



Island Times

Environmental Investigation and Cleanup News
Former Naval Station Treasure Island

Summer 2009, Newsletter No. 15

www.bracpmo.navy.mil

ENVIRONMENTAL PROGRAM

The Navy developed this newsletter to update the community on the environmental program at former Naval Station Treasure Island (NAVSTA TI). NAVSTA TI encompasses both Treasure Island (TI) and Yerba Buena Island (YBI). Environmental investigation and cleanup began on NAVSTA TI in the mid-1980s and continues today. Please share this information with your family, friends, colleagues, and anyone else who may be interested. Please use the coupon on the back page of this newsletter to be added by name to the mailing list. We welcome your comments and suggestions for future editions of the Island Times and encourage you to contact the Navy with any questions.

FOCUS ON TECHNOLOGY: ARSENIC IN GROUNDWATER PILOT STUDY IN THE SITE 12 TI HOUSING AREA

Background: What Contamination is There, and Why?

The groundwater at NAVSTA TI is not used as drinking water; instead, drinking water is piped in from the City of San Francisco. However, elevated levels of arsenic have been detected in groundwater in some areas at Site 12, the TI Housing Area, perhaps because arsenic that is found naturally in soil may have dissolved into the groundwater. As a result, the Navy is investigating and cleaning up groundwater at NAVSTA TI to prevent the water from reaching San Francisco Bay. This process may be reversible, and the Navy, along with its contractor Shaw Environmental and Infrastructure, Inc. (Shaw) is testing a technology called “biosparging” to find out.

Biosparging is a technology that is used beneath the ground surface — that is, groundwater is not removed for treatment, but air and sometimes nutrients are pumped into the groundwater to increase the activity of the naturally occurring microorganisms.

In recent years, the Navy has been monitoring the natural biological breakdown, known as “biodegradation” of petroleum contamination in groundwater in certain areas at Site 12. Naturally occurring microorganisms are consuming and breaking down the petroleum. At the same time, the microorganisms are also consuming all of the oxygen from the groundwater, causing naturally occurring arsenic to dissolve from the soil into groundwater. The Navy may simply be able to add oxygen back

SAFETY MILESTONE FOR NAVY CONTRACTORS

Congratulations to Navy contractor Shaw Environmental and Infrastructure Inc. for its outstanding safety record. The Shaw team at NAVSTA TI, led by Project Manager Peter Bourgeois, has achieved their third consecutive 1,000 days without incident, for a total of 3,000 days without a lost time incident. Safety is important to the Navy, and a Health and Safety Plan, as well as an Accident Prevention Plan are prepared for each project to ensure the workers, residents, and the public are kept safe.





Arsenic in groundwater study site, adjacent to Building 1311 (out of photo at right)

into the groundwater to treat the arsenic. However, if the petroleum remains in the groundwater, the arsenic will once again dissolve, requiring further treatment. Therefore, the Navy would like to treat the remaining petroleum contamination in the groundwater at the same time as the arsenic.

During the process of investigation and cleanup at NAVSTA TI, the Navy assesses various technologies to identify the best method possible to achieve cleanup goals. Often, studies are used to test technology and verify that a specific cleanup method will work on the conditions at NAVSTA TI. If the technology is successful during the initial study, called a pilot study, then it is expanded and used to address a wider area.

Details about the Technology

Before any work occurs in the field, a laboratory experiment, called a “bench-scale test,” was run to evaluate whether using biosparging to return oxygen into the groundwater is effective at reducing concentrations of arsenic in groundwater. In a second phase, laboratory technicians added a nutrient to feed the microorganisms that are consuming the petroleum. This nutrient was shown to accelerate the rate of biodegradation (the breakdown of petroleum), so the petroleum can be cleaned up faster, which will eliminate the conditions that allow the arsenic to release into the groundwater. The bench-scale test demonstrated that the technology is successful, and the Navy is conducting a pilot study in the field to

evaluate how real field conditions will respond to the treatment technology.

