



S T R A U G H A N
E N V I R O N M E N T A L
S E R V I C E S , I N C .

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The Straughan Goddard Environmental Team (SGET) conducted annual drinking water testing for NASA's Goddard Space Flight Center (GSFC). Buildings were selected throughout the main campus, zones 1 through 6, in accordance with Work Instruction 250-WI-8500.5.5. A minimum of one building was selected from each distribution zone. A zone distribution map is attached for reference. Both pumping stations and primary buildings from each remote area were analyzed. The samples were collected on August 24 (Buildings 12, 201, 302, 405), August 25 (Buildings 4, 9A, 21, 27, 30A, 90), and August 26 (Buildings 7, 17, 20, 25, 32). The sites were analyzed for the following parameters: alkalinity, bacterial analysis, chloride, Free Available Chlorine, Haloacetic Acids, hardness, metals analysis, nitrate, orthophosphate, pH, sulfate, temperature, Total Dissolved Solids, Total Organic Carbon, and Total Trihalomethanes (TTHM). A report of these results is attached.

The following is an outline of parameters that did not meet our goals, based on the *EPA's 2006 Edition of the Drinking Water Standards and Health Advisories*:

- Buildings 9A (East Pump House Station), 7, 201, 405, 27, 20, 4, 17 and 25 did not meet the primary standard for TTHM. The primary standard for TTHM is 80 µg/L. An analysis was performed for each constituent of TTHM to ensure that none of them pose a health risk. Based on *EPA's 2006 Edition of the Drinking Water Standards and Health Advisories*, the Chloroform reference dose for an adult to be at risk is 10 µg/kg/day, the Bromodichloromethane reference dose is 3 µg/kg/day, and the Dibromochloromethane reference dose is 20 µg/kg/day. For this analysis, SGET considers the weight of the average sized adult to be 70 kg. The findings of the analysis were as follows:
 - Bromoform was not detected at any location and does not pose a risk.
 - Chloroform was detected at the highest level (89 µg/L) in Building 9A. At this level, an average sized adult would need to drink 7.9 liters of water a day to reach the exposure level.
 - Dibromochloromethane was detected at the highest level (4.4 µg/L) in Buildings 27, 7, 20, and 25. At this level, an average sized adult would need to drink 318 liters of water a day to reach the exposure level.

- Bromodichloromethane was detected at the highest level (18 µg/L) in Buildings 201 and 20. At this level, an average sized adult would need to drink 11.7 liters of water a day to reach the exposure level.

The average adult consumes approximately 2 liters of water a day; therefore, none of these constituents present a health concern.

- Buildings 9A, 20, and 405 did not meet the secondary standard for pH. The secondary standard for pH is between 6.5 - 8.5. All three buildings had pH readings above pH 9 with the highest reading at pH 9.42 in Building 405. Water with a high pH can cause aesthetic problems such as scale (calcium or magnesium carbonate) build-up in plumbing fixtures, lowered efficiency of electric water heaters, and may give the water an alkali taste. This factor does not pose a health risk.
- The Langlier Index (LI) is an indication of the water's likeliness to corrode or cause scale build-up in pipes and fittings. Corrosion can lead to the leaching of metals into the distributed water, especially after remaining stagnant in the piping for an extended period of time, such as overnight. Scale build-up inside the distribution system may result in the clogging of pipes and fittings. Buildings 4 and 21 were found to be mildly corrosive. Building 405 was found to have the propensity for mild scaling. All other buildings tested were found to be near balanced on the LI.
- Orthophosphate is added to the water by the water provider, Washington Suburban Sanitary Commission (WSSC). WSSC adds 1,000 µg/L of orthophosphate as a Best Management Practice to prevent pinhole leaks in the distribution system. This additive helps inhibit corrosion which can also cause the release of lead and copper from pipes and fittings. Most buildings showed little to no loss of orthophosphate in the distribution system. However, Building 405 showed a significant loss of orthophosphate with a result of 370 µg/L. This loss is most likely due to consumption of the orthophosphate in the system.

With the exception of those items discussed above, all tested parameters met the established goals for drinking water quality.

GSFC Map with Drinking Water
Distribution Zones

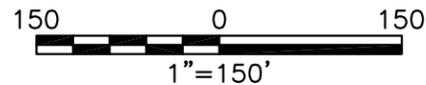
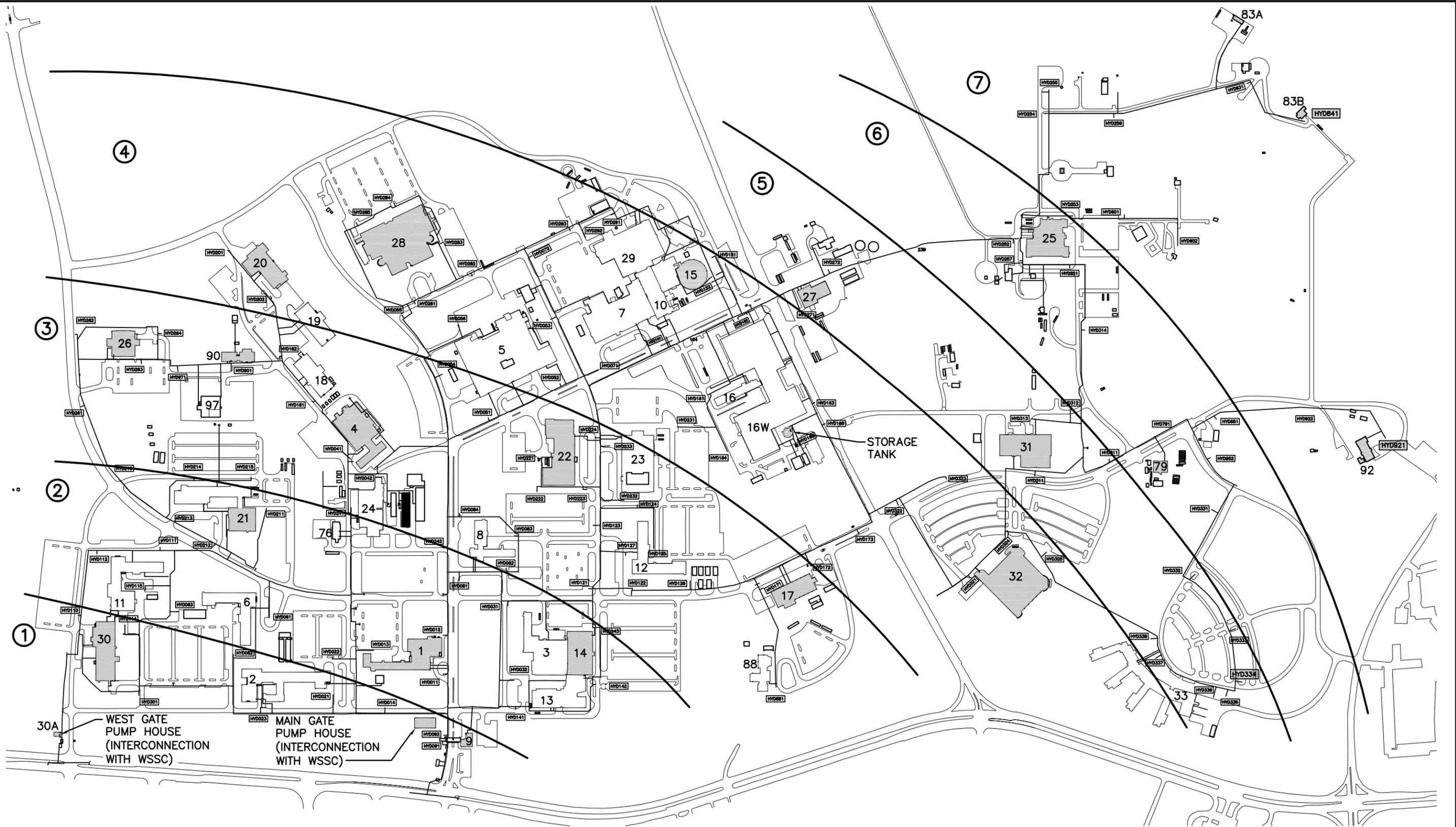


