

ONGOING & PLANNED FUTURE ACTIONS

- The Navy will continue to coordinate with NYSDOH, NYSDEC and Nassau County Department of Health (the Agencies) to:
 - determine the most effective measures to quickly reduce the vapor levels in affected homes; and
 - permanently reduce the source of vapors to ensure the protection of Bethpage residents.
- Ongoing and planned future actions include:
 - Additional Environmental Sampling: Because of the elevated levels found in some homes along 11th Street, the Navy plans additional indoor air and sub-slab sampling in homes along 10th Street. This information will help us determine if the vapors have migrated beyond the 11th Street homes previously sampled. – suggest deleting this sentence – I think we should focus on the soil vapor sampling in the streets as the best indicator of vapor migration.
 - Sealing Openings in Basement Floors: Any utility access or large cracks in basement floors will be sealed temporary to minimize potential for vapor intrusion.
 - Installation of Portable Air Filtration Units: Portable carbon air filtration units have been installed in affected homes to reduce levels of TCE immediately. Testing will be conducted to ensure effectiveness.
 - Installation of Sub-slab Depressurization Systems: Sub-slab depressurization systems (similar to those proven to effectively remove radon) will be offered for homes where levels of volatile chemicals exceed NYSDOH guidelines. Pending approval of residents, installation and monitoring of these systems will be conducted over the coming months.
 - Installation of a Soil Vapor Extraction (SVE) System: The SVE system will be installed on NWIRP property and will be designed to draw vapors back to Navy property, reduce the source of vapors and prevent any further migration into nearby neighborhood (pilot test performed in December 2008 and full scale construction expected to begin in Sept 2009).



A sub-slab depressurization system is an effective, proven way to keep chemical vapors from entering the indoor air of homes. A pipe is installed below the basement floor and connected to a blower. The blower pulls the vapors from the ground before they can enter the home and vents them outside.

FOR MORE INFORMATION

- Documents relating to the site investigation are available at the following locations:

- *Bethpage Public Library*
47 Powell Avenue
Bethpage, NY 11714
(516)931-3907
bethpage@nassaulibrary.org

- *A public website is also available @*
<http://nwirpbethpage.navy-env.com/>

- For specific information regarding the site investigation, please contact:

Ms. Lora Fly
Remedial Project Manager
Naval Facilities Engineering Command
(757)444-0781 lora.fly@navy.mil

- For specific information regarding cleanup-issues, please contact:

Steven Scharf
Project Manager
NYS Department Environmental Conservation
(518) 402-9620

- For specific information regarding site-related health questions, please contact:

Jacquelyn Nealon
Project Manager
NYS Dept. of Health
(800) 458-1158 ext. 2-7880

- *If you have additional comments or concerns, please leave a comment card at this station – **THANKS FOR YOUR PARTICIPATION!***

NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP) BETHPAGE: SITE 1 (“FORMER DRUM MARSHALLING AREA”) INVESTIGATION OPEN HOUSE 6:00 – 9:00 P.M.

Welcome to the NWIRP Bethpage Site 1 open house public meeting. Subject matter experts are at each poster station to answer your questions regarding the ongoing environmental investigation at the site.

Our goal for this meeting is to:

- *explain how the Navy is conducting the site investigation and cleanup;*
- *identify community concerns & solicit comments;*
- *establish methods to share information; and*
- *provide the community with the most up-to-date information regarding the ongoing environmental investigation.*



Typical Poster Session Layout

SITE HISTORY



The primary mission of the Naval Weapons Industrial Reserve Plant (NWIRP) was to research, design, build and test military aircraft in support of our national defense

1933

Naval Weapons Industrial Reserve Plant (NWIRP) opens as part of Grumman “Iron Works”

1940’s – 1980’s

Site 1 used to store waste solvents

1986

Initial studies identify sites on NWIRP that require further investigation – environmental restoration program begins

1998

NWIRP closes

1998 - 2002

Soil Vapor Extraction (SVE) system operated at NWIRP Site 1 – groundwater concentrations reduced to cleanup goals

2006 (October)

NYSDOH issues guidance for evaluating potential vapor intrusion at environmental restoration sites

2007

Work plans prepared by Navy and approved by NYSDEC for soil vapor sampling at NWIRP fence line

2009 - Present

Homes along 11th Street sampled to determine potential for vapor intrusion. Sample results indicate **several** homes along 11th street have TCE in indoor basement air that exceeds NYSDOH guidelines – Navy works with the Agencies to implement immediate corrective action, reduce source of vapor and ensure protection of Bethpage residents

2008

Navy conducts soil **vapor** sampling at NWIRP fence line and finds elevated levels of TCE in southeastern corner of property – Navy pilot tests SVE system for containment of soil vapors on NWIRP property. Additional soil vapor sampling along 10th and 11th streets finds elevated levels of TCE – residents contacted to arrange for indoor air sampling.

