# Technical Assistance Services For Communities

## Review of Pompton Lakes Data and Reports
## October 2011 Fact Sheet

**Introduction**

The Technical Assistance Services for Communities (TASC) contractor reviewed eight documents pertaining to the DuPont Pompton Lakes Works (PLW) site in order to determine whether the 10 ground water contaminants being tested for by DuPont are an appropriately comprehensive list of ground water contaminants migrating off site. The documents reviewed are:

1. 1982 Superfund Hazard Ranking System scoring package
2. November 1995 Comprehensive Groundwater Monitoring Plan
3. 2000 Annual Groundwater Report
4. 2004 Annual Groundwater Report
5. 2009 New Jersey Department of Environmental Protection (NJDEP) and DuPont Pompton Lakes Split Ground Water Sampling Data
6. January 2010 Remedial Technology Evaluation for Offsite Groundwater Contamination
7. June 2010 Eastern Manufacturing Area Remedial Investigation Report
8. December 2010 Vapor Intrusion Remedial Investigation Report

**Discussion**

The DuPont PLW site manufactured lead azide, an explosive, and produced, filled and assembled cartridges, shells and wire for blasting caps. Other explosives known to be on the site included RDX, PETN and mercury fulminate. Process wastes were discharged to unlined ponds and lagoons. Until 1963, wastes were buried in eight disposal sites around the plant.

In 1995, after extensive ground water sampling for EPA priority pollutants and many other suspected ground water contaminants, DuPont proposed to continue sampling ground water for the following 11 contaminants; this list was approved by NJDEP:

1. tetrachloroethene (PCE)
2. trichloroethene (TCE)
3. *cis*-1,2-dichloroethene
4. *trans*-1,2-dichloroethene
5. 1,1-dichloroethene
6. 1,1,1-trichloroethane
7. 1,1-dichloroethane
8. 1,2-dichloroethane
9. vinyl chloride
10. carbon tetrachloride
11. lead

In 2000, DuPont received permission from NJDEP to stop testing for lead because only one of 33 ground water samples tested for lead in 2000 exceeded the ground water quality standard, which at the time was 10 micrograms per liter (µg/L). However, the ground water quality standard for lead is now 5 µg/L. Five wells sampled in 2000 had lead concentrations above 5 µg/L; two of these wells were off-site. Therefore, the community may want to suggest that analysis of ground water samples for lead be resumed.



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In 2009, community concern about the reduced number of contaminants chosen for analysis in the 1995 plan led to NJDEP's decision to split ground water samples with DuPont and analyze the ground water samples to confirm that the 10 selected contaminants were appropriate. NJDEP split eight ground water samples with DuPont from both on-site and off-site wells. NJDEP and DuPont samples were analyzed by the same analytical method for the same expanded list of volatile organic compounds (VOCs) but different laboratories were used. NJDEP analyzed the eight ground water samples for 35 VOCs. The samples were not analyzed for metals. No VOCs were detected above their standards, other than those VOCs included on the list of 10 sampled contaminants. These analytical results suggest that the 10 chlorinated VOCs chosen for sampling are the appropriate VOCs to target for ground water analyses. However, the community may want to ask NJDEP to consider analyzing samples for other contaminants, in addition to VOCs, especially in light of new, more stringent standards.

**Findings**

TASC did not find any significant deficiencies in the processes used by DuPont and NJDEP to identify contaminants for sampling at the DuPont PLW. Comprehensive ground water analyses for many contaminants were completed prior to selecting the COCs for further ground water monitoring. Comprehensive sampling and analyses of soil in different locations of the PLW site were also completed. It appears that, in general, care has been taken to analyze for appropriate contaminants based on known activities in different locations of the PLW site. Detailed notes pertaining to each document reviewed accompany this fact sheet for the convenience of readers who may want additional information.

## Recommendations

- TASC recommends that the community request that NJDEP review currently available data to evaluate whether monitoring should resume for any of the contaminants that have been removed from monitoring, based on new, more stringent Class II-A standards or new information about health effects. In particular, it may be prudent to resume monitoring for lead. It may also be prudent to monitor for arsenic and benzene, unless it can be shown that these are not due to site activities. Chemicals deleted from the list of 34 ground water contaminants of potential concern that now have new, more stringent standards include lead, selenium, arsenic, antimony, dibromochloromethane and bis(2-ethylhexyl)phthalate.
- The community may want to ask NJDEP to use current health information to calculate health-based screening levels for contaminants detected at the site that do not have Class II-A standards and, if necessary, add new contaminants to the list of contaminants of concern that are monitored in ground water.
- TASC recommends that the community ask NJDEP to consider testing ground water for perchlorate.
- TASC recommends that the community ask NJDEP to consider testing ground water for the organic explosives PETN, RDX, TNT, TETRYL and HMX.
- When the sampling plan was written in 1995, indeno(1,2,3-c,d)pyrene had no regulatory standard; however, it now has a Class II-A standard (0.2 µg/L). It was only detected in one sample at the site; its concentration was 1.9 µg/L, which is above the standard. The community may want to request that NJDEP evaluate whether ground water should be tested for indeno(1,2,3-c,d)pyrene in light of the new, more stringent standard.