

## Vertical Profile Boring Installation Summary

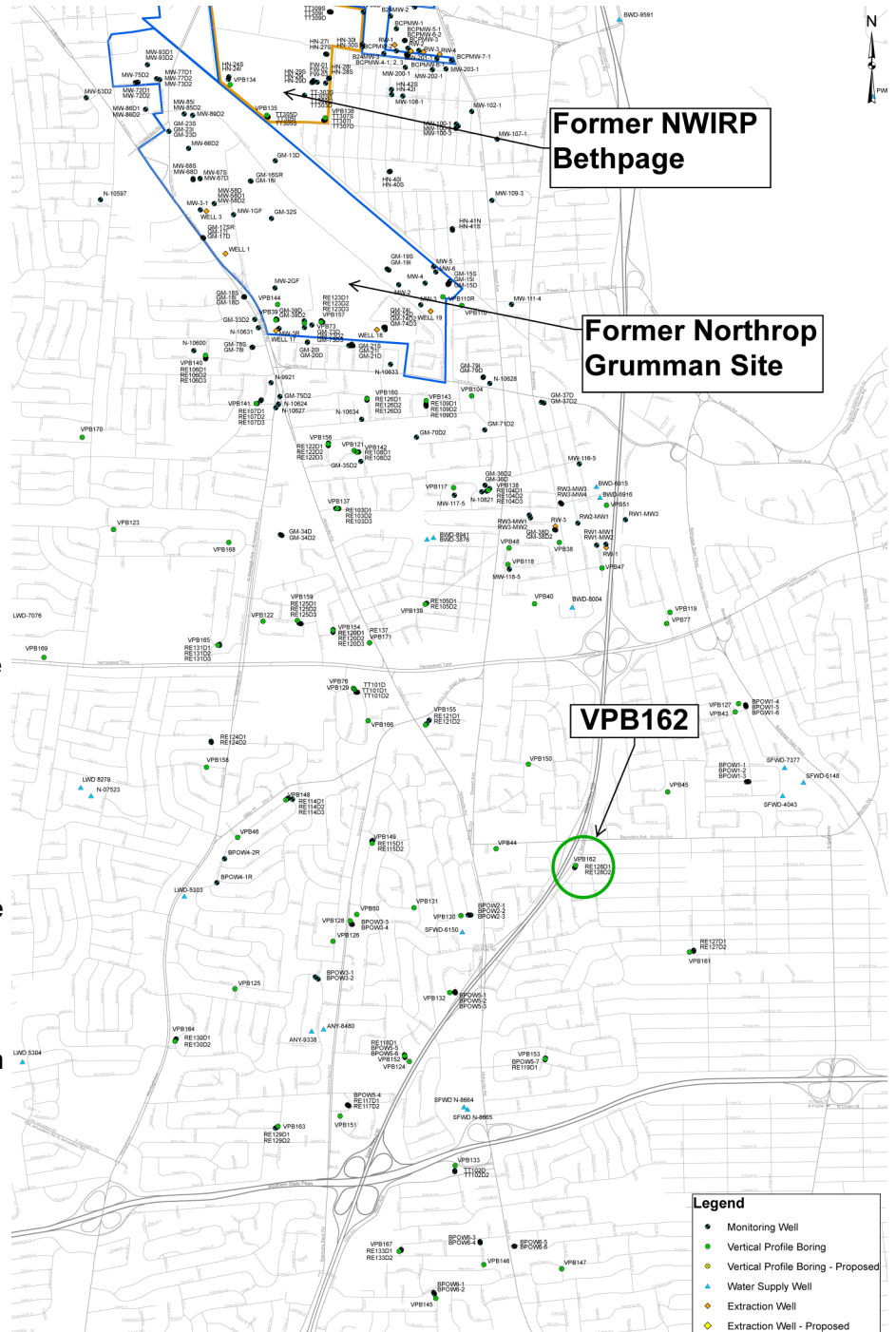
Installed August 2016

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 VBP162 investigation focused on **Trichloroethene (TCE)** and **Tetrachloroethene (PCE)**,



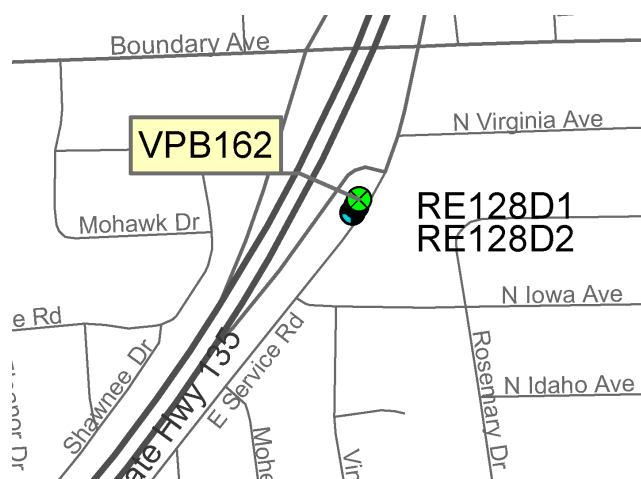
**Please note the VPB investigation is sampling raw groundwater, meaning it has not been treated to remove contaminants. Raw groundwater is not what is distributed by the water districts to the public. All water distributed by the water districts is collected from their own water supply wells, and is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

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.

#### **VBP162 Investigation Summary**

- VBP162 was completed between June 23, 2016 and August 2, 2016;
- The final boring was 1010 feet (ft) deep and reached the Raritan Clay below the Magothy Aquifer;
- 42 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.

Two permanent wells were installed at VBP162 (RE128D1 and RE128D2) between August and September, 2016 and are 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
98-100	ND	ND
148-150	0.45	ND
198-200	1.9	ND
218-220	<b>16</b>	1.0
238-240	<b>12</b>	1.3
258-260	<b>31</b>	1.2
278-280	<b>15</b>	ND
298-300	ND	ND
318-320	ND	ND
343-345	ND	ND
358-360	ND	ND
378-380	ND	ND
398-400	ND	ND
418-420	ND	ND
438-440	ND	ND
458-460	ND	ND
478-480	ND	ND
498-500	ND	ND
518-520	ND	ND
538-540	ND	ND
558-560	ND	ND
583-585	ND	ND
598-600	ND	ND
618-600	ND	ND
638-640	ND	ND
658-660	ND	ND
678-680	ND	ND
698-700	ND	ND
718-720	ND	ND
748-750	ND	ND
763-765	ND	ND
783-785	ND	ND
798-800	ND	ND
818-820	ND	ND
838-840	ND	ND
858-860	ND	ND
878-880	ND	ND
898-900	ND	ND
918-920	ND	ND
938-940	ND	ND
958-960	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.