FIGURE 3-1
SAMPLE LOCATIONS
AND ZONES

NASA-GSFC

2010 Annual Results

Results of Annual Drinking Water Sampling for 8/24/2010 through 8/26/2010

| Date | Time | Bldg | Location | Analyte | Results | Standard and Type |
|-----------|---------|--------------|-------------------------------|---------------------------|----------------|----------------------------|
| 8/24/2010 | 10:34 | 012 | Kitchenette sink in room E008 | Alkalinity | 46,000 ug/l | NA Sample ID# 20100824-012 |
| | | | | Bromodichloromethane | 11 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 | 60 ug/l | 80 ug/l P |
| | | | | Copper | 56 ug/l | 1,000 ug/l S |
| | | | | Degrees C | 28.8 degrees C | NA |
| | | | | Dibromoacetic Acid | <1 ug/l | NA |
| | | | | Dibromochloromethane | 2.5 ug/l | 80 ug/l P |
| | | | | Dichloroacetic Acid | 1.1 ug/l | 60 ug/l P |
| | | | | E. Coli | <1 CFU | NA |
| | | | | Free Available Chlorine | <20 ug/l | 4,000 ug/l P |
| | | | | Haloacetic Acids | 1.1 ug/l | 60 ug/l P |
| | | | | Hardness | 76,000 ug/l | NA |
| | | | | Heterotrophic Plate Count | <2 CFU | 500 CFU P |
| | | | | Iron | <100 ug/l | 300 ug/l S |
| | | | | Langlier Index | -0.47 units | NA |
| | | | | Lead | <1 ug/l | 15 ug/l AL |
| | | | | Monobromoacetic Acid | <1 ug/l | NA |
| | | | | Monochloroacetic Acid | <2 ug/l | 60 ug/l P |
| | | | | Nitrate | 400 ug/l | 10,000 ug/l P |
| | | | | Orthophosphate | 880 ug/l | NA |
| | | | | pH | 7.62 pH | 6.5-8.5 pH S |
| | | | | Sulfate | 16,000 ug/l | 250,000 ug/l S |
| | | | | Total Coliform | <1 CFU | 0 CFU S |
| | | | | Total Dissolved Solids | 130,000 ug/l | 500,000 ug/l S |
| | | | | Total Organic Carbon | <1,000 ug/l | NA |
| | | | | Total Trihalomethanes | 73.5 ug/l | 80 ug/l P |
| | | | | Trichloroacetic Acid | <1 ug/l | 60 ug/l P |
| Zinc | 33 ug/l | 5,000 ug/l S | | | | |
| <hr/> | | | | | | |
| 8/24/2010 | 9:24 | 201 | Bathroom sink | Alkalinity | 46,000 ug/l | NA Sample ID# 20100824-201 |
| | | | | Bromodichloromethane | 18 ug/l | 80 ug/l P |
| | | | | Bromoform | <5 ug/l | 80 ug/l P |

| Date | Time | Bldg | Location | Analyte | Results | Standard and Type |
|-----------|----------|--------------|-------------------------|---------------------------|--------------|----------------------------------|
| 8/24/2010 | 9:24 | 201 | Bathroom sink | Cadmium | <1 ug/l | 5 ug/l P Sample ID# 20100824-201 |
| | | | | Chloride | 37,000 ug/l | 250,000 ug/l S |
| | | | | Chloroform | 70 ug/l | 80 ug/l P |
| | | | | Copper | 140 ug/l | 1,000 ug/l S |
| | | | | Degrees C | 28 degrees C | NA |
| | | | | Dibromoacetic Acid | <1 ug/l | NA |
| | | | | Dibromochloromethane | 3.8 ug/l | 80 ug/l P |
| | | | | Dichloroacetic Acid | 5.5 ug/l | 60 ug/l P |
| | | | | E. Coli | <1 CFU | NA |
| | | | | Free Available Chlorine | <20 ug/l | 4,000 ug/l P |
| | | | | Haloacetic Acids | 7.6 ug/l | 60 ug/l P |
| | | | | Hardness | 76,000 ug/l | NA |
| | | | | Heterotrophic Plate Count | 2 CFU | 500 CFU P |
| | | | | Iron | <100 ug/l | 300 ug/l S |
| | | | | Langlier Index | -0.87 units | NA |
| | | | | Lead | <1 ug/l | 15 ug/l AL |
| | | | | Monobromoacetic Acid | <1 ug/l | NA |
| | | | | Monochloroacetic Acid | <2 ug/l | 60 ug/l P |
| | | | | Nitrate | 900 ug/l | 10,000 ug/l P |
| | | | | Orthophosphate | 930 ug/l | NA |
| | | | | pH | 7.23 pH | 6.5-8.5 pH S |
| | | | | Sulfate | 15,000 ug/l | 250,000 ug/l S |
| | | | | Total Coliform | <1 CFU | 0 CFU S |
| | | | | Total Dissolved Solids | 140,000 ug/l | 500,000 ug/l S |
| | | | | Total Organic Carbon | 2,000 ug/l | NA |
| | | | | Total Trihalomethanes | 91.8 ug/l | 80 ug/l P |
| | | | | Trichloroacetic Acid | 2.1 ug/l | 60 ug/l P |
| Zinc | <20 ug/l | 5,000 ug/l S | | | | |
| 8/24/2010 | 10:16 | 302 | Mens bathroom slop sink | Alkalinity | 49,000 ug/l | NA Sample ID# 20100824-302 |
| | | | | Bromodichloromethane | 15 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 | 50 ug/l | 80 ug/l P |
| | | | | Copper | 6.7 ug/l | 1,000 ug/l S |

