the fact sheet and followed up to confirm display.
- September 2 & 3, 2008 – Visited the National Archives in College Park Maryland and Washington DC to research records pertinent to the Historical Radiological Assessment (HRA).
- September 5, 2008 – Submitted the Final Response to Comments (RTCs) on the Site 27 Time Critical Removal Action (TCRA) Action Memorandum (AM) and Work Plan.
- September 9, 2008 - Submitted Solid Waste Management Units (SWMUs) Sites 2, 5, 7, and 18 Fact Sheet and Draft Final Proposed Plan (PP) to the Regulatory Agencies for review. Received concurrence from the Regulatory Agencies on the PP and Fact Sheet. The PP and Fact Sheet is scheduled to be distributed to the public on October 3, 2008. The Public Meeting is scheduled on October 22, 2008.
- September 12, 2008 – Submitted Final Inland Area Site Management Plan (SMP) Fiscal Year 2009 Update.
- September 15, 2008 – Public notice for the Area of Potential Interest Investigation was published in the Contra Costa Times.
- September 19, 2008 – Submitted the draft Inland Area Fact Sheet for regulatory review. Comments were due September 29, 2008. Final Fact Sheet is scheduled to be distributed to the mailing list October 2008.

- September 19, 2008 - Submitted Draft Site 22A (Group 1-5 Magazine Areas) Remedial Investigation (RI) Report to the Regulatory Agencies and RAB for review. Comment period ends November 19, 2008.
- September 19, 2008 – Received comments on the Draft Supplemental Preliminary Assessment (PA) Report for Site 23A (Inland Area EOD Site).
- September 30, 2008 – Distributed the Site 24A (Former Pistol Firing/Grenade Launching Range) Draft Final Site Inspection (SI) Work Plan to the Regulatory Agencies and RAB for review. Comment period ends October 31, 2008.
- October 1 and 2, 2008 – Conducted an onsite scoping meeting with the Regulatory Agencies for the PA/SI Work Plan for the Areas of Potential Interest (AOPI).
- Finalized Press Release for HRA (very similar to Public Notice). Began development of list of proposed papers/radio stations/outlets for submittal. Scheduled to send out in October 2008.

ATTACHMENT D

**INSTALLATION RESTORATION SITE 27
TIME-CRITICAL REMOVAL ACTION PRESENTATION
RESTORATION ADVISORY BOARD MEETING
FORMER NAVAL WEAPONS STATION SEAL BEACH
DETACHMENT CONCORD, CALIFORNIA**

OCTOBER 1, 2008

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Installation Restoration (IR) Site 27



Time-critical Removal Action for Metals and PCBs

Naval Weapons Station Seal Beach
Detachment Concord, Concord, California

Restoration Advisory Board Meeting



Site 27 Buildings



Site 27 Boiler House (Bldg IA-36) and
Chemical and Materials Testing Laboratory (Bldg IA-20)



CATEGORIES OF CERCLA REMOVAL ACTIONS (EPA)



- **EMERGENCY REMOVAL ACTION**
 - Immediate action required
 - Notification by telephone to EPA, state and local officials

- **TIME CRITICAL REMOVAL ACTION**
 - Planning period less than 6 months
 - Public Notification with 30 day comment period

- **NON-TIME CRITICAL REMOVAL ACTION**
 - Planning period greater than 6 months
 - Prepare Action Memorandum including Engineering Evaluation/Cost Analysis (EE/CA) and additional plan documents (SAP, etc.)
 - Public Notification with 30 day comment period



