EPA 600/R-13/179 | August 2013 | www.epa.gov/ord

United States
Environmental Protection
Agency

Data Set: Water Quality Parameter Response Data for 5 Different Finished Drinking Waters from 4 Large Municipalities





Office of Research and Development
National Homeland Security Research Center

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Disclaimer

The U.S. Environmental Protection Agency (EPA) through its Office of Research and Development and the Office of Water funded and collaborated in the research described herein under contract number EP-C-09-041 with Shaw Environmental and Infrastructure, Inc. It has been subject to an administrative review but does not necessarily reflect the views of EPA. No official endorsement should be inferred. EPA does not endorse the purchase or sale of any commercial products or services.

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List of Acronyms

BP	British Petroleum
CAS	Chemical Abstracts Service
CFU	Colony Forming Unit
CWA	Clean Water Act
EPA	Environmental Protection Agency
DI	Deionized Water
GAC	Granular Activated Carbon
L	Liter
mL	milliliter
NHSRC	National Homeland Security Research Center
OP	Organophosphate
ORP	Oxygen Reduction Potential
pH	Percent Hydrogen
T&E	Test and Evaluation Facility
TOC	Total Organic Carbon
UVA	Ultraviolet Absorbance
UV-Vis	Ultraviolet and Visible Light
WQ	Water Quality
WQP	Water Quality Parameter

Acknowledgements

The tests performed for this report were performed by Maqsud Rahman and Wendy Coates of Shaw Environmental Inc. under contract number EP-C-09-041 with Shaw Environmental and Infrastructure, Inc. with the U.S. EPA.

The project team would like to acknowledge Brad Smith for performing numerous total organic analysis for this data report.

Executive Summary

Bench-scale experiments were conducted to measure the response of water quality parameters to contaminants that are potential threats to the drinking water supply. The experiments were conducted in beakers at the United States Environmental Protection Agency (U.S. EPA) Test and Evaluation (T&E) Facility in Cincinnati, Ohio. Five different types of finished waters from four municipalities within the United States were evaluated. Numerous studies have evaluated the response of water quality parameters to injected contaminants for a specific water matrix (Hall et al., 2007). However, end users of the data have expressed concerns about whether a utility with different source waters or treatment regimes would experience the same dose response as EPA observed. Therefore, more data comparing these responses across various treated waters are provided in this data set to address these concerns. The data are provided in excel spreadsheets in the appendices of this report. An example spreadsheet explaining each data field is also provided for nicotine. The water community can use these spreadsheets to select the source water and treatment most representative to their utility and build specific dose response curves. An example dose response curve for oxamyl is developed and presented from this data in Section 3. Optimally, these dose response curves can be used to infer a contaminant concentration due to a given deflection or change in a water quality parameter.

This data set was prepared in support of the EPA's Water Security Initiative, which is being implemented by the Office of Water. This data set was summarized and presented at the 2010 American Water Works Association Water Quality Technology Conference in Savannah, Georgia (Allgeier et al., 2010). This data set provides response data for chlorinated and chloraminated surface waters and for filtered and unfiltered treated waters. It also provides data for chlorinated groundwater.

Sixteen selected chemical, biological and radiological (surrogate) contaminants were used at varying concentrations. The water quality parameters of free and total chlorine, total organic carbon, pH, specific conductance, oxidation-reduction potential, and ultra violet- visible light (UV-Vis) absorbance were evaluated. The data are presented in Excel® (Microsoft Inc., Redmond, WA) spreadsheets. An example spreadsheet for nicotine explaining the data fields is provided in the Appendices to this report

In general, the data showed that the type of disinfectant, treatment process, or water source did not greatly affect the water quality parameter response to the injected contaminants. There was an overall slower parameter response time for chloraminated waters than for chlorinated waters. Free and total chlorine along with total organic carbon (TOC) were the most responsive to the wide range of contaminants tested. Also, the parameter of UV-Vis absorbance was a useful substitute for traditional UV persulfate-based TOC detectors and was not affected by varying water types. Per the detection thresholds defined in section 3 of this report, the data sets for all of the waters tested showed consistently that the TOC response via the UV persulfate method was able to detect 62.5 % of the injected contaminants while UV-Vis surrogate TOC was able to detect 37.5 %. Free and total chlorine were also able to detect 62.5 % of the contaminants. However, the true value of this data set is the afore mentioned ability to develop specific and representative dose response curves.