| Date | Time | Bldg | Location | Analyte | Results | Standard and Type |
|-----------|-------|------|-------------------------|---------------------------|----------------|----------------------------|
| 8/24/2010 | 10:16 | 302 | Mens bathroom slop sink | Degrees C | 25.2 degrees C | NA Sample ID# 20100824-302 |
| | | | | Dibromoacetic Acid | <1 ug/l | NA |
| | | | | Dibromochloromethane | 4.2 ug/l | 80 ug/l P |
| | | | | Dichloroacetic Acid | 6.8 ug/l | 60 ug/l P |
| | | | | E. Coli | <1 CFU | NA |
| | | | | Free Available Chlorine | 60 ug/l | 4,000 ug/l P |
| | | | | Haloacetic Acids | 21.8 ug/l | 60 ug/l P |
| | | | | Hardness | 83,000 ug/l | NA |
| | | | | Heterotrophic Plate Count | <2 CFU | 500 CFU P |
| | | | | Iron | <100 ug/l | 300 ug/l S |
| | | | | Langlier Index | 0.13 units | NA |
| | | | | Lead | <1 ug/l | 15 ug/l AL |
| | | | | Monobromoacetic Acid | <1 ug/l | NA |
| | | | | Monochloroacetic Acid | <2 ug/l | 60 ug/l P |
| | | | | Nitrate | 800 ug/l | 10,000 ug/l P |
| | | | | Orthophosphate | 900 ug/l | NA |
| | | | | pH | 8.21 pH | 6.5-8.5 pH S |
| | | | | Sulfate | 20,000 ug/l | 250,000 ug/l S |
| | | | | Total Coliform | <1 CFU | 0 CFU S |
| | | | | Total Dissolved Solids | 150,000 ug/l | 500,000 ug/l S |
| | | | | Total Organic Carbon | 2,000 ug/l | NA |
| | | | | Total Trihalomethanes | 69.2 ug/l | 80 ug/l P |
| | | | | Trichloroacetic Acid | 15 ug/l | 60 ug/l P |
| | | | | Zinc | 52 ug/l | 5,000 ug/l S |
| 8/24/2010 | 9:50 | 405 | Kitchen sink | Alkalinity | 62,000 ug/l | NA Sample ID# 20100824-405 |
| | | | | Bromodichloromethane | 14 ug/l | 80 ug/l P |
| | | | | Bromoform | <5 ug/l | 80 ug/l P |
| | | | | Cadmium | <1 ug/l | 5 ug/l P |
| | | | | Chloride | 39,000 ug/l | 250,000 ug/l S |
| | | | | Chloroform | 65 ug/l | 80 ug/l P |
| | | | | Copper | 7.5 ug/l | 1,000 ug/l S |
| | | | | Degrees C | 24 degrees C | NA |
| | | | | Dibromoacetic Acid | <1 ug/l | NA |
| | | | | Dibromochloromethane | 3.2 ug/l | 80 ug/l P |
| | | | | Dichloroacetic Acid | 3.1 ug/l | 60 ug/l P |

| Date | Time | Bldg | Location | Analyte | Results | Standard and Type |
|-----------|------|------|--------------|---------------------------|--------------|----------------------------|
| 8/24/2010 | 9:50 | 405 | Kitchen sink | E. Coli | <1 CFU | NA Sample ID# 20100824-405 |
| | | | | Free Available Chlorine | 20 ug/l | 4,000 ug/l P |
| | | | | Haloacetic Acids | 3.1 ug/l | 60 ug/l P |
| | | | | Hardness | 92,000 ug/l | NA |
| | | | | Heterotrophic Plate Count | 40 CFU | 500 CFU P |
| | | | | Iron | <100 ug/l | 300 ug/l S |
| | | | | Langlier Index | 1.43 units | NA |
| | | | | Lead | <1 ug/l | 15 ug/l AL |
| | | | | Monobromoacetic Acid | <1 ug/l | NA |
| | | | | Monochloroacetic Acid | <2 ug/l | 60 ug/l P |
| | | | | Nitrate | 2,000 ug/l | 10,000 ug/l P |
| | | | | Orthophosphate | 370 ug/l | NA |
| | | | | pH | 9.42 pH | 6.5-8.5 pH S |
| | | | | Sulfate | 15,000 ug/l | 250,000 ug/l S |
| | | | | Total Coliform | <1 CFU | 0 CFU S |
| | | | | Total Dissolved Solids | 150,000 ug/l | 500,000 ug/l S |
| | | | | Total Organic Carbon | <1,000 ug/l | NA |
| | | | | Total Trihalomethanes | 82.2 ug/l | 80 ug/l P |
| | | | | Trichloroacetic Acid | <1 ug/l | 60 ug/l P |
| | | | | Zinc | <20 ug/l | 5,000 ug/l S |

| Date | Time | Bldg | Location | Analyte | Results | Standard and Type |
|-----------|-------|------|-----------------|---------------------------|----------------|----------------------------|
| 8/25/2010 | 11:00 | 004 | Break area sink | Alkalinity | 45,000 ug/l | NA Sample ID# 20100825-004 |
| | | | | Bromodichloromethane | 16 ug/l | 80 ug/l P |
| | | | | Bromoform | <5 ug/l | 80 ug/l P |
| | | | | Cadmium | <1 ug/l | 5 ug/l P |
| | | | | Chloride | 35,000 ug/l | 250,000 ug/l S |
| | | | | Chloroform | 67 ug/l | 80 ug/l P |
| | | | | Copper | 6.5 ug/l | 1,000 ug/l S |
| | | | | Degrees C | 24.1 degrees C | NA |
| | | | | Dibromoacetic Acid | <1 ug/l | NA |
| | | | | Dibromochloromethane | 2.8 ug/l | 80 ug/l P |
| | | | | Dichloroacetic Acid | 7.2 ug/l | 60 ug/l P |
| | | | | E. Coli | <1 CFU | NA |
| | | | | Free Available Chlorine | 130 ug/l | 4,000 ug/l P |
| | | | | Haloacetic Acids | 20.2 ug/l | 60 ug/l P |
| | | | | Hardness | 72,000 ug/l | NA |
| | | | | Heterotrophic Plate Count | <2 CFU | 500 CFU P |
| | | | | Iron | <100 ug/l | 300 ug/l S |
| | | | | Langlier Index | -1.22 units | NA |
| | | | | Lead | <1 ug/l | 15 ug/l AL |
| | | | | Monobromoacetic Acid | <1 ug/l | NA |
| | | | | Monochloroacetic Acid | <2 ug/l | 60 ug/l P |
| | | | | Nitrate | 900 ug/l | 10,000 ug/l P |
| | | | | Orthophosphate | 1,000 ug/l | NA |
| | | | | pH | 6.96 pH | 6.5-8.5 pH S |
| | | | | Sulfate | 11,000 ug/l | 250,000 ug/l S |
| | | | | Total Coliform | <1 CFU | 0 CFU S |
| | | | | Total Dissolved Solids | 130,000 ug/l | 500,000 ug/l S |
| | | | | Total Organic Carbon | 2,000 ug/l | NA |
| | | | | Total Trihalomethanes | 85.8 ug/l | 80 ug/l P |
| | | | | Trichloroacetic Acid | 13 ug/l | 60 ug/l P |
| | | | | Zinc | <20 ug/l | 5,000 ug/l S |

