



SUBBASE REMEDIATION ADVISORY BOARD NEWS

Spring 2018

Sediment Remediation at Lower Base Nearing Completion

The Navy continues cleanup of the Lower Base area, largely considered to be the most complex area of environmental cleanup at the base. The Lower Base is the last operational area on the base requiring remediation. After this cleanup, the Navy, EPA, and CTDEEP will start the process of deleting the Subbase from the National Priorities List, a national list of uncontrolled hazardous waste sites.

The Lower Base operational area includes seven zones, collectively referred to as Operable Unit (OU) 4. OU4 site investigation work was completed and a Record of Decision (ROD) was finalized by the Navy and EPA in August 2012 and modified in August 2017. The ROD identified the remedy and cleanup approach for each specific zone. The remedy for sediment at Zone 4 (Pier 6 south to former Pier 1) was dredging and backfill, which began in December 2017; the ROD-required remedial activities at the other Lower Base zones are nearly complete.

Construction activities for Zone 4 sediment are described below:

- Dredging between Piers 2 and 6 to eight feet with confirmation samples to verify contaminated sediment has been adequately removed
- Dewatering dredged sediment using barges fitted with permeable liners to operate as passive drainage beds
- Transporting dewatered sediment and dewatering fluid for disposal
- Dredged material used as daily cover (beneficial re-use) at a local landfill
- Backfilling with approximately 10,250 cubic yards of clean sand/stone to maintain the stability of the slope in the area along the Quay Wall
- Turbidity monitoring and controls
 - 5 separate buoys will monitor turbidity in the water column at 3 depths at 15 minute intervals before, during, after construction
 - Primary and secondary turbidity curtains to minimize sediment migration

Following construction completion, land use controls, long-term monitoring, and five-year reviews will evaluate remedy protectiveness.



Dredge barge in dredge area with crane and environmental bucket



Sediment dewatering; awaiting transport offsite

Fourth Five-Year Review

The Fourth Five-Year Review was finalized in December 2016 and determined that all remedies were currently protective of human health and the environment. The five-year review identified issues, recommendations, and follow-up actions for some sites. Some issues include:

- Rebar installation (trailer grounding rods) into the cap surface at Site 6. Repairs and modification to site controls are in progress.
- Zone 4 soil excavation. Excavation did not remove all soil in excess of remedial goals. Documentation and modifications to the remedy are being considered.

Did you know?

Five-year reviews generally are required when hazardous substances remain on site above levels that permit unrestricted use and unlimited exposure. Five-year reviews provide an opportunity to evaluate the implementation and performance of a remedy to determine whether it remains protective of human health and the environment.

Did you know?

Emerging contaminants are chemicals for which the risks to human health and the environment are not yet known.

Emerging Contaminants

The Fourth Five-Year Review identified that emerging contaminants 1,4-dioxane and per- and polyfluoroalkyl substances (PFAS), including perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA), may be present and require further evaluation.

In general, ingestion of these emerging contaminants could pose a risk. Since there are no potable wells at the SUBASE and groundwater cannot be utilized for any purpose, there is no risk to SUBASE personnel. Drinking water is supplied to the SUBASE by Groton Utilities and PFAS were not detected in the Groton water system during testing performed between 2013 and 2015.

The Navy has a “scan-watch-action process” to identify, evaluate, and mitigate risks associated with emerging contaminants, including PFAS and 1,4-dioxane. Additional information, including the general steps of this process can be found at:

https://www.navfac.navy.mil/navfac_worldwide/specialty_centers/exwc/products_and_services/ev/erb/merging.html.

The Navy is taking the following steps to address these emerging contaminants at the SUBASE:

- Performing preliminary evaluations identifying sites and areas where emerging contaminants may be present and also those where no further action is required
 - Groundwater sampling and analysis (where identified as necessary in the preliminary evaluations)
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UPDATE: On-Going Long Term Monitoring (LTM)

The Navy completed remedial actions at seven sites at the SUBASE that require Long Term Monitoring: three former landfills (Area A Landfill, Defense Reutilization & Marketing Office, and Goss Cove Landfill), Area A Wetland, Area A Downstream, a former underground oily waste water tank, and a former fuel farm. LTM includes the following activities:

- Groundwater monitoring and analysis
- Surface water and seep monitoring
- Site inspections, maintenance of cap or cover components and monitoring wells, and correction of deficiencies, and reporting
- Land Use Control annual inspections
- Five-year reviews

Did you know?

Long term monitoring (LTM) is used after a selected remedy is put in place at an environmental restoration site if contamination is left in place as part of a remedy. LTM is generally required for containment remedies (such as a landfill cap) to assess whether the remedy remains protective of human health and the environment.

