

NAB LITTLE CREEK

INSTALLATION RESTORATION PROGRAM

NEWSLETTER

March 20, 1995

CLEANUP BEGINS AT PCB SITE

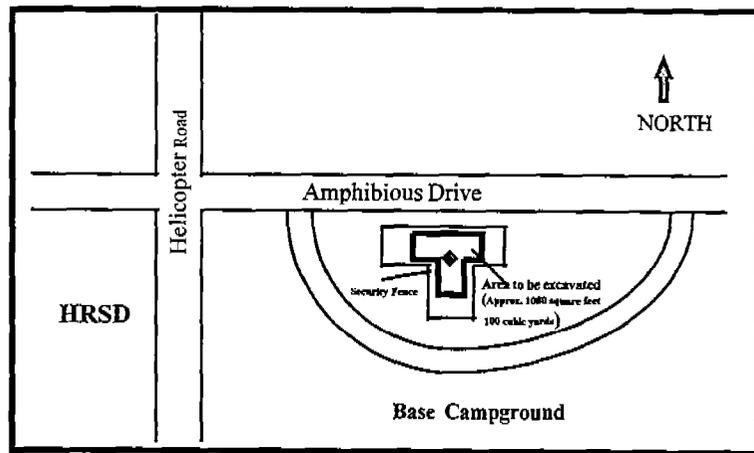
Activity is currently underway to complete the Removal Action at Site 16.

Site 16 is located on Amphibious Drive, approximately 300 feet east of the intersection with Helicopter Road. As shown in the site drawing, the base campground is located to the south and the Hampton Roads Sanitation District (HRSD) Chesapeake and Elizabeth Sewage Treatment Plant is located southwest of the site. The transformer on pole #425 lost less than five gallons of cooling fluid containing polychlorinated biphenyls (PCBs) as the result of a lightning strike in the early 1980s. The area of concern consists of approximately 1,080 square feet immediately surrounding the pole.

Since the levels of PCB contamination in the soil are above those allowed by federal standards, and the site is near a campground, a Corrective Measures Plan was prepared to evaluate possible cleanup alternatives. Each alternative was evaluated based on its effectiveness, implementability, and cost to successfully achieve the cleanup goals. The primary factor evaluated for each cleanup alternative was the effectiveness in minimizing the threat to human health and the environment. The U.S. Environmental Protection Agency and Virginia Department of Environmental Quality have been involved with reviewing and approving the cleanup action.

Removal of the contaminated soil and disposal of the soil in a permitted landfill was selected as the preferred cleanup method.

The Navy Public Works Center Norfolk was tasked to perform the removal action. During the week of March 13-17, 1995, PWC personnel secured a work perimeter and staged equipment and supplies necessary for the cleanup. On March 20, 1995 PWC workers began removing the contaminated soil.



POLE #425 PCB RELEASE (SITE 16)

The cleanup work involves the removal of approximately 100 cubic yards of contaminated soil. The workers must excavate the designated area to a depth of at least two feet. Due to the presence of numerous utilities in the area, the workers must perform most of the excavation by hand. The workers will be protected from the PCBs by wearing protective coveralls and full face respirators. There is no risk to any personnel outside of the work area.

Once the area has been excavated to the proper depth, soil samples will be taken to ensure that cleanup goals have been achieved. If cleanup goals have been met, the area will be backfilled with clean fill and restored. If PCBs are still present above the cleanup standard, the area will be excavated deeper and resampled. The utility pole will also be replaced as part of the cleanup action. It is expected to take approximately three weeks to complete the removal action.

The contaminated soil and debris will be shipped in a roll-off container to a specially permitted landfill which can accept PCB waste.

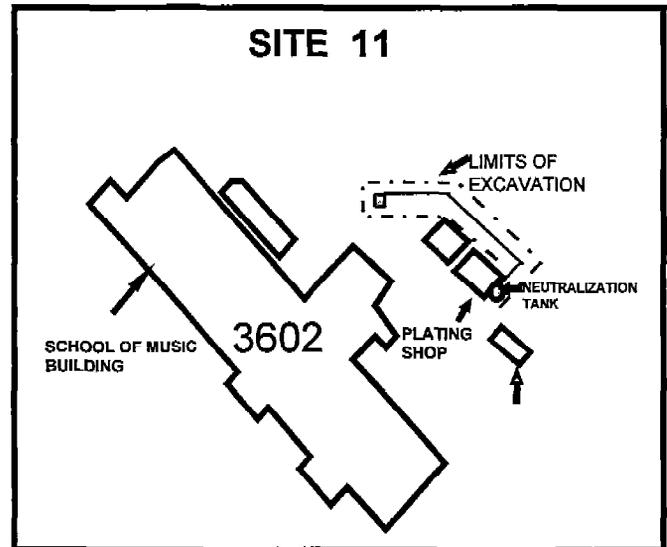
FORMER SCHOOL OF MUSIC PLATING SHOP REMOVAL ACTION

During its period of operation (1964-1974), the School of Music Plating Shop reportedly used a variety of heavy metal plating baths, cyanide, lacquer, and lacquer stripper. The site consists of an in-ground concrete tank and its associated piping. The tank was used to treat the plating solutions used on musical instruments. The tank is approximately five feet in diameter and nine feet deep.