Risk-based Ecological Removal Goals



Site 27 TCRA Risk-Based Ecological Removal Goals

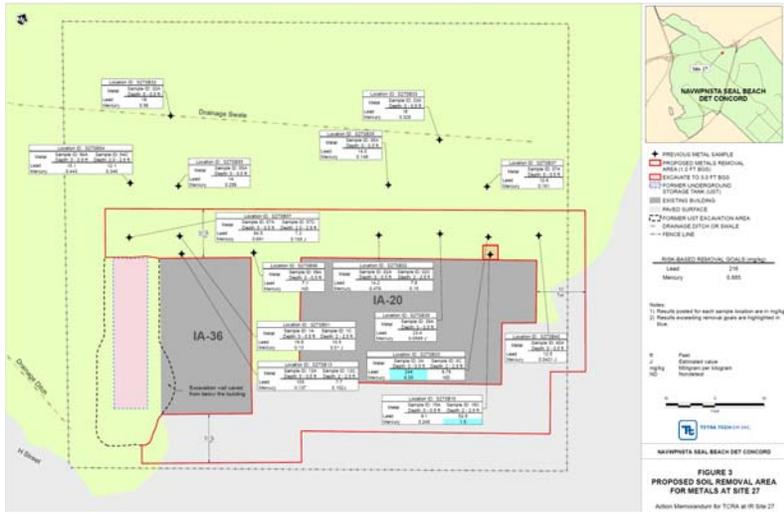
Receptor	Lead (mg/kg)	Mercury (mg/kg)	Aroclor-1248 (mg/kg)	Aroclor-1254 ^a (mg/kg)
American Robin	216	0.88	NA	0.92
Western Harvest Mouse (Omnivore)	NA	NA	0.06	0.37

Notes:

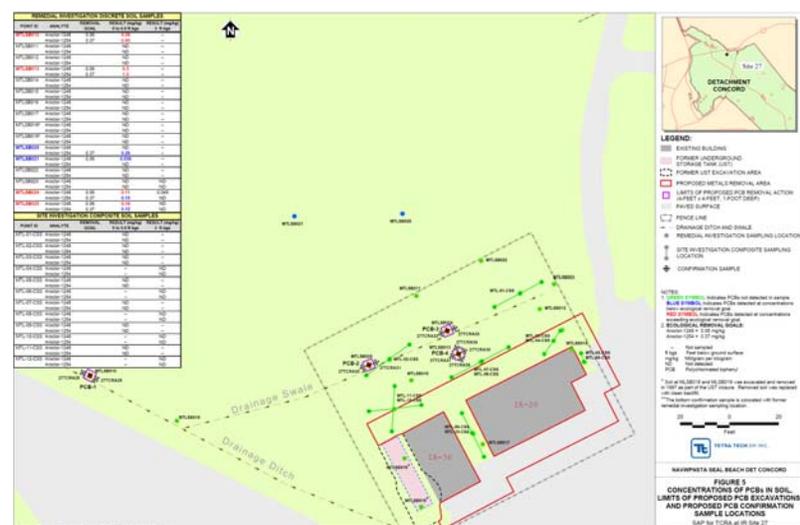
- a **Bold value indicates lowest risk-based removal goal for the exposure medium.**
 NA Not applicable (This chemical was not considered a COPEC for this receptor)



Soil Results for Lead and Mercury and Proposed TCRA Removal Area



Soil Results for PCBs and Proposed TCRA Removal Areas (4)





Summary of TCRA Removal Areas



TCRA Soil Removal Area	COPECS	Maximum Detected Concentration (mg/kg)	Removal Goal (mg/kg)	Description of Excavation	Estimated Volume of Excavated Soil
Metals Removal Area	Lead	244	216	Removal of soil within 10 feet of Buildings IA-20 and IA-36 (approximately 2,440 square feet without buildings) to 1 foot bgs	90.4 cy
	Mercury	6.05	0.88		1.2 cy
	<i>Total</i>				92 cy
PCB Removal Area (PCB-1 through PCB-4)	Aroclor-1248	0.5	0.06	Removal of soil from 4-foot by 4-foot square area around four locations in the vicinity of Buildings IA-20 and IA-36 to 1 foot bgs	2 cy
	Aroclor-1254	1.0	0.37		

