

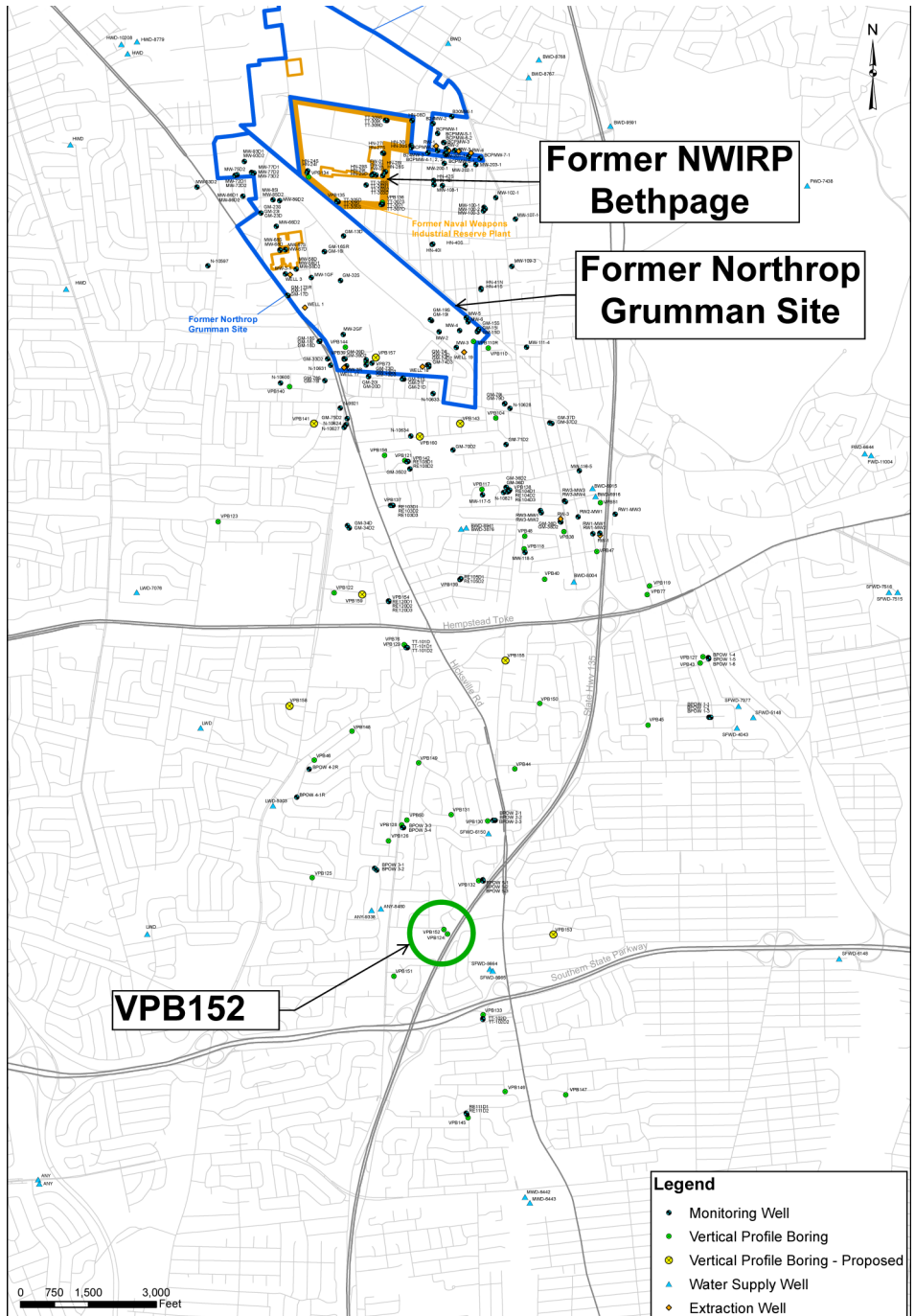
Vertical Profile Boring Installation Summary

Installation July 2014

Historic storage and/or disposal practices at the former **Naval Weapons Industrial Reserve Plant Bethpage (NWIRP Bethpage)** and adjacent former Northrop Grumman properties resulted in groundwater contamination in the local area. Over the last several decades, **volatile organic compounds (VOCs)** that originated from these facilities have moved into the groundwater and off-property with the groundwater flow. The contamination has generally moved to the south while sinking downward to greater depths.

The Navy estimates the VOC contamination covers approximately 3,000 acres, but it is not distributed evenly throughout the area. Instead of a single, contiguous plume, there are multiple widely dispersed plumes or "fingers", meaning VOCs are present in the groundwater at different concentrations and different depths in different areas.

