Dupont Pompton Lakes Works Site Cleanup Newsletter

FEBRUARY 2014* Updated 2/18/14

Thank you for reading the latest newsletter on the DuPont Pompton Lakes Works environmental cleanup. The U.S. Environmental Protection Agency issues this communication regularly to keep you informed of the cleanup activities related to the DuPont Pompton Lakes Works site. In addition to these regular newsletters, the EPA holds quarterly public information sessions with the next date scheduled for **March 19**, and also provides a weekly "Open Hours" service in the municipal building (Thursdays from 10 a.m. till 4 p.m.) where people can drop by, ask questions and get information in person. This edition of the newsletter includes answers to some of the questions presented during previous public information sessions as well as providing general information regarding the main cleanup issues.

MARK YOUR CALENDARS!

Public Information Session
March 19, 2014
3-5 p.m. and 7-9 p.m.
Carnevale Center
10 Lenox Ave.
Pompton Lakes, NJ 07442

Permit Modification Appeal Process and Lake Cleanup Update:
The permit modification that the EPA proposed for the cleanup of the Acid Brook Delta and uplands area was appealed by E.I. DuPont De Nemours and Company (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 in August, 2013 and were granted an extension of the motion to stay until January 2014. In December 2013, another request for an extension of the motion to stay was made based on progress in the discussions between the EPA and DuPont. The extension was granted until February 26, 2014. ***In February, a fourth motion to stay was granted until April 30, 2014.*** To review the documents filed before the Environmental Appeals Board, or to learn more about the process, please visit: www.epa.gov/eab.

During the stay, the EPA and DuPont continue to work 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. The Sediment Sampling Plan was implemented between July and October and included the collection of over 300 sediment samples for physical and chemical analysis. The EPA is currently evaluating the sediment data and will receive a comprehensive report from DuPont in late February.
In addition, DuPont submitted eight different scopes of work related to ecological investigations.

Additional Resources:
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Dupont Pompton Lakes Works Site Cleanup Newsletter

FEBRUARY 2014

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. DuPont will be submitting the results of the ecological investigations in late February.

Regarding community engagement, the EPA issued the previous edition of this newsletter in August 2013 and conducted public information sessions in June and November 2013. Also in November, the EPA established a weekly presence at the Pompton Lakes Municipal Building to answer questions about the environmental cleanup. So far, dozens of people have taken advantage of this new opportunity to converse directly with EPA staff. If residents prefer not to come to the Municipal Building, EPA personnel are willing to meet at other locations. 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. Representatives of the EPA have also reached out to local groups and are meeting with both the Rotary Club and the League of Women Voters. 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 **March 19, 2014**.

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 a permit appeal had not been filed.

What is the oversight process for reviewing work of DuPont's contractors?

DuPont, through its contractors, has prepared work plans and other technical reports that are subject to review by the regulatory agencies (EPA and NJDEP). Typically, technical documents are submitted to both the EPA and NJDEP for simultaneous review. Comments to the technical documents are prepared based on the review and discussed between the EPA and NJDEP prior to transmitting them to DuPont. The EPA and NJDEP may meet with DuPont prior to submittal of a revised work plan or technical report to address questions or clarifications that DuPont may have. The revised work plan or technical report is then resubmitted to the EPA and NJDEP for final review and approval. Although not typical, if the revised submittal is still not satisfactory, further comments are provided to DuPont by the EPA and/or NJDEP and the work plan or technical report would be resubmitted a second time.

Field oversight would involve either EPA, NJDEP or their contractors providing direct, on-site observation of investigation and/or construction activities. For example, during the dredging of the Acid Brook Delta, the EPA and/or its contractor intends to be on-site full-time providing field oversight. The purpose of the EPA's field presence will be to monitor DuPont's conformance to the approved work plans. There will be access to the EPA in the field should members of the community have questions or concerns.

