



DOVER GAS LIGHT SUPERFUND SITE COMMUNITY UPDATE

DOVER, KENT COUNTY, DELAWARE

JANUARY 2011

SAMPLING COMPLETE

The U.S. Environmental Protection Agency (EPA) has completed the third and final phase of its field investigation of the Dover Gas Light Company Superfund Site.

During this phase of the investigation, EPA took additional samples of the groundwater beneath the City of Dover and conducted follow-up testing for vapor intrusion at 31 properties. The results of this phase, plus the earlier two phases of the investigation, will be used to design a plan to clean up contaminated groundwater.

The key results of the third phase confirm that:

- ◆ **The Dover drinking water supply remains unaffected by the groundwater contamination from the site.** The City of Dover draws its groundwater from the Cheswold and Piney Point aquifers. *An aquifer is an underground water-bearing zone.* Both aquifers lie well below any known contamination and are separated by a thick clay layer.
- ◆ **The levels of vapor intrusion from the contaminated groundwater do not present a health concern to residents at this time and the EPA will continue to monitor vapor intrusion levels for any changes.** Vapor intrusion occurs when contaminated groundwater, or soil, gives off vapors that can seep into buildings. At high levels, these vapors may present health concerns.



Installing probe for vapor intrusion testing



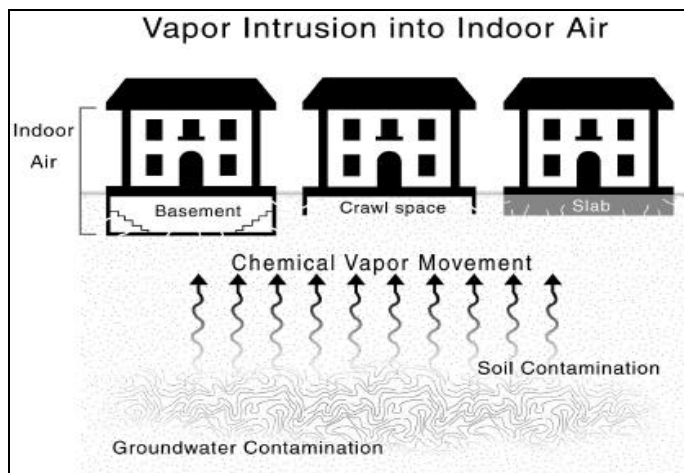
Finishing probe installation



Final product—size of a nickel

EPA began this third phase of the field investigation in 2009. During the investigation, we:

- ◆ Sampled groundwater near the former Dover Gas Light Co. and the former Capitol Cleaners and Launderers, Inc. to identify the various contaminants that have mingled together from each facility, contributing to the groundwater contamination.
- ◆ Sampled the groundwater in a 23-acre area to characterize the contaminated plume. We also sampled the groundwater in a deeper aquifer, about 75 to 85 feet below ground surface.
- ◆ Completed another round of residential vapor intrusion sampling which included re-testing 19 original properties sampled in 2008, plus 12 additional properties.



The EPA, along with the Delaware Department of Natural Resources and Environmental Control (DNREC), completed the first and second phases of the investigation between 2006 and 2008. Those phases included:

- ◆ Using data from all the existing monitoring wells to develop an up-to-date picture of the plume.
- ◆ Determining where additional monitoring wells might need to be installed.

- ◆ Sampling surface water and sediment in the St. Jones River to the east.
- ◆ Installing and sampling new monitoring wells to determine groundwater contamination to the north, east, and south.
- ◆ Screening residential, business and government properties in Dover to see if vapors given off by the contaminated plume might be entering buildings through basements and/or foundations.

PUTTING IT ALL TOGETHER

Now that all three phases are complete, EPA has a better understanding of the size and location of the contaminated groundwater plume underneath the City of Dover.