Past investigations have revealed high concentrations of heavy metals in the tank. Since the potential release of these constituents presents a risk to human health and the environment, an Engineering Evaluation/Cost Analysis report was prepared to evaluate alternatives to mitigate the potential risk.

It was determined that the best alternative would be to remove the tank, tank contents, and the associated piping, and dispose of them as hazardous waste. The area will be restored after confirmation samples indicate that there is no residual contamination present in the soil.

A remediation contractor (IT Corporation) was selected by the Navy to perform the removal action. The Navy is currently negotiating the remediation contract. Once this issue is resolved, IT Corporation can mobilize to begin work within two months.



**FORMER SCHOOL OF MUSIC
PLATING SHOP AND DISPOSAL
AREA (Site 11)**

Additional Ecological Work Planned

Representatives from the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration (NOAA) have expressed concerns that the ecological issues (particularly surface water and sediment quality) have not been adequately addressed at the installation Restoration sites.

The Navy plans to conduct additional ecological work to address these concerns. This work will involve

researching and compiling existing information from past IR studies and local, state, and university studies pertaining to the Little Creek Harbor area. This information will be incorporated with future water, sediment, and biota sampling to be performed within Little Creek Harbor.

PIERS 11-19 REMEDIATION CONSTRUCTION

Two areas of subsurface petroleum contamination have been identified in the piers 11-19 area. The contamination resulted from past waste oil disposal practices and historic leaks in the fuel distribution system.

In June of 1994, the Virginia Department of Environmental Quality (DEQ) approved a Corrective Action Plan (CAP) to remove the free floating fuel in the piers 11-19 area. The CAP stated that the best method to remove the free floating fuel from beneath the ground would be to install a series of trenches along the pier bulkhead. These permeable trenches will allow groundwater and free floating fuel to readily flow into them. The groundwater and fuel will be pumped separately to a treatment system building. The fuel will be pumped to a holding tank and the groundwater will be treated before it is eventually discharged back into Little Creek Harbor. The studies conducted at the piers 11-19 area indicate that there are several thousand gallons of fuel beneath the ground. It is estimated that it will take approximately five years to reach our cleanup goals.

Construction activity for the piers 11-19 remediation project began in December 1994. Installation of the remediation system should be completed by June/July 1995.

A brief outline of the system follows.

Figure (1) shows the areas affected at piers 11-19. Two areas of fuel contamination (north and south) are depicted. A series of trenches (three in the north and two in the south) will be installed close to the pier bulkhead. Groundwater naturally flows towards Little Creek Harbor within the affected area. The highly permeable trenches will act like "sponges" to attract the flow of fuel and groundwater. The trenches have been designed so that the fuel will not flow around the trenches. The curved "flow" lines depict how fuel and water molecules are drawn towards the trenches. The fuel and groundwater will be separately pumped through piping installed within the existing steam/utility tunnels in the area. The fluids will be piped to a treatment system building which is approximately 25% completed.

Figure (2) depicts a cross section of a typical trench. The lengths of the trenches vary from 50 to 100 feet. The width is 5 feet and the depth is approximately twelve feet. An impermeable liner will be installed between each trench

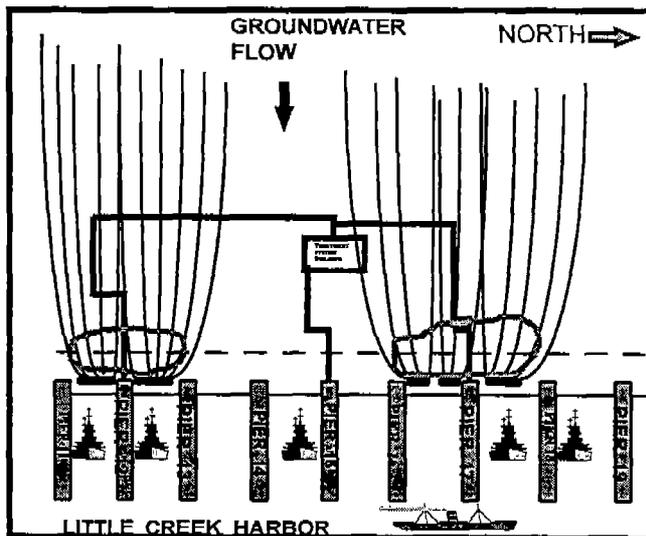


Figure (1)

and the pier bulkhead to ensure that fuel does not migrate to the surface water. A 36 inch perforated pipe will be installed within each trench to act as a conduit to flow to a manhole sump. Each trench will be backfilled with coarse gravel to promote the flow of fuel and groundwater into the trench. A groundwater depression pump will be installed within the sump of each trench. To promote the flow of fluids into the trench. Oil which enters the sump will float on top of the water. Each sump will have a dedicated oil skimmer to pump oil back to the treatment system building.