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Dupont Pompton Lakes Works Site Cleanup Newsletter

FEBRUARY 2014

Lakeside Middle School Update

The EPA has responded to community concern regarding the potential for vapor intrusion of contaminants related to the DuPont site into the Lakeside Middle School. The school and the Board of Education building were tested in 2009. The results of the testing in 2009 revealed that there were no detections of contaminants of concern. However, exercising an abundance of care, the EPA requested access from the Pompton Lakes Board of Education to perform sub-slab vapor testing again.

On December 2, 2013 the Pompton Lakes Board of Education notified school parents about the EPA's request and the Board's approval to re-sample Lakeside Middle School and the Board of Education building. It should be emphasized that the EPA's request was not based on any new scientific data. The EPA routinely visits sites and performs this type of testing when requested by the community.

An example of an individual summa canister of the type used to collect sub-slab vapor samples.

Sub-slab vapor testing was performed by the EPA on December 30-31 during winter recess. The sampling locations were the same as those sampled in 2009 and the analyses were performed by a New Jersey certified laboratory. Once the sampling results are received and reviewed by the EPA to assure the quality of the data they will be shared with the school community through the Board of Education. The EPA expects to be able to provide the results of the sub-slab vapor testing to the Board of Education in early March.

Bioremediation Pilot Study

DuPont has implemented 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 field testing of the system began June 24, 2013 and was completed on December 20, 2013.

The bioremediation system extracts ground water, adds a bioaugmentation culture (microorganisms or bacteria) to the water and then reinjects it into a single well in the intermediate zone of the aquifer. 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. Potassium bromide is used to trace the ground water flow under recirculating conditions, to aid in the understanding the system's efficiency, and to

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correlate changes in volatile organic compound concentrations to bioremediation-related activities.

The EPA and NJDEP have received six monthly status updates during the field implementation of the pilot study. The bioremediation pilot system operated largely as it was supposed to. DuPont is preparing the final report which will summarize and interpret their results. Once the final report is submitted by DuPont (expected in early March), it will be reviewed by the EPA and NJDEP.

Can you share data?

When the Bioremediation Pilot Report is final, the EPA and NJDEP will communicate the results to the public (expected to be in April). The report will also be placed on the EPA and NJDEP websites as well as in the information repository in Pompton Lakes.

Hydraulic Surcharging Update

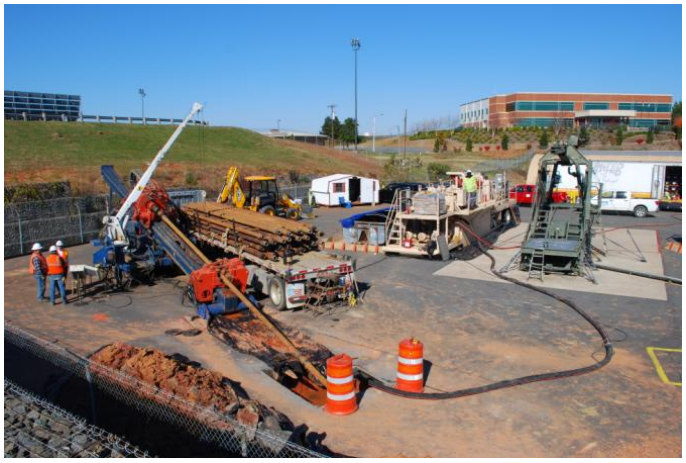
On June 28, 2013, DuPont submitted their *Implementation Work Plan-Hydraulic Surcharging Pilot Study* (Pilot Study Work Plan) to the NJDEP and the EPA. Hydraulic surcharging, through the operation of the existing on-site ground water treatment system, has reduced volatile organic compound concentrations 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.

NJDEP and the EPA provided DuPont comments on their Pilot Study Work Plan. DuPont submitted a revised Pilot Study Work Plan based those comments and the regulatory agencies are currently finalizing their review of the Pilot Study Work Plan. Once NJDEP and the EPA approve the Pilot Study Work Plan, DuPont will provide a final design. In conjunction with the preparation of the final design, DuPont is preparing an NJDEP-required Permit-by-Rule Application for submittal to NJDEP which will include community outreach and public notice plans. The implementation of the Pilot Study Work Plan will require issuance of a permit-by-rule by NJDEP because the duration of the pilot study is greater than 180 days. A public notice will be issued and a public hearing will be held, if requested. The permit-by-rule needs to be approved by NJDEP prior to the initiation of the pilot study.

