

# Combe Fill South (CFS) Landfill

Chester & Washington Townships, Morris County

September 2004

## Operation & Maintenance Activities at Landfill Continuing

### Ground Water Treatment Plant

The ground water treatment plant has been in operation since June 1997. The plant treats approximately 25 million gallons of ground water per year, which is discharged to the East Branch of the Trout Brook. Discharge quality reports are forwarded to the township health departments monthly.

### Environmental Monitoring

NJDEP continues to monitor select wells and surface water/sediment locations on a semi-annual basis; the remaining locations are monitored annually. Several wells contain compounds at levels exceeding standards, with benzene being one of the primary contaminants of concern. One surface water location near Schoolhouse Lane has shown similar contamination.

### Point of Entry Treatment (POET) Systems

NJDEP continues to maintain and monitor POET systems in 28 residences in Chester and Washington Townships. Systems in homes along Schoolhouse Lane are monitored semi-annually, the balance are checked annually. The carbon units are recharged annually. The Department also samples the wells

semi-annually at the four homes on Schoolhouse Lane that do not have POET systems. Additionally, four potable wells at "sentinel" locations are sampled annually. Results of this periodic monitoring has remained consistent over the last several years, typically showing exceedances of drinking water standards in only two wells.

## DEP Begins Look at Deep Ground Water Aquifer

In 1986, the remedial remedy selected included installation of an on-site remediation system to extract and treat the contaminated ground water in the shallow aquifer. Also required was a supplemental investigation to evaluate the contamination in the deep ground water aquifer after initial treatment of the shallow aquifer.

In June 2003, NJDEP engaged The Louis Berger Group to conduct the deep aquifer remedial investigation. After reviewing the background files Berger developed a Site Sampling and Investigation Plan (SSIP), which was submitted to NJDEP in July.

The SSIP details five areas of investigation or Areas of Concern (AOC):

AOC 1 - on the western side of the landfill property, bordering the neighboring property. Several monitor wells are planned in this area.

AOC 2 - two monitor wells are planned for this area bracketing the headwaters of the East Branch of the Trout Brook.

AOC 3 - the largest area of the investigation, stretching from the northeastern edge of the landfill property across Schoolhouse Lane towards Route 24. The investigation will continue up to the tributary to the Lamington River that runs behind the homes on the north side of the lane. The investigation in this area will involve installing several monitor wells, sampling soil and groundwater along Schoolhouse Lane, and sampling surface water and sediments in the tributary.

AOC 4 - will entail a more detailed ground water investigation in the area of the fence line investigation detailed on reverse side.

AOC 5 - represents the site-wide ground water flow and water quality. The data collected from the previous AOCs will be reviewed with respect to the regional conditions.

Preliminary field work with the NJ Geological Survey (NJGS) began this spring. They are assisting NJDEP with a geophysical investigation, identifying faults and other geological features, which will aid in citing new monitor wells. Ongoing NJGS field work will take place this fall. Berger's field work is planned to commence early next year.

(continued on page 2)



## Landfill Gases Along Perimeter of Site Tracked

In March 2001, 33 soil gas probes were installed around the perimeter of the Combe Fill South site in order to define the extent and concentration of landfill gases outside of the fill area and to determine any additional areas of concern. In 2002 and 2003, 15 additional probes were installed in areas where added information was needed. One of the main areas of concern has been identified along the northeastern perimeter of the fill, where the levels of landfill gases are significantly elevated (averaging 50% methane concentrations) and the fence line is quite close to the property line. This area extends from near the power line right-of-way roughly 600' northwest along the property line. Other smaller areas with elevated gas concentrations have been identified

as well. Additional probes have recently been installed near the treatment plant in order to determine whether gases are migrating under the building.

### Need More Information?

#### NJDEP Contact:

**Mark Herzberg**

**Community Relations Coordinator**

**(609) 633-1369**

**[mark.herzberg@dep.state.nj.us](mailto:mark.herzberg@dep.state.nj.us)**

## Area Along Fence Line Investigated

Between December 2003 and June 2004, soil borings and test pits were completed along the northern edge of the CFS property where waste materials were encountered during installation of landfill gas probes. Pits were dug along the fence line in an area approximately 450' long and 35' wide. The investigative work revealed an area outside of the capped landfill that contained a significant volume of pharmaceutical wastes, personal hygiene products and drums. Fifteen drums were removed during this delineation work; other drums were left in place. A scope of work for off-site removal of the waste cell has been prepared and forwarded to the Responsible Parties. They will be meeting with the Department to discuss the technical aspects of the work.

An aerial view of the Combe Fill South Landfill with existing monitoring wells highlighted

