PROPOSED PLAN / DRAFT REMEDIAL ACTION PLAN

Former North Building Ways, Investigation Area A2

Former Mare Island Naval Shipyard, Vallejo, California

September 2009

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Your Comments Make a Difference!

Public participation is an important part of the cleanup process and may influence the final decision of the selected alternative for IA A2. There are many opportunities for public involvement. Dates to remember are shown below and on Page 7.

Dates to Remember

Public Comment Period:

September 22, 2009 until October 21, 2009

Public Meeting:

September 23, 2009 at 7:00 p.m.

Mare Island Conference Center, Vallejo, California

*A glossary of terms and definitions is provided on Page 6.

INVITATION TO COMMENT

The Department of the Navy invites you to comment on this No Further Action (NFA) Proposed Plan/Draft Remedial Action Plan (PP/Draft RAP) for the area known as Investigation Area (IA) A2 at former Mare Island Naval Shipyard in Vallejo, California (Figure 1).

Figure 1. Vicinity Map

The Navy proposes no environmental cleanup action is necessary for IA A2 under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Total petroleum hydrocarbons (TPH) and polychlorinated biphenyls (PCB) will be addressed under programs that are separate from the CERCLA program. The Navy proposes NFA for this PP/Draft RAP based on a risk management decision that concluded that no unacceptable risks to human health or the environment are remaining at the site from residual hazardous substances.

The Navy encourages you to participate by submitting written or oral comments on the PP/Draft RAP for NFA under CERCLA for IA A2. The Navy is issuing this PP/Draft RAP pursuant to Section 117(a) of CERCLA and Sections 300.430(f) (2) and (3) of the National Oil and Hazardous Substance Pollution Contingency Plan (NCP) to ensure that the public has the opportunity to comment. The Navy invites you to attend a public meeting to discuss this PP/Draft RAP scheduled on September 23, 2009, at 7:00 p.m. at the Mare Island Conference Center, in Vallejo, California. The public comment period begins on September 22, 2009, and ends on October 21, 2009.

MARE ISLAND HISTORY

Mare Island was the first naval shipyard established on the Pacific coast. It is located in the western part of the City of Vallejo and borders the eastern portion of San Pablo Bay (Figure 1). The Navy purchased Mare Island in 1853 and commenced shipbuilding operations in September 1854. The primary ship construction and maintenance area of Mare Island was established along the northeastern shore of the original island, adjacent to Mare Island Strait. During World War II, Mare Island reached peak capacity for shipbuilding, repair, overhaul, and maintenance. After the war, Mare Island was considered one of the primary installations for construction and maintenance of the Navy's Pacific fleet of submarines. However, shipyard activity decreased because of