We also know what contaminants are in the plume and the potential for those contaminants to cause vapor intrusion problems inside homes and other buildings. Overall findings from all three phases of the investigation show:

- ◆ Contamination related to the former Dover Gas Light Company facility is still present beneath its former location, and has moved slowly and generally to the east. Some of these contaminants appear to have moved as far as the St. Jones River. The contaminants of concern include benzene, naphthalene, xylenes and related compounds.
- ◆ Contamination related to the former Capitol Cleaners facility has moved more rapidly and expanded more broadly to the north and south, as well as east towards the St. Jones River. Contaminants of concern include tetrachloroethene, trichloroethene and their breakdown products.
- ◆ Contamination from both of these sources has mixed together below the ground just east of the former Capitol Cleaners facility.

- ◆ Contamination from both of these sources is also moving deeper. Contaminants are present in significant quantities in two upper aquifers separated by layers of clay: one is about 25 feet below ground, the other is about 30 to 60 feet below ground.
- ◆ Contamination is present in the next deeper aquifer but so far, at much lower concentrations and not affecting the Dover drinking water supply which is drawn from the much deeper Cheswold and Piney Point aquifers.

NEXT STEPS

- ◆ Using the data collected during the investigations, EPA is developing a **Conceptual Site Model or CSM** that will provide a real-time picture of where the contamination is and where it's going.
- ◆ EPA will use the CSM to complete a "Risk Assessment" which will tell us if there are any risks to human health and the environment associated with the contamination.
- ◆ Once EPA has all of the risk information, we will identify and evaluate the options available to address the groundwater contamination and reduce any risks to human health and the environment. This process, called the **Feasibility Study**, may take several months to complete.
- ◆ The EPA will present the proposed cleanup options to the community for public comment before a final remedy is selected and will continue to keep the community updated as we make progress.

SITE HISTORY

- ◆ The former Dover Gas Light Company plant was located on a one-acre plot in downtown Dover. It originally occupied the western half

of the city block bound by New Street, Bank Lane, North Street and Governors Avenue.

1859-1948: The Dover Gas Light Company was a coal gasification plant. Coal gas was used as a fuel for cooking and lighting in the late 19th and early 20th centuries.

1984: Contamination was first discovered. DNREC installed monitoring wells at the site and found that shallow groundwater was contaminated with several coal tar derivatives, including benzene, toluene, ethylbenzene, xylenes, naphthalene and acenaphthylene.

1987: The Site was proposed for inclusion on the EPA's National Priorities List (NPL) and was listed on the NPL in October 1989, making it eligible for federal cleanup funds.

1989: A fire destroyed the Capitol Cleaners facility near the former Dover Gas Light Company. After the fire, investigators found evidence that contaminants, including oils and dry-cleaning solvents and their breakdown products, such as perchloroethene and trichloroethene, leaked into the ground.

1994: EPA issued the first Record of Decision (ROD) for the site which described EPA's cleanup plan for the excavation and off-site treatment of contaminated soils and a combination of containment and natural attenuation for the groundwater.

EPA's current work will result in a second ROD because we believe that natural attenuation may not be sufficient to address contaminated groundwater.

1997-2004: EPA and DNREC excavated contaminated soil from three underground brick structures on the former gas plant. Remaining soil contamination was addressed using a soil vapor extraction technology and the area was capped with a one-acre asphalt parking lot.

2006-Present: EPA and DNREC began and completed three phases of field investigations summarized in this fact sheet.



Johnson Victrola Museum parking lot is the former site of the Dover Gas Light Company.

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Today the former Dover Gas Light site has been replaced with a paved parking lot for the Johnson Victrola Museum adjacent to the site.

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Dover Gas Light Website

<http://www.epa.gov/reg3hwmd/super/sites/DED980693550/index.htm>

Vapor Intrusion Fact Sheet

http://www.epa.gov/reg3hwmd/super/sites/DED980693550/fs/new_vapor_intrusiond_final.pdf

Other EPA Projects in Delaware

<http://www.epa.gov/reg3hwmd/super/de.htm>

<http://www.epa.gov/reg3wcmd/ca/de.htm>

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EPA Update for the Dover Gas Light Superfund Site