NPL Deletion

Once the sediment and soil remedies at OU4 are complete, emerging contaminants are resolved, and no further response actions are required, the SUBASE will be eligible for National Priority List deletion.

LTM activities and five-year reviews will still occur to verify remedy protectiveness at sites where potential hazards remain.

Did you know?

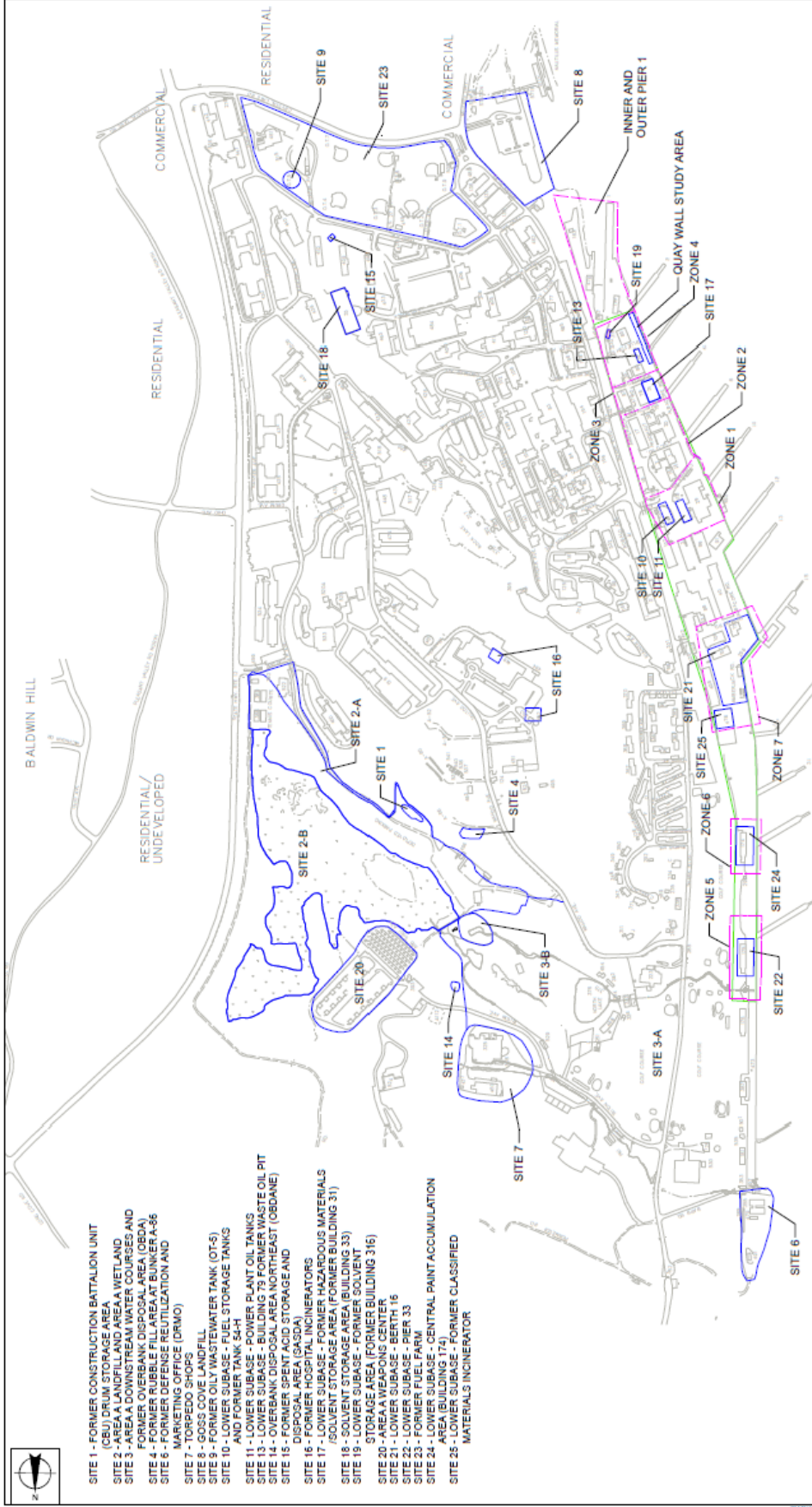
To delete a federal facility from the National Priorities List:

- EPA approves a "close out report" for each remedy at the base that documents that all appropriate response actions have been taken.
- The Regional Office obtains State concurrence.
- EPA publishes a notice of intent to delete in the Federal Register and in a major newspaper near the community involved. Public comment is requested.
- EPA responds to the comments and, if the site continues to warrant deletion, publishes a deletion notice in the Federal Register.

