

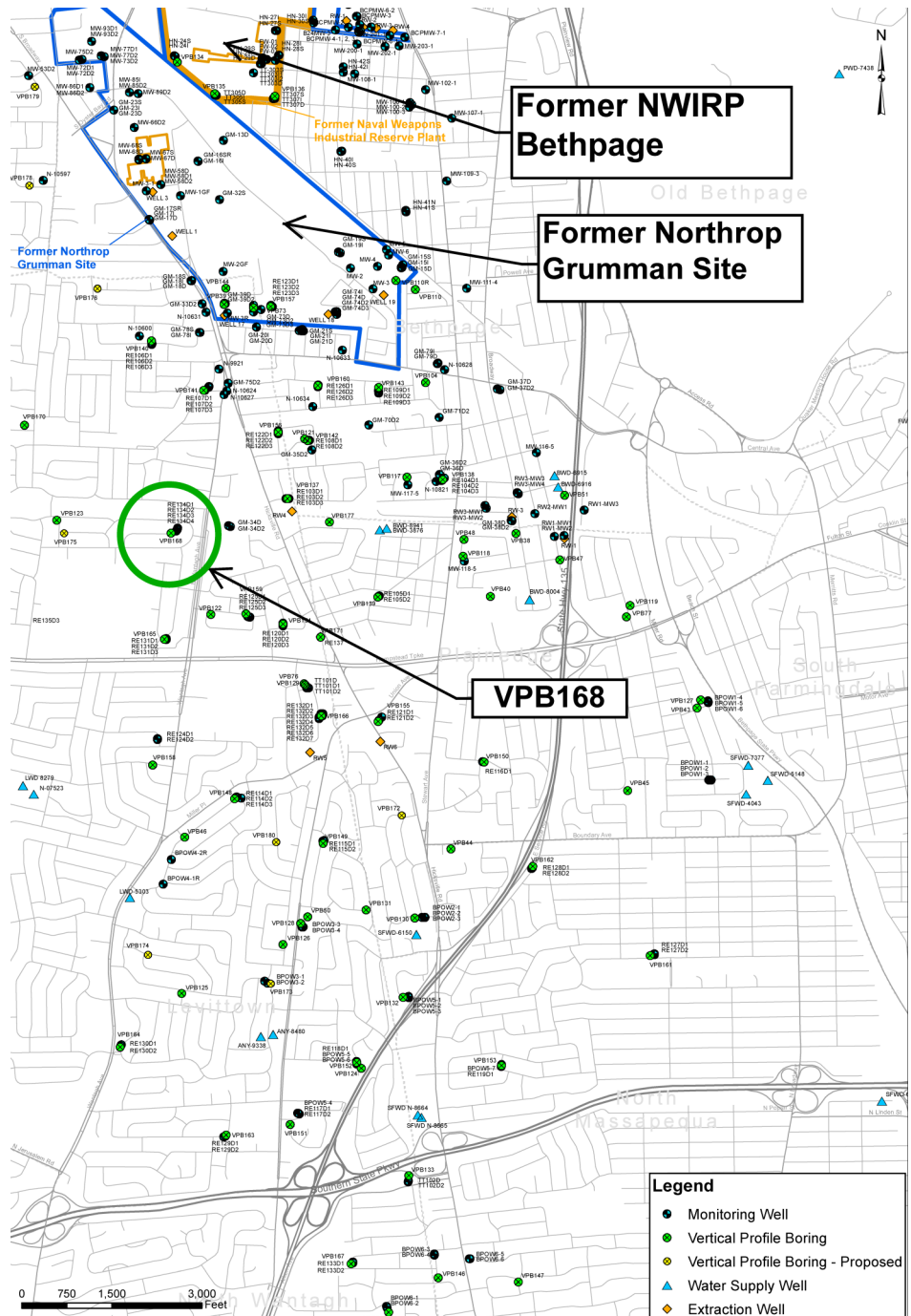
Vertical Profile Boring Installation Summary

Installed November 2017

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.

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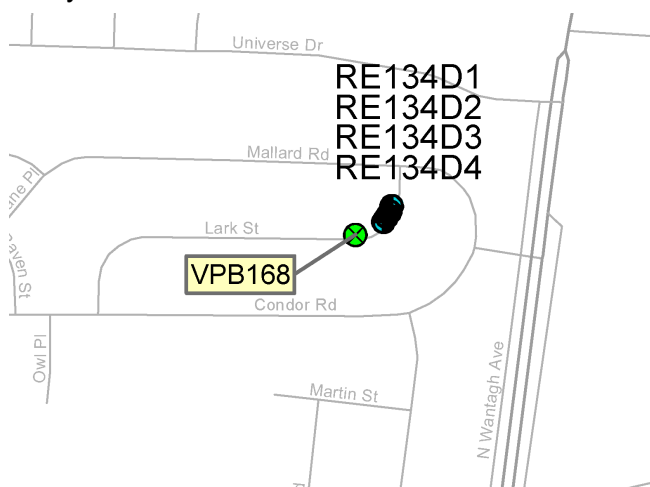
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The VBP166 investigation focused on **Trichloroethene (TCE)** and **Tetrachloroethene (PCE)**, which are two primary VOCs in the NWIRP Bethpage groundwater contamination. The groundwater results were compared with **Maximum Contaminant Levels (MCLs)**, 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.

VBP168 Investigation Summary

- VBP168 was completed between 10/10/2017 and 11/27/2017;
- The final boring was 890 feet (ft) deep and reached the Raritan Clay below the Magothy Aquifer;
- 33 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.

Four permanent wells were installed at VBP168 (RE134D1-RE134D4) between April and June, 2018 and will be monitored as part of the Navy's Environmental Restoration Program. Results of monitoring well 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	ND	ND
98-00	ND	ND
138-140	ND	ND
198-200	0.6	ND
218-220	1.8	0.49
238-240	ND	ND
258-260	3.4	ND
278-280	51	5.1
298-300	1.2	ND
323-325	12	1.3
338-340	42	5
358-360	ND	ND
378-380	67	7.4
403-405	61	7.7
418-420	31	3.3
443-445	10	1.8
458-460	36	4.5
478-480	35	3.2
498-500	100	9.4
518-520	160	190
538-540	110	23
558-560	110	11
578-580	ND	ND
598-600	95	36
618-620	53	20
658-660	ND	ND
683-685	9	9.5
698-700	ND	ND
723-725	ND	ND
743-745	ND	ND
763-765	ND	ND
778-780	ND	ND
818-820	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.