



DuPont/Pompton Lakes Works Site Cleanup Newsletter

AUGUST 2013

Thank you for reading the latest newsletter on the DuPont/ Pompton Lakes Works cleanup in Pompton Lakes, NJ. The U.S. Environmental Protection Agency issues this communication regularly to keep you informed of our cleanup activities at the site and associated impacted areas. In addition to these regular newsletters, the EPA holds quarterly public information sessions with the next date scheduled for **October 3, 2013**, and will be adding a weekly "Open Hours" service in town where people can drop by, ask questions and get information in person. (Details coming soon.)

Permit Modification Appeal Process Update:

The permit modification that the EPA proposed for the cleanup of the Acid Brook Delta and uplands area was appealed by DuPont and the Passaic River Coalition. In March 2013, the federal Environmental Appeals Board issued a motion to stay, meaning that the appeal process would be put on hold temporarily while the parties work cooperatively to resolve matters raised in the two appeals. The specific issues concern the scope of the cleanup work to be conducted in the Acid Brook Delta and the community engagement associated with the cleanup. The parties provided a status update to the board on August 26, 2013 and requested an extension of the motion to stay until February 26, 2014. The motion is under consideration by the appeals board.

During the stay, EPA and DuPont are working together to resolve items raised in the permit appeals. Regarding the technical work, the EPA, New Jersey Department of Environmental Protection (NJDEP), the U.S. Fish and Wildlife Service, and DuPont have conducted conference calls and met in person to discuss the scope of work related to sediment and biota sampling in and around Pompton Lake. Based on those discussions, DuPont submitted the *2013 Sediment Sampling Plan* that was approved by the EPA and is now being implemented. In addition, DuPont has submitted eight different scopes of

work for tasks associated with their proposed ecological investigation. These scopes of work range from collection and analysis of bird, fish and amphibian tissue to the sampling/analysis of sediment pore water. The EPA has met with DuPont to discuss these scopes of work and is currently reviewing their submissions.

Regarding community engagement, the EPA issued the previous edition of this newsletter in April 2013 and conducted public information sessions in June 2013. In addition, the EPA has met with local officials, local community advisory groups and their representatives and other interested residents to answer questions as well as to respond to requests for information. This outreach has included representatives of the Passaic River Coalition, which the EPA will continue to keep informed as the technical work and settlement process moves forward. The EPA's next public information session is scheduled for October 3, 2013.

It should be noted that the previously mentioned technical analyses and community engagement activities being undertaken are consistent with the work and activities that would be performed if an appeal had not been filed.



Acid Brook at the north boundary of the site

Additional Resources:

EPA Pompton Lakes website: www.epa.gov/region2/waste/dupont_pompton

New Jersey Department of Environmental Protection:

www.state.nj.us/dep/srp/community/sites/dupont_pompton_lakes



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Bioremediation Pilot Study:

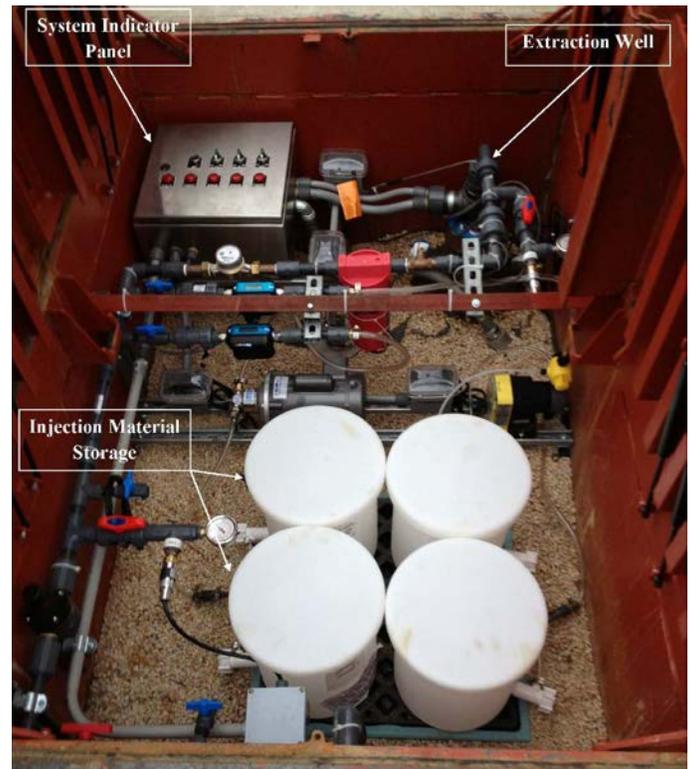
DuPont is currently implementing a bioremediation pilot study to determine whether this treatment technology would clean up contaminated ground water in the plume area of Pompton Lakes. Bioremediation uses naturally occurring microorganisms to reduce contamination in the environment. The testing of the system began June 24, 2013 and is scheduled to run for six months.

Data collected so far indicate that the bioremediation system is functioning as expected. As described in the previous newsletter, the system extracts ground water, adds a bioaugmentation culture (microorganisms or bacteria) to the water and then reinjects it into a single well. The culture promotes degradation of the target volatile organic compounds. In this study, sodium lactate and a potassium bromide tracer are also added to the reinjection water. The sodium lactate serves as food for the microorganisms in order for them to grow to sufficient numbers to result in a significant reduction of the chemical concentrations in the ground water. Sodium lactate addition began on July 12, 2013 and is added daily to the reinjected ground water.

Potassium bromide is used to trace the ground water flow under recirculating conditions, to aid in the understanding the system's efficiency, and to correlate changes in volatile organic compound concentrations to bioremediation-related activities. Initial operation of the bioremediation system included the recirculation of ground water at a rate of approximately 2-3 gallons per minute as well as the addition of the tracer to the recirculated ground water. The tracer was added for five weeks. Results to date for the field analysis of potassium bromide indicate that reinjected ground water is entering the target intermediate zone (approximately 45-60 feet below ground surface).