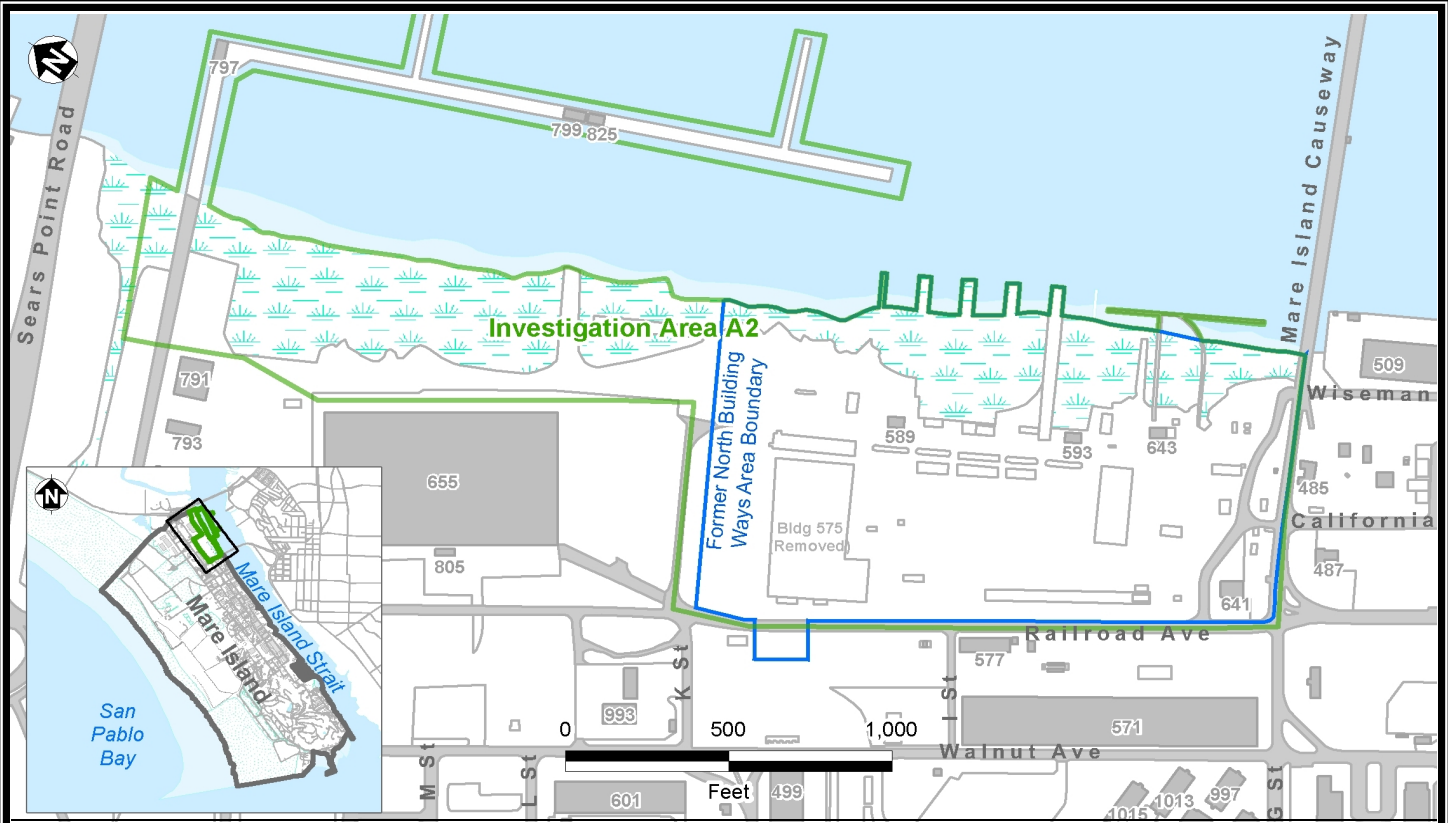


Figure 2. Former North Building Ways and Investigation Area A2 Site Features

decreasing Navy needs in a postwar environment. The Mare Island Naval Shipyard was closed on April 1, 1996, after 142 years of operation.

