

BNL's commitment to the environment

*clean it up  
and keep it clean*



# Cleaning up Groundwater

Dear Neighbor,

We at Brookhaven National Laboratory regret that during past decades groundwater contamination has occurred and moved off of our site. Over the past several years, we have worked hard to begin cleaning up the groundwater both on and off of Laboratory property. This work has included the installation of several treatment systems on Lab property, as well as one system and many groundwater monitoring wells in neighborhoods south of the Laboratory.

Soon, the Laboratory will be installing additional temporary and permanent monitoring wells in these neighborhoods. The sampling data from these wells will be used to locate the treatment systems necessary to complete the groundwater cleanup.

I realize that you may have questions and concerns about this work. We have tried to anticipate many of them and provide the answers here. If you have further questions, please call Ken White at 631-344-4423. Also, Laboratory staff will personally contact residents adjacent to the drilling sites. Eventually, they will also contact those adjacent to the planned treatment unit locations, to provide more information, answer your questions, and get your feedback.

As residents ourselves, we are sensitive to the impact of this work in the neighborhood. We will do everything we can to ensure the job is done safely and quickly and that our work sites are left clean. Again, please feel free to call if you have any questions.

Sincerely,



*Les Hill,*  
Director, Environmental Management  
Brookhaven National Laboratory





Elected officials and community members dedicating the first groundwater treatment system off BNL property



The manager of BNL's groundwater remediation program explaining Long Island's aquifers



Civic president Jan Schaefer and Congressman Felix Grucci learning about groundwater treatment from BNL staff

community involvement  
extensive sampling  
compliance with laws

# Cleaning up groundwater

## Background

Several years ago, Brookhaven National Laboratory discovered it was responsible for contaminating groundwater off the Laboratory site. As a result of past operations from as far back as World War I when the Lab was Camp Upton, some chemicals have entered the groundwater and moved beyond the Laboratory's southern boundary. These chemicals are known as volatile organic compounds. They are the same as those commonly found in household products such as solvents, fuel oils, polishes, and cleansers.

This has been a concern for both the U.S. Department of Energy and the Laboratory. We have been and will continue to address this issue, seeking and incorporating community input at appropriate points throughout the cleanup process.

Several very important steps already have been taken in our groundwater program:

- Residents to the south of the Lab who did not already have public water were offered connection to the Suffolk County Water Authority supply lines. Approximately 1,500 households accepted this offer.
- On-site sources of contamination such as old tanks and spill areas have been cleaned up to prevent further contamination.
- Hundreds of permanent and temporary sampling wells have been installed on site and to the south. Lab representatives sample these wells routinely to ensure we know where the contamination is located.
- Seven groundwater treatment systems are currently operating (see map). Six are on Lab property and one is in an industrial park south of the Laboratory and north of the Long Island Rail Road. The on-site systems prevent further migration of contaminated groundwater past the Lab boundary.
- The Department of Energy worked with agencies that regulate the Laboratory — the Suffolk County Department of Health Services, the New York State Department of Environmental Conservation, and the United States Environmental Protection Agency — and came to agreement on how the Department and the Lab should continue the cleanup process. The community helped shape this agreement during the public comment period.



Drill rig with 30-foot mast and support truck. Three to five workers will be present during the day. If necessary, security personnel will watch the site at night.

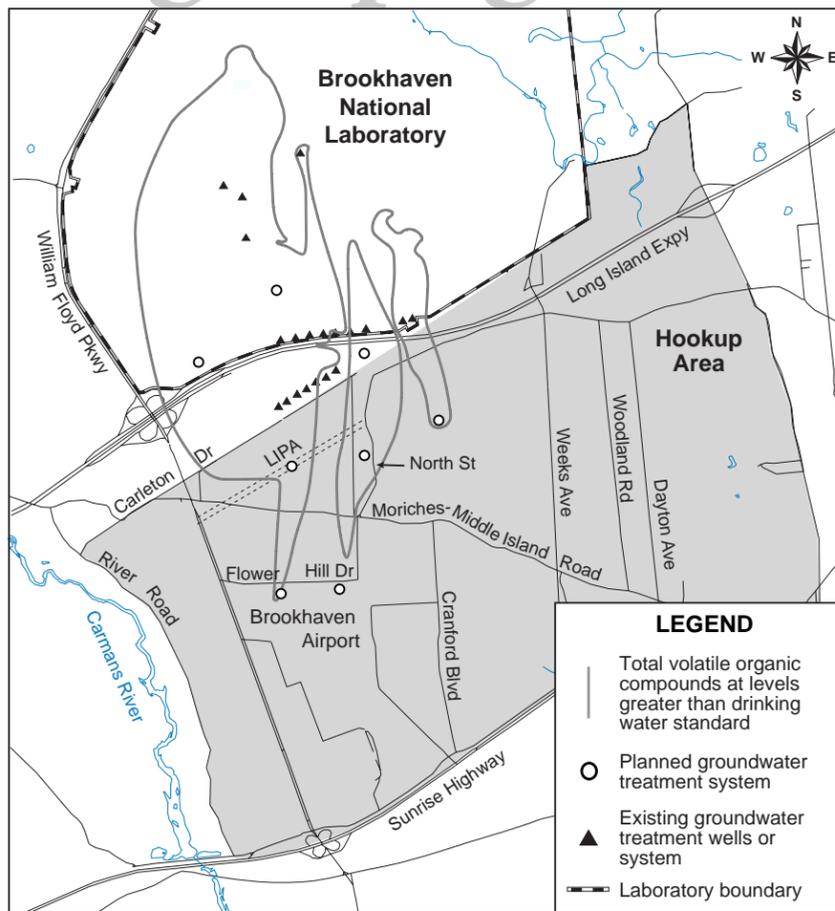
## What will happen next?