The Navy drilled several wells to inject the oxygen and the nutrients into the groundwater at portions of Site 12. There are also wells to monitor the progress of the treatment. A supplementary technology, vapor extraction, may be used to capture any vapors generated from the biosparging, if necessary.



Contractors developing the injection wells at Site 12

The Schedule

The pilot study wells were installed in late December 2008 and injection of oxygen and nutrients, then monitoring are expected to last for about 1 year.

The equipment used at the site is housed in a small, durable shed to contain it and to prevent disruptive noise to nearby residents. All equipment will also have sound-dampening features to prevent noise disturbances. There may be a few small trucks on site, and fencing will be used to prevent public access to the field work area. However, residents should expect a few disruptions.

Shaw will present updates on the progress of the field work at all of the RAB meetings. If you would like to read the full work plan that details the study, finalized in October 2008, it can be found in the Information Repositories. (See page 8 for RAB details and Information Repository locations.) We also encourage you to contact the Navy if you would like more information. ■

ACTIVITIES FOR 2009

In 2009, the Navy will continue its environmental work on NAVSTA TI, working toward the goal of completing site cleanup and readying the property for transfer. See below for a list of milestones planned for 2009. Schedules may vary, and updates are provided at every RAB meeting. A map of the sites can be found on page 7.

Key Field Work for 2009 (in site order)

- Site 6 Data Gaps Investigation — *October 2009 start*
- Sites 6 and 12 Semiannual Groundwater Monitoring — *July 2009*
- Site 12 SWDAs Non-time Critical Removal Action — *Ongoing*
- Site 12 Arsenic in Groundwater Pilot Study — *Ongoing*
- Sites 21 and 24 Treatability Study — *Ongoing*
- Site 31 Remedial Action — *November 2009 start*
- Site 32 Toxic Substances Control Act (TSCA) PCB Removal Action — *May 2009 start*

Milestone Documents for 2009, Final Versions (in site order)

- Site 6 Data Gaps Investigation Work Plan — *October 2009*
- Site 6 2007 Annual Groundwater Status Report — *January 2009 completed*
- Sites 6 and 12 2008 Annual Groundwater Status Report — *October 2009*
- Sites 8 and 29 Interim Remedial Investigation (RI) Report — *April 2009 completed*
- Site 11 Interim RI Report — *July 2009*
- Site 12 Radiological Risk Assessment — *June 2009*
- Site 21 Feasibility Study (FS) Report — *March 2009 completed*
- Site 27 Revised FS Report — *July 2009*

- Site 28 Revised RI Report — *April 2009 completed*
- Site 30 Record of Decision/Remedial Action Plan (ROD/RAP) — *June 2009*
- Site 31 ROD/RAP — *June 2009*
- Site 32 TSCA PCB Removal Action Work Plan — *May 2009*
- Site 33 RI Report — *July 2009*
- PCB Field Activity Report — *March 2009 completed*
- Assessment of Lead-Based Paint in Buildings at TI and YBI — *November 2009*
- Assessment of Asbestos-Containing Material in Buildings at TI and YBI — *November 2009*
- 2009 Site Management Plan — *August 2009*

Keeping the Community Informed in 2009

- Six Restoration Advisory Board Meetings (*see page 8 for meeting dates and location*)
- Site 12 Radiological Program Information Sheet — *June 2009*
- Two issues of this newsletter, the Island Times, Volumes 15 and 16
- General Environmental Fact Sheet Volume 5 — *May 2009*
- Housing Area Open House/Information Session — *Fall 2009*
- Participation at the TI Community Picnic — *Fall 2009*
- Basewide Radiological Program Fact Sheet — *December 2009* ■

HISTORICAL FACT

What happened 70 years ago on Treasure Island?

- A Nothing, the island wasn't built yet!
- B Troops began training for what would become World War II
- C The Golden Gate International Exposition opened
- D The San Francisco – Oakland Bay Bridge was completed

See page 9 for answer!