SITE INFORMATION

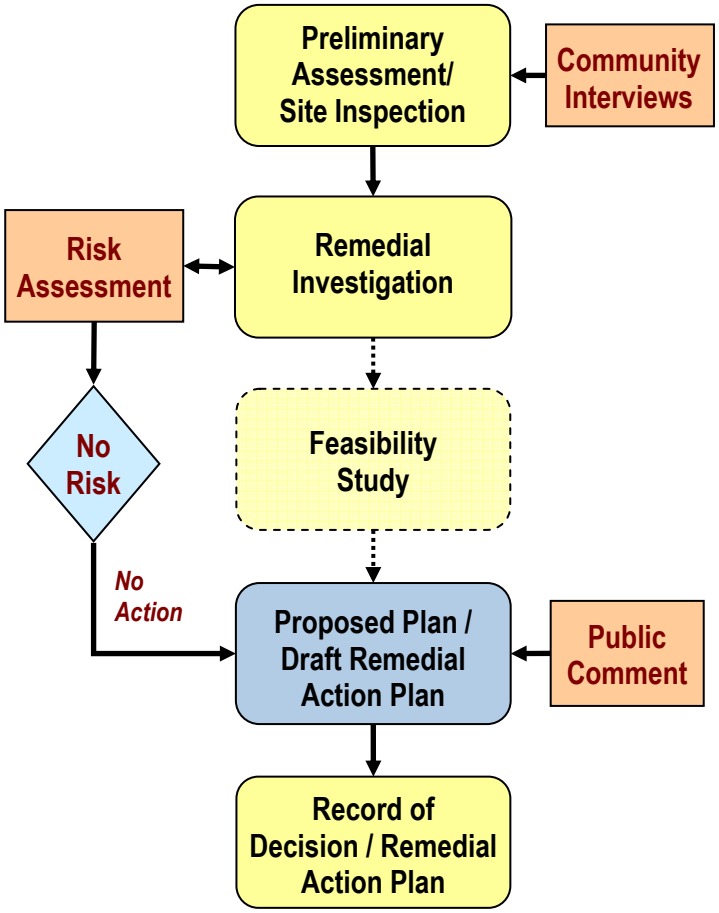
IA A2 occupies approximately 60 acres at the northeastern end of the former facility (Figure 2). The topography is relatively flat, with ground surface elevations that slope towards Mare Island Strait, which is located along the eastern edge of the IA. IA A2 contains both upland habitat and tidal wetlands that are adjacent to Mare Island Strait (Figure 2).

IA A2 includes the Former North Building Ways (FNBW) Area, which is the only CERCLA site within IA A2. The FNBW Area occupies approximately 40 acres of IA A2. The Navy used the FNBW Area to assemble destroyers and landing craft during World War II. After World War II, activities related to shipping at the site were phased out, including building use and most of the wharf. Building 575 (removed) was subsequently used during the 1950s for repair of landing crafts, and Building 593 was used to decontaminate radium dials and markers, decommission equipment containing mercury, and to store drums for low-level radioactive material. Building 589 was previously an electrical substation and used for storage. Building 641 was a fire station, and Building 643 was an electrical substation.

THE CERCLA PROCESS

This PP/Draft RAP details the Navy's recommendation for NFA and provides an overview of the environmental investigations and results for the site. Under federal cleanup regulations, it is not necessary to develop and analyze multiple cleanup options when the levels of contamination at the site are low and do not pose a significant risk to human health or the environment for its current or proposed future use. Therefore, this document provides only the proposed NFA recommendation and a summary of the data from the investigations that support the preferred action. This recommendation is based on extensive field investigations, laboratory analysis, evaluation of current and future reuses, and a thorough assessment of potential impacts to human health and ecological receptors.

CERCLA PROCESS OVERVIEW



The community has an opportunity to comment on the PP/Draft RAP, as required by CERCLA. The PP/Draft RAP describes the site history, environmental studies, past environmental cleanup, and how the recommended action will protect human health and the environment. After the public comment period has ended, the Navy will consider the public comments during preparation of a record of decision/remedial action plan (ROD/RAP), which will document the selected alternative. Additional information on IA A2 and the FNBW Area may be found in numerous documents, which are summarized in the Final Revision 1 Remedial Investigation (RI) report for the IA A2, FNBW Area, dated September 22, 2008. The RI report and other site documents are available at the information repository, located at the John F. Kennedy Library in Vallejo, California (see Page 8 for information).

Regulatory agency representatives of the Department of Toxic Substances Control (DTSC), the California Regional Water Quality Control Board, San Francisco Bay Region (Water Board), and the U.S. Environmental Protection Agency (EPA) have been coordinating and overseeing environmental cleanup at Mare Island. These agencies and the Navy make up the Base Realignment and Closure (BRAC) Cleanup Team (BCT).

PREVIOUS INVESTIGATIONS AND SUMMARY OF SITE RISK

Multiple investigations were conducted at IA A2 to investigate former on-site activities.

