

March 9, 2010

Mr. Ted Rattray
 President
 Belcorp Environmental Services, Inc.
 Suite 900
 1508 West Broadway
 Vancouver, BC V6J 1W8



Dear Mr. Rattray:

Presented herein are Sound Resource Management Group's best estimates of emissions in the Fraser Valley from transport of MSW between Vancouver and an out-of-region landfill such as Cache Creek. Table 1A shows these Fraser Valley emissions from trucks using liquefied natural gas (LNG) as fuel. Truck emissions in the Fraser Valley are based on the 114 kilometer distance between the Lower Mainland and Hope. The LNG fuel is produced from methane in captured landfill gas, such as the LNG that will be produced by the landfill gas collection system and LNG production facility planned for the Cache Creek Landfill Extension.

Estimates for truck emissions in the Fraser Valley are presented in Table 1A along with the performance criteria for an in-region waste-to-energy (WTE) facility and an out-of-region landfill managing 500,000 tonnes per year (TPY) of municipal solid waste (MSW) generated in the Metro Vancouver region. These performance criteria comparisons were presented and discussed in our letter report of February 18. They are included here to provide perspective on the magnitude of overall emissions from an in-region WTE compared with the in-region emissions from hauling MSW to an out-of-region landfill. The in-region MSW hauling emissions for LNG-fueled trucks are included in the total emissions for the out-of-region landfill shown in Table 1A.

Table 1A
Annual Performance Criteria for Waste Management Facilities
Emissions / (Emissions Reductions) from 500,000 TPY MSW Disposal
Compared with Emissions in the Fraser Valley from Hauling MSW Out-of-Region

<u>Performance Criteria</u>	<u>In-Region Waste-to-Energy</u>	<u>Out-of-Region Landfill</u>	Memo:
			<u>Emissions in Fraser Valley from LNG-Fueled Trucks Hauling MSW Out of Region</u>
NOx (tonnes)	2	16	1.1
SOx (tonnes)	93	(11)	0.1
PM10 (tonnes)	4	2	0.3
CO (tonnes)	(56)	9	4.2
VOCs (tonnes)	(31)	4	0.7
Ammonia (tonnes)	17.2	(0.1)	0.0
Mercury (kg)	34.4	0.1	0.0
Dioxins & Furans (mg TEQ)	15.3	1.5	insufficient data
GHGs (tonnes CO ₂ e)	142,459	(127,462)	185

* Note that the CO and VOC reductions shown for in-region WTE are dependent on creation of substantial new markets for steam/hot water sales. These sales are necessary in order to displace enough emissions from natural-gas-fueled heat and power to yield the reductions in CO and VOC emissions shown for in-region WTE. These reductions assume that markets for hot water and steam supplied by MSW WTE facilities in Metro Vancouver would be nearly triple the size of current markets serviced from the existing Burnaby WTE facility.

As indicated in Table 1A, in-region emissions from hauling MSW using LNG as fuel to an out-of-region landfill are lower, in most cases substantially lower, than in-region emissions from WTE for nitrogen oxides (NOx), sulfur oxides (SOx), particulates (PM10), ammonia, mercury, and greenhouse gases (GHGs). In-region emissions of dioxins and furans from hauling MSW to an out-of-region landfill are also lower than in-region emissions from WTE, but exact dioxin/furan emissions levels for liquefied natural gas trucks were not available.

Estimated emissions from hauling MSW through the Fraser Valley to an out-of-region landfill are higher than in-region WTE emissions only for carbon monoxide (CO) and volatile organic compounds (VOCs). As indicated in the footnote to Table 1A, these lower CO and VOC emissions for in-region WTE are dependent on very optimistic projections for sales of steam and/or hot water from a new in-region WTE facility.

Respectfully Submitted,

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