ACCOMPLISHMENTS IN 2008

The year 2008 was busy for the Navy's environmental cleanup program at NAVSTA TI. Below is a list of significant field operations that took place during the year. In addition, you will find a list of final documents that were issued, all of which are available to the public in the Information Repositories (see page 8 for repository locations). The Navy appreciates the participation of the community in its environmental work, including attending meetings, using the information repositories, meeting with the Navy at community events, and contacting the Navy directly with your questions.

Key Field Work in 2008 *(in site order)*

- Semiannual Groundwater Monitoring at Sites 6 and 12
- Site 12 SWDAs Non-time Critical Removal Action — *(Ongoing in 2009)*
- Site 12 Arsenic in Groundwater Pilot Study — *(Ongoing in 2009)*
- Site 12 Soil Gas Sampling
- Sites 21 and 24 Treatability Study — *(Ongoing in 2009)*
- Site 27 Clipper Cove Near-Shore Field Investigation
- Basewide PCB Remedies
- Radiological Surveys at Buildings 233, 343, 344

Milestone Documents Issued in 2008 *(by date)*

- Sites 6A and 25 2006 Annual Groundwater Status Report — *January 2008*
- Site 12 2006 Annual Groundwater Status Report — *January 2008*
- Site 27 Near-Shore Field Investigation Sampling and Analysis Plan (SAP) — *January 2008*
- Final PCB Summary Report (Phase I and II) — *February 2008*
- Sites 21 and 24 Treatability Study Work Plan — *July 2008*
- Site 24 Remedial Investigation Report/ Focused Feasibility Study — *July 2008*

- Site 30 Proposed Plan (PP)/Draft RAP — *September 2008*
- Site 31 PP/Draft RAP — *September 2008*
- Sites 6 and 12 SAP for Groundwater Monitoring — *October 2008*
- Site 12 Work Plan for Arsenic in Groundwater Pilot Study — *October 2008*
- Site 32 RI Report — *October 2008*
- Final Soil Gas Investigation SAP — *November 2008*
- Final Status Survey Reports for Buildings 233, 343, 344 — *November 2008*
- Final Site Management Plan — *November 2008*
- Site 12 2007 Groundwater Status Report — *December 2008*

Community Involvement in 2008

- Six Restoration Advisory Board Meetings
- Community Relations Plan 2008 Update — *May 2008*
- Island Times Newsletter, Volume 14 — *Summer 2008*
- One Public Meeting for the Sites 30 and 31 PPs — *October 2008*
- Navy Booth at the TI Community Picnic — *October 2008* ■



The Navy talks to residents at the TI Community Picnic

**TEAM MEMBER
PROFILE:
Project Manager
Ross Steenson**



The Island Times recently sat down to talk to one of the newer regulatory members of the NAVSTA TI Base Realignment and Closure Cleanup Team, Ross Steenson. Mr. Steenson works for the California Environmental Protection Agency Regional Water Quality Control Board.

Island Times: Ross, how long have you been with the Water Board, and what kinds of projects have you worked on?

Steenson: I've been at the Water Board since December 2008. Currently, I'm working on various projects, including NAVSTA TI, petroleum at Hunters Point Shipyard in San Francisco, the Benicia Arsenal, and I'm supporting a fellow Water Board colleague on a petroleum forensics matter on another site.

Island Times: What did you do before you worked at the Water Board?

Steenson: My discipline at the Water Board is engineering geologist, although I am a

hydrogeologist by training. I've been in the environmental remediation business since 1989. Since 1992, primarily I've worked on projects in Northern California related to solvents, petroleum, and wood treating contamination.

Island Times: What are your responsibilities on the NAVSTA TI project?

Steenson: My title is Case Manager. My role is to ensure that sites are adequately investigated and cleaned up to protect water quality in accordance with state of California regulations

Island Times: What is your average workday like; what would we find you doing?

Steenson: Most of my time is spent reviewing technical documents, which includes poring over maps and data tables and consulting other colleagues at the Water Board for their input. I also attend a number of meetings related to the projects I am working on, where we plan, discuss, and schedule the work that is happening. In addition, I provide responses to public inquiries about my projects.

Island Times: Where did you go to school, and what did you study?