Remedial Investigation

During the RI, initial sampling was conducted between 1997 and 1998 to collect 165 soil, 18 groundwater, and 40 sediment samples across the FNBW Area to fully assess potential contamination and evaluate potential receptors that might be affected at the site. The initial samples indicated that TPH-diesel, TPH-motor oil, polycyclic aromatic hydrocarbons (PAH), iron, and lead were detected at concentrations above screening criteria in soil.

During subsequent step-out sampling in 2003, TPH-diesel, iron, and lead were detected at concentrations below their screening criteria. Elevated concentrations of PAHs detected at the site were determined to be representative of ambient conditions at Mare Island. TPH-motor oil that remained at the site at concentrations above the screening criterion was addressed under the Navy's separate petroleum program (see Page 4).

Risk Assessments

The Navy performed a baseline risk assessment, which evaluated the potential for chemicals of concern to cause adverse effects to human health or ecological receptors. The results of the human health risk assessment indicated carcinogenic risk was greater than the minimum threshold that may indicate a risk, but was within the risk management range EPA considers acceptable. The risk assessment identified PAHs as the main concern; however, the cancer risks associated with PAHs were determined in the RI report to represent ambient conditions at Mare Island.

View of Former North Building Ways Area IA A2

The potential risks to ecological receptors at IA A2 were evaluated for onshore and offshore areas. The onshore risk assessment presented in the IA A2 RI concluded ecological risk at IA A2 is not unacceptable because it is similar to the risk posed by concentrations of chemicals found in the natural environment. The offshore risk assessment likewise concluded that sediment posed minimal risk to benthic invertebrate and vertebrate communities. The offshore areas are being further characterized in the upcoming RI report for IA K, which includes all offshore areas along Mare Island Strait.

Radiological Investigation

The only area within IA A2 identified as having a historical radiological use was Building 593. A site investigation conducted in 1992 assessed the potential radiation contamination associated with Building 593 under the basewide radiological program. Sampling efforts included collection of air, surface wipe, waste liquid, and soil samples from in and around the building. After this effort, additional soil from outside the building and a portion of concrete from inside the building were removed. Based on the results of the investigation, DTSC, the state Department of Health, and EPA concurred with the finding of NFA for Building 593 in 1996.

Petroleum Program

The Navy finished implementing a Petroleum Corrective Action Plan (PCAP) in May 2009 to address petroleum hot spots (small contaminated areas) identified during previous site investigations conducted at IA A2 between 1997 and 2003. Field activities involved removing surface and subsurface soil that exceeded the screening criterion of 500 milligrams per kilogram for TPH-motor oil. A total of 17 areas of concern were excavated (3,378 cubic yards of petroleum-contaminated soil) to depths of approximately 5 feet below ground surface. The excavated areas were backfilled with clean fill material. TPH-motor oil was reported below the screening criterion in all confirmation soil samples. A final completion and closure report is being prepared for the site under the Navy's separate petroleum program.

PCB Program

IA A2 was also included as part of a basewide assessment of PCB contamination. The PCB assessment evaluated 13 sites, including Buildings 163, 589, 591 (demolished), 593, 641, 643, 799, and 825, the railroad tracks, and the former pier areas. Of the 13 sites, three are currently recommended for closure, and the other 10 are undergoing further verification sampling and abatement. Soil will be excavated if confirmation soil samples exceed the Toxic Substances Control Act screening criterion of 1 part per million. The results of the sampling will be documented in forthcoming site closure reports under the Navy's separate PCB corrective action program.

Although there are no records of PCB releases into Mare Island Strait from any of the eight PCB sites located on the pier, sediment adjacent to the pier is being evaluated and further characterized in the upcoming RI report for IA K.

DESCRIPTION OF THE NO ACTION ALTERNATIVE

No action will be taken to alter or change the conditions at the site. No action is appropriate for sites when no current or potential threat to human health or the environment exists. Based on the investigations and environmental considerations, IA A2 does not pose a risk to human health or the environment. As a result, the Navy proposes that NFA under CERCLA is appropriate for IA A2.