Notes:

bgs Below ground surface
 cy In-place cubic yards
 COPEC Chemicals of potential ecological concern
 mg/kg Milligram per kilogram
 PCB Polychlorinated biphenyls
 TCRA Time-critical removal action



Next Steps at Site 27



- TCRA Field Removal Completion (Final Remedy for Site 27)
- Post Removal Sampling to Support the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Determination
- Screening Level Ecological Risk Assessment (SLERA)
- Removal Action Completion Report (RACR)
- No Further Action Proposed Plan (NFA PP)
- No Further Action Record of Decision (NFA ROD)



TCRA Schedule



- Final TCRA Action Memorandum and Work Plan -10/3/2008
- TCRA field work – 10/14/2008 to 11/20/2008
- Complete Confirmation Sample Data Validation 12/5/2008
- Draft Removal Action Completion Report (RACR) and Screening-level Ecological Risk Assessment (SLERA) – 5/14/2009

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Questions?



**Aerial Photo
from June 27,
2002**

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ATTACHMENT E

**REMEDIAL INVESTIGATION REPORT SITE 22A MAGAZINE AREAS PRESENTATION
RESTORATION ADVISORY BOARD MEETING
FORMER NAVAL WEAPONS STATION SEAL BEACH
DETACHMENT CONCORD, CALIFORNIA**

OCTOBER 1, 2008

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Concord Naval Weapons Station



Remedial Investigation Report Site 22A Magazine Areas



**Sylwester Kosowski, Navy Remedial Project Manager
Restoration Advisory Board Meeting
October 1, 2008**



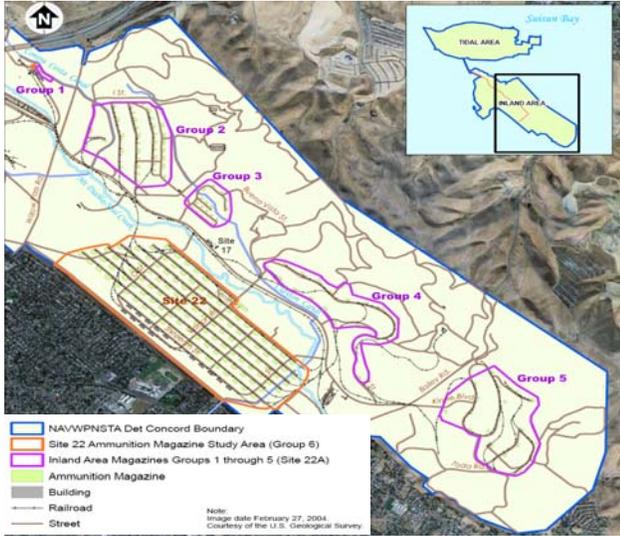
Presentation Overview



- Overview of Site 22A History
- Overview of Remedial Investigation and Sampling Approach
- Results of the Remedial Investigation
- Schedule
- Questions



Site 22A Magazine Areas



Site 22A: 504 acres divided into 5 groups with 102 magazines and no buildings



History of Magazine Areas Overview



- 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 were inspected, certified clean, and are currently not in use
- The Navy currently leases the area that encompasses the magazines for cattle grazing





Site 22A Investigation Overview



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-impacted soil pose an unacceptable risk to human health or the environment?
- Were arsenic-containing herbicides applied along fence lines to create fire breaks?

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Site 22A Sampling Approach Overview



Tier 1 Sampling (August 2007)

- 56 surface soil samples were collected adjacent to the magazines
- 16 surface soil samples in open-grassland areas

Tier 2 Sampling (January 2008)

- Subsurface soil samples were collected from depths of 1.5, 3, 5, and 10 feet at 9 locations where the highest arsenic concentrations were detected in surface soil
- 11 surface soil samples were collected within ditches downstream from Tier 1 sampling locations
- 24 surface soil samples were collected away from the elevated concentrations (step-out sampling) to define the horizontal extent of arsenic contamination
- 9 surface soil samples were collected along fence lines (fire breaks)

