

DEPARTMENT OF THE NAVY

NAVAL FACILITIES ENGINEERING COMMAND
NORTHEAST IPT, ENVIRONMENTAL DIVISION
9742 MARYLAND AVENUE
NORFOLK, VIRGINIA 23511-3095



IN REPLY REFER TO:

5090

OPNEEV/lbf

29 August 2008

Dear Bethpage Resident:

I am writing this letter to keep you informed regarding our ongoing environmental restoration program at the former Naval Weapons Industrial Reserve Plant (NWIRP), Bethpage, NY. Environmental investigations identified volatile organic compounds (VOCs) in soil at the NWIRP. VOCs are a class of chemicals that can evaporate easily into the atmosphere and include solvents, cleaners, and degreasers. These chemicals were used at the facility from the 1940s to the 1990s and a portion of the chemicals were released into the soil and groundwater.

One of the sites with VOCs (the Former Drum Marshalling Area, Site 1) is adjacent to your neighborhood and we wanted to share information regarding the ongoing site investigation as soon as possible. A treatment system operated at the site from 1997 to 2002 and removed most of the VOCs. However, sampling conducted earlier this year found VOCs at the NWIRP property line that borders the northern part of 11th Street. Under some conditions, VOCs can migrate outward and into overlying buildings through a process known as "vapor intrusion" (see the attached fact sheet for additional details). *Although vapor intrusion is uncommon, we feel strongly that it needs to be investigated in this case because VOCs have been found at NWIRP and housing areas are relatively close to the existing property boundary.*

We are working closely with the New York State Department of Environmental Conservation (NYSDEC) to conduct additional testing to determine if vapor intrusion may be an issue beyond the NWIRP property. During the coming weeks, we plan to install wells in street right-a-ways bounded by 10th and 11th Streets, and Maple and Sycamore Avenues. Drilling operations will be conducted during normal working hours, Monday through Friday. Additional actions will be coordinated with NYSDEC.

To answer any questions, the Navy will be sponsoring an informational meeting at the Bethpage Community Center, 103 Grumman Road West, Bethpage, New York on Tuesday, October 7, 2008 from 6:00 – 9:00 P.M. The meeting will be informal and consist of a series of poster stations to explain the history of NWIRP and current and planned future actions for the site. Representatives from both the U.S. Navy and the NYSDEC will be on hand to answer questions. Community members are encouraged to attend to learn more about the ongoing project. We look forward to seeing you there.

Should you have any questions, please contact me at (757) 444-0781.

Sincerely,



LORA B. FLY

Remedial Project Manager

By Direction of the

Commanding Officer

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Numbered Street Neighborhood – regular mail

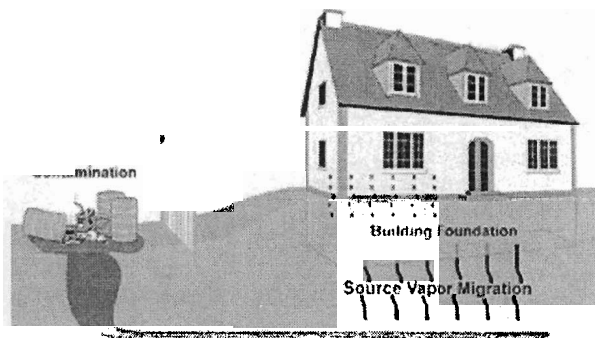
Naval Facilities Engineering Command
 Remedial Project Manager (Code OPNEEV)
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What is "Vapor Intrusion"?

July 2002

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, or soil gas, is the air found in the spaces between soil particles. Over time, volatile chemicals in the subsurface soils or groundwater can move into and contaminate the soil vapor. Normal heating, air-conditioning and ventilation systems can create a negative pressure inside buildings that draws these soil vapors from the ground into overlying buildings. Under certain conditions, soil vapors can enter buildings through cracks in slab floors, basement floors, sump pumps or wherever electrical wires or pipes penetrate the foundation.



Chemicals that evaporate easily are called "volatile" chemicals. Under certain conditions, volatile chemicals can move from underground into the indoor air of overlying buildings through a process known as "vapor intrusion".

Why is Site 1 being investigated for potential vapor intrusion issues?