In conjunction with the permit-by-rule process, DuPont is attempting to secure access from the New York Susquehanna & Western Railway Corporation, whose right-of-way will be the location of the horizontal well. All access (i.e. the staging area) for drilling the horizontal well will be from DuPont property.

Dupont Pompton Lakes Works Site Cleanup Newsletter



Typical well drilling equipment setup

What protections will be put into place to protect from potential flooding?

During the EPA's community engagement activities, questions have been raised regarding the potential flooding of basements in homes near the location of the pilot study. NJDEP and the EPA consider the potential for flooding of basements due to the implementation of the Pilot Study Work Plan to be low. However, NJDEP and the EPA are continuing to assess information regarding this community concern. The following information is being considered in NJDEP and the EPA's assessment of the potential for flooding of basements.

1) As part of the permitting for the existing ground water extraction and treatment (GWET) system infiltration beds, extensive modeling and field testing were completed. Results of these efforts showed that, even under the maximum design flow rates, the water table would not rise to elevations that would adversely impact residents' basements.

2) Although not specifically a protection against flooding, it should be noted that since the operation of the GWET system which started in 1998, there has been no evidence that the water table elevation has risen to a level that would adversely impact residents' basements as a result of operating the system. The system initially operated at an increased flow (approximately 200 gallons per minute). Water levels were monitored on a continual basis during this time period as part of the initial operating requirements. This data showed that water table elevations did not rise to a level where they would adversely impact basements.

3) What is being proposed for the pilot study is to use a similar amount of water that has been discharged to the shallow aquifer via a series of infiltration beds (near the surface of the water table) since 1998. Under the pilot study, that water would be discharged 20 feet below ground along a greater distance.

4) There will be monitoring points along the horizontal well to measure the water table elevation. If the elevation should rise to a point where it becomes evident that it could adversely impact residents' basements the pilot study can be immediately shutdown. An evaluation would be done to determine if the operational conditions of the pilot study can be modified and the pilot study resumed or if the pilot study would need to be terminated.

5) The existing infiltration beds will be available in case water needs to be diverted from the horizontal well.

Will any greenery be replaced?

Community concern was also expressed to the EPA regarding the clearing of vegetation in order to implement the pilot study. Vegetation is expected to be cleared only to the extent that access is

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required to perform the work. A survey of the railroad right-of-way will be performed by DuPont to fully understand the limits of work and any clearing, if needed.

What is the timeline?

NJDEP and the EPA expect that the Pilot Study Work Plan will be approved in February and that the Permit-By-Rule Application will be submitted in spring 2014.

Where does water come from for the surcharging?

The water for the surcharging is from the upgradient ground water that is currently being treated by the GWET system and discharged into a series of infiltration basins, where it is allowed to infiltrate into the shallow zone of the aquifer.

What about noise issues?

Although noise issues are not anticipated during the installation of the horizontal well and operation of the hydraulic flushing pilot study, it is standard practice to have a Health and Safety Plan prepared for field activities. The Health and Safety Plan will address the potential for noise impacts to workers and nearby residents as well as other aspects of worker and community health and safety.

CMS/On-site Soil Cleanup Update

DuPont submitted a draft Corrective Measures Study (CMS) to the EPA and NJDEP which addresses impacted soil within the former manufacturing areas of the site. The purpose of this CMS is to identify and evaluate potential cleanup alternatives for impacted soils.

Specifically, the CMS pertains to the following on-site areas of the former manufacturing site:

- Eastern Manufacturing Area (EMA) located east of the Wanaque River, south of New Jersey Interstate 287 (I-287), and west of Ringwood State Park. This area is further broken into the northern, middle and southern portions on the eastern side of the site;
- Northern Manufacturing Area (NMA) located north of I-287 along the Wanaque River; and
- Western Manufacturing Area (WMA) located south of I-287 along the Wanaque River.