Steenson: I received a Bachelor of Science degree in Geology from the College of William & Mary. (I thought about choosing a double major in history, but that was too time consuming and a geology degree seemed to have better career prospects!) Then I went to Miami University of Ohio, where I received a Masters of Science degree with a hydrogeology focus. My thesis was a water budget study for a spring (for

a water bottling company), which is a unique focus since my work experience is mainly remediation-related.

Island Times: What do you find most challenging about the NAVSTA TI project?

Steenson: There are so many sites and sub-sites, and so much history to this project. It is challenging to get up to speed with the information and become familiar with the processes and programs already in place.

Island Times: What do you like best about the NAVSTA TI project?

Steenson: The work is very interesting because there are different sites with varying contaminants of concern. Overall, this is a very good team of Navy representatives, regulators, consultants, and members of the public working collaboratively.

Island Times: What do you like to do in your free time? It sounds like you're a bit of a history buff, since you almost majored in that.

Steenson: I do like history, and I love to travel. My most recent trip was to Tokyo last November, where my trip was focused on the history of Edo (Tokyo) along the Sumida River. I'm not sure when I'll be able to take my next trip, but I'm hoping to visit Israel. When I have free time at home, I enjoy playing historical strategy games. But if the weather is sunny, I'm most likely to be found out and about hiking on some Bay Area trail. ■

For Ross Steenson's contact information, see page 8. Welcome to the NAVSTA TI Team, Ross!

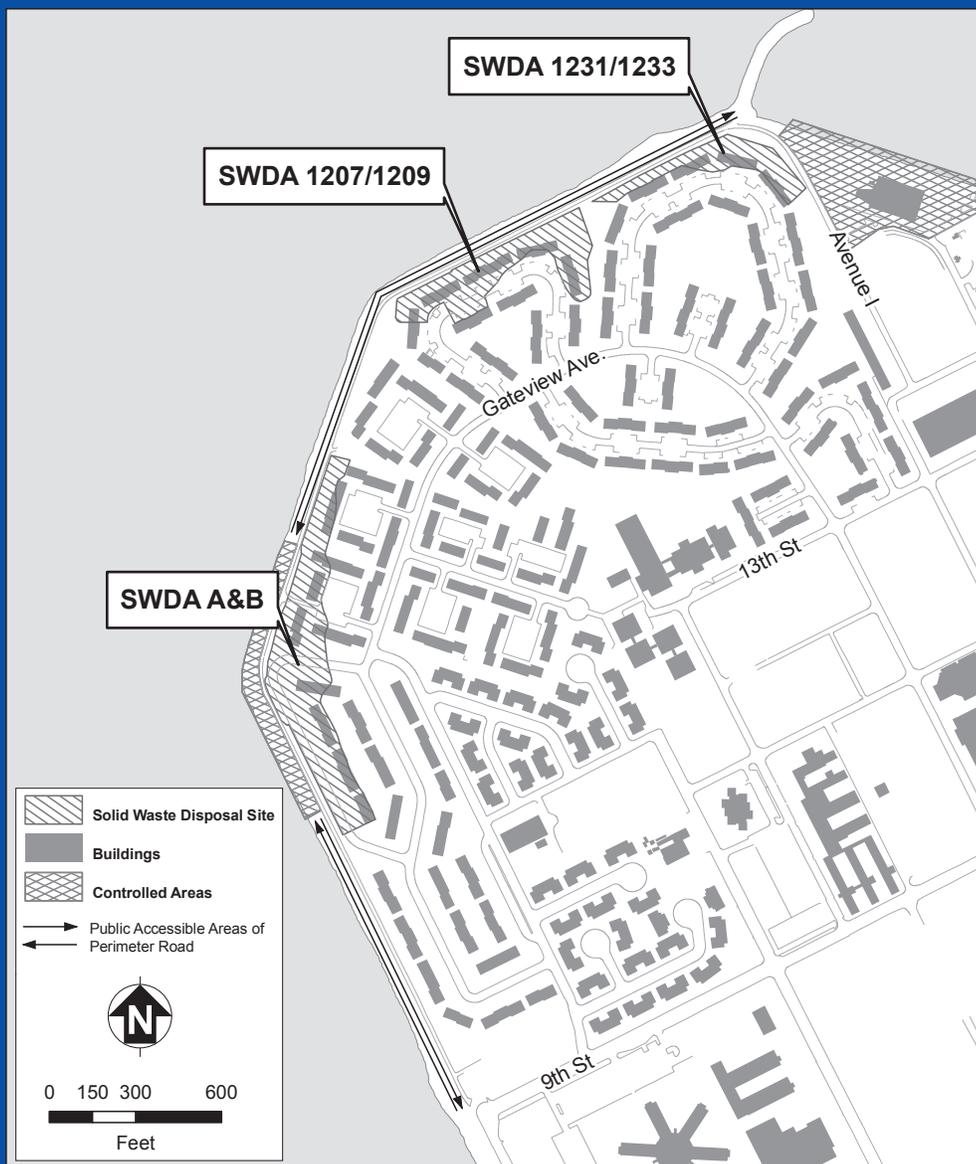
WHAT IS HAPPENING IN THE TI HOUSING AREA?

