STRAUGHAN ENVIRONMENTAL SERVICES, INC.

Memo

To: 200/ Stephanie Rudo, *Director of Goddard Child Development Center*

CC: 250/ Lori Levine, *Drinking Water Program Manager, MEMD*

740/ Steve Naus, *Facility Operations Manager*

From: 250/ Hayley Thomas, *Environmental Scientist, SGET*

Date: July 27, 2010

Attachments: 2010 Second Quarter Drinking Water Study Sample Results

Re: Second Quarter Drinking Water Results for GSFC – Building 090

The Straughan Goddard Environmental Team (SGET) conducted quarterly drinking water testing for Goddard Space Flight Center (GSFC). Samples were collected from the Goddard Child Development Center (Building 90). The samples were taken from the kitchen utility sink located in Room 106. The samples were collected on June 15, 2010 and analyzed for the following parameters: Alkalinity, bacterial analysis, Free Available Chlorine, Chloride, Haloacetic Acids, Hardness, metals, Nitrate, Orthophosphate, pH, Sulfate, Temperature, Total Dissolved Solids, Total Organic Carbon, and Total Trihalomethanes. A report of these results is attached.

The paragraph below details a parameter that did not meet the target.

- The Langlier Index is an indication of the water's likeliness to corrode pipes and fittings. Building 90 was found to be mildly corrosive.

Corrosive water can lead to leaching of metals from pipes and fittings into the water distributed, especially after it has remained stagnant in piping for an extended period of time, such as overnight. The results for all metals analyzed in this sampling were below their respective standards or goals and do not pose a health risk. A best practice recommended by the EPA is to flush water lines for approximately one minute or until the water turns cold each day before initial use. I recommend the GCDC follow this practice to ensure that the center is using the freshest water.

Results of Quarterly Child Development Center Sampling

Date	Time	Bldg	Location	Analyte	Results	Standard and Type		
6/15/2010	10:07	90	right kitchen sink	Alkalinity	34,000 ug/l	ug/l	NA	Total Dissolved Solids were analyzed out of hold.
				Bromodichloromethane	10 ug/l	80 ug/l	P	
				Bromoform	<5 ug/l	80 ug/l	P	
				Cadmium	<1 ug/l	5 ug/l	P	
				Chloride	38,000 ug/l	250,000 ug/l	S	
				Chloroform	31 ug/l	80 ug/l	P	
				Copper	7.8 ug/l	1,000 ug/l	S	
				Degrees C	22.3 degrees C	degrees C	NA	
				Dibromoacetic Acid	<1 ug/l	60 ug/l	NA	
				Dibromochloromethane	1.9 ug/l	80 ug/l	P	
				Dichloroacetic Acid	13 ug/l	60 ug/l	P	
				E. Coli	<1 CFU	CFU	NA	
				Free available chlorine	1,000 ug/l	4,000 ug/l	P	
				Haloacetic acids	31 ug/l	60 ug/l	P	
				Hardness	64,000 ug/l	ug/l	NA	
				Heterotrophic plate count	<2 CFU	500 CFU	P	
				Iron	<100 ug/l	300 ug/l	S	
				Langlier Index	-1.03 ug/l		NA	
				Lead	<1 ug/l	15 ug/l	AL	
				Monobromoacetic Acid	<1 ug/l	60 ug/l	NA	
				Monochloroacetic acid	<2 ug/l	60 ug/l	P	
				Nitrate	2,000 ug/l	10,000 ug/l	P	
				Orthophosphate	1,000 ug/l		NA	
				pH	7.34 pH	6.5-8.5 pH	S	
				Sulfate	7,000 ug/l	250,000 ug/l	S	
				Total Coliform	<1 CFU	0 CFU	P	
				Total Dissolved Solids	110,000 ug/l	500,000 ug/l	S	
				Total organic carbon	1,000 ug/l	ug/l	NA	
				Total trihalomethanes	42.9 ug/l	80 ug/l	P	
				Trichloroacetic Acid	18 ug/l	60 ug/l	P	
				Zinc	<20 ug/l	5,000 ug/l	S	

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P = Primary Standard S = Secondary Standard (Aesthetics) AL = Action Level NA = Not Applicable (No standard)