UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
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LET'S EVALUATE THIS HIGH LEVEL ASSESSMENT & ITS MANY SHORT COMINGS!

SPECIAL NOTE: THIS DOCUMENT HAS BEEN AUGMENTED. SEE BELOW:

**Times New Roman font is the EPA's original report
** Arial font displays facts and concerns of the residents of Pompton Lakes, Wayne and the Passaic Watershed

June 8, 2011

RCRA Site Visit and Assessment

E.I. du Pont de Nemours & Company -- EPA ID No. NJD 002 173 946
2000 Cannonball Road
Pompton Lakes, NJ 07442

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A site visit of the DuPont Pompton Lakes Works site was conducted on May 5, 2011. The objective of the visit was to become familiar with the facility and its former and present operations, to obtain information regarding remediation projects being conducted on- and off-site, and to assess whether or not additional efforts could be made to expedite remediation, including of the residential area surrounding the site which was impacted as a result of off-site migration of contaminated groundwater.

Representing the facility was Ms. Norma Eichlin, vice president of 0'Brian & Gere Engineers, Inc. (973 492-7725; (norma.eichlin@obg.com) and Mr. David Epps, Project Director, DuPont Corporate Remediation Group. The Site Visit consisted of an opening interview, a site tour, a review of documents, and a closing conference.

The site visit was unannounced; in addition, facility representatives allowed the EPA inspectors free access to all areas of the site and to all documents requested.

This audit confirms that there are **heavy metal pollutants still in the work-site that have not been remediated, 17 yrs since operations ceased-no action plan for remediation and the pump-n-treat systems will take many years to reduce the deadliness of groundwater flowing off the site.** The concentration of heavy metals increases in groundwater after the rains/snow. With adequate surface water infiltration, **Arsenic, Hg (mercury), Pb (lead), Zn (zinc), Sn (selenium), Sb (antimony), Cd (cadmium), V (vanadium), Cr (chromium), DU (depleted uranium)** and others are leaching into underlying ground water. Ground water

seepage can carry heavy metal contaminants with it. **This toxic cocktail creates the PLUME and pollutes Pompton Lake and downstream!**

BACKGROUND

DuPont Pompton Lakes is a 578 acre site which manufactured blasting caps and explosives; the facility began operating at this site in 1904 and ceased manufacturing operations in 1994, Spills of chemicals used to degrease and clean metal parts, and other processes, resulted in groundwater contamination which migrated to the neighboring community southeast of the site.

The primary pollutants of concern in groundwater at the site are about chlorinated volatile organic compounds (VOCs) with the predominant pollutants being tetrachloroethylene (PCE) and Trichloroethylene (TCE). As a result of the off-site migration of organic pollutants via groundwater flow, approximately 450 nearby homes could be impacted by subsurface contamination. The depth to groundwater in the area is approximately 10 to 15 feet.

Exposure to trichloroethylene is specifically associated with kidney cancer and exposure to **tetrachloroethylene with non-Hodgkins lymphoma**. Reports have documented that residents in the affected area of Pompton Lakes have more than three times the rate of kidney cancer in women and more than 2.5 times the rate of non-Hodgkins lymphoma in men when compared to state-wide rates. **This pollution and other chemicals leach into the lake through ½ mile of shoreline, yet the NJDEP or EPA have not measured it.**

In 2008 sub-slab vapor samples were collected beneath neighborhood homes which determined the presence in the soil of low level organic solvent vapors at above screening criteria. Vapor intrusion of these volatiles from shallow portions of the water-table aquifer is presently the primary concern of local residents, Since 2008, DuPont has offered residents a vapor mitigation system which uses depressurization of the sub-slab to induce preferential pathways for vapors, About 230 of the impacted households have accepted and are using this vapor intrusion mitigation method.

Soil and sediment **contamination are present at the site, with lead, arsenic and mercury being the prevalent pollutants**. Some contaminated sediments have been removed and shipped off-site. Geo-textile and "rip-rap" technology is being used to prevent additional impact by remaining contamination by averting overland flow.

A piled rock wall with woven-cloth; "rip-rap" technology? Is it adequate to stop the heavy seasonal rains full of contamination from further polluting Pompton Lakes? Costs are being minimized while adversely impacting residents' health? What about the groundwater from 578 Acres?

Areas of soil and sediment contamination remain on-site for which the facility is awaiting final remedy approval by the EPA and NJDEP. These contaminated areas will be excavated and shipped off-site, or **consolidated, stabilized on-site and/or capped**. **It was stated that this project should be completed within three (3) years.** When asked whether or not these heavy metal constituents would leach into the groundwater, **it was stated that groundwater samples do not show lead or mercury contamination at detectable levels.**

REMOVE don't CAP the contamination or groundwater will just carry the pollution under the homes into the lake. With no plan how can anyone state how long it will take to decontaminate the DuPont work site? We need to test the groundwater regularly for all contaminants not rely on "it was stated" by DuPont. What about other Contaminants???