The Navy and their contractor, Shaw, continue the Non-Time Critical Removal Action in the Treasure Island Housing Area (also known as Site 12). As previously reported, the purpose of the removal action is to excavate the soil in the areas primarily behind the green fences, referred to as the Solid Waste Disposal Areas (SWDA) (see map below for SWDA locations). Previous investigations identified three SWDAs where primary contaminants of concern are

lead, polychlorinated biphenyls (PCB), polycyclic aromatic hydrocarbons (PAH), and dioxins. In addition, the Navy identified items that contain radium-226 and related low levels of radium in soil at SWDAs 1207/1209 and 1231/1233. The items consisted of buttons and markers that were painted to glow in the dark and were likely discarded, along with other debris, at these two locations before the housing was constructed in the 1960s. The planned excavations at SWDAs 1207/1209 and 1231/1233

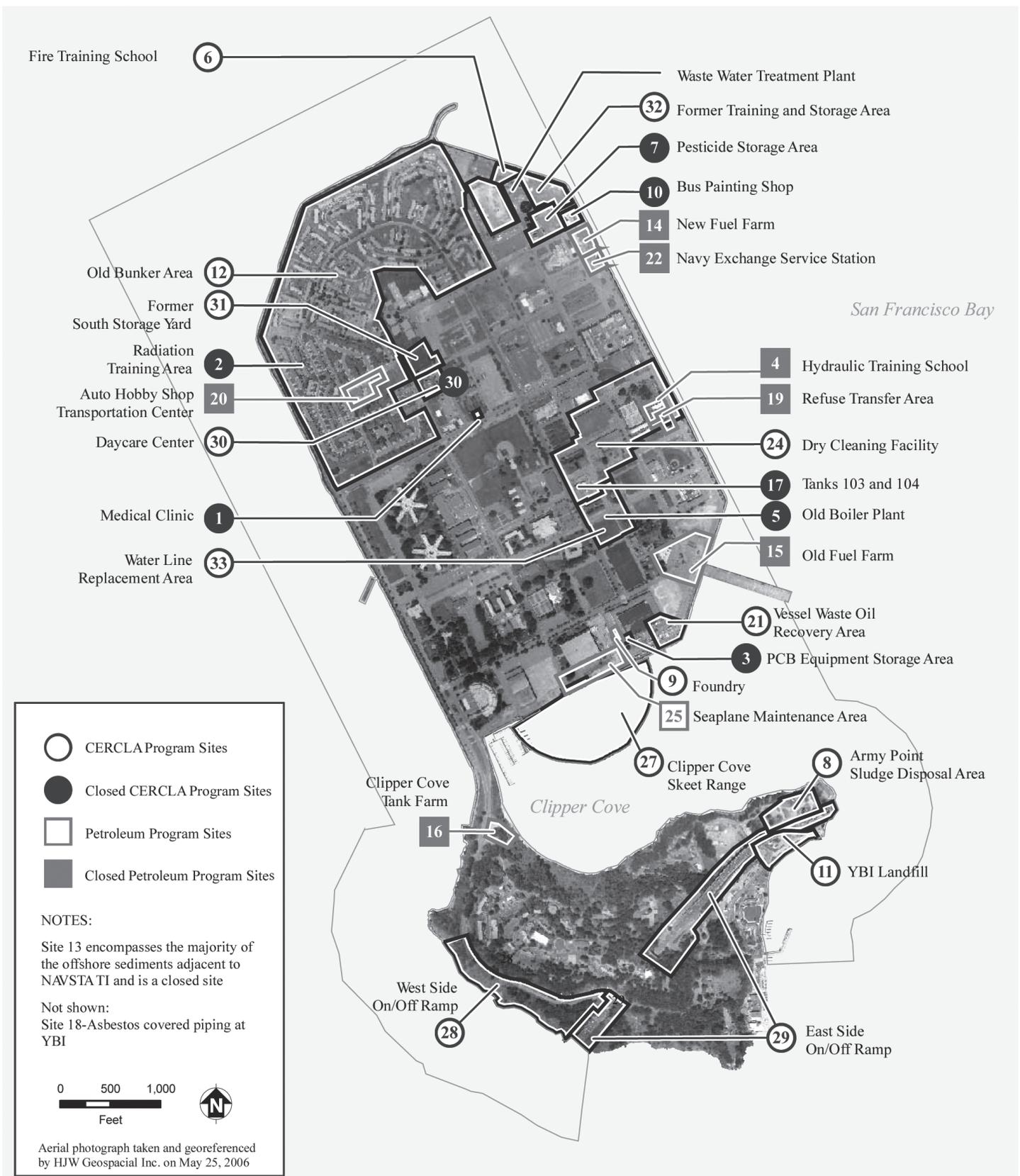
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PERIMETER PATH ACCESS