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Tier 1 Field Sampling Effort



Marking Sampling Locations Using a GPS

- Surface soil samples were collected from 72 locations at Site 22A



Soil Sampling Using a Disposable Trowel

7



Tier 2 Soil Sampling Effort



- Tier 2 Sampling:
 - Advanced 9 Geoprobe borings
 - Collected 20 step-out samples
 - Collected 11 surface soil samples from ditches



Geoprobe Rig

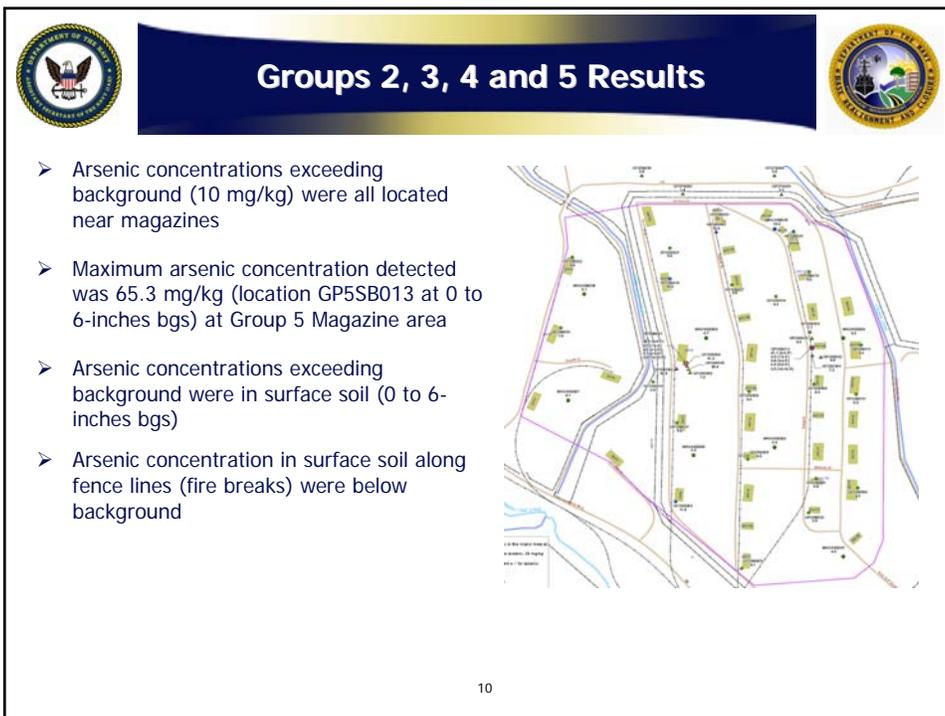
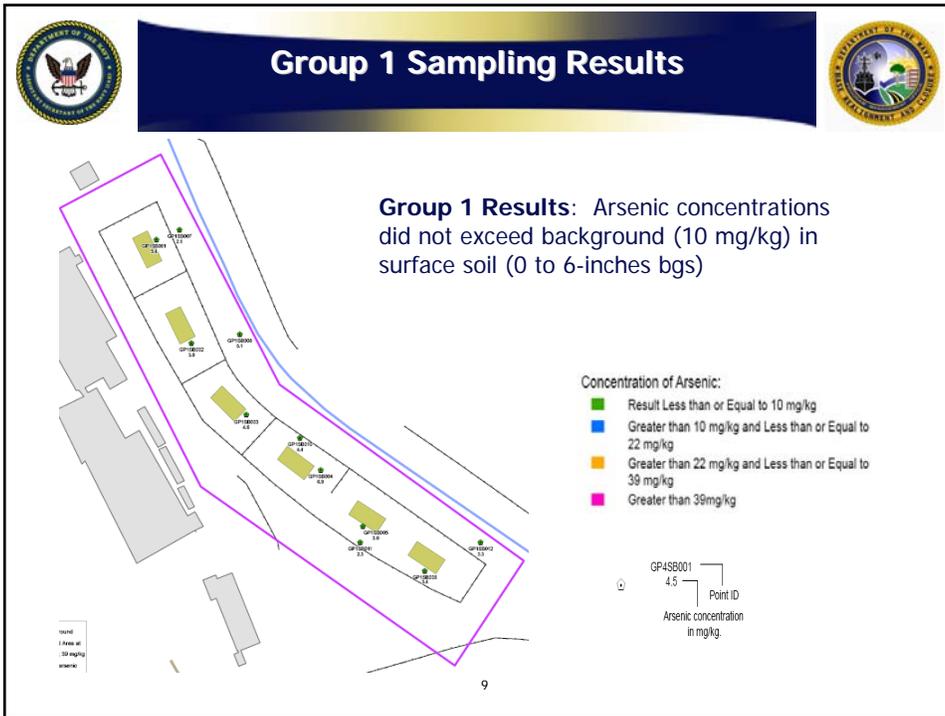