1 Introduction

Concern over the risk of deliberate contamination of drinking water systems, and research aimed at mitigating this risk, has intensified with the spate of global terrorist activity. The U.S. Environmental Protection Agency (EPA) has devoted research efforts to the early detection of contaminants within a drinking water system. Data in this report describes the response of water quality parameters to the injection of 16 selected chemical, biological, and radiological (surrogate) contaminants in a laboratory. The data were generated in order to build parameter response curves for various types of drinking waters with an ultimate goal of improving event detection. Though several studies have been performed that provide contaminant response data for a single water matrix (Hall, et al., 2007 and Szabo et al., 2008), the question of applicability to other finished waters is often raised. End users of the data have expressed concerns about whether a utility with different source waters or treatment regimes would experience the same dose response as EPA observed.

The objectives of this study were to:

- Evaluate water quality parameter response times using five test waters and 16 water security contaminants under controlled conditions.
- Develop tabular summaries, graphical representations and empirical relationships for each combination of water source, contaminant, and water quality parameter. The data can be used to interpolate or infer responses from similar water types and contaminants. Dose response curves can be built from this data which will allow the end users to choose the water type and treatment method most similar to their utility. An example dose response curve is developed and presented for oxamyl in Section 3.

The goal of this data report is two-fold: (1) to summarize the response data for the aforementioned project and (2) to provide the data and data collection methods to the broader research community. This document, containing both the data collection methods and the data, is available online through the National Homeland Security Research Center (NHSRC) website (www.epa.gov/nhsrc/). Therefore, any publications generated from the aforementioned project can reference this data and the data is easily accessed. In addition, the data provided in this open format is accessible to and available for use by other researchers in the fields of event detection algorithms, data modeling or water quality.

2 Materials and Methods

2.1 Test Samples

Five different test waters were collected for this experiment from four different municipalities (see Table 1). The collected water was shipped overnight on ice to the laboratory. All the collected water was stored in the refrigerator until use. The water to be used in the experiments was removed from the refrigerator on the night before the experiments to bring the water temperature to room temperature (~20ºC). The water removed from the refrigerator sat in the Organics Laboratory, where the overnight shift of room temperature is less than 5 ºC.

The test waters from these 4 municipalities cover a broad range of variable and are representative of most treated drinking waters within the United States. Waters number 1 and 5 are supplied from rivers. Waters number 3 and 4 are supplied from surface water lakes and reservoirs. Water number 2 is supplied from groundwater. Waters number 1, 2 and 3 are chlorinated and waters 4 and 5 are chloraminated. Waters number 3 and 4 are unfiltered. Water number 1 has conventional treatment followed by granular activated carbon filtration.

Table 1. Detail for Source Waters Utilized in this Study (Five Municipalities)

Water Identification Number	Water source	Filtration	Chemical disinfection
1	River	Granular activated carbon filtration	Chlorinated
2	Groundwater	Filtered	Chlorinated
3	Lake	Unfiltered	Chlorinated
4	Primarily snow melt	Unfiltered	Chloraminated
5	River	Filtered	Chloraminated

2.2 Test Parameters

The water quality parameters listed in Table 2 were evaluated.

Table 2. Water Quality Parameters and Instruments

Parameter	Instrument	Trade name or model	Manufacturer or Supplier
pH	Handheld multiparameter instrument	YSI 556	YSI Inc.,Yellow Springs, Ohio
Specific Conductance			
Oxidation Reduction Potential			
pH	pH/Ion Selective electrode meter	Orion™ pH/ISE	Thermo Fisher Scientific, Waltham, MA
Oxidation Reduction Potential			
Specific Conductance	Conductivity meter	Extech®	Davis Instruments, Vernon Hills, IL
Total Organic Carbon (TOC)	TOC analyzer	Phoenix	Teledyne Tekmar, Mason, Ohio
Free and Total Chlorine	Spectrophotometer	Hach® DR2700	Hach Company, Loveland, Colorado
UV-Vis Absorbance		Hach® DR/4000	

2.3 Testing procedures

The testing was conducted under a fume hood. Approximately 1550 milliliters of each water matrix to be tested was added to a 2 liter test beaker on a spin plate as per the test procedures listed below.

