

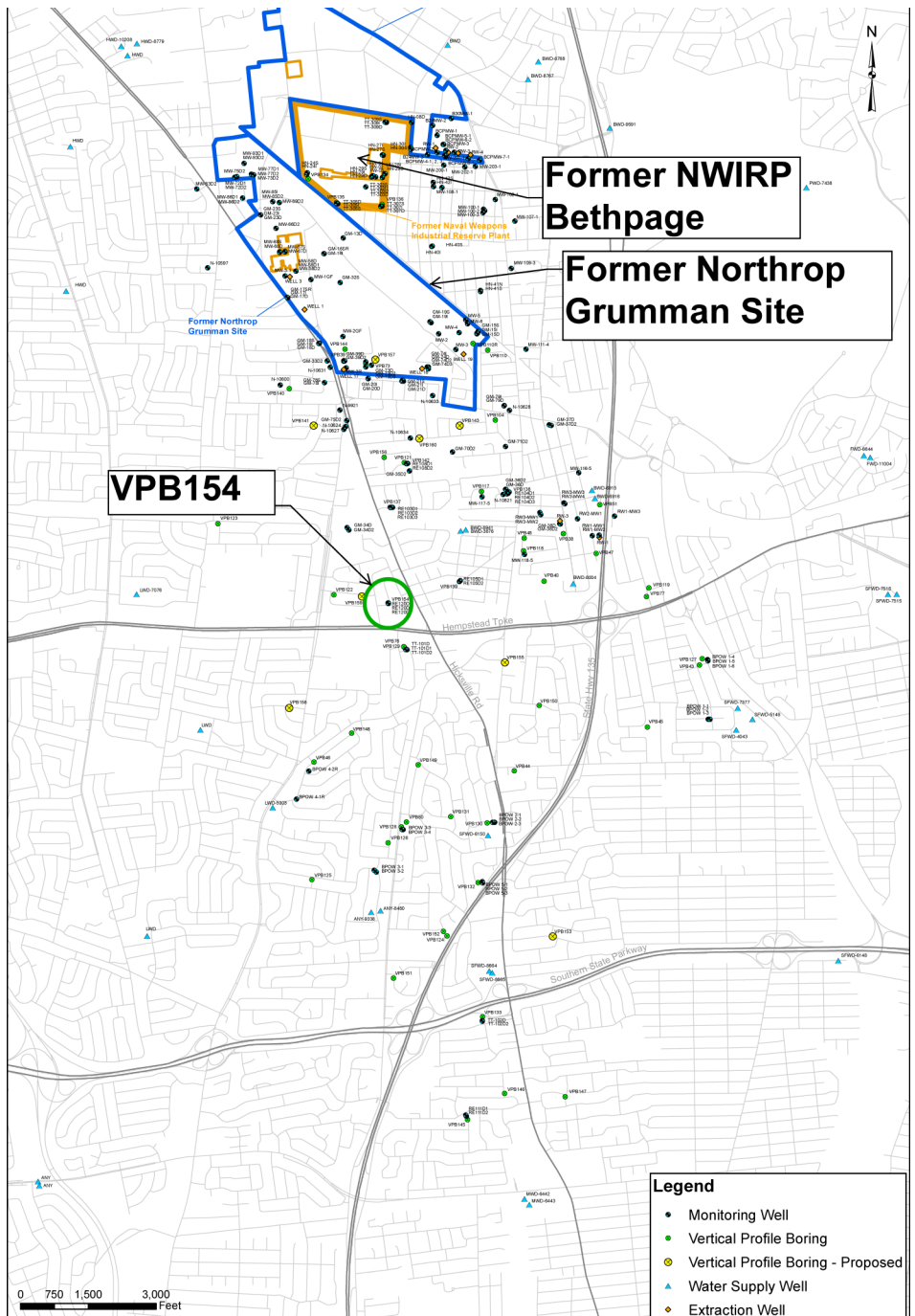
Vertical Profile Boring Installation Summary

Installed September 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.

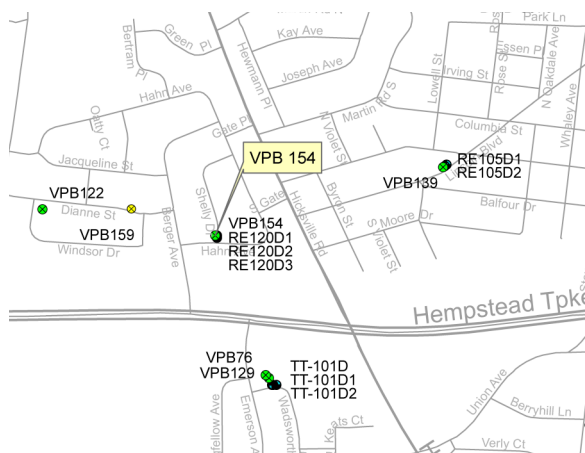


The VPB 154 investigation focused on **Trichloroethene (TCE)** and **Tetrachloroethene (PCE)**, which are two primary VOCs in the NWIRP Bethpage groundwater contamination. The groundwater results were compared with **Maximum Contaminant Levels (MCLs)**, which are used by the New York State Department 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.

VPB 154 Investigation Summary

- VPB 154 was completed between July 15, 2014 and September 3, 2014;
- The final boring was 950 feet (ft) deep and reached the Raritan Clay below the Magothy Aquifer.
- 39 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 VPB 154 (RE120D1, RE120D2 and RE120D3) between October and November, 2014 and are monitored quarterly as part of the Navy's Environmental Restoration 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
148 - 150 ft	ND	ND
198 - 200 ft	31	3.2
228 - 230 ft	180	4.8
238 - 240 ft	190	5.1
258 - 260 ft	ND	ND
278 - 280 ft	200	7.1
298 - 300 ft	200	8.0
318 - 320 ft	180	7.5
338 - 340 ft	26	ND
358 - 360 ft	1.5	ND
378 - 380 ft	0.34	ND
398 - 400 ft	ND	ND
418 - 420 ft	170	4.8
438 - 440 ft	190	5.0
458 - 460 ft	180	5.4
483 - 485 ft	160	6.6
503 - 505 ft	160	ND
518 - 520 ft	340	3.4
538 - 540 ft	970	12
558 - 560 ft	900	10
578 - 580 ft	1800	8.4
598 - 600 ft	350	0.40
618 - 620 ft	810	1.7
638 - 640 ft	1800	5.6
663 - 665 ft	600	ND
678 - 680 ft	550	2.8
698 - 700 ft	700	4.6
718 - 720 ft	ND	ND
738 - 740 ft	1.4	ND
763 - 765 ft	ND	ND
778 - 780 ft	ND	ND
798 - 800 ft	ND	ND
818 - 820 ft	ND	ND
838 - 840 ft	0.33	ND
858 - 860 ft	ND	ND
908 - 910 ft	ND	ND
918 - 920 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 (514)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.