| | | | | | | |
|-----------|------|------|----------------------------------|----------------------|-------------|----------------------------|
| 8/25/2010 | 9:46 | 009A | Hose connection on big blue pipe | Alkalinity | 51,000 ug/l | NA Sample ID# 20100825-09A |
| | | | | Bromodichloromethane | 14 ug/l | 80 ug/l P |
| | | | | Bromoform | <5 ug/l | 80 ug/l P |

| Date | Time | Bldg | Location | Analyte | Results | Standard and Type |
|-----------|-------|------|--|---------------------------|--------------|----------------------------------|
| 8/25/2010 | 9:46 | 009A | Hose connection on big blue pipe | Cadmium | <1 ug/l | 5 ug/l P Sample ID# 20100825-09A |
| | | | | Chloride | 35,000 ug/l | 250,000 ug/l S |
| | | | | Chloroform | 89 ug/l | 80 ug/l P |
| | | | | Copper | 1.3 ug/l | 1,000 ug/l S |
| | | | | Degrees C | 24 degrees C | NA |
| | | | | Dibromoacetic Acid | <1 ug/l | NA |
| | | | | Dibromochloromethane | 2.8 ug/l | 80 ug/l P |
| | | | | Dichloroacetic Acid | 3.3 ug/l | 60 ug/l P |
| | | | | E. Coli | <1 CFU | NA |
| | | | | Free Available Chlorine | <20 ug/l | 4,000 ug/l P |
| | | | | Haloacetic Acids | 3.3 ug/l | 60 ug/l P |
| | | | | Hardness | 75,000 ug/l | NA |
| | | | | Heterotrophic Plate Count | 116 CFU | 500 CFU P |
| | | | | Iron | 180 ug/l | 300 ug/l S |
| | | | | Langlier Index | 0.95 units | NA |
| | | | | Lead | <1 ug/l | 15 ug/l AL |
| | | | | Monobromoacetic Acid | <1 ug/l | NA |
| | | | | Monochloroacetic Acid | <2 ug/l | 60 ug/l P |
| | | | | Nitrate | 600 ug/l | 10,000 ug/l P |
| | | | | Orthophosphate | 950 ug/l | NA |
| | | | | pH | 9.09 pH | 6.5-8.5 pH S |
| | | | | Sulfate | 7,000 ug/l | 250,000 ug/l S |
| | | | | Total Coliform | <1 CFU | 0 CFU S |
| | | | | Total Dissolved Solids | 140,000 ug/l | 500,000 ug/l S |
| | | | | Total Organic Carbon | 1,000 ug/l | NA |
| | | | | Total Trihalomethanes | 105.8 ug/l | 80 ug/l P |
| | | | | Trichloroacetic Acid | <1 ug/l | 60 ug/l P |
| | | | | Zinc | <20 ug/l | 5,000 ug/l S |
| 8/25/2010 | 10:39 | 021 | Cafeteria sink used to wash vegetables and fruit | Alkalinity | 37,000 ug/l | NA Sample ID# 20100825-021 |
| | | | | Bromodichloromethane | 9.5 ug/l | 80 ug/l P |
| | | | | Bromoform | <5 ug/l | 80 ug/l P |
| | | | | Cadmium | <1 ug/l | 5 ug/l P |
| | | | | Chloride | 33,000 ug/l | 250,000 ug/l S |

| Date | Time | Bldg | Location | Analyte | Results | Standard and Type |
|-----------|-------|------|--|---------------------------|----------------|-----------------------------------|
| 8/25/2010 | 10:39 | 021 | Cafeteria sink used to wash vegetables and fruit | Chloroform | 37 ug/l | 80 ug/l P Sample ID# 20100825-021 |
| | | | | Copper | 6 ug/l | 1,000 ug/l S |
| | | | | Degrees C | 25.7 degrees C | NA |
| | | | | Dibromoacetic Acid | <1 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 | NA |
| | | | | Free Available Chlorine | 1,000 ug/l | 4,000 ug/l P |
| | | | | Haloacetic Acids | 24 ug/l | 60 ug/l P |
| | | | | Hardness | 63,000 ug/l | NA |
| | | | | Heterotrophic Plate Count | <2 CFU | 500 CFU P |
| | | | | Iron | <100 ug/l | 300 ug/l S |
| | | | | Langlier Index | -1.04 units | NA |
| | | | | Lead | <1 ug/l | 15 ug/l AL |
| | | | | Monobromoacetic Acid | <1 ug/l | NA |
| | | | | Monochloroacetic Acid | <2 ug/l | 60 ug/l P |
| | | | | Nitrate | 900 ug/l | 10,000 ug/l P |
| | | | | Orthophosphate | 910 ug/l | NA |
| | | | | pH | 7.27 pH | 6.5-8.5 pH S |
| | | | | Sulfate | 8,000 ug/l | 250,000 ug/l S |
| | | | | Total Coliform | <1 CFU | 0 CFU S |
| | | | | Total Dissolved Solids | 130,000 ug/l | 500,000 ug/l S |
| | | | | Total Organic Carbon | 2,000 ug/l | NA |
| | | | | Total Trihalomethanes | 48.4 ug/l | 80 ug/l P |
| | | | | Trichloroacetic Acid | 11 ug/l | 60 ug/l P |
| | | | | Zinc | <20 ug/l | 5,000 ug/l S |
| <hr/> | | | | | | |
| 8/25/2010 | 11:38 | 027 | Slop sink in Janitor's closet | Alkalinity | 47,000 ug/l | NA Sample ID# 20100825-027 |
| | | | | Bromodichloromethane | 17 ug/l | 80 ug/l P |
| | | | | Bromoform | <5 ug/l | 80 ug/l P |
| | | | | Cadmium | <1 ug/l | 5 ug/l P |
| | | | | Chloride | 36,000 ug/l | 250,000 ug/l S |
| | | | | Chloroform | 65 ug/l | 80 ug/l P |
| | | | | Copper | 5.7 ug/l | 1,000 ug/l S |
| | | | | Degrees C | 27.2 degrees C | NA |