NJDEP and the EPA completed an initial review of the CMS and provided written comments to DuPont. Generally, the nature of the EPA and NJDEP's comments included, but were not limited to, how proposed soil cleanup levels were derived and the level of detail regarding the descriptions of DuPont's proposed remedial alternatives. NJDEP, the EPA, and DuPont will be meeting in mid-February regarding the revisions to the CMS based on NJDEP and the EPA's comments. Once approved, the CMS will be incorporated into the permit for the site via the permit modification process. The permit modification process includes public notification and an opportunity for comment prior to the determination of the final remedy.

Dupont Pompton Lakes Works Site Cleanup Newsletter

FEBRUARY 2014

Vapor Intrusion Program Update:
Vapor mitigation systems have been installed in 324 homes to date. The EPA continues to encourage all homeowners with homes above the "vapor mitigation area" (the contaminated shallow ground water plume) to have their homes tested to determine the need for the installation of a vapor mitigation system.

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.

In March 2013, NJDEP's sub-slab soil gas and indoor air comparison levels which are used to determine the need for a vapor mitigation system were revised based on EPA toxicity factors/equations. DuPont subsequently requested that NJDEP approve modification of the comparison levels used in their vapor mitigation program such that they are consistent with the current NJDEP screening levels. The EPA and NJDEP reviewed DuPont's request and required that DuPont prepare a revised work plan detailing how the use of the new comparison levels will impact the currently implemented vapor mitigation program. DuPont submitted a *Revised Vapor Interim Remedial Measure Work Plan* in December 2013 which is undergoing review by the regulatory agencies. The EPA and NJDEP met with DuPont in January and will meet again in February 2014 to discuss how DuPont will address comments.

What is the correct vapor mitigation map?
The correct map depicting the vapor mitigation and expanded investigation areas is at the following website: http://www.nj.gov/dep/srp/community/sites/dupont_pompton_lakes/vapor_mitigation_area_map.pdf.

What can be done to reach realtors in the area?
As part of the EPA's community outreach program, various local organizations have been contacted to provide a status update and enhance awareness of the issues regarding the environmental cleanup in the Pompton Lakes area. Local realtor organizations are among the groups that the EPA is targeting for this outreach and informational exchange.

What information can you share regarding health effects?
The Agency for Toxic Substances and Disease Registry (ATSDR) is the federal public agency that is responsible for public health actions and provides health information. They have fact sheets on the health effects of the two most common volatile organic compounds in the Pompton Lakes area. The EPA will provide copies of these fact sheets at the next public information session on March 19, 2014 or they may be accessed at the links below:

PCE:http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=264&tid=48

TCE:http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=172&tid=30

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Dupont Pompton Lakes Works Site Cleanup Newsletter

FEBRUARY 2014

Who should be contacted if a vapor mitigation system goes down on the weekend?

Generally it takes a significant amount of time for vapors to build up again underneath the slab of a building, however if the system stops operating or the alarm goes off during the weekend, please call the emergency numbers posted with the system.

Useful information for property owners with vapor mitigation systems concerning power outages can be found on the NJDEP's Site Remediation Program website at http://www.nj.gov/dep/srp/guidance/vaporintrusion. The information on this website advises property owners that a power outage that shuts down their vapor mitigation system for a short period of time (several days to weeks) does not create an immediate health hazard. The vapor mitigation system was installed to reduce an occupant's exposure to very low levels of organic vapors over an extended period of time (25 to 30 years).

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 (VOCs) which can cause vapor intrusion in areas where the shallow ground water VOC plume extends beneath homes. The DuPont Pompton Lakes Works site is regulated under the federal Resource Conservation and Recovery Act (RCRA). DuPont is responsible for conducting the necessary cleanup with oversight by the EPA and the New Jersey Department of Environmental Protection.

For More Information, Please Contact:
Pat Seppi, Community Involvement Coordinator
U.S. EPA
(212) 637-3679
seppi.pat@epa.gov

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