



Memo

To: 200 / Elka Forbes

CC: 250 Janine Pollack for GET

From: 250 / PGT Water Team

Date: May 5, 2009

Attachments: 2009 First Quarter Drinking Water Study Sample Results

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

The Proxtronics Goddard Team (PGT) conducted quarterly drinking water testing for Goddard Space Flight Center's (GSFC) main campus. Samples were collected from the Child Development Center (Building 90). The samples were taken from the kitchen utility sink located in Room 106. The samples were collected on March 19, 2009 and analyzed for the following parameters: Alkalinity, Bacteria Analysis, Free Available Chlorine (FAC), 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.

PGT was unable to obtain analytical results for Heterotrophic Plate Count (HPC). This occurred because PGT's analytical lab did not process the sample. HPC measures the live heterotrophic bacteria in the water system. Because both Total Coliform and E. coli were negative and FAC was at a level sufficient to prevent bacterial growth, there is no concern with respect to bacteria levels in the water. PGT will make certain HPC is analyzed in the second quarter.

The paragraph below details the only area of concern.

- The Langlier Index is an indication of the water's likeliness to corrode pipes and fittings. Building 90 was found to be mildly corrosive. Corrosion can lead to leaching of metals into the water distributed, especially after remaining stagnant in piping for an extended period of time, such as overnight. All metals were below the respective goals therefore the water does not appear to be sufficiently corrosive to cause the release of metals into the water distributed. In addition to the metals being below respective goals, there were sufficient amounts of Orthophosphate in the water system to prevent corrosion.

Results of Quarterly Child Development Center Sampling

Date	Time	Bldg	Location	Analyte	Results	Standard and Type	
3/19/2009	9:59	090	Kitchen Sink	Alkalinity	40,000 ug/l	ug/l NA	Sample ID: 20090319-090
				Bromodichloromethane	<0.5 ug/l	80 ug/l P	Sample ID: Trip Blank
				Bromodichloromethane	8.1 ug/l	80 ug/l P	Sample ID: 20090319-090
				Bromoform	<5 ug/l	80 ug/l P	Sample ID: Trip Blank
				Bromoform	<5 ug/l	80 ug/l P	Sample ID: 20090319-090
				Chloride	37,000 ug/l	250,000 ug/l S	
				Chloroform	8.2 ug/l	80 ug/l P	Sample ID: Trip Blank
				Chloroform	19 ug/l	80 ug/l P	Sample ID: 20090319-090
				Copper	9.3 ug/l	1,000 ug/l S	
				Degrees C	11.6 degrees C	degrees C NA	
				Dibromoacetic Acid	<1 ug/l	60 ug/l NA	
				Dibromochloromethane	2.2 ug/l	80 ug/l P	
				Dibromochloromethane	<0.5 ug/l	80 ug/l P	Sample ID: Trip Blank
				Dichloroacetic Acid	9.9 ug/l	60 ug/l P	Sample ID: 20090319-090
				E. Coli	<1 CFU	CFU NA	
				Free available chlorine	1,000 ug/l	4,000 ug/l P	
				Haloacetic acids	21.9 ug/l	60 ug/l P	
				Hardness	77,000 ug/l	ug/l NA	
				Langlier Index	-1.53 units	NA	
				Lead	<5 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	1,000 ug/l	10,000 ug/l P	
				Orthophosphate	1,000 ug/l	NA	
				pH	6.79 pH	6.5-8.5 pH S	
				Sulfate	15,000 ug/l	250,000 ug/l S	
				Total Coliform	<1 CFU	0 CFU P	
				Total Dissolved Solids	15,000 ug/l	500,000 ug/l S	
				Total organic carbon	4,000 ug/l	ug/l NA	
				Total trihalomethanes	29.3 ug/l	80 ug/l P	
				Trichloroacetic Acid	12 ug/l	60 ug/l P	

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