| Date | Time | Bldg | Location | Analyte | Results | Standard and Type |
|----------------------|----------------|----------------|-------------------------------|---------------------------|--------------|----------------------------|
| 8/25/2010 | 11:38 | 027 | Slop sink in Janitor's closet | Dibromoacetic Acid | <1 ug/l | NA Sample ID# 20100825-027 |
| | | | | Dibromochloromethane | 4.4 ug/l | 80 ug/l P |
| | | | | Dichloroacetic Acid | 3 ug/l | 60 ug/l P |
| | | | | E. Coli | <1 CFU | NA |
| | | | | Free Available Chlorine | 20 ug/l | 4,000 ug/l P |
| | | | | Haloacetic Acids | 6 ug/l | 60 ug/l P |
| | | | | Hardness | 73,000 ug/l | NA |
| | | | | Heterotrophic Plate Count | 6 CFU | 500 CFU P |
| | | | | Iron | <100 ug/l | 300 ug/l S |
| | | | | Langlier Index | -0.36 units | NA |
| | | | | Lead | <1 ug/l | 15 ug/l AL |
| | | | | Monobromoacetic Acid | <1 ug/l | NA |
| | | | | Monochloroacetic Acid | <2 ug/l | 60 ug/l P |
| | | | | Nitrate | 900 ug/l | 10,000 ug/l P |
| | | | | Orthophosphate | 1,000 ug/l | NA |
| | | | | pH | 7.76 pH | 6.5-8.5 pH S |
| | | | | Sulfate | 10,000 ug/l | 250,000 ug/l S |
| | | | | Total Coliform | <1 CFU | 0 CFU S |
| | | | | Total Dissolved Solids | 140,000 ug/l | 500,000 ug/l S |
| | | | | Total Organic Carbon | 1,000 ug/l | NA |
| | | | | Total Trihalomethanes | 86.4 ug/l | 80 ug/l P |
| | | | | Trichloroacetic Acid | 3 ug/l | 60 ug/l P |
| | | | | Zinc | <20 ug/l | 5,000 ug/l S |
| | | | | 8/25/2010 | 10:15 | 030A |
| Bromodichloromethane | 15 ug/l | 80 ug/l P | | | | |
| Bromoform | <1 ug/l | 80 ug/l P | | | | |
| Cadmium | <1 ug/l | 5 ug/l P | | | | |
| Chloride | 41,000 ug/l | 250,000 ug/l S | | | | |
| Chloroform | 35 ug/l | 80 ug/l P | | | | |
| Copper | 6.4 ug/l | 1,000 ug/l S | | | | |
| Degrees C | 26.6 degrees C | NA | | | | |
| Dibromoacetic Acid | 1.3 ug/l | NA | | | | |
| Dibromochloromethane | 4.1 ug/l | 80 ug/l P | | | | |
| Dichloroacetic Acid | 13 ug/l | 60 ug/l P | | | | |

| Date | Time | Bldg | Location | Analyte | Results | Standard and Type |
|-----------|-------|------|--------------------------------------|---------------------------|--------------|--|
| 8/25/2010 | 10:15 | 030A | Hose connection on big overhead pipe | E. Coli | <1 CFU | NA Sample ID# 20100825-30A |
| | | | | Free Available Chlorine | 2,000 ug/l | 4,000 ug/l P |
| | | | | Haloacetic Acids | 26.3 ug/l | 60 ug/l P |
| | | | | Hardness | 103,000 ug/l | NA |
| | | | | Heterotrophic Plate Count | 287 CFU | 500 CFU P |
| | | | | Iron | <100 ug/l | 300 ug/l S |
| | | | | Langlier Index | -0.96 units | NA |
| | | | | Lead | 1.1 ug/l | 15 ug/l AL |
| | | | | Monobromoacetic Acid | <1 ug/l | NA |
| | | | | Monochloroacetic Acid | <2 ug/l | 60 ug/l P |
| | | | | Nitrate | 800 ug/l | 10,000 ug/l P |
| | | | | Orthophosphate | 830 ug/l | NA |
| | | | | pH | 6.99 pH | 6.5-8.5 pH S |
| | | | | Sulfate | 39,000 ug/l | 250,000 ug/l S |
| | | | | Total Coliform | <1 CFU | 0 CFU S |
| | | | | Total Dissolved Solids | 180,000 ug/l | 500,000 ug/l S |
| | | | | Total Organic Carbon | 2,000 ug/l | NA |
| | | | | Total Trihalomethanes | 54.1 ug/l | 80 ug/l P |
| | | | | Trichloroacetic Acid | 12 ug/l | 60 ug/l P |
| | | | | Zinc | <20 ug/l | 5,000 ug/l S |
| <hr/> | | | | | | |
| 8/25/2010 | 9:10 | 090 | Small kitchen sink | Alkalinity | 43,000 ug/l | NA Sample ID# 20100825-090 |
| | | | | Alkalinity | 45,000 ug/l | NA Blind duplicate, sample ID # 20100825-800 |
| | | | | Bromodichloromethane | 16 ug/l | 80 ug/l P Sample ID# 20100825-090 |
| | | | | Bromodichloromethane | 15 ug/l | 80 ug/l P Blind duplicate, sample ID # 20100825-800 |
| | | | | Bromoform | <5 ug/l | 80 ug/l P |
| | | | | Bromoform | <5 ug/l | 80 ug/l P Sample ID# 20100825-090 |
| | | | | Cadmium | <1 ug/l | 5 ug/l P |
| | | | | Cadmium | <1 ug/l | 5 ug/l P Blind duplicate, sample ID # 20100825-800 |
| | | | | Chloride | 35,000 ug/l | 250,000 ug/l S Sample ID# 20100825-090 |
| | | | | Chloride | 35,000 ug/l | 250,000 ug/l S Blind duplicate, sample ID # 20100825-800 |
| | | | | Chloroform | 60 ug/l | 80 ug/l P |
| | | | | Chloroform | 58 ug/l | 80 ug/l P Sample ID# 20100825-090 |
| | | | | Copper | 7.9 ug/l | 1,000 ug/l S |
| | | | | Copper | 6.8 ug/l | 1,000 ug/l S Blind duplicate, sample ID # 20100825-800 |