PRESENT FACILITY OPERATIONS

To control groundwater contamination, on- and off-site, DuPont operates an air-stripper pump- and-treat system which is fed by five on-site groundwater recovery wells and re-injects treated water into on-site infiltration beds at the southern boundary of the site and upgradient to the adjacent community. The system treats approximately 120 gallons of contaminated groundwater per minute which may be limited by the fact that at higher rates, at least one local residence's basement floods. The pump-and treat schematic not only strips VOCs from groundwater but also keeps contaminated groundwater from migrating off-site to the nearby residences via hydraulic control of subsurface water.

> **The EPA's own audit conclusion #4 (page 4) clearly states that the pump-n-treat system is inadequate for near term reduction of the deadly pollution flowing through the plume into the lake.** Off-site potential for bio-treatment pump-n-treat is all speculative and may take many years?

Although no pump-and-treat recovery wells have been installed off-site to date, DuPont indicated it is starting an in-situ bio-treatment pilot study in late May 2011 to determine the feasibility of biological treatment of the off-site plume. While no off-site treatment of groundwater has been conducted heretofore, DuPont asserts that pump and treat systems would not be feasible at the 2 - 50 ppb pollutant concentrations. Reduction of current concentrations of pollutants would naturally attenuate.

> **If pump-n-treat won't bring the pollution levels down to safe levels 0.002 ppm mg/kg or less, use other more costly-n-effective approaches…remove and replace. We can't wait for NATURE!**

SITE TOUR

Two areas were visited during the site visit: (1) the pump and treat station, and (2) groundwater monitoring wells (to note their physical condition); no concerns were noted in the operations and condition of equipment or of the wells.

The following records were reviewed:

(1) Site maps including well locations, elevations and most recent groundwater monitoring data;
(2) Air Stripper effluent sampling data;
(3) Off-site residence groundwater analysis data and basement vapor monitoring data

Other records, including videos of walk-throughs of the two tunnels that were formerly used to store explosives, are being reviewed.

> **When and where will the groundwater monitoring results and the air stripper effluent sampling data be released to the public?** It's been over 3 months since this assessment; have the residence of the PLUME and Pompton Lakes been updated on the groundwater analysis data and basement vapor monitoring data? **Release the Information! What other records are being reviewed? Little can be discerned from the appearance of equipment, maintenance records, up-time and performance records are required… softball audit?**
> **Levels of pollution information are vital for residents' health!**

CONCLUSIONS

1. Other than the Acid Brook Delta and the uplands, off-site sediment and soil remediation of heavy metals has been complete.

Stop using Volume-Weighted-Spatial-Averaged Numbers! What about the rest of the lake and downstream where the mercury levels alone are maximum 367 and 754 ppm mg/kg surface and subsurface mercury concentration outside of the 800-foot Acid Brook Delta radius that is proposed to be dredged and capped. Safe levels are below 0.004 ppm mg/kg. Both shorelines have documented heavy Mercury contamination. **What about the other contaminants below the shallow testing; what's leeching into the aquifers? We can't wade or swim in the Lake, test the ½ mile PLUME shoreline.**

2. Off-site groundwater contamination and vapor intrusion: concentrations of PCE and TCE exceed screening levels in the upper part of the water table aquifer resulting in vapor intrusion into residences above the plume. Hydraulic control using a pump and treat system prevents additional groundwater contamination from further impacting nearby homes; sub-slab vapor intrusion mitigation to avert vapors away from homes is offered residents, approximately 250 of whom are using this technique. In addition, biological agents are being considered to attenuate groundwater pollutants concentration even further.

   Hydraulic control isn't working! Gradient flow from the work-site, groundwater and contaminants flowing downhill, are re-polluting the PLUME and the LAKE…TODAY! There is a significant degree of urgency, people are getting sick and dieing! What about the HIGHLAND'S SINGLE AQUIFER is our drinking water Safe?

3. Remediation of remaining on-site sediment and soil contamination of heavy metals is awaiting final remedy approval; this 3-year project will involve excavation, off-site shipment and/or **consolidation and capping.**

   Remove all contamination don't cap or we will relive this crisis in a couple of years, possibly at more toxic levels. Accelerate the clean-up to "healthy, usable levels throughout the borough, lake and downstream of the dam". Groundwater will carry heavy metals!

4. Although on-site groundwater contamination is being addressed with pump-and-treat system at its present rate of treatment, significant attenuation may not be achieved in the near future.

   Groundwater is carrying toxic chemicals and heavy metals. The current on-site "pump-n-treat" process is inadequate and slow. The PLUME, the Lake and Downstream are being polluted daily! The residents have suffered enough. They may not have a "future" unless there is timely remediation to safe levels of all contaminants.

RCB will continue to review the progress of the site remediation and provide comments as necessary which it believes may improve or expedite the remediation.

DO IT…REMOVE POLLUTION DON'T CAP…EXPEDITE REMEDIATION!