For More Information

If you have any additional questions, please contact the Public Affairs Office at (860) 694-5980, the SUBASE Environmental team, or visit one of the following websites to learn more about our environmental programs:

- **EPA SUBASE IR Website:** www.epa.gov/region1/superfund/sites/newlondon
 - **SUBASE Website:** <https://www.cnic.navy.mil/NewLondon/index.htm>
 - **SUBASE Facebook Page:** <http://www.facebook.com/NavalSubmarineBaseNewLondon>
 - **Naval Facilities Mid-Atlantic Installation Restoration Program public website:** https://portal.navfac.navy.mil/portal/page/portal/navfac/navfac_ww_pp/navfac_hq_pp/navfac_env_pp/env_restoration_installations/lant/midlant/new_london/welcome
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- SITE 1 - FORMER CONSTRUCTION BATTALION UNIT (CBU) DRUM STORAGE AREA - WETLAND
- SITE 2 - AREA A DOWNSTREAM WATER COURSE AND FORMER OVERBANK DISPOSAL AREA (OBDA)
- SITE 3 - FORMER RUBBLE FILL AREA AT BUNKER A-36
- SITE 4 - FORMER DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO)
- SITE 5 - TORPEDO SHOPS
- SITE 6 - GOSS COVE LANDFILL
- SITE 7 - FORMER WATER TANK (OT-5) AND FORMER TANK 54-H
- SITE 8 - LOWER SUBBASE - FUEL STORAGE TANKS
- SITE 9 - LOWER SUBBASE - POWER PLANT OIL TANKS
- SITE 10 - LOWER SUBBASE - BUILDING 79 FORMER WASTE OIL PIT
- SITE 11 - LOWER SUBBASE - BUILDING 79 FORMER WASTE OIL PIT
- SITE 12 - OVERBANK DISPOSAL AREA NORTHEAST (OBDA-N)
- SITE 13 - FORMER SPENT ACID STORAGE AND DISPOSAL (SASD) INCINERATOR
- SITE 14 - LOWER SUBBASE - FORMER HAZARDOUS MATERIALS STORAGE AREA (FORMER BUILDING 31)
- SITE 15 - SOLVENT STORAGE AREA (BUILDING 33)
- SITE 16 - LOWER SUBBASE - FORMER SOLVENT STORAGE AREA (FORMER BUILDING 316)
- SITE 17 - AREA A WEAPONS CENTER
- SITE 18 - LOWER SUBBASE - BERTH 16
- SITE 19 - FORMER FUEL FARM
- SITE 20 - FORMER FUEL FARM
- SITE 21 - LOWER SUBBASE - CENTRAL PAINT ACCUMULATION AREA (BUILDING 174)
- SITE 22 - LOWER SUBBASE - FORMER CLASSIFIED MATERIALS INCINERATOR

SITE BOUNDARY
 ZONE BOUNDARY
 LOWER SUBBASE BOUNDARY

FIGURE 1-2
 SITE LOCATION MAP
 NEW LONDON SUBMARINE BASE
 GROTON, CONNECTICUT

REQUESTED BY: S. MCCARTHY
 DRAWN BY: A. ZAMMITMAN
 DATE: 08/20/2013
 DRAWING NUMBER:

1 inch = 850 feet

SUBASE Environmental Cleanup Team

Mr. Joseph McCloud

Remedial Project Manager
NAVFAC Mid-Atlantic
Northeast IPT, Code OPTE3
9324 Virginia Ave, Building Z144
Norfolk, Virginia 23511
joseph.mccloud@navy.mil
(757) 341-2010

Mr. Michael Brown

Installation Environmental Program Manager
NAVFAC Mid-Atlantic
Naval Submarine Base – New London Public Works Env Division
Box 400
439 Tautog Avenue, Room 104
Groton, Connecticut 06349-5039

Ms. Kymberlee Keckler

Remedial Project Manager
Federal Facilities Superfund Section
U.S. Environmental Protection Agency, Region 1
5 Post Office Square, Suite 100
Mail Code: OSRR07-3
Boston, Massachusetts 02109-3912
keckler.kymberlee@epa.gov
(617) 918-1385

Mr. Kenneth Feathers

Supervising Sanitary Engineer
CTDEEP, Remediation Division
Bureau of Water Protection and Land Reuse, Remediation Division
79 Elm Street
Hartford, Connecticut 06106-5127
kenneth.feathers@ct.gov
(860) 424-3770



From: Public Affairs Office
Naval Submarine Base New London
Box 44
Groton, CT 06349