Pompton Lakes DuPont Cleanup

Community Advisory Group Meeting

November 3, 2010

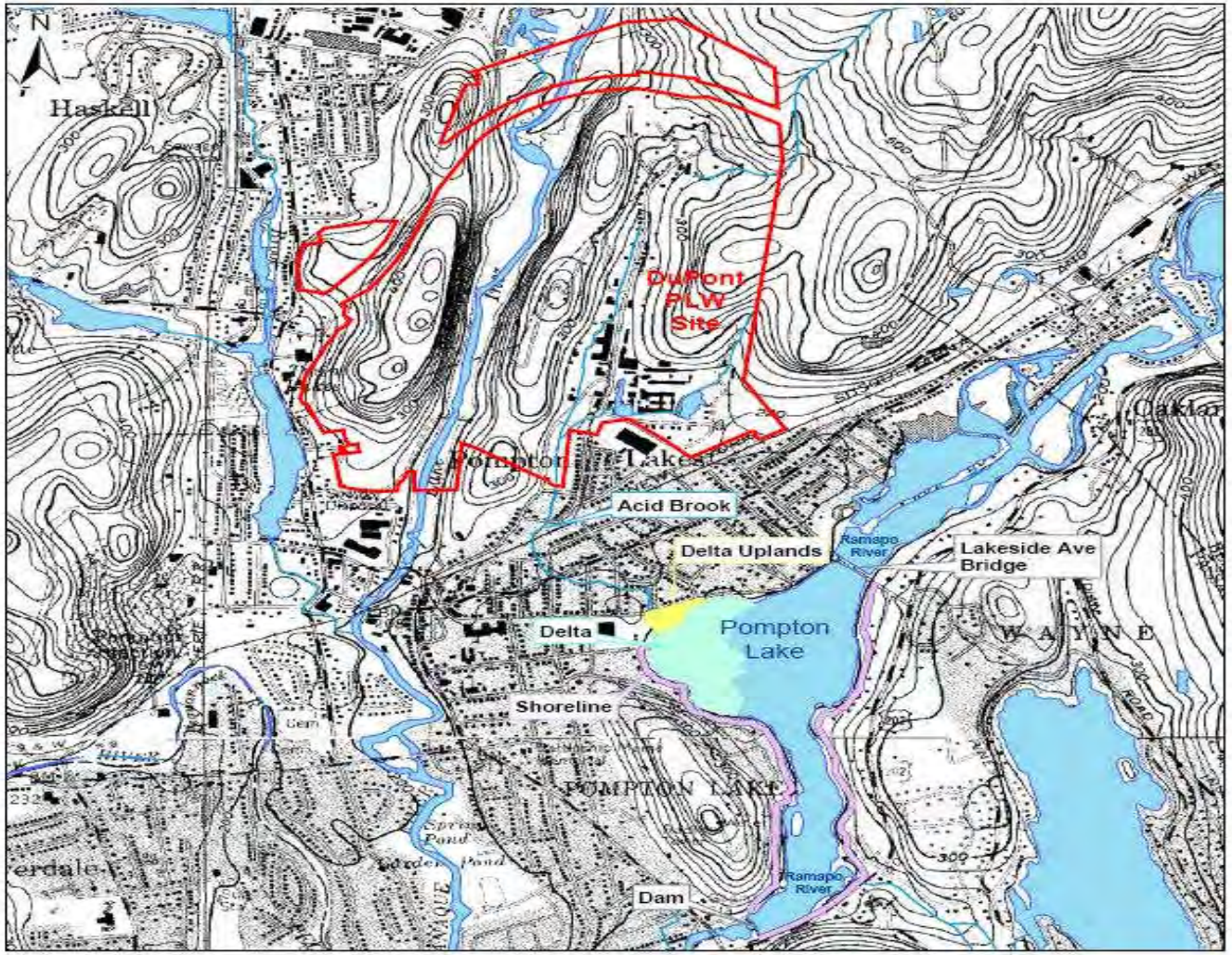
Roles & Responsibilites

- EPA
- New Jersey DEP
- ATSDR
- New Jersey DHSS

Pompton Lakes DuPont Cleanup

Timeline & Significant Milestones

- DuPont Works Site Investigation & Cleanup
- Sediment Cleanup in Pompton Lake
- Ground Water Contaminant Plume Cleanup
- Vapor Intrusion Investigation & Third Party Sampling Program



Legend:	PARSONS 200 Cottontail Lane South Somerset, New Jersey 08873	Site Location Map DuPont Pompton Lakes Works Pompton Lakes, New Jersey Figure 1-1
Base is portions of the USGS Wanaque and Pompton Plains QUAD.		