The Naval Facilities Engineering Command has been working with the New York State Department of Environmental Conservation (NYSDEC) to identify and cleanup historical waste storage and disposal sites at the former Naval Weapons Industrial Reserve Plant (NWIRP) in Bethpage, NY. Part of this process requires groundwater under the Former Drum Marshalling Area (Site 1) to be sampled and analyzed to determine if it has been impacted by past industrial operations. During the course of this study, Volatile Organic Compounds (VOCs) were found in the soil and groundwater at Site 1. From 1997 to 2002, a treatment system was constructed and operated at the site and removed most of the VOCs. The remaining VOCs were bound in soils and would be addressed through natural attenuation process. One of these compounds, trichloroethylene or TCE, is a volatile solvent known to be associated with vapor intrusion issues at other areas across the United States.

These compounds were used as industrial cleaners and some of the compounds found their way into soil and groundwater. Based on the type of chemical, a better understanding on how these chemicals may migrate and the proximity to occupied buildings, the Navy and NYSDEC concluded that additional studies should be conducted to evaluate the potential for vapor intrusion.

Can vapor intrusion from Site 1 affect my health?

Exposure to a volatile chemical does not necessarily mean that adverse health effects will occur. Whether or not adverse health effects occur can depend on a variety of factors:

- Toxicity of the chemical;
- Concentration of the chemical;
- Duration and frequency of exposure; and
- The individual's sensitivity to the specific chemical.

Although vapor intrusion is not common, it should be investigated wherever site conditions indicate it may have the potential to occur. Since the results from the initial investigation indicate that there may be a potential for vapor intrusion at Site 1, the Navy is working closely with NYSDEC to determine if soil vapors could migrate off-site and into neighboring buildings and occupied structures.

What additional testing can be done? What are the next steps?

Once the potential for vapor intrusion at a site has been determined, there are a variety of methods that can be used to help define the actual extent of contamination. These methods may include:

- **Soil Vapor Samples:** These samples may be collected to help characterize the nature and extent of vapor contamination in the soil of a given area. Soil vapor samples are typically collected before sub-slab and/or indoor air samples to help pinpoint buildings or groups of buildings that require additional analysis.
- **Sub-slab Vapor Samples:** These samples may be collected to characterize the contamination in the soil directly beneath a building with a basement or slab foundation. Sub-slab soil vapor results are used to determine current and potential future human exposures based on actual vapor levels beneath a building.
- **Indoor Air Samples:** These samples may be collected to characterize the indoor air quality in a specific building. Indoor air sample results help to evaluate whether there are current human exposures to volatile chemicals in the indoor air of a building. **Indoor air samples must be used with caution as they do not tell you what percentage of the volatile chemicals detected are actually being caused by vapor intrusion.** As there are many potential sources of volatile chemicals in indoor air, these results must be compared to both outdoor air and sub-slab samples in order to provide meaningful information regarding vapor intrusion at a particular site.
- **Outdoor Air Samples:** These samples may be collected to characterize site-specific background air conditions. Outdoor air samples are used to evaluate the extent to which outdoor sources (example: automobiles, lawn mowers, oil storage tanks, industrial facilities, etc.) may be affecting indoor air quality.

The Navy will be working closely with NYSDEC to conduct additional field work in the area east of Site 1 beginning in October of 2008. Current plans call for installing eight (8) soil vapor wells in street right-a-ways bounded by 11th Street, Maple Avenue, Sycamore Avenue and 10th Street. The results of this additional sampling and analysis will determine the next appropriate steps to be conducted. We will continue to keep you informed of our progress throughout this ongoing process.

Where can I go for more information?

The Navy and NYSDEC will be sponsoring an informational meeting regarding potential vapor intrusion issues at Site 1 @:

**Bethpage Community Center
103 Grumman Road West
Bethpage, New York
Tuesday, October 7, 2008 – 6:00 – 9:00 PM.**

The meeting will be an open house format with poster stations and subject matter experts assigned to answer questions and provide additional details regarding the ongoing site investigation.

If you have specific questions regarding the information on this fact sheet, please contact the Navy and Marine Corps Public Health Center @ (757)953-0932. For information regarding the ongoing cleanup program at NWIRP Bethpage, please contact the remedial project manager, Ms. Lora Fly @ (757)444-0781.

As the science regarding vapor intrusion is constantly evolving, please see the EPA website for the latest guidance and additional resources: <http://www.epa.gov/correctiveaction/eis/vapor.htm> or New York Department of Health Guidance at http://www.health.state.ny.us/environmental/indoors/vapor_intrusion.