The purpose of the Day 1 testing was (1) to prepare the control and test beakers and (2) to then record WQ parameters following injection of contaminants into the water types.

The purpose of the Day 2 testing was to ensure that the control sample without contaminant added provided stable readings the next day and that chlorine decay due to exposure to air and light at room temperature had been completed. It was also an important data point for the test beaker with the contaminant added because it provided a 24 hour sample. The injection testing and sampling was performed over a relatively short time period of approximately 45 minutes. Previous studies have indicated that the water quality parameters react quickly with added contaminants, but not in all cases, especially with chloraminated waters. However, the 24 hour sample provided some insight into contaminants with delayed reaction kinetics.

Day 1

1. Prepare solutions of the contaminants in nanopure™ ultrapure water (MilliQ™ water produced on site at the T&E Facility by Barnstead/Thermolyne Model #D871).

2. Calibrate instruments.
3. Check temperature of test water left out overnight.

Preparing the Control Beaker and Recording Parameters

4. Pour 1550 mL of test water into a 2-L glass beaker and mark it as control beaker. Continuously stir the water with a stir bar.
5. Insert calibrated probes into control beaker.
6. When readings are stable, record baseline readings of the pH, specific conductance, oxidation reduction potential water quality (WQ) parameters. Collect baseline readings for the spectrophotometer (15 ml for free/total chlorine analysis and 10 ml for UV-Vis analysis, conduct these analyses immediately and discard sample). Then collect the 40 ml TOC baseline sample using a 50-mL pipette and preserve with phosphoric acid for the TOC analysis. Refrigerate preserved TOC sample.
7. Inject nanopure water at a volume representative of the experimental conditions for the experimental batch day (less than 15 ml) into the control beaker.
8. Record WQ parameter values. Collect 25ml spectrophotometer sample (15 ml for free/total chlorine analysis and 10 ml for UV-Vis analysis), conduct these analyses immediately and discard sample. Collect, preserve, and refrigerate 40 ml TOC sample.
9. Remove probes and decontaminate by rinsing with unused test water.
10. Cover the control beaker and set it out on the bench for later measurement.

Preparing the Test Beakers and Recording Parameters

11. Fill 4 more 2-liter glass test beakers with 1.5 liters plus 50 ml of test water for the day's testing and cover them with Parafilm® (Pechiney Plastic Packaging Company, Chicago, Illinois) wrap and place on the bench at ambient temperature.
12. Take one of the test beakers from step 11 and insert the rinsed probes. Continuously stir the water with a stir bar.
13. When readings are stable, record baseline readings of WQ parameters and spectrophotometer (15 ml for free/total chlorine analysis and 10 ml for UV-Vis analysis); conduct these analyses immediately and discard sample. Collect the 40 ml baseline sample for the TOC analysis, preserve, and refrigerate sample.

Comparing the Control Beaker and Test Beakers

14. Compare the baseline WQ parameter values (except for TOC) of the control beaker to the test beaker. If values are within 10%, proceed with testing, go to step 15. If not, collect new control and test beakers. (Return to step 1, 2 or 3, as needed.)

Injecting Contaminants into the Test Beaker and Recording Parameters

15. Inject Concentration 1 of Contaminant 1 into the test beaker. Continuously stir the water with a stir bar.
16. Record WQ parameter values when they become stable. Collect 25 ml spectrophotometer sample (15 ml for free/total chlorine analysis and 10 ml for UV-Vis analysis); conduct these analyses immediately and discard

sample. Collect, preserve, and refrigerate 40 ml TOC sample.

17. Repeat steps 15 and 16 for Concentration 2 of Contaminant 1.
18. Repeat steps 15 and 16 for Concentration 3 of Contaminant 1.
19. Repeat steps 15 and 16 for Concentration 4 of Contaminant 1.
20. Repeat steps 15 and 16 for Concentration 5 of Contaminant 1.
21. Remove and rinse off WQ probes with test water.
22. Collect a 1000 ml sample headspace-free in a 1000 ml amber glass bottle with Teflon-lined cap (call this sample as a bottle point sample), and place on bench overnight at ambient temperature (~20 ºC).
23. Using the 2nd test beaker, insert rinsed probes.
24. Repeat steps 13 thru 22 for baseline and 5 concentrations of Contaminant 2.
25. Using the 3rd test beaker, insert rinsed probes.
26. Repeat steps 13 through 22 for 5 concentrations of Contaminant 3.
27. Using the 4^{th} test beaker, insert rinsed probes.
28. Repeat steps 13 through 22 for 5 concentrations of Contaminant 4.