Timeline & Significant Milestones

RCRA Facility Investigation Reports (RFIs) (Northern, Eastern, Western Manufacturing Areas)	Draft reports submitted in late June 2010 NJDEP & EPA Reviews On-Going	Corrective Measures Study (CMS) Final Reports Due 90 Days After EPA approval of RFI Reports (Spring 2011)
RCRA Permit Modifications	Public Comment + Responsiveness Summary + Final Decision on Proposed Permit Modifications	Public comment, Resp. Summary & Decision as soon as practicable after CMS Final Reports submission

Timeline & Significant Milestones

Corrective Measures Implementation (CMI) Work Plan (for Soils: Eastern, Western, Northern Manufacturing Areas)	Permit Modification will include requirements for the CMI Work Plans & implementation schedule	Nine months after EPA approval of CMS reports (Winter 2012)
Soils Cleanup of Eastern, Western & Northern Manufacturing Areas	Implementation pursuant to permit & any applicable permit modifications	Start work upon EPA approval of CMI Work Plans & Schedule (completion of soils cleanup approx. 2015/2016)

Timeline & Significant Milestones

Completion of Site Restoration for Eastern, Western, Northern Manufacturing Areas	Implementation pursuant to permit & any applicable permit modifications	One year to complete restoration following completion of soils cleanup (restoration complete approx. 2016/2017)
Submittal of Site-Wide Soils CMI Report for Eastern, Western & Northern Manufacturing Areas		Six months after completion of site restoration (2017)

Legend

- Wetland Area Boundary
- Transition Area Boundary (50ft)
- Riparian Zone Boundary (50ft)
- Delta Restoration Area (~26 acres)
- Wetland Restoration Area (~1 acre)
- Transition Area Restoration Area (~1 acre)
- Upland Restoration Area (~0.1 acres)
- Acid Brook Restoration Area (~0.1 acres)
- Riparian Zone Restoration Area (~1.5 acres)
- Temporary Disturbance Area (~0.2 additional acres) (~2.2 total acres)

Note:
Transition Area and Riparian acreages include overlap with other resource areas

Figure 2-6
Restoration Plan
Uplands
DuPont Pompton Lakes Works

Pompton Lakes, New Jersey

Prepared By: VP	Checked By: BB
Job: 18985155	Date: 05/18/2010

Key Map Not to Scale

Source:
NJDEP 2007 Aerial Imagery
URS Custom Data

NAD 1983 State Plane New Jersey
Projection: Transverse Mercator
False Easting: 492125.000000
False Northing: 0.000000
Central Meridian: -74.500000
Scale Factor: 0.999900
Latitude Of Origin: 38.833333
Linear Unit: Foot US

N

0 20 40 80 Feet

1 inch = 80 feet

URS

G:\GIS_Data\DUPONT\PMPTNLKS\Projects\RAWP\Figure 2-6 Restoration Plan Uplands.mxd

Timeline & Significant Milestones

Lake Sediment Cleanup Approach Spelled Out in Corrective Measures Implementation (CMI) Work Plan	**EPA approves CMI Work Plan & Schedule** **CMI Work Plan to be incorporated in permit modification** **EPA prepares permit modification** **EPA selects final decision on permit modification**	**45 Day Public Comment on Permit Modification** **Winter 2010/2011** **Final Decision Winter/Spring 2011**

Timeline & Significant Milestones

Lake Sediment: **DuPont completes additional design studies; obtains permits; prepares site; performs cleanup**	**DuPont starts work on receipt of EPA notification after permit modification approval**	**Work estimated to require approximately 4 years, including time for design work and obtaining permits (completion estimated in 2015)**
Demobilization/ Restoration		**Estimated to take 18 months to complete**