| Date | Time | Bldg | Location | Analyte | Results | Standard and Type |
|-----------|------|------|--------------------|---------------------------|----------------|--|
| 8/25/2010 | 9:10 | 090 | Small kitchen sink | Degrees C | 25.1 degrees C | NA Sample ID# 20100825-090 |
| | | | | Degrees C | 25.1 degrees C | NA Blind duplicate, sample ID # 20100825-800 |
| | | | | Dibromoacetic Acid | <1 ug/l | NA Sample ID# 20100825-090 |
| | | | | Dibromoacetic Acid | <1 ug/l | NA Blind duplicate, sample ID # 20100825-800 |
| | | | | Dibromochloromethane | 3 ug/l | 80 ug/l P |
| | | | | Dibromochloromethane | 3.3 ug/l | 80 ug/l P Sample ID# 20100825-090 |
| | | | | Dichloroacetic Acid | 17 ug/l | 60 ug/l P Blind duplicate, sample ID # 20100825-800 |
| | | | | Dichloroacetic Acid | 16 ug/l | 60 ug/l P Sample ID# 20100825-090 |
| | | | | E. Coli | <1 CFU | NA Blind duplicate, sample ID # 20100825-800 |
| | | | | E. Coli | <1 CFU | NA Sample ID# 20100825-090 |
| | | | | Free Available Chlorine | 210 ug/l | 4,000 ug/l P Blind duplicate, sample ID # 20100825-800 |
| | | | | Free Available Chlorine | 210 ug/l | 4,000 ug/l P Sample ID# 20100825-090 |
| | | | | Haloacetic Acids | 31 ug/l | 60 ug/l P Blind duplicate, sample ID # 20100825-800 |
| | | | | Haloacetic Acids | 29 ug/l | 60 ug/l P Sample ID# 20100825-090 |
| | | | | Hardness | 74,000 ug/l | NA |
| | | | | Hardness | 74,000 ug/l | NA Blind duplicate, sample ID # 20100825-800 |
| | | | | Heterotrophic Plate Count | <2 CFU | 500 CFU P |
| | | | | Heterotrophic Plate Count | <2 CFU | 500 CFU P Sample ID# 20100825-090 |
| | | | | Iron | <100 ug/l | 300 ug/l S |
| | | | | Iron | <100 ug/l | 300 ug/l S Blind duplicate, sample ID # 20100825-800 |
| | | | | Langlier Index | -0.82 units | NA Sample ID# 20100825-090 |
| | | | | Langlier Index | -0.8 units | NA Blind duplicate, sample ID # 20100825-800 |
| | | | | Lead | <1 ug/l | 15 ug/l AL Sample ID# 20100825-090 |
| | | | | Lead | <1 ug/l | 15 ug/l AL Blind duplicate, sample ID # 20100825-800 |
| | | | | Monobromoacetic Acid | <1 ug/l | NA Sample ID# 20100825-090 |
| | | | | Monobromoacetic Acid | <1 ug/l | NA Blind duplicate, sample ID # 20100825-800 |
| | | | | Monochloroacetic Acid | <2 ug/l | 60 ug/l P Sample ID# 20100825-090 |
| | | | | Monochloroacetic Acid | <2 ug/l | 60 ug/l P Blind duplicate, sample ID # 20100825-800 |
| | | | | Nitrate | 800 ug/l | 10,000 ug/l P Sample ID# 20100825-090 |
| | | | | Nitrate | 800 ug/l | 10,000 ug/l P Blind duplicate, sample ID # 20100825-800 |
| | | | | Orthophosphate | 900 ug/l | NA |
| | | | | Orthophosphate | 970 ug/l | NA Sample ID# 20100825-090 |
| | | | | pH | 7.36 pH | 6.5-8.5 pH S |
| | | | | pH | 7.36 pH | 6.5-8.5 pH S Blind duplicate, sample ID # 20100825-800 |
| | | | | Sulfate | 14,000 ug/l | 250,000 ug/l S Sample ID# 20100825-090 |
| | | | | Sulfate | 14,000 ug/l | 250,000 ug/l S Blind duplicate, sample ID # 20100825-800 |

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

| Date | Time | Bldg | Location | Analyte | Results | Standard and Type |
|-----------|------|------|--------------------|------------------------|--------------|--|
| 8/25/2010 | 9:10 | 090 | Small kitchen sink | Total Coliform | <1 CFU | 0 CFU S Sample ID# 20100825-090 |
| | | | | Total Coliform | <1 CFU | 0 CFU S Blind duplicate, sample ID # 20100825-800 |
| | | | | Total Dissolved Solids | 140,000 ug/l | 500,000 ug/l S Sample ID# 20100825-090 |
| | | | | Total Dissolved Solids | 130,000 ug/l | 500,000 ug/l S Blind duplicate, sample ID # 20100825-800 |
| | | | | Total Organic Carbon | 2,000 ug/l | NA Sample ID# 20100825-090 |
| | | | | Total Organic Carbon | 2,000 ug/l | NA Blind duplicate, sample ID # 20100825-800 |
| | | | | Total Trihalomethanes | 77.3 ug/l | 80 ug/l P Sample ID# 20100825-090 |
| | | | | Total Trihalomethanes | 78 ug/l | 80 ug/l P Blind duplicate, sample ID # 20100825-800 |
| | | | | Trichloroacetic Acid | 14 ug/l | 60 ug/l P |
| | | | | Trichloroacetic Acid | 13 ug/l | 60 ug/l P Sample ID# 20100825-090 |
| | | | | Zinc | <20 ug/l | 5,000 ug/l S |
| | | | | Zinc | <20 ug/l | 5,000 ug/l S Blind duplicate, sample ID # 20100825-800 |