REGULATORY SUMMARY

California Health and Safety Code

This PP/Draft RAP has been prepared to meet the requirements of the California Health and Safety Code (HSC) Section 25356.1 for hazardous substance release sites. The HSC requires preparation of a RAP for sites that are not listed on the National Priorities List (NPL), such as Mare Island. Therefore, this document also serves as a Draft RAP to fulfill the public notice and comment requirements of the HSC. The final RAP will be incorporated in the ROD for this site.

California Environmental Quality Act

As required by California state law (the California Environmental Quality Act, or CEQA), DTSC has studied the risks associated with the residual chemical concentrations at the site and possible effects of the proposed cleanup on human health and the environment. The findings of the study can be reviewed in a document called a Notice of Exemption (commonly referred to as an NOE). The NOE is prepared by DTSC based on the findings of the risk assessment. The NOE documents that the proposed cleanup will have no negative impact on human health or the environment.

Nonbinding Allocation of Responsibility

HSC Section 25356.1(e) requires DTSC to prepare a preliminary nonbinding allocation of responsibility among all identifiable potentially responsible parties. HSC Section 25356.3(a) allows potentially responsible parties with an aggregate allocation in excess of 50 percent to convene an arbitration proceeding by submitting to binding arbitration before an arbitration panel. Based on available information regarding the former Mare Island Naval Shipyard, DTSC determines that the Navy is a responsible party with aggregate alleged liability in excess of 50 percent of the costs of removal and remedial action pursuant to HSC Section 25356.3. The Navy may convene arbitration if it so chooses.

View of Former North Building Ways Area IA A2 and Causeway Tower Bridge

NEXT STEPS FOR IA A2

The Navy will present the PP/Draft RAP for IA A2 at a public meeting on September 23, 2009. After the public comment period ends on October 21, 2009, the Navy and BCT will review and consider public comments concerning the recommended remedial alternative. The Navy's decision will be documented as a ROD/RAP, which will include all of the comments received, as well as the Navy's responses. A Public Notice will be published in the *Vallejo Times-Herald* announcing when the ROD/RAP is available to the public in the information repositories.

Multi-Agency Environmental Team Concurs with No Action Proposal

The multi-agency environmental team is composed of the Navy, DTSC, Water Board, and EPA and was established with the primary goals of protecting human health and the environment, to expedite the environmental cleanup, and to coordinate the environmental investigations and cleanup at the installation.

The team also serves as the primary forum for assessing cleanup priorities and progress. The team obtains a consensus on issues regarding the installation's environmental activities and makes a concerted effort to integrate current and potential future uses into the cleanup decisions.

Based on previous CERCLA investigations at IA A2, the Navy, DTSC, Water Board, and EPA concluded that further remedial investigation or cleanup is not needed. The multi-agency team further agreed that the potential risk to human health and the environment at IA A2 is within acceptable ranges and that no further evaluation or cleanup actions under CERCLA are necessary.

GLOSSARY OF TECHNICAL TERMS

BCT — Base Realignment and Closure Cleanup Team consists of representatives from the Navy, DTSC, Water Board, and EPA.

BRAC — Base Realignment and Closure is a program established by Congress under which Department of Defense installations undergo closure, environmental cleanup, and property transfer to other federal agencies or communities for reuse.

CERCLA — Comprehensive Environmental Response, Compensation, and Liability Act — A law that establishes a program to identify hazardous waste sites and procedures for cleaning up sites to protect human health and the environment. It is often known as Superfund.

DTSC — California EPA's Department of Toxic Substances Control — A State of California environmental regulatory agency that supports and provides oversight of environmental activities at Mare Island.

EPA — U.S. Environmental Protection Agency — A national environmental regulatory agency that supports and provides oversight of environmental activities at Mare Island.

Hazard Index — A calculated value used to represent a potential noncancer health effect. A hazard index value of 1 or less is considered protective of ecological or human health.