The agreement made between the Department of Energy and the regulatory agencies defines the work the Lab is required to do by law to clean up the groundwater. Residents adjacent to work sites will be contacted before work starts.

In order for the Lab to meet its responsibilities, these actions must be completed:

- In the summer and fall of 2001, approximately 30 new wells will be installed south of the Laboratory so additional samples can be taken. The wells, both temporary and permanent, will be up to 250 feet deep. Samples from permanent wells will be taken routinely in the same way as with existing Laboratory wells. The information gathered from the samples will help to pinpoint the most effective locations for treatment systems.
- During 2001-02, approximately 15 additional wells will be drilled to sample water from the depths of 250-450 feet. Where possible, drilling will be confined to vacant properties. Occasionally, equipment may have to remain in front of a residence during drilling. This would require blocking off a portion of the street.

Drilling at each location will take place over a limited time. Shallow wells take two to three days, while the deeper wells may take up to four weeks.



In cases where it is necessary to remove some vegetation to allow equipment access, Lab staff will contact property owners before the work starts. After drilling is completed, vegetation will be restored.

## How will you minimize disruption in the neighborhood?

We realize that issues such as noise, the presence of equipment, and work-site cleanliness are important to you. That is why Laboratory staff will notify residents adjacent to well sites before work begins. If you, or any resident, encounter any problems or have questions, please call Ken White or Bob Howe at the phone numbers provided below.

Crews will work weekdays between 7:30 a.m. and 6:00 p.m., and most wells will be located on vacant property and within town and utility company right-of-ways. Of course, each work-site will be maintained in a safe and orderly condition, with a final clean up when work is completed.

## What happens once all the sampling is complete?

After the wells have been installed and a sufficient number of samples have been collected and analyzed, the Lab will determine the ideal locations for treatment systems. The Laboratory will provide this information to residents and ask them to give input on building locations and aesthetic appearance. A treatment system building is typically the size of a one- or two-car garage. The exterior can be designed to suit the area. It is anticipated that the treatment systems will be located on vacant or industrial properties and will have minimal impact to the community. We would like these buildings to be as unobtrusive as possible.



Community resident Jerry Minasi touring a treatment system building with BNL staff

Five treatment units will be installed immediately south of the Laboratory (see map). All of the units are planned to be operational by 2006. Once constructed, they will operate for a number of years. The exact length of operation will depend on the results of continued groundwater monitoring. After the groundwater cleanup is complete, the treatment units will be dismantled and removed and the land restored.

## Our commitment to the community

The Department of Energy and the Laboratory are committed to integrating community input into groundwater cleanup decisions. Ongoing opportunities for input include presentations at local civic meetings, periodic information sessions and roundtable discussions, and public comment periods on important cleanup documents. Also, presentations are regularly given to the Laboratory Community Advisory Council, which meets the second Thursday of each month. These meetings are open to the public.

Just as important as gathering input is delivering timely groundwater cleanup information to the community. The Laboratory and the Department of Energy accomplish this through fact sheets like this one, as well as the quarterly newsletter *cleanupdate* and the Environmental Restoration Division website at <http://www.bnl.gov/erd>. If you would like to add your name to our mailing list or learn more about public participation activities at the Laboratory, please call Ken White at the number provided below.

The Laboratory also maintains an Administrative Record that contains information used to make cleanup decisions, as well as the Department's responses to community comments. These documents are located at several locations, including the Longwood and Mastics-Moriches-Shirley Public Libraries.

## If you have any questions or concerns, please contact:

Ken White, Community Involvement  
Brookhaven National Laboratory  
631.344.4423  
kwwhite@bnl.gov

Bob Howe, Environmental Restoration  
Brookhaven National Laboratory  
631.344.5588  
howe@bnl.gov

Background information and regular status updates are available online at:  
<http://www.bnl.gov/erd>