| Date | Time | Bldg | Location | Analyte | Results | Standard and Type |
|-----------|-------|------|-----------|---------------------------|----------------|----------------------------|
| 8/26/2010 | 10:23 | 007 | Room 194 | Alkalinity | 47,000 ug/l | NA Sample ID# 20100826-007 |
| | | | | Bromodichloromethane | 17 ug/l | 80 ug/l P |
| | | | | Bromoform | <5 ug/l | 80 ug/l P |
| | | | | Cadmium | <1 ug/l | 5 ug/l P |
| | | | | Chloride | 36,000 ug/l | 250,000 ug/l S |
| | | | | Chloroform | 76 ug/l | 80 ug/l P |
| | | | | Copper | 12 ug/l | 1,000 ug/l S |
| | | | | Degrees C | 24.1 degrees C | NA |
| | | | | Dibromoacetic Acid | <1 ug/l | NA |
| | | | | Dibromochloromethane | 4.4 ug/l | 80 ug/l P |
| | | | | Dichloroacetic Acid | 5.2 ug/l | 60 ug/l P |
| | | | | E. Coli | <1 CFU | NA |
| | | | | Free Available Chlorine | 70 ug/l | 4,000 ug/l P |
| | | | | Haloacetic Acids | 14.3 ug/l | 60 ug/l P |
| | | | | Hardness | 69,000 ug/l | NA |
| | | | | Heterotrophic Plate Count | 2 CFU | 500 CFU P |
| | | | | Iron | <100 ug/l | 300 ug/l S |
| | | | | Langlier Index | -0.33 units | NA |
| | | | | Lead | <1 ug/l | 15 ug/l AL |
| | | | | Monobromoacetic Acid | <1 ug/l | NA |
| | | | | Monochloroacetic Acid | <2 ug/l | 60 ug/l P |
| | | | | Nitrate | 900 ug/l | 10,000 ug/l P |
| | | | | Orthophosphate | 890 ug/l | NA |
| | | | | pH | 7.87 pH | 6.5-8.5 pH S |
| | | | | Sulfate | 11,000 ug/l | 250,000 ug/l S |
| | | | | Total Coliform | <1 CFU | 0 CFU S |
| | | | | Total Dissolved Solids | 160,000 ug/l | 500,000 ug/l S |
| | | | | Total Organic Carbon | 1,000 ug/l | NA |
| | | | | Total Trihalomethanes | 97.4 ug/l | 80 ug/l P |
| | | | | Trichloroacetic Acid | 9.1 ug/l | 60 ug/l P |
| | | | | Zinc | <20 ug/l | 5,000 ug/l S |
| <hr/> | | | | | | |
| 8/26/2010 | 9:59 | 017 | Room S228 | Alkalinity | 44,000 ug/l | NA Sample ID# 20100826-017 |
| | | | | Bromodichloromethane | 17 ug/l | 80 ug/l P |
| | | | | Bromoform | <5 ug/l | 80 ug/l P |
| | | | | Cadmium | <1 ug/l | 5 ug/l P |

| Date | Time | Bldg | Location | Analyte | Results | Standard and Type |
|-----------|-------|------|-----------|---------------------------|----------------|-------------------|
| 8/26/2010 | 9:59 | 017 | Room S228 | Chloride | 36,000 ug/l | 250,000 ug/l S |
| | | | | Chloroform | 61 ug/l | 80 ug/l P |
| | | | | Copper | 8 ug/l | 1,000 ug/l S |
| | | | | Degrees C | 27.4 degrees C | NA |
| | | | | Dibromoacetic Acid | <1 ug/l | NA |
| | | | | Dibromochloromethane | 4.3 ug/l | 80 ug/l P |
| | | | | Dichloroacetic Acid | 7.2 ug/l | 60 ug/l P |
| | | | | E. Coli | <1 CFU | NA |
| | | | | Free Available Chlorine | 120 ug/l | 4,000 ug/l P |
| | | | | Haloacetic Acids | 19.2 ug/l | 60 ug/l P |
| | | | | Hardness | 72,000 ug/l | NA |
| | | | | Heterotrophic Plate Count | 32 CFU | 500 CFU P |
| | | | | Iron | <100 ug/l | 300 ug/l S |
| | | | | Langlier Index | -0.21 units | NA |
| | | | | Lead | <1 ug/l | 15 ug/l AL |
| | | | | Monobromoacetic Acid | <1 ug/l | NA |
| | | | | Monochloroacetic Acid | <2 ug/l | 60 ug/l P |
| | | | | Nitrate | 900 ug/l | 10,000 ug/l P |
| | | | | Orthophosphate | 870 ug/l | NA |
| | | | | pH | 7.94 pH | 6.5-8.5 pH S |
| | | | | Sulfate | 13,000 ug/l | 250,000 ug/l S |
| | | | | Total Coliform | <1 CFU | 0 CFU S |
| | | | | Total Dissolved Solids | 140,000 ug/l | 500,000 ug/l S |
| | | | | Total Organic Carbon | 2,000 ug/l | NA |
| | | | | Total Trihalomethanes | 82.3 ug/l | 80 ug/l P |
| | | | | Trichloroacetic Acid | 12 ug/l | 60 ug/l P |
| | | | | Zinc | <20 ug/l | 5,000 ug/l S |
| | | | | <hr/> | | |
| 8/26/2010 | 10:46 | 020 | Room C133 | Alkalinity | 49,000 ug/l | NA |
| | | | | Bromodichloromethane | 18 ug/l | 80 ug/l P |
| | | | | Bromoform | <5 ug/l | 80 ug/l P |
| | | | | Cadmium | <1 ug/l | 5 ug/l P |
| | | | | Chloride | 35,000 ug/l | 250,000 ug/l S |
| | | | | Chloroform | 82 ug/l | 80 ug/l P |
| | | | | Copper | 13 ug/l | 1,000 ug/l S |
| | | | | Degrees C | 26.1 degrees C | NA |