Obtaining End-of-Day Baseline Readings and Preparation for Day 2

29. Insert rinsed probes into control beaker and measure the end-of-day baseline readings. When readings are stable, record readings of WQ parameters and spectrophotometer (15 ml for free/total chlorine analysis and 10 ml for UV-Vis analysis); conduct these analyses immediately and discard sample. Collect the 40 ml baseline sample for the TOC analysis, preserve, and refrigerate sample.
30. Collect a 1000 ml headspace-free in a 1000 ml amber glass bottle with Teflon®-lined cap (call this sample as a bottle point control sample), and place on bench overnight at ambient temperature (~20 ºC).

Wash glassware; discard excess test waters, store the probes, and clean the lab. Glassware was cleaned with Alconox® (Alconox Inc., White Plains, NY) soap and rinsed 3 times by tap water and 3 times by DI (deionized) water. Probes were rinsed with DI water. All glassware and probes were rinsed by the "test water" prior to use.

Day 2

The purpose for Day 2 sampling is to measure the extent of free or total chlorine degradation over a 24-hour time period.

Run the bottle point samples from day 1 (5 samples: 1 control plus 4 test samples).

1. Calibrate instruments.

   Recording Parameters

2. Pour Control bottle point sample from Day 1 into a 2-L glass beaker and insert calibrated probes. Record WQ values when they become stable and collect a 25ml spectrophotometer sample (15 ml for free/total chlorine analysis and 10 ml for UV-Vis analysis) and conduct these analyses immediately and discard sample. Collect a 40 ml sample for TOC analysis, preserve with phosphoric acid, and refrigerate. Remove probes and rinse with test water.
3. Pour Contaminant 1 bottle point sample into a beaker and insert rinsed and calibrated probes.
4. Record WQ values when they become stable and collect a 25ml spectrophotometer sample (15 ml for free/total chlorine analysis and 10 ml for UV-Vis analysis); conduct these analyses immediately and discard sample. Collect a 40 ml sample for TOC analysis, preserve with phosphoric acid, and refrigerate. Remove probes and rinse with test water.
5. Compare bottle point results (except TOC) to last recorded readings from Concentration 5 of Contaminant 1. If the values are within acceptable range (20%), then Day 1 values for Contaminant 1 will be used. If not, a kinetics study should be performed in order to obtain reaction rates. A kinetic study is a measurement of contaminant concentration change over time in the presence of a reactant.
6. Repeat steps 3, 4, and 5 for Contaminant 2 bottle point sample.
7. Repeat steps 3, 4, and 5 for Contaminant 3 bottle point sample.
8. Repeat steps 3, 4, and 5 for Contaminant 4 bottle point sample.
9. Start with Day 1 step 3 and go through step 30 for Day 2 Control and 5 Concentrations of Contaminants 5, 6, 7, and 8.
10. Wash glassware, discard excess test waters, store the probes, clean the lab.

Keep repeating Day 2 procedure until all contaminants have been run.

Table 3 lists the contaminants that were evaluated in this study. The water quality responses to each contaminant were measured at five concentrations between zero and a reference concentration. The listed reference concentration represents the maximum concentration used for testing. If measureable water quality responses were observed at lower concentrations, then the higher concentration injections

were not conducted. Contaminant doses were selected to generate a 5 point response curve. Historical data was used to select an initial starting concentration and four additional concentrations were run based on the water quality changes observed in the previous doses.