The Navy is conducting a groundwater investigation that includes the installation of **vertical profile borings (VPB)** to gather more information on the location, depth, and concentration of contaminants in the groundwater plume. Installation of a VPB involves drilling a deep hole (up to approximately 1,000 feet below ground surface [bgs]) and taking samples of the groundwater at various depths. One to three permanent monitoring wells are typically installed adjacent to the VPB hole, and the depth of the well(s) is determined based on the results of the sampling conducted during the VPB installation.



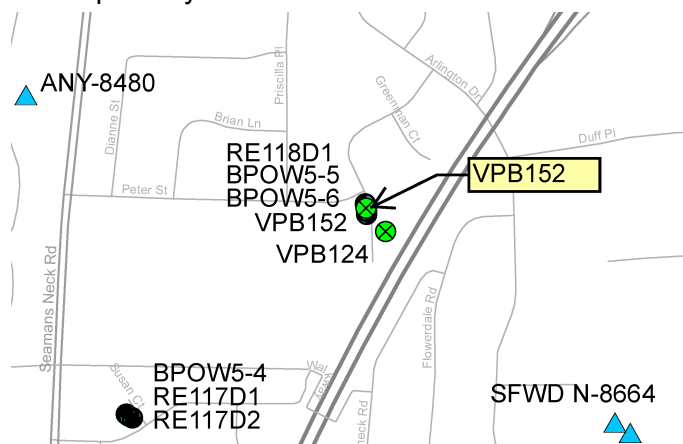
Please note the VPB investigation is sampling raw groundwater, meaning it has not been treated to remove contaminants. Raw groundwater is not what is distributed by the water districts to the public. All water distributed by the water districts is collected from their own water supply wells, and is regularly tested and treated by the districts to ensure a safe water supply.

The VPB152 investigation focused on **Trichloroethene (TCE)** and **Tetrachloroethene (PCE)**, which are two primary VOCs in the NWIRP Bethpage groundwater contamination. The groundwater results were compared with **Maximum Contaminant Levels (MCLs)**, which are used by the New York State Department of Health for determining when water is safe for distribution. The MCL for both TCE and PCE is 5 micrograms per liter (ug/L) or parts per billion.

VPB152 Investigation Summary

- VPB152 was completed between May 23, 2014 and July 7, 2014;
- The final boring was 997 feet (ft) deep and reached the Raritan Clay below the Magothy Aquifer;
- 40 groundwater screening samples were collected at different depths;
- The table contains TCE and PCE levels; **bolding** indicates an exceedance of the NYSDEC MCL. ND denotes there were no detections in the sample.

Three permanent wells were installed at VPB152 (RE118D1, BPOW5-5 and BPOW5-6) between April and May, 2015 and will be monitored quarterly as part of either the Navy's Environmental Restoration Program or Northrop Grumman's Operable Unit 2 groundwater monitoring program. Results of monitoring will be discussed at the RAB meetings and will be available on-line at the information repository website for review.



Depth interval (ft bgs)	TCE (ug/L)	PCE (ug/L)
58 - 60 ft	ND	ND
98 - 100 ft	ND	ND
150 - 152 ft	ND	ND
200 - 202 ft	ND	ND
220 - 222 ft	ND	ND
240 - 242 ft	ND	ND
260 - 262 ft	ND	ND
280 - 282 ft	ND	ND
300 - 302 ft	ND	ND
320 - 322 ft	ND	ND
345 - 347 ft	ND	ND
360 - 362 ft	ND	ND
380 - 382 ft	ND	ND
400 - 402 ft	ND	ND
420 - 422 ft	ND	ND
440 - 442 ft	ND	ND
460 - 462 ft	ND	ND
480 - 482 ft	ND	ND
500 - 502 ft	ND	ND
520 - 522 ft	ND	ND
540 - 542 ft	ND	ND
560 - 562 ft	ND	ND
580 - 582 ft	ND	ND
605 - 607 ft	ND	ND
620 - 622 ft	ND	ND
640 - 642 ft	ND	ND
660 - 662 ft	ND	ND
680 - 682 ft	ND	ND
700 - 702 ft	ND	ND
725 - 727 ft	ND	ND
740 - 742 ft	ND	ND
780 - 782 ft	ND	ND
800 - 802 ft	ND	ND
830 - 832 ft	ND	ND
850 - 852 ft	ND	ND
870 - 872 ft	ND	ND
880 - 882 ft	ND	ND
910 - 912 ft	ND	ND
930 - 932 ft	ND	ND
950 - 952 ft	ND	ND

FOR MORE INFORMATION

Copies of all official environmental program documents are available for review at an information repository located at Bethpage Public Library, 47 Powell Avenue, Bethpage, NY 11714 (516)931-3907.

Additional information on the NWIRP Bethpage Environmental Restoration Program is available online at <http://go.usa.gov/DyXF> or by contacting: Public Affairs, NAVFAC Mid-Atlantic, 9324 Virginia Ave, Norfolk VA 23511-3095, 757-341-1411.