| Date | Time | Bldg | Location | Analyte | Results | Standard and Type | | | | |
|----------------------|----------------|----------------|-----------|---------------------------|--------------|----------------------------|--------------------------|----------------------|-------------|----------------------------|
| 8/26/2010 | 10:46 | 020 | Room C133 | Dibromoacetic Acid | <1 ug/l | NA Sample ID# 20100826-020 | | | | |
| | | | | Dibromochloromethane | 3.3 ug/l | 80 ug/l P | | | | |
| | | | | Dichloroacetic Acid | 6.4 ug/l | 60 ug/l P | | | | |
| | | | | E. Coli | <1 CFU | NA | | | | |
| | | | | Free Available Chlorine | <20 ug/l | 4,000 ug/l P | | | | |
| | | | | Haloacetic Acids | 10.8 ug/l | 60 ug/l P | | | | |
| | | | | Hardness | 71,000 ug/l | NA | | | | |
| | | | | Heterotrophic Plate Count | <2 CFU | 500 CFU P | | | | |
| | | | | Iron | <100 ug/l | 300 ug/l S | | | | |
| | | | | Langlier Index | 0.92 units | NA | | | | |
| | | | | Lead | <1 ug/l | 15 ug/l AL | | | | |
| | | | | Monobromoacetic Acid | <1 ug/l | NA | | | | |
| | | | | Monochloroacetic Acid | <2 ug/l | 60 ug/l P | | | | |
| | | | | Nitrate | 900 ug/l | 10,000 ug/l P | | | | |
| | | | | Orthophosphate | 790 ug/l | NA | | | | |
| | | | | pH | 9.07 pH | 6.5-8.5 pH S | | | | |
| | | | | Sulfate | 10,000 ug/l | 250,000 ug/l S | | | | |
| | | | | Total Coliform | <1 CFU | 0 CFU S | | | | |
| | | | | Total Dissolved Solids | 140,000 ug/l | 500,000 ug/l S | | | | |
| | | | | Total Organic Carbon | 2,000 ug/l | NA | | | | |
| | | | | Total Trihalomethanes | 103.3 ug/l | 80 ug/l P | | | | |
| | | | | Trichloroacetic Acid | 4.4 ug/l | 60 ug/l P | | | | |
| | | | | Zinc | <20 ug/l | 5,000 ug/l S | | | | |
| | | | | 8/26/2010 | 9:15 | 025 | Kitchenette on 1st floor | Alkalinity | 46,000 ug/l | NA Sample ID# 20100826-025 |
| | | | | | | | | Bromodichloromethane | 17 ug/l | 80 ug/l P |
| | | | | | | | | Bromoform | <5 ug/l | 80 ug/l P |
| Cadmium | <1 ug/l | 5 ug/l P | | | | | | | | |
| Chloride | 36,000 ug/l | 250,000 ug/l S | | | | | | | | |
| Chloroform | 63 ug/l | 80 ug/l P | | | | | | | | |
| Copper | 10 ug/l | 1,000 ug/l S | | | | | | | | |
| Degrees C | 26.2 degrees C | NA | | | | | | | | |
| Dibromoacetic Acid | <1 ug/l | NA | | | | | | | | |
| Dibromochloromethane | 4.4 ug/l | 80 ug/l P | | | | | | | | |
| Dichloroacetic Acid | 4.2 ug/l | 60 ug/l P | | | | | | | | |
| E. Coli | <1 CFU | NA | | | | | | | | |

| Date | Time | Bldg | Location | Analyte | Results | Standard and Type | | |
|-----------|------|------|--------------------------|---------------------------|--------------|-------------------|----|-------------------------|
| 8/26/2010 | 9:15 | 025 | Kitchenette on 1st floor | Free Available Chlorine | <20 ug/l | 4,000 ug/l | P | Sample ID# 20100826-025 |
| | | | | Haloacetic Acids | 10.1 ug/l | 60 ug/l | P | |
| | | | | Hardness | 69,000 ug/l | | NA | |
| | | | | Heterotrophic Plate Count | <2 CFU | 500 CFU | P | |
| | | | | Iron | <100 ug/l | 300 ug/l | S | |
| | | | | Langlier Index | -0.08 units | | NA | |
| | | | | Lead | <1 ug/l | 15 ug/l | AL | |
| | | | | Monobromoacetic Acid | <1 ug/l | | NA | |
| | | | | Monochloroacetic Acid | <2 ug/l | 60 ug/l | P | |
| | | | | Nitrate | 900 ug/l | 10,000 ug/l | P | |
| | | | | Orthophosphate | 930 ug/l | | NA | |
| | | | | pH | 8.09 pH | 6.5-8.5 pH | S | |
| | | | | Sulfate | 11,000 ug/l | 250,000 ug/l | S | |
| | | | | Total Coliform | <1 CFU | 0 CFU | S | |
| | | | | Total Dissolved Solids | 130,000 ug/l | 500,000 ug/l | S | |
| | | | | Total Organic Carbon | 1,000 ug/l | | NA | |
| | | | | Total Trihalomethanes | 84.4 ug/l | 80 ug/l | P | |
| | | | | Trichloroacetic Acid | 5.9 ug/l | 60 ug/l | P | |
| | | | | Zinc | <20 ug/l | 5,000 ug/l | S | |
| | | | | <hr/> | | | | |
| 8/26/2010 | 9:37 | 032 | Room S130A | Alkalinity | 44,000 ug/l | | NA | Sample ID# 20100826-032 |
| | | | | Bromodichloromethane | 16 ug/l | 80 ug/l | P | |
| | | | | Bromoform | <5 ug/l | 80 ug/l | P | |
| | | | | Cadmium | <1 ug/l | 5 ug/l | P | |
| | | | | Chloride | 36,000 ug/l | 250,000 ug/l | S | |
| | | | | Chloroform | 59 ug/l | 80 ug/l | P | |
| | | | | Copper | 37 ug/l | 1,000 ug/l | S | |
| | | | | Degrees C | 25 degrees C | | NA | |
| | | | | Dibromoacetic Acid | <1 ug/l | | NA | |
| | | | | Dibromochloromethane | 4.1 ug/l | 80 ug/l | P | |
| | | | | Dichloroacetic Acid | 3.1 ug/l | 60 ug/l | P | |
| | | | | E. Coli | <1 CFU | | NA | |
| | | | | Free Available Chlorine | 40 ug/l | 4,000 ug/l | P | |
| | | | | Haloacetic Acids | 6.8 ug/l | 60 ug/l | P | |
| | | | | Hardness | 68,000 ug/l | | NA | |
| | | | | Heterotrophic Plate Count | <2 CFU | 500 CFU | P | |

| Date | Time | Bldg | Location | Analyte | Results | Standard and Type |
|-----------|------|------|------------|------------------------|--------------|-------------------|
| 8/26/2010 | 9:37 | 032 | Room S130A | Iron | 110 ug/l | 300 ug/l S |
| | | | | Langlier Index | -0.1 units | NA |
| | | | | Lead | <1 ug/l | 15 ug/l AL |
| | | | | Monobromoacetic Acid | <1 ug/l | NA |
| | | | | Monochloroacetic Acid | <2 ug/l | 60 ug/l P |
| | | | | Nitrate | 900 ug/l | 10,000 ug/l P |
| | | | | Orthophosphate | 970 ug/l | NA |
| | | | | pH | 8.11 pH | 6.5-8.5 pH S |
| | | | | Sulfate | 11,000 ug/l | 250,000 ug/l S |
| | | | | Total Coliform | <1 CFU | 0 CFU S |
| | | | | Total Dissolved Solids | 140,000 ug/l | 500,000 ug/l S |
| | | | | Total Organic Carbon | 1,000 ug/l | NA |
| | | | | Total Trihalomethanes | 79.1 ug/l | 80 ug/l P |
| | | | | Trichloroacetic Acid | 3.7 ug/l | 60 ug/l P |
| | | | | Zinc | <20 ug/l | 5,000 ug/l S |

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