Initial information gathered from June 24, 2013 to August 2, 2013 by DuPont and provided to the EPA and the NJDEP as part of DuPont's monthly reporting includes data on ground water pumping, water level

monitoring (collected at least twice per week), water quality monitoring for the baseline and the first bi-weekly sampling event. The EPA and NJDEP have made and will continue to make site visits to observe the operation of the bioremediation system and are currently reviewing the results presented in DuPont's status report.



Vault for the bioremediation extraction well and instrumentation

Ground water recirculation and the addition of sodium lactate and potassium bromide will continue throughout August. Future ground water activities including bi-weekly and monthly monitoring will continue to gather data in order to evaluate the operation and performance of the bioremediation system. DuPont will report the results monthly with the next status update scheduled for submission in early September. The field portion of the pilot study is currently expected to conclude in December 2013 and will be followed by submission of a technical report documenting the results of the pilot study.



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Hydraulic Surcharging Pilot Study:

On June 28, 2013, DuPont submitted their *Implementation Work Plan-Hydraulic Surcharging Pilot Study* to the NJDEP and the EPA. The purpose of this pilot study is to enhance hydraulic surcharging in order to reduce contaminant concentrations in the off-site ground water plume. The current ground water treatment program involves the operation of a ground water extraction and treatment system that was constructed in 1998. On-site ground water is withdrawn from the aquifer along the southern boundary of the site via five recovery wells. This establishes a capture zone that prevents ground water containing volatile organic compounds from migrating off-site. Extracted ground water is conveyed to an on-site treatment system for treatment via air stripping. The treated ground water is then conveyed to infiltration beds (located along the southern and southeastern boundary of the site) that allow for infiltration to the subsurface. The treated ground water is routinely sampled/analyzed prior to discharge to the infiltration beds.

Hydraulic surcharging, through the operation of the ground water treatment system, has reduced volatile organic compound concentrations in the eastern portion of the off-site ground water plume in the shallow aquifer, which is also the source of vapor intrusion. The purpose of the hydraulic surcharging pilot study is to collect data on how well hydraulic surcharging can

improve ground water distribution and flow rates within the shallow aquifer in the *western* portion of the plume near the site boundary. Hydraulic surcharging is done through the installation of a horizontal well system to deliver the treated ground water. The amount of treated ground water to be discharged into the shallow aquifer will be similar to the current ground water extraction, treatment and discharge system using infiltration basins. The well system is being proposed to run adjacent to the New York Susquehanna & Western Railway Corporation tracks south of the DuPont site.

The implementation of the work plan will require issuance of a permit-by-rule by NJDEP because the duration of the pilot study will be greater than 180 days. A public notice will be issued and a public hearing will be held, if requested. The permit-by-rule application needs to be approved by NJDEP prior to the initiation of the pilot study. NJDEP and the EPA are currently reviewing the work plan. Once the permit-by-rule is issued and the work plan is approved by NJDEP and the EPA, DuPont will perform the following: utility clearance (the alignment of the horizontal well is along a railroad right-of-way), pre-design field activities (e.g. a field survey, geotechnical borings, etc.), construction of the horizontal well, operation of the hydraulic surcharging system, monitoring and reporting.

MARK YOUR CALENDARS!

Public Information Session
October 3, 2013
3-5 p.m. and 7-9 p.m.
Carnevale Center
10 Lenox Ave.
Pompton Lakes, NJ 07442



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Vapor Mitigation Systems Update:

Vapor mitigation systems have been installed in 308 homes to date. The EPA continues to encourage all homeowners with homes above the "vapor mitigation area" (the contaminated shallow ground water plume) to install a vapor mitigation system. See the vapor mitigation map at the NJDEP website:
http://www.nj.gov/dep/srp/community/sites/dupont_pompton_lakes/documents_maps.htm.

If you would like DuPont to install the vapor mitigation system, please contact David Epps, DuPont Project Director, at 973-492-7733. If you would like a third party contractor to install the system, please call Pat Seppi, the EPA's Community Involvement Coordinator, at 212-637-3679.

For More Information, Please Contact:

Pat Seppi, Community Involvement Coordinator
U.S. EPA
(212) 637-3679
seppi.pat@epa.gov

Vapor Mitigation System Inspection Program:

The EPA continues to inspect systems at the request of the homeowner. If you have not been inspected by the EPA or NJDEP (or do not know) and would like this inspection, please call Pat Seppi at 212-637-3679.

More Information about NJDEP's Vapor Intrusion Project:

http://www.nj.gov/dep/srp/community/sites/dupont_pompton_lakes/vapor_intrusion_proj.htm

Site Background:

From 1902-1994, DuPont manufactured explosives on a 570-acre site located at 2000 Cannonball Road in Pompton Lakes and Wanaque, New Jersey. Past operations and waste management practices have contaminated surface water, soil, sediment and ground water both on- and off-site. The primary soil and sediment contaminants are lead, mercury and copper. Primary ground water contaminants are volatile organic compounds which can cause vapor intrusion in areas where the shallow ground water volatile organic compound plume extends beneath homes. The DuPont Pompton Lakes Works site is regulated under the federal Resource Conservation and Recovery Act. DuPont is responsible for conducting the necessary cleanup with oversight by the EPA and NJDEP.

Additional Resources:

EPA Pompton Lakes website: www.epa.gov/region2/waste/dupont_pompton
New Jersey Department of Environmental Protection:
www.state.nj.us/dep/srp/community/sites/dupont_pompton_lakes