May, 2008

Biosolids Division Monthly Report

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District of Columbia Water and Sewer Authority

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The mission of the District of Columbia Water and Sewer Authority biosolids management program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publicly acceptable, and cost-effective management of biosolids produced by the Blue Plains Advanced Wastewater Treatment Plant while helping preserve agriculture and protect the Chesapeake Bay.



April 2008 Blue Plains Biosolids Report

In April, biosolids hauling averaged 1133 wet tons per day. The graph below shows the hauling by contractor for the month of May. Average % solids was 26.8%, and average lime dose was 21%. A second graph shows average tons recycled per day for the last 24 months.



Average Daily Hauling by Contractor for May, 2008



Average Daily Biosolids Production

The graphs below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of April 2008. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits, the AMSA average levels surveyed in 1996, and even the proposed 2025 European Union (EU) limits.



Environmental Benefits

In April of 2008 staff sent 20798 wet tons of biosolids from the plant. In addition, 5135 wet tons of material came out of storage in April. No tonnage went to landfills in April. The graph below shows the benefits as compared to landfilling all the biosolids in a non-energy recovering landfill. Taking into account the fuel required to transport biosolids to the field, the net benefit is 2554 metric tons CO₂ equivalent avoided emissions. The graph shows the benefit (carbon credit) of the sequestration, the energy savings due to avoiding conventional fertilizer use, and the total of the two. This is equivalent to taking 5,338,110 car miles off the road in the month of April (assumes 20 mpg, 19.4 lb CO2 equivalent emissions/gallon gas – EPA estimate).

DCWASA Biosolids Recycling Program Greenhouse Gas Balance Benefits April 2008 Hauling Totals



HIGHLIGHTS

Last month staff attended and made presentations at the MWCOG microconstituent meeting. This event was a two day meeting designed to bring together expertise to discuss the state of knowledge concerning emerging pollutants and micro-constituents. Staff presented an overview of the issue as it concerns biosolids land application, focusing on the research projects funded through the Blue Plains program, including two and USDA/U of MD looking at the fate of triclosan and triclocarban (anti-microbial) in WWTP's and the fate and transport of polybrominated diphenyl ether (PBDE – a fire retardant) from land applied biosolids.

Staff visited Keystone Biofuels in Harrisburg, PA, a biodiesel manufacturing plant. The production of biodiesel produces a residual of glycerin in relatively large quantities. Glycerin can be used (with some process modifications) as a substitute (for methanol) carbon source in the BNR process. Staff discussed availability of glycerin and the preliminary results of research looking at dosing rates and stochiometry for using glycerin as a substitute for methanol. If feasible, this could represent a substantial savings for Blue Plains.

Map of Blue Plains Biosolids Applications and Agricultural \$'s for April 2008