NPL — National Priorities List — The federal list of Superfund sites nationwide. NPL sites are considered high priority for cleanup under the Federal Superfund program. Mare Island is not listed on the NPL.

PAH — Polycyclic Aromatic Hydrocarbons — A group more than 100 different chemicals made up of one or more fused carbon rings; they are present in coal and petroleum products, and are formed when organic substances are burned.

PCAP — Petroleum Corrective Action Plan — A document that evaluates and implements the cleanup of petroleum-related compounds at a site.

PCB — Polychlorinated biphenyl — A family of mixtures of synthetic industrial compounds produced by chlorination of biphenyl carbon rings that were often used as coolants in electrical transformers. PCBs were banned from further production in 1977, because they can accumulate in animal tissue, and can result in adverse health effects.

PP — Proposed Plan — A document that presents the recommended cleanup action (if any), explains the recommendation, and solicits comments from the community.

RAP — Remedial Action Plan — A plan prepared for public review and comment that outlines a specific program leading to remediation of a contaminated site. The RAP is required under California Health and Safety Code Section 25356.1 for sites not listed on the NPL.

Mailing List Coupon

If you would like to be included on the mailing list to receive information about environmental restoration at Mare Island, please complete this coupon and mail to: Base Realignment and Closure PMO West, Attn: Michael Bloom, BRAC Environmental Coordinator, 1455 Frazee Road, Suite 900, San Diego, CA 92108-4310

☐ Add me to the Mare Island Installation Restoration Program mailing list.
☐ Send me information on Restoration Advisory Board membership.

Name_____ Affiliation (optional) _____

Street _____

City _____ State_____ Zip Code _____

Phone _____ E-Mail _____

RI — Remedial Investigation — A major study that must be completed before a decision can be made about how to clean up a site. The RI is designed to assess the nature and extent of contamination at a site and to estimate the risks posed by the contamination.

Risk — Likelihood or probability that a hazardous substance released to the environment will cause adverse effects on exposed human or other biological receptors. Risk calculations are designed to overestimate risk to assure that the cleanup will protect human health and the environment. Adverse health effects can be classified as carcinogenic (cancer-causing) or non-carcinogenic. Risk from cancer is expressed as a probability such as 1 in 1,000,000 (also expressed $1x10^{-6}$). This term means that one additional person in a population of 1,000,000 is more likely to get cancer over a lifetime. Noncancer risk is expressed as a Hazard Index relative to a threshold value of 1; see left.

Risk Management Range — The risk management range is considered to represent a cancer risk between 1 in 10,000 and 1 in 1,000,000 ($1x10^{-4}$ and $1x10^{-6}$).

ROD — Record of Decision — A decision document that identifies the cleanup alternative chosen for implementation at a CERCLA site. The ROD is based on information from the RI and other reports, and on public comments and community concerns.

Screening Criteria — Usually chemical concentration limits, which provide a quantitative means of identifying areas for potential remedial action.

TPH — Total Petroleum Hydrocarbons — A variety of complex mixtures of compounds, including the following three ranges: gasoline, diesel, and motor oil.

OPPORTUNITIES FOR PUBLIC INVOLVEMENT

The Navy is issuing this PP/Draft RAP as part of its public participation responsibilities under Section 117(a) of CERCLA and Sections 300.430(f) (2) and (3) of the NCP. The flowchart at the top of Page 3 illustrates the status of IA A2 in the CERCLA process. The Navy provides information on the CERCLA process at IA A2 and the FNBW Area to the public through monthly public meetings of the Restoration Advisory Board, information repositories for the site, and announcements published in the *Vallejo Times-Herald* and other local newspapers. The public is encouraged to gain a more thorough understanding of IA A2 and CERCLA activities conducted at Mare Island by visiting the information repository, reviewing the administrative record file, and attending public meetings. The administrative record is a collection of reports the BCT uses in selecting cleanup alternatives. See Page 8 for contact information on the information repository and administrative record.