SITE 1: “FORMER DRUM MARSHALLING AREA” and OFF-SITE SAMPLING LOCATIONS



Location of soil vapor samples taken in right-of-ways



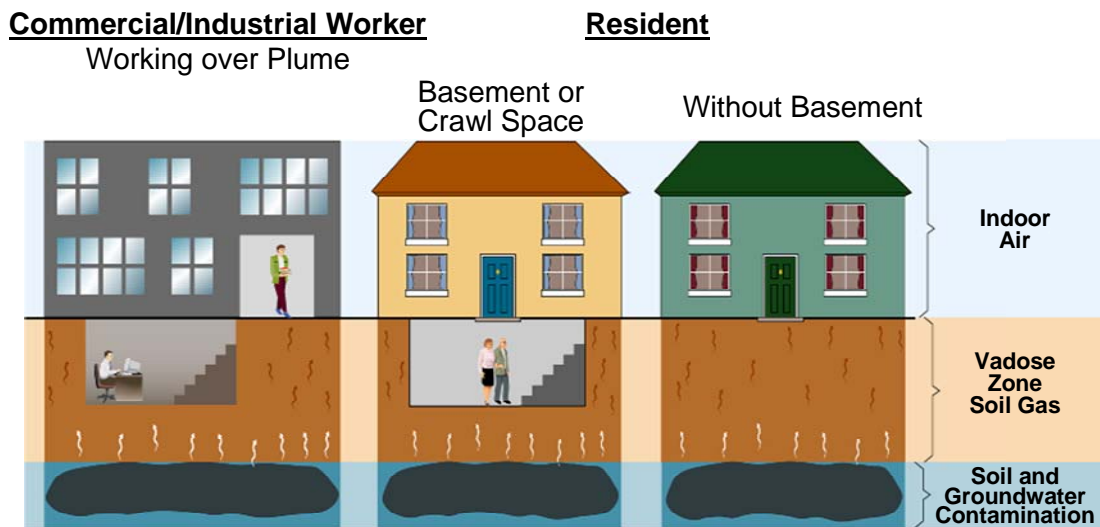
Location of indoor air samples taken from residences along 11th Street

Site 1: “Former Drum Marshalling Area”:

- Approximately 4 acre site used from the 1940’s through the 1970’s to store drums of waste materials;
- Volatile chemicals historically used at the site were released to soil and groundwater and have migrated off-site and into nearby homes through a process known as “vapor intrusion”;
- Sampling conducted in January 2009 indicates trichloroethylene (TCE) in indoor basement air in several 11th Street homes exceeds NYSDOH guidelines;
- Navy is coordinating with New York State Department of Environmental Conservation (NYSDEC), New York State Department of Health (NYSDOH) and Nassau County Department of Health (the Agencies) to implement appropriate actions to immediately reduce TCE levels in indoor air and permanently reduce the source of the vapor intrusion to ensure protection of Bethpage residents.

UNDERSTANDING VAPOR INTRUSION

- Vapor intrusion is the process by which volatile chemicals move from an underground source into the indoor air of buildings or other enclosed structures.
- Soil vapor sampling results along 11th Street indicate that volatile chemicals have moved off-site from NWIRP property.
- Several homes on 11th Street have levels of trichloroethylene (TCE) in indoor basement air that are higher than NYSDOH guidelines.



ITRC, 2007

Volatile chemicals are chemicals that can evaporate easily. Vapor intrusion should be investigated wherever volatile chemicals have been historically released at a site and site conditions indicate it may have the potential to occur.

The NYSDOH guideline was set many times lower than the levels that have caused health effects. The Navy is working with the Agencies to determine the most effective way to:

- immediately reduce vapor levels in affected homes, and
- permanently reduce the source of vapors to ensure long-term protection of Bethpage residents.

SUMMARY OF RECENT ACTIONS

Significant progress has been made in the environmental investigation of Site 1 (“Former Drum Marshalling Area”) at NWIRP. Recent actions completed include:

Installation of Air Sparging/Soil Vapor Extraction (AS/SVE) System: A treatment system was installed at Site 1 to remove volatile chemicals in soil and groundwater using “air sparging/soil vapor extraction”. The treatment system:

- was designed to eliminate the continuing source of groundwater contamination;
- was successful in removing over 2 tons of volatile chemicals during operation Aug 1998 - Mar 2002;
- achieved the goal of reducing volatile chemicals in both soil and groundwater on site.



Air sparging uses air to help remove chemical vapors from both soil and groundwater. The soil vapor extraction system then works like a vacuum to extract and collect the volatile chemicals for proper disposal. AS/SVE systems work best on volatile chemicals, like those found at NWIRP, Site 1 (“Former Drum Marshalling Area”)



Soil gas sampling along the eastern border of NWIRP in January 2008. Sampling indicated elevated levels of volatile chemicals at the facility boundary.

Environmental Sampling Conducted Along The Eastern Boundary of NWIRP: After developing a sampling plan and coordinating with NYSDEC, the Navy conducts soil vapor sampling along the facility fence line in January 2008. Results indicate that elevated levels of volatile chemicals are present along the eastern edge of the facility.

Environmental Sampling Conducted In 11th Street Homes and Neighborhood Right-A-Ways:

Sampling conducted in October 2008 along right-a-ways indicates elevated levels of TCE in soil vapor along 11th Street. Preliminary results from additional sampling conducted in January 2009 in homes along 11th Street indicates elevated TCE levels in the indoor basement air of several residences. Navy contacts residents and installs carbon filter units as an immediate mitigation



Indoor air sampling was conducted in January 2009 in homes along 11th Street. Results indicate elevated levels of TCE in the indoor basement air of several of the homes sampled.