

February 5, 2002

Ms. Elizabeth Shevi
Director, Policy & Planning Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

RE: WLSSD Voluntary Mercury Reduction 2001 Annual Report

Dear Ms. Shevi:

The Western Lake Superior Sanitary District (WLSSD) is a strong supporter of the Minnesota Voluntary Mercury Reduction Project. WLSSD is an active member of the Minnesota Pollution Control Agency's (MPCA's) Mercury Contamination Reduction Initiative and enthusiastically supports the consensus that programs that encourage voluntary participation are preferable to a broad regulatory approach. WLSSD has complied with mercury discharge limits wastewater discharge and has been able to meet the exceptional quality standard for mercury in our biosolids. We will continue to minimize releases to the environment from these sources. This report will document WLSSD's mercury reduction activities that occurred within the last year.

In July 2001, WLSSD discontinued its sludge incineration process; this was WLSSD's only mercury point source emission to air. In the first half of the year, prior to the shut down, 8 pounds of mercury were emitted via the incinerator. The new wastewater solids treatment process utilizes anaerobic digestion and a comprehensive biosolids land application program.

WLSSD staff continues to work with dental practices in order to reduce the amount of amalgam particles discharged to the sewer or released to other media where mercury may be emitted to the environment. WLSSD, in cooperation with the Northeast District Dental Society, applied for and received a local environmental improvement grant. Grant funds are being used to purchase improved sedimentation traps, which capture fine amalgam particles that normally would be sewer from dental suction systems. These treatment systems, when properly installed and operated, capture 99 percent of the amalgam particles (ISO standard) released through dental suction systems. This is far superior to conventional traps, which capture 60-80 percent of the amalgam. As of the end of the 2001, 25 of the 52 dental practices in the WLSSD service area had installed the improved capture devices. Eight (8) additional practices scheduled installation in January

2002. The project goal is to have 75 percent of the dental practices using improved systems by the end of 2002. WLSSD is seeking additional funding to purchase improved traps for all the dental practices in the service area. The concentration and mass of mercury in the wastewater sludge is being tracked by WLSSD in order to measure the success of this project.

WLSSD has worked with the MPCA during the last two years to help eliminate mercury use in school laboratories by collecting mercury-containing items and offering non-mercury alternatives in exchange. Laboratory and fever thermometers have been the most common items exchanged, although numerous other items were turned in. Two thousand one hundred and five (2105) laboratory thermometers were collected in 2000 and 2001 and properly disposed of through the WLSSD Household Hazardous Waste Facility. Three hundred pounds of mercury were collected from schools during 2000 and 2001.

Schools are not the only customers that use the WLSSD Household Hazardous Waste Facility and Clean Shop program to manage mercury-containing wastes. Households and small businesses disposed of 645 pounds of mercury waste in 2000, and 968 pounds in 2001. Households that choose to turn in mercury-containing fever thermometers to WLSSD for proper disposal receive a mercury-free thermometer in exchange.

The table below shows the actual mercury emissions from WLSSD facilities and the estimates that were projected for 2001 and 2008.

Mercury Emissions from WLSSD Facilities

Type of Emission	1990	1998	2000	2001 Estimate	2001 Actual	2008 Estimate
	Lbs/yr	Lbs/yr	Lbs/yr	Lbs/yr	Lbs/yr	Lbs/yr
Incinerator Stack (AIR)	47	10	11	5	8	0
Wastewater Effluent (WATER)	42.4	2.0	1.0	0.8	0.7	0.5
Incinerator ash (Landfill)	1.3	52.5	5	2	0.9	0
Biosolids (Land Application)	0	5.9	5	10	7.5	11
Subtotal	90.7	70.4	23.4	17.8	17.1	11.5
Solid waste Estimate (Landfill)	118	55.2	100	95	95	80
Total	208.7	125.6	123.4	112.8	112.1	91.5

The total wastewater influent mercury load for 2001 was 10.2 pounds per year. Industrial sampling shows WLSSD industrial customers discharged 0.69 pounds. The source of the remaining mercury was households, small businesses, and unregulated industries. Mass balance analysis determined that 93% of the mercury received as a component of WLSSD wastewater influent appears in the biosolids product; only 7% of the mercury received is discharged to the receiving waters.

If you have any further questions concerning WLSSD's efforts to reduce mercury emissions, please feel free to call Tim Tuominen of my staff at (218) 722-3336 extension 324.

Sincerely,

Kurt N.W. Soderberg
Executive Director