Table 3. List of Contaminants, Class, and Reference Concentrations

Contaminant	Class	Reference Concentration
Unleaded Gasoline 87 from BP	Petroleum Products	10 mg/L
Potassium cyanide	Reactive Pesticides	50 mg/L
Aldicarb	Reactive Pesticides	70 mg/L
Oxamyl	Reactive Pesticides	200 mg/L
Sodium arsenite	Metals	42 mg/L
Mercuric chloride	Metals	105 mg/L
Strychnine	Plant Toxin	50 mg/L
Nicotine	Plant Toxin	50 mg/L
Sodium fluoroacetate	Non reactive Pesticides	35 mg/L
Phorate	Surrogate for an Organophosphate (OP) Chemical Warfare Agent (CWA) (also a class 2a pesticide)	70 mg/L
Cesium chloride	Radionuclides	2 mg/L
sodium thiosulfate pentahydrate	Dechlorinating agent (co-contaminant with bacterial toxins)	5 mg/L
Sporulation Media	Nutrient Media (co-contaminant with bacterial agent)	Volume required for 10^3, 10^5 and 10^8 CFU/mL *Bacillus globigii* in matrix water
Trypticase Soy Broth (TSB)	Nutrient Media (co-contaminant with bacterial agent)	Volume required for 10^3, 10^5, 10^8 CFU/mL *B. globigii* in matrix water
B. globigii washed	Clean Pathogen with sodium thiosulfate pentahydrate (5 mg/L)	10^3, 10^5 and 10^8 CFU/mL *B. globigii* in matrix water
B. globigii with sporulation media	Dirty pathogen with sodium thiosulfate pentahydrate (5 mg/L)	10^3, 10^5 and 10^8 CFU/mL *B. globigii* in matrix water

BP, British Petroleum; CFU, colony forming units; CWA, Clean Water Act
Bacillus globigii spores were obtained from Dugway Proving Grounds in Dugway, Utah

Table 4 shows the solubility of the chemical contaminants to be evaluated in this study. It should be noted that saturation limits were not exceeded during the study.

Table 4. Contaminant Solubility Limits

Compound	CAS registry number	Solubility	Temperature	Reference
Cesium Chloride	7647-17-8	1860 g/L	20°C	www.fishersci.ca/viewmsds.do?catNo=C2425
Sodium Arsenite (powder)	7784-46-5	Very Soluble[1]		sciencelab.com/msds.php?msdsId=9924962
Mercuric Chloride	7487-94-7	7.4 g per 100 ml	20°C	ch.ntu.edu.tw/~genchem99/msds/exp11/HgCl2.pdf
Sodium Thiosulfate Pentahydrate	10102-17-7	680 g/L	20°C	sciencelab.com/msds.php?msdsId=9927606
Oxamyl	23135-22-0	280 g/L	25°C	extoxnet.orst.edu/pips/oxamyl.htm
Aldicarb	116-06-3	6,000 ppm	Room temperature	extoxnet.orst.edu/pips/aldicarb.htm
PCB-1260	011096-82-5	0.027 mg/L	25°C	ull.chemistry.uakron.edu/erd/Chemicals/2000/1917.html
Potassium Cyanide	151-50-8	237 g/L	25°C	ull.chemistry.uakron.edu/erd/Chemicals/8000/6939.html
Sodium Fluoroacetate	62-74-8	111 g/dL	25°C	inchem.org/documents/pims/chemical/pim494.htm
Phorate	298-02-2	50 mg/L	25°C	inchem.org/documents/pds/pds/pest75_e.htm
Strychnine	57-24-9	140 mg/L		ull.chemistry.uakron.edu/erd/Chemicals/8000/7086.html
Nicotine	54-11-5	Completely miscible		sigmaaldrich.com/MSDS/MSDS/DisplayMSDSPage.do?country=US&language=en&productNumber=N3876&brand=SIGMA&PageToGoToURL=http%3A%2F%2Fwww.sigmaaldrich.com%2Fcatalog%2Fproduct%2Fsigma%2Fn3876%3Flang%3Den
Gasoline	No CAS #	Negligible to slight		hess.com/ehs/msds/9950GasolineAllGrades.pdf

