Naval Weapons Industrial Reserve Plant, Bethpage, NY
Groundwater Investigation

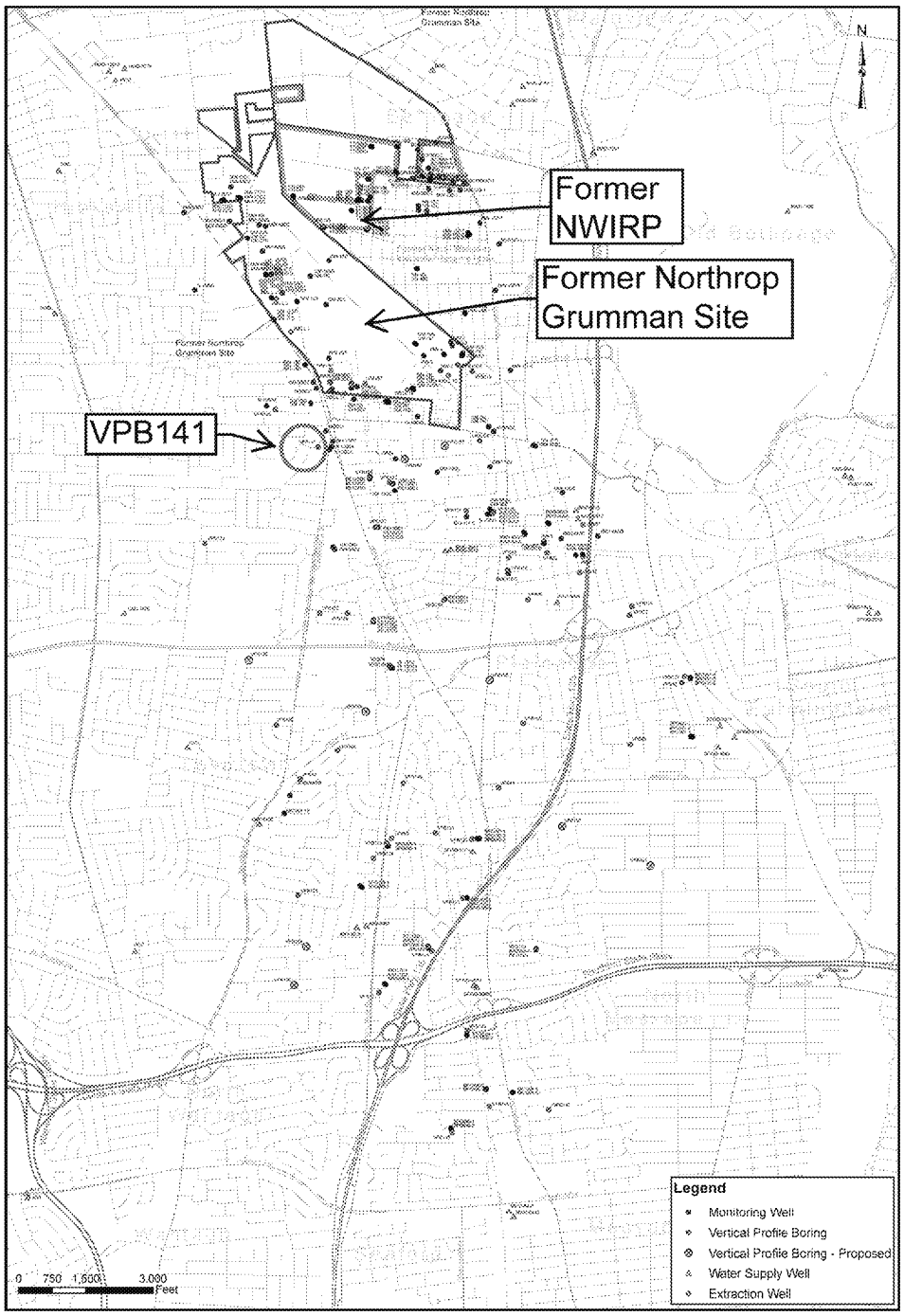
VPB141 Installation Summary

Vertical Profile Boring Installation Summary — September 2015

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 1,000 feet deep) 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.



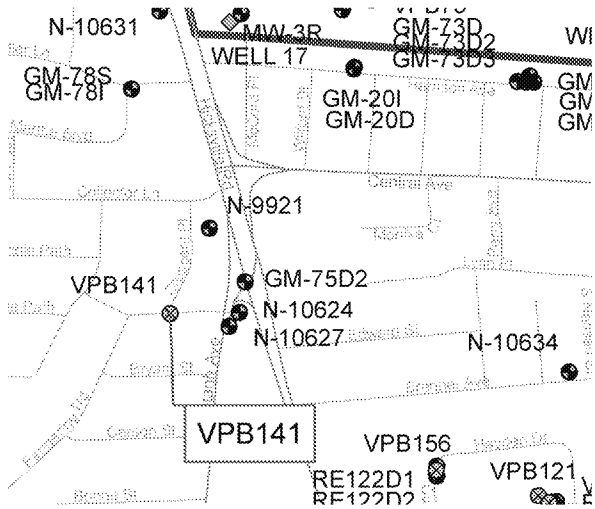
Please note the VPB investigation is sampling raw groundwater, meaning it has not been treated to remove contaminants. Raw groundwater is not what is distributed by the water districts to the public. All water distributed by the water districts is collected from their own water supply wells, and is regularly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

The VPB 141 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 141 Investigation Summary

- *VPB 141 was completed between March 16, 2015 and April 22, 2015;*
- *The final boring was 850 feet (ft) deep;*
- *33 groundwater screening samples were collected at different depths;*
- *The table contains TCE and PCE levels; bolding indicates an exceedance of the NYSDEC MCL.*

Permanent wells are planned on being installed at the VPB 141 location. Follow-on monitoring of wells will be 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)	PCE (ug/L)	TCE (ug/L)
58-60	< 0.50	< 0.50
103-105	0.79	0.54
148-150	< 0.50	1.0
198-200	4.8	**180**
218-220	< 0.50	0.89
238-240	< 0.50	0.50
258-260	< 0.50	1.4
278-280	< 0.50	0.42
298-300	< 0.50	0.81
318-320	< 0.50	4.1
338-340	< 0.50	0.48
363-365	< 1.0 UJ	0.72
378-380	1.9	**31**
398-400	4.3	**87**
423-425	0.69	**16**
438-440	< 0.50	< 0.50
458-460	1.4	**7.5**
478-480	0.45	3.1
498-500	0.43	3.4
523-525	**6.1**	**36**
543-545	**17**	**170**
578-580	**24**	**280**
598-600	< 20	**32**
618-620	3.5	1.7
638-640	< 10	**18**
658-660	< 0.50	0.33
678-680	< 100	< 100
698-700	< 10	< 10
718-720	< 1.0	< 1.0
743-745	< 1.0	< 1.0
758-760	< 4.0	< 4.0
778-780	< 0.50	< 0.50
823-825	< 0.50	< 0.50

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 Officer, NAVFAC Mid-Atlantic, 9742 Maryland Ave, Norfolk VA 23511-3095 or Thomas.kreidel@navy.mil