



# 2008 LMOP PROJECT EXPO

## NEWPORT NEWS SOLID WASTE DISPOSAL FACILITY #2

### NEWPORT NEWS, VIRGINIA



#### ENVIRONMENTAL BENEFITS

LANDFILL OVERVIEW

**Open Year: 1984**

**Closure Year: 1996**

**Waste in Place: 1.8 million tons**

**Landfill Area: 50 acres**

**Waste Depth: 80 feet**

**Number of Wells Installed: 46**

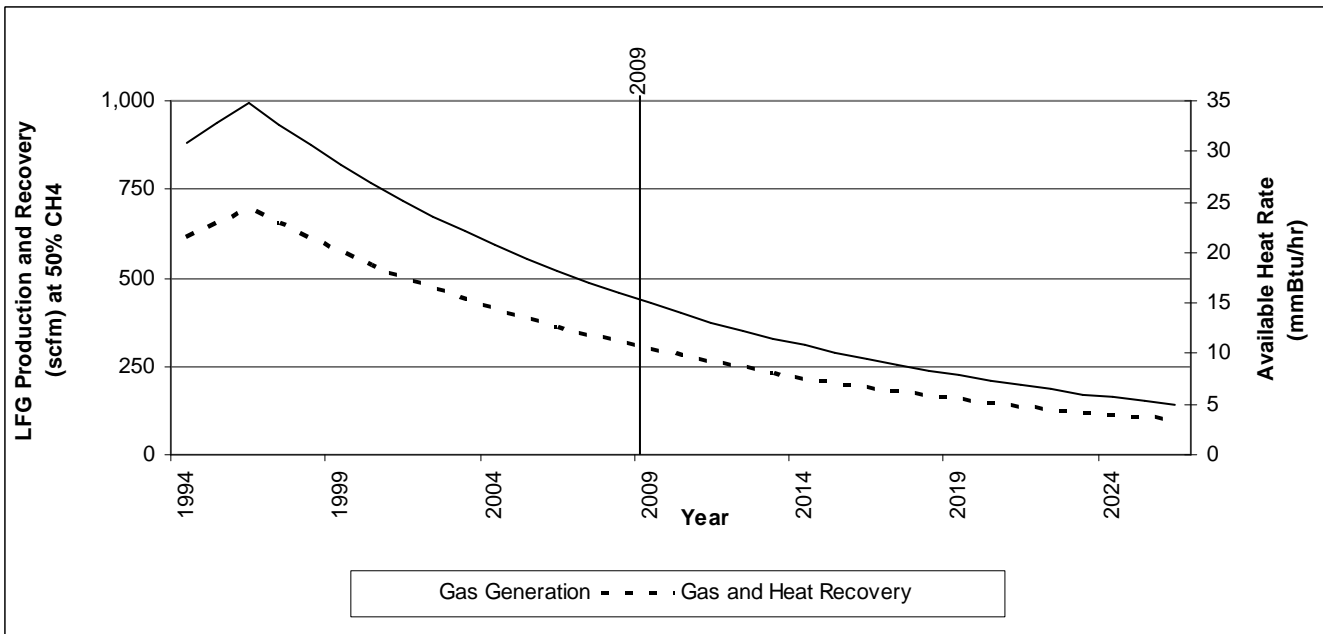
**Flare in Place: Yes**

**Methane Content of Gas: Estimated 50%**

Newport News Solid Waste Disposal Facility #2 reports that it is not currently required to collect and combust landfill gas under the Landfill NSPS/EG. Collection and control of the landfill gas at its estimated extraction rate of 299 scfm in 2009 would result in direct emission reductions of 29,000 metric tons CO<sub>2</sub>e and utilizing the gas to generate electricity would result in the avoidance of 5,200 metric tons of CO<sub>2</sub>e emissions due to displaced electricity generation from conventional fossil fuel sources. These emission reductions are equivalent to any one of the following annual environmental benefits for 2009:

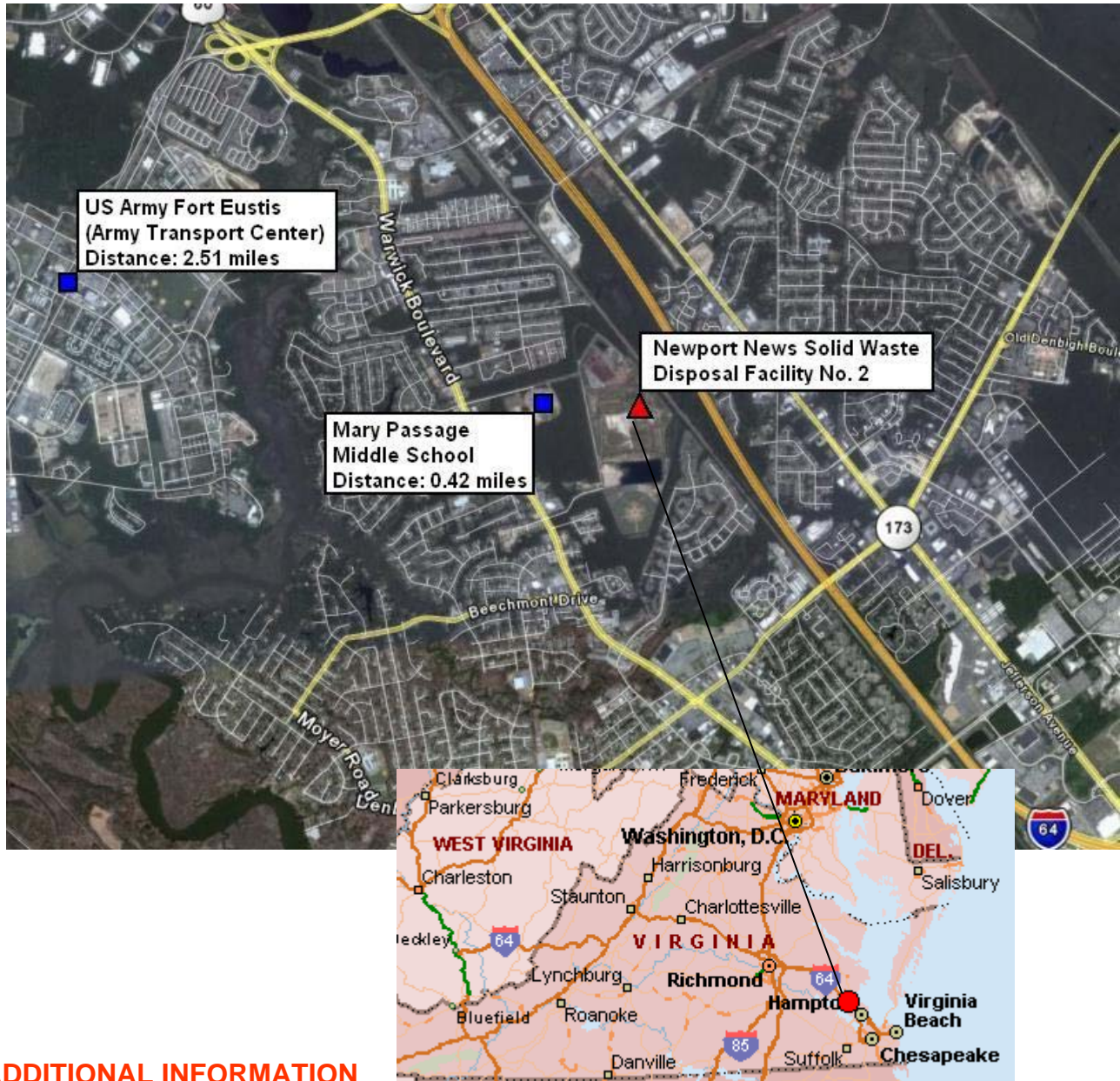
- Annual greenhouse gas emissions from 6,300 passenger vehicles
- Carbon sequestered annually by 7,800 acres of pine or fir forests
- CO<sub>2</sub> emissions from burning 180 railcars' worth of coal
- CO<sub>2</sub> emissions from 80,500 barrels of oil consumed

#### LANDFILL GAS AND ENERGY POTENTIAL



- Actual 2006 LFG Recovery: 312 scfm
- LandGEM Peak Recovery Estimation: 697 scfm (in 1996)

## LANDFILL LOCATION AND POTENTIAL END USERS



### ADDITIONAL INFORMATION

The landfill is currently exploring a direct-use project with the nearby middle school. Preliminary estimates using LFGcost indicate that an adjacent direct-use project may be feasible. Since the energy demand at the school is seasonal, perhaps this project could be combined with another on-site use.

The landfill has provided historical records of the school's electricity and natural gas demand, as shown below:

Year	Annual Natural Gas Usage (CCF)	Annual Electricity Demand (kWh)
2007	42,478	2,422,220
2006	33,837	2,032,460
2005	40,695	2,259,040

### FOR MORE INFORMATION

**Newport News Solid Waste Disposal Facility #2**  
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 Newport News, VA 23608

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