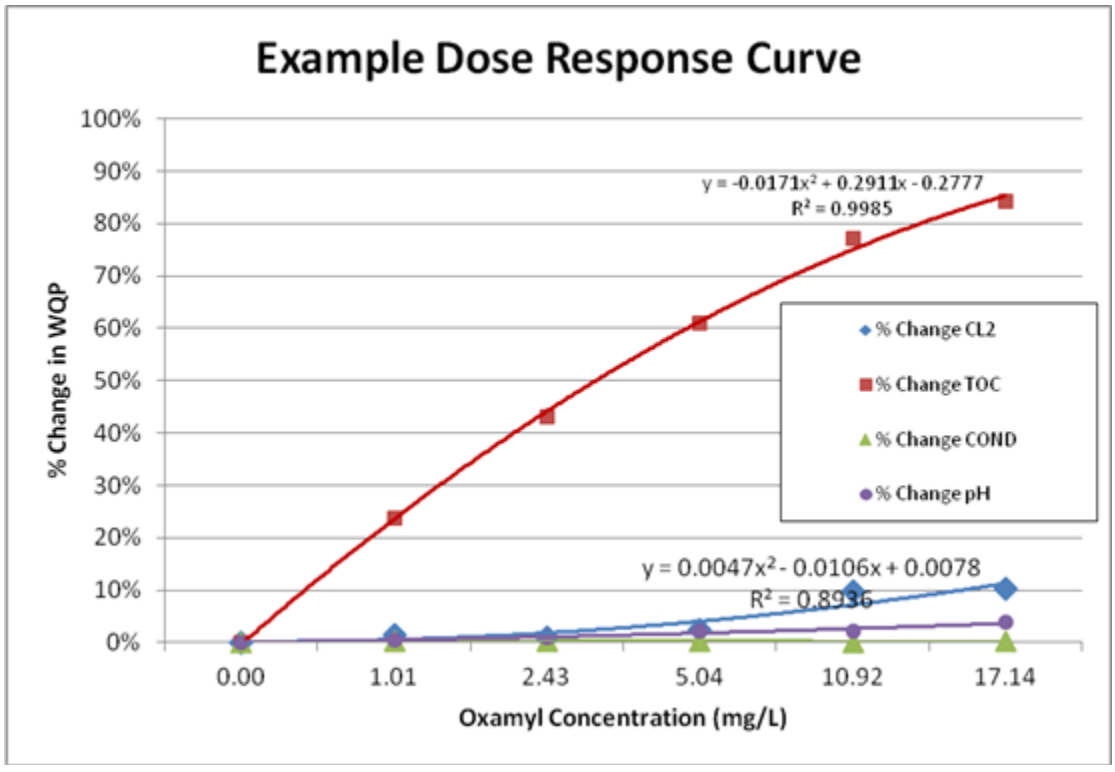
1: Solubility data is not available. CAS®, Chemical Abstract Services

3 Results

For the purposes of quantifying detection, certain thresholds needed to be established. In other words, what minimum deflection of the response signal would be considered a detection of a water quality event due to the added contaminant? The following detection thresholds were established based upon historical data and experience with the water quality sensors:

TOC UV persulfate method	0.2 mg/l
UV-Vis absorbance (TOC surrogate)	0.005 UVA units
Chlorine residual (free and total)	0.2 mg/l
Conductivity	25 us/cm
Oxygen Reduction Potential (ORP)	50 mv
pH	0.2 pH units

These detection thresholds and data sets provided in the attachments can be used to develop response curves and compare sensor responses across varying water types. An example of a typical response curve which can be developed is provided below.



Using the detection thresholds listed above and the attached data sets, it was observed that the water type was not a major factor affecting the water quality response to the study contaminants. The study results consistently showed the UV persulfate method was better at detecting TOC than the UV-Vis method, with percent detections of 62.5 and 37.5, respectively. Free and total chlorine methods were also able to detect the study contaminants 62.5% of the time.

4 References

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Appendices

Example Excel Data Table With Explanation Bullets
Water 1 Chlorinated Source Water (River) with GAC Treatment
Water 2 Chlorinated Ground Water with Conventional Treatment
Water 3 Chlorinated Unfiltered Water (Lake)
Water 4 Chloraminated Unfiltered Source Water
Water 5 Chloraminated Source Water (River) with Conventional Treatment