The Navy has revised the fence locations for the Site 12 Removal Action to reopen the majority of Perimeter Path. The only segments of Perimeter Path remaining closed are the segments near Westside Drive and Lester Court, and the easternmost area of the path, where environmental activities are still taking place. Please continue to observe all safety signage and do not enter fenced areas.

NAVSTA TI IR PROGRAM SITE MAP



CHECK OUT THE RESTORATION ADVISORY BOARD

The RAB is composed of members of the community who work with the Navy and regulatory agencies to provide input on the environmental restoration of NAVSTA TI. Regular meetings are held to discuss the progress of the environmental cleanup program. It is a great opportunity to find out what is going on and to have your voice heard! Residents or community members regularly drop in to hear the latest news or ask questions. All RAB meetings are open to the public. Everyone is welcome!

RAB meetings are held at 7:00 p.m. on the third Tuesday of every other month at the Casa de la Vista on TI. For more information, call James Sullivan at (619) 532-0966 or send an e-mail to james.b.sullivan2@navy.mil. You can also check out the schedule on the Navy's website at www.bracpmo.navy.mil.

Remaining 2009 RAB Meetings
 June 16th, August 18th, October 20th,
 and December 15th

INFORMATION REPOSITORIES

Did you know the Navy has set up two conveniently located Information Repositories housing environmental documents related to NAVSTA TI? You can visit these repositories to view various documents published for the environmental program. Visit the Navy's Information Repositories, located at the following addresses:

Navy BRAC PMO Office

410 Palm Avenue, Building 1, Room 161
 Treasure Island, San Francisco, CA 94130
 (415) 743-4704

Monday through Friday 8:30 a.m. – 4:30 p.m.

AND

San Francisco Public Library

Government Publications Section, 5th Floor
 100 Larkin Street
 San Francisco, CA
 (415) 557-4400
 Call for hours

BRAC CLEANUP TEAM CONTACT LIST

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are now complete, and temporary fencing has been removed.