Ground Water Contamination & Cleanup Overview

Background

- Groundwater monitoring was initiated in the 1980s
- Existing interim remedial measure (IRM) pump & treat system -- August 1998
  - Goal: Contain groundwater contamination with potential for off-site migration

Geologic and Hydrogeologic Setting

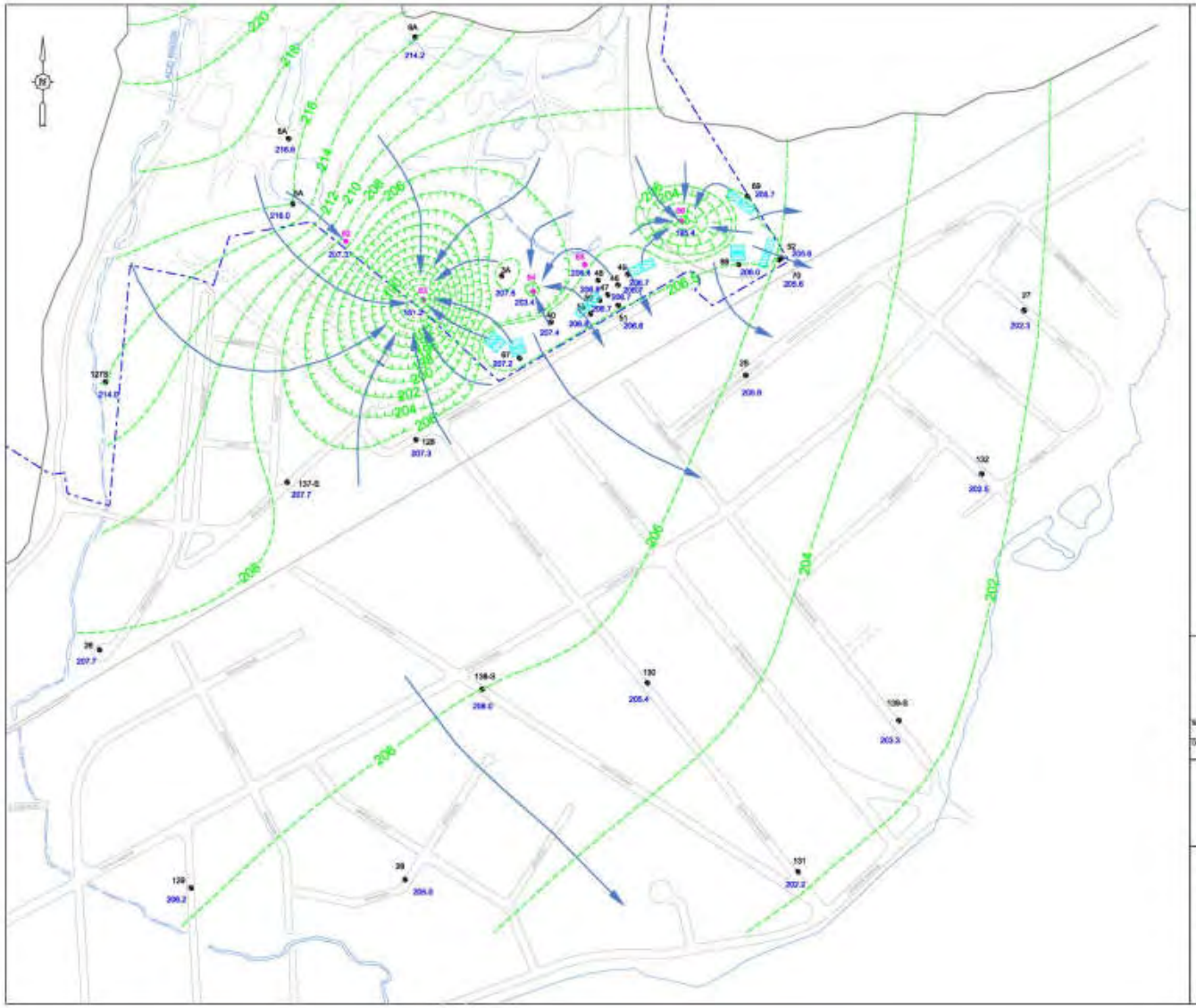
- Acid Brook flows south and discharges into Pompton Lake (created by damming the Ramapo River)
- Wanaque River flowed through Lake Inez and south through Pompton Lakes
- Two geologic units -- bedrock and alluvial deposits