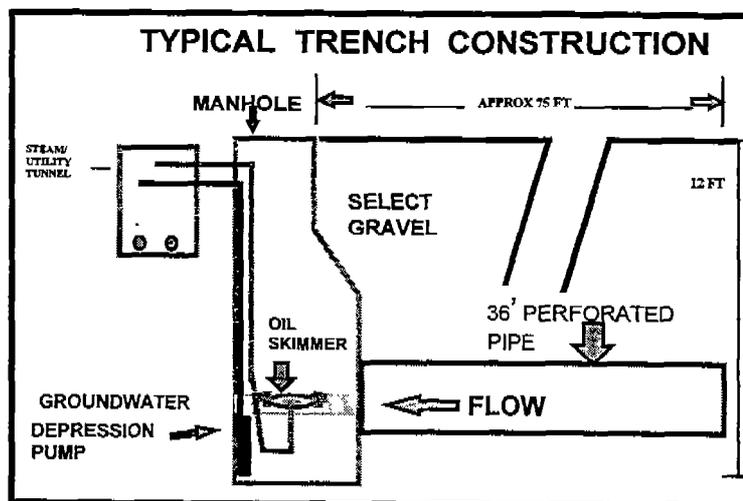


Figure (2)

Figure (3) depicts a block diagram of the treatment system building components. The building measures 40' by 60'. Fuel oil from each trench will be directly pumped into an oil holding tank (2000 gal capacity). When the oil holding tank becomes nearly full, it will be pumped out by a local company that buys used oil for energy reclamation. The groundwater from each trench must be treated prior to discharging it back to Little Creek Harbor. Studies have shown that the water may contain dissolved levels of naphthalene above DEQ discharge limits.

To ensure the groundwater is treated to acceptable levels before discharge, it will pass through several treatment steps. The groundwater will first pass through a sequestrant system which keeps iron and other minerals in solution so that they do not deposit on and clog the system. Then the water will flow to a holding tank to ensure that changing flow rates do not affect the system.

From the holding tank, the water will flow to an oil/water separator to ensure that any oil in the groundwater pump is separated out. The separated oil will be pumped to the oil holding tank. The groundwater will be pumped to four activated carbon units which remove any dissolved organic chemicals. The water then flows to a treated water holding tank for discharge back into Little Creek Harbor at Pier 15.

Several automated safety features have been incorporated into the design of the treatment system to ensure that leaks, spills, overflows, equipment and personal injury do not occur.

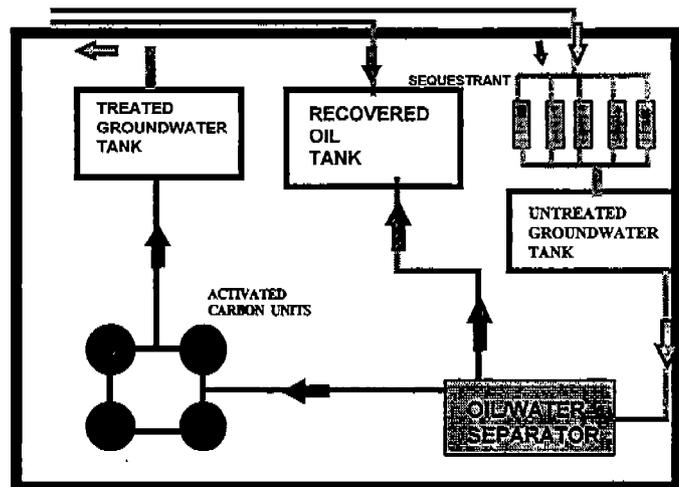


Figure (3)

The DEQ has required that the Navy monitor sixteen well locations to ensure that cleanup goals are being met. Also, the effluent from the treatment system operation will be sampled monthly to ensure that the Navy does not exceed discharge limits as specified under our discharge permit.

Once the treatment system operates for six months without receiving any fuel, it will be turned off. The Navy will perform sampling for a period of one year after the system is turned off to ensure that free product does not reappear in the monitoring wells or the trenches.

Additional Field Work Planned at Two Sites

As discussed in the Final Remedial Investigation /Feasibility Study Report, additional field work is required at Site 12 (Former Navy Exchange Dry Cleaning Facility Disposal Area), and Site 13 (Former Public Works Center PCP Wood Treating Dip Tank and Drying Area). Draft Work Plans for this additional field work should be available by mid-April 1995.

The work plans detail objectives and specific activities to obtain additional site-specific information needed to make a final determination regarding remedial actions at these sites. The contractor should be on-site within a few weeks after approval of the work plans.

General Information

The intent of this newsletter is to inform you and keep you abreast of Installation Restoration (IR) activities. Most RAB members expressed concerns that they were being inundated with volumes of technical information that they did not have the time to sort through. As a RAB member, the Navy is willing to send you personal copies of all future documents at your request. We will

solicit RAB member interest before we tell our contractor how many copies of each document they should print.

We anticipate holding our next RAB meeting in June 1995. If you have any questions/comments regarding the newsletter or would like information on other Installation Restoration topics please do not hesitate to call Mr. Richard Stryker at (804) 363-4571.