Other small items that contain radium-226 were also discovered during the soil excavation at SWDA A&B. These radiological items were identified primarily in the area around Westside Drive and Buildings 1319 and 1321. The items consisted primarily of small, ½-inch diameter metal items called foils that contain radium-226. The Navy's Radiological Affairs Support Office (RASO) is reviewing the foils and investigating possible previous Navy use for these objects. Excavation has been temporarily stopped while the Navy updates the work plan to reflect the latest field conditions.

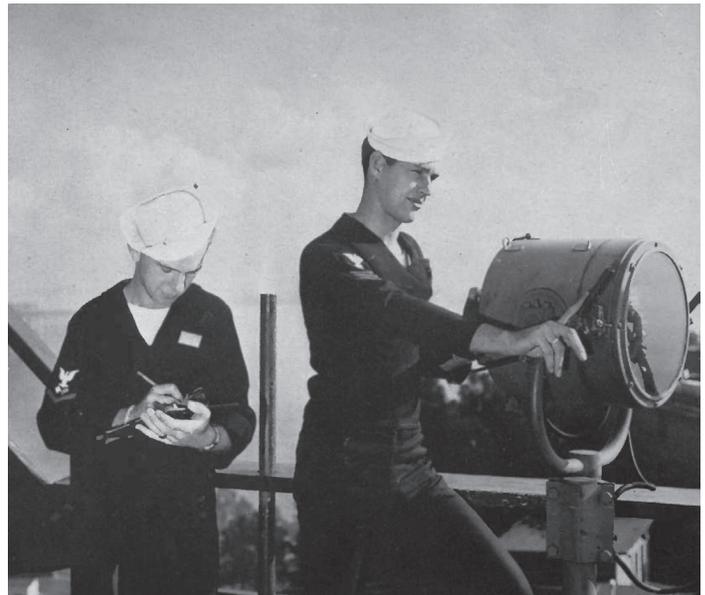
The Navy has removed all of the excavated soil that was stockpiled in a storage area outside the Housing Area on the northeastern side of TI. (See location of storage area on map on page 6.) Steel storage bins remain in the storage area; newly excavated low-level radium-containing soil will be held in the bins, and then sent off site for appropriate disposal. This soil can be safely stored in the bins outside the Housing Area because the bins are sealed and locked. In addition, the site, just like all of the work sites at NAVSTA TI, is secured and patrolled by security to prevent public access or vandalism.

Soil contaminated by lead, PCBs, PAHs, or dioxins, (but not radium), will be transported by dump truck and might be temporarily stockpiled in the Storage Area on the northeastern side of TI. To date, approximately 10,700 tons of Class I (hazardous) waste and 12,100 tons of Class II (nonhazardous) waste soils have been shipped off site. In addition, about 8,700 tons of low-level radiologically contaminated soil has been shipped off site for proper disposal. The Navy plans to complete the excavations

during 2009. Updates on the project are presented at every Restoration Advisory Board (RAB) meeting. See page 8 for meeting times and locations. We encourage you to contact the Navy directly if you have questions or concerns. ■

NAVY CONDUCTING LEAD-BASED PAINT AND ASBESTOS REASSESSMENTS

The Navy and their contractors are reassessing lead-based paint (LBP) and asbestos in the TI and YBI housing areas. This is a standard reassessment conducted periodically to ensure potential LBP is encapsulated and asbestos is contained. All of the houses are being assessed, however, wipe sampling will only be conducted in a percentage of housing units. All activity is being coordinated through the leasing agent. If you have any questions, contact your leasing agent, or contact the Navy. (See page 8 for Navy contact information)



**Armed Guard Signalmen
at the Signal Tower on YBI – 1940's**

HISTORICAL FACT

Answer:

C: In February 1939, the Golden Gate International Exposition (GGIE) opened. Treasure Island was built for the GGIE, which celebrated the completion of the Bay Bridge (1936) and the Golden Gate Bridge (1937).

NAVSTA TI Mailing Coupon

If you would like to be added to the NAVSTA TI mailing list and receive copies of future newsletters and fact sheets, please fill out the coupon below and mail it to:

James B. Sullivan
Navy BRAC PMO West
1 Avenue Of The Palms
Suite 161
San Francisco, CA 94130-1807

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