Subsurface Soil Samples for Lab Analysis



Ditch Sampling

8





Human Health Risk Assessment (HHRA)



Four HHRA receptors were evaluated:

- Current rancher
- Future industrial worker
- Future construction worker
- Future resident (adult and child)



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HHRA Results



- Rancher, industrial, and construction worker Scenarios: Cancer risks are below $1E-06$ or within the risk range of $1E-04$ to $1E-06$ for all magazine areas.
- Residential Scenario: Cancer risks are within the risk management range for all magazine areas using federal toxicity criteria for arsenic. Cancer risks using California toxicity criteria slightly exceeding the upper end of the range ($1E-04$) for Groups 3, 4, and 5.
- Noncancer hazard: Below the threshold hazard index of 1 for rancher, industrial, construction worker, and residential scenarios.

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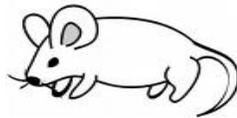


Ecological Risk Assessment



The ecological risk assessment evaluated the following receptors:

- Terrestrial plants
- Terrestrial invertebrates
- Amphibians
- Birds and mammals



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Ecological Risk Assessment Results



Results of the "Step 2" screening level ecological risk assessment:

- Arsenic was found to pose potential unacceptable risk to plants and terrestrial invertebrates, amphibians, and small mammals (western harvest mouse and California ground squirrel)
- Arsenic concentrations do not pose unacceptable risk to birds or large mammals (black-tail deer and grey fox)

Results of the "Step 3a risk refinement":

- Arsenic in soil does not pose unacceptable risk to ecological receptors and does not warrant further evaluation in the baseline ecological risk assessment

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Study Questions Summary



- Were arsenic-containing herbicides applied only around magazines or were they applied throughout the magazine areas?
Answer: Only around the magazines (within 90 feet).
- Has arsenic in surface soil (above background) migrated to deeper soils?
Answer: No, arsenic concentrations above background have remained within the upper 6-inches of soil.
- Has arsenic in surface soil (above background) migrated to ditches or low-lying areas?
Answer: Yes, possible migration by surface water runoff or the sample collected with the radius of herbicide spraying.
- Does the arsenic-impacted soil pose an unacceptable risk to human health or the environment?
Answer: Potential risks to human health are within EPA's risk range, and slightly exceeding the upper end (1E-04) using California toxicity criteria. Arsenic in soil does not pose unacceptable risk to ecological receptors.
- Were arsenic-containing herbicides applied along fence lines to create fire breaks?
Answer: No. Arsenic concentrations in all 9 fire break samples were below background.

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RI Recommendation



The Navy recommends conducting a Feasibility Study to address human health risks associated with arsenic-impacted surface soil.

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Site 22A Schedule



- September 19, 2008 – Draft RI report submitted to regulatory agencies
- November 20, 2008 – Agency comments on draft RI report
- January 18, 2009 – Issue draft final RI report
- February 17, 2009 – Issue final RI report

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Questions ?



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