Unacceptable Risk — Unacceptable risk is identified based on the results of the baseline risk assessment. The definition of unacceptable risk means a potential threat to human health or the environment.

Water Board — Regional Water Quality Control Board — A State of California environmental regulatory agency that supports and provides oversight of environmental activities at Mare Island.

YOU CAN GET INVOLVED !

There are two ways the public can participate and provide comments on this PP/Draft RAP:

1. Public Comment Period – During the public comment period from September 22, 2009, to October 21, 2009, you may use the enclosed comment form to send written comments to the Navy.
2. Public Meeting – You may also provide written or oral comments during the public meeting on September 23, 2009, that will be held at the Mare Island Conference Center in Vallejo, California. A stenographer will be at the meeting to record all public comments.

FOR MORE INFORMATION

Name/Title	Organization	Phone	Address	E-Mail
Michael Bloom BRAC Environmental Coordinator	Navy	(619) 532-0967	1455 Frazee Road Suite 900 San Diego, CA 92108	michael.s.bloom@navy.mil
Janet Naito Project Manager	DTSC	(510) 540-3833	700 Heinz Avenue Suite 200 Berkeley, CA 94710	jnaito@dtsc.ca.gov
Paisha Jorgensen Project Manager	Water Board	(510) 622-2756	1515 Clay Street Suite 1400 Oakland, CA 94612	pjorgensen@waterboards.ca.gov
Carolyn D'Almeida Project Manager	EPA	(415) 972-3150	75 Hawthorne Street 9th Floor San Francisco, CA 94105	dalmeida.carolyn@epa.gov

INFORMATION REPOSITORY

John F. Kennedy Library
505 Santa Clara Avenue
Vallejo, CA 94590
(866) 572-7587

Hours:	Mon & Wed	10 a.m. — 9 p.m.
	Tues & Thurs	10 a.m. — 6 p.m.
	Fri & Sat	10 a.m. — 5 p.m.
	Sun	1 p.m. — 5 p.m.

ADMINISTRATIVE RECORD

Naval Facilities Engineering Command, Southwest
1220 Pacific Highway, Building 128 Mailroom
Attn: Ms. Diane Silva,
Administrative Records Coordinator
Building 1, 3rd Floor
San Diego, CA 92132-5190
(619) 532-3676

Project Website: http://www.bracpmo.navy.mil/basepage.aspx?baseid=47&state=California&name=mare_island

Attn: Mr. Michael Bloom
BRAC Program Management Office West
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310

INSIDE

Your invitation to comment on the Navy's environmental cleanup at Mare Island Naval Shipyard

PROPOSED PLAN/
DRAFT REMEDIAL ACTION PLAN
Former North Building Ways Area, Investigation Area A2
Former Mare Island Naval Shipyard, Vallejo, California

The public comment period for the Proposed Plan/Draft Remedial Action Plan (PP/Draft RAP) for the Former North Buildings Ways Area at Investigation Area A2 at Mare Island, Vallejo, California is from September 22, 2009, to October 21, 2009. A public meeting to present the PP/Draft RAP will be held at the Mare Island Conference Center in Vallejo, California on September 23, 2009. You may provide your comments verbally at the public meeting where your comments will be recorded by a court reporter. Alternatively, you may provide written comments in the space provided below or on your own stationary. After completing your comments and your contact information, please fold and mail this form to the address provided on the reverse side. All written comments must be postmarked no later than October 21, 2009. You may also submit this form to a Navy representative at the public meeting. Comments are also being accepted by e-mail; please address e-mail messages to **michael.s.bloom@navy.mil**.

Name: _____

Representing: _____

Phone Number: _____

Address: _____

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Comments: _____

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Don't forget to attend the Public Meeting for the FNBW Area IA A2 Proposed Plan/Draft Remedial Action Plan!

Michael Bloom
BRAC Environmental Coordinator
Program Management Office West
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310

Don't forget to attend the Public Meeting for the FNBW Area IA A2 Proposed Plan/Draft Remedial Action Plan!