LEGEND

1. Former Western Valley Manufacturing Area
2. Former Eastern Valley Manufacturing Area
3. Former Northern Manufacturing Area
4. Offsite Groundwater Area
5. Offsite Wanaque River Area
6. Pompton Lakes Delta Area

On-site Ground Water

- When ground water was found to be contaminated, a pump and treat system was installed to contain contaminated ground water before it flowed off-site toward residences
- Ground water is treated to remove chlorinated volatile organic chemicals
- As treated ground water is discharged to the shallow zone, a layer of “cleaner” water will spread in the shallow zone down-gradient



LEGEND

- PROPERTY LINE
- OPEN WATERS
- INFILTRATION BED

WELL ID
- PUMPING WELL LOCATION
- WELL LOCATION

ELEVATION
GROUNDWATER ELEVATIONS ROUNDED TO NEAREST 0.1'

GROUNDWATER ELEVATION CONTOUR LINE (approximated)
Groundwater elevation contour interval is 2-Foot, except around infiltration beds where additional contours have been added to show better detail.

Direction of groundwater flow

GRAPHIC SCALE

170 0 85 170 340 680

1 inch = 170 feet

SCALE	DESIGNED BY	DRAWN BY	CAD FILE
1-in = 170-ft	MEV	MEV	GW RASR Figs 4-10.dgn
DATE	CHECKED	APPROVED	PROJECT NO
22-Jan-10			445499.01001

PARSONS
200 Cottontail Lane
Somerset, New Jersey 08873

Groundwater Potentiometric Surface
Shallow Alluvial Zone, November 2008

DUPONT POMPTON LAKES WORKS
Pompton Lakes, New Jersey
2000 Cannonball Road
Pompton Lakes, New Jersey 07442

Figure 4

Off-site Ground Water

- An “aquifer” is a reservoir of water under the ground
- Gravity makes the ground water flow from DuPont (a higher level) toward Pompton Lake (a lower level)
- To get from DuPont to Pompton Lake it flows under homes in Pompton Lakes

Potential Receptors

- Shallow ground water contaminated with VOCs flow under homes and evaporates through the slab into home
- Residents can come into contact with ground water if they use a contaminated drinking water well (none in vapor mitigation area)

VOC Constituents of Concern

- Chlorinated VOCs that came from DuPont are called constituents of concern (COCs). They include:
  - Tetrachloroethene (PCE)
  - Trichloroethene (TCE)
  - Vinyl chloride (VC)
  - Carbon Tetrachloride
- Some VOCs in the indoor air of homes are from chemicals found in homes. Examples are dry cleaning, paints, adhesives, and cleaning products.

Ground Water Cleanup Approach

- Continue groundwater pump & treat to contain the contaminated groundwater on-site
- Conduct pilot study to determine the effectiveness and implementability considering site access constraints
- Assess how to most successfully proceed to large-scale cleanup

Timeline & Significant Milestones

Ground Water Cleanup Pilot	**Pilot project to test EAB (Enhanced Anaerobic Bioremediation)**	**Work Plan to be submitted in November** **Pilot starts in February; Results in Spring 2011** **Pilot Study Report due in June 2012**
Ground Water Cleanup	**-Cleanup depends on results of pilot project**	**Work could start as early as 2012/2013**

Vapor Intrusion Investigation & Third Party Sampling

Expanded Investigation Area Sampling	**Buffer Zone Expanded**	**Size of Plume Has Not Expanded; Size of Buffer Zone Has Expanded**
Vapor Intrusion Investigation	**Ground Water Monitoring & Reporting Ongoing**	**Ground Water, Sub-Slab & Indoor Air Data Summarized in Vapor Intrusion RI Report**