Water 1 Chlorinated Source Water (River) with GAC Treatment

Aldicarb 10-8-08

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Aldicarb	Chlorinated Source Water, Carbon Treated	10/8/08	11:06	0	23.45	0.00	8.76	0.00	529	0	664	0	8.79	0.00	657	0	528	0	0.84	0.00	0.71	0.00	0.00	ND	-----	0.000	ND	0.000	-----
Aldicarb	Chlorinated Source Water, Carbon Treated	10/8/08	11:14	8	-----	1.03	8.75	0.01	529	0	636	28	8.77	0.02	659	2	529	1	0.34	0.50	1.03	0.32	0.46	0.016	220	0.016	0.003	0.003	-----
Aldicarb	Chlorinated Source Water, Carbon Treated	10/8/08	11:22	16	-----	2.48	8.75	0.01	529	0	623	41	8.77	0.02	645	12	529	1	0.03	0.81	1.48	0.77	1.09	0.031	220	0.031	0.007	0.007	-----
Aldicarb	Chlorinated Source Water, Carbon Treated	10/8/08	11:29	23	-----	5.14	8.75	0.01	529	0	593	71	8.77	0.02	625	32	527	1	0.02	0.82	2.21	1.50	2.27	0.061	220	0.061	0.024	0.024	-----
Aldicarb	Chlorinated Source Water, Carbon Treated	10/8/08	11:37	31	-----	11.14	8.75	0.01	528	1	571	93	8.77	0.02	609	48	524	4	0.03	0.81	3.88	3.17	4.92	0.119	220	0.119	0.062	0.062	-----
Aldicarb	Chlorinated Source Water, Carbon Treated	10/8/08	11:44	38	-----	17.48	8.75	0.01	527	2	556	108	8.76	0.03	595	62	523	5	0.03	0.81	5.79	5.08	7.72	0.171	220	0.171	0.100	0.100	-----
Aldicarb	Chlorinated Source Water, Carbon Treated	10/9/08	9:10	1324	-----	17.48	8.73	0.03	518	11	367	297	8.77	0.02	238	419	529	1	0.02	0.82	5.61	4.90	7.72	0.190	220	0.190	0.110	0.110	-----

Cecium Chloride 10-6-08

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Cesium chloride	Chlorinated Source Water, Carbon Treated	10/6/08	10:16	0	23.06	0.00	8.80	0.00	518	0	622	0	8.79	0.00	642	0	530	0	0.94	0.00	0.74	0.00	-----	ND	-----	-----	ND	-----	-----
Cesium chloride	Chlorinated Source Water, Carbon Treated	10/6/08	10:27	11	-----	0.10	8.80	0.00	518	0	637	15	8.78	0.01	657	15	529	1	0.93	0.01	0.75	0.01	-----	ND	-----	-----	ND	-----	-----
Cesium chloride	Chlorinated Source Water, Carbon Treated	10/6/08	10:35	19	-----	0.26	8.80	0.00	518	0	644	22	8.78	0.01	662	20	528	2	0.94	0.00	0.72	0.02	-----	ND	-----	-----	ND	-----	-----
Cesium chloride	Chlorinated Source Water, Carbon Treated	10/6/08	10:42	26	-----	0.54	8.79	0.01	518	0	649	27	8.77	0.02	666	24	528	2	0.93	0.01	0.73	0.01	-----	ND	-----	-----	ND	-----	-----
Cesium chloride	Chlorinated Source Water, Carbon Treated	10/6/08	10:52	36	-----	1.13	8.79	0.01	519	1	656	34	8.77	0.02	670	28	527	3	0.89	0.05	0.71	0.03	-----	ND	-----	-----	ND	-----	-----
Cesium chloride	Chlorinated Source Water, Carbon Treated	10/6/08	11:01	45	-----	1.76	8.80	0.00	520	2	653	31	8.77	0.02	673	31	526	4	0.89	0.05	0.71	0.03	-----	ND	-----	-----	ND	-----	-----
Cesium chloride	Chlorinated Source Water, Carbon Treated	10/7/08	9:10	1374	-----	1.76	8.77	0.03	529	11	608	14	8.76	0.03	582	60	529	1	0.69	0.25	0.70	0.04	-----	ND	-----	-----	ND	-----	-----

Gasoline 11-19-08

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Gasoline	Chlorinated Source Water, Carbon Treated	11/19/08	10:35	0	16.03	0.00	8.45	0.00	577	0.00	693	0	8.45	0.00	693	0	576	0	0.86	0.00	0.95	0.00	-----	ND	ND	-----	ND	-----	-----
Gasoline	Chlorinated Source Water, Carbon Treated	11/19/08	10:45	10	-----	1.01	8.45	0.00	577	0.00	695	2	8.46	0.01	695	2	577	1	0.84	0.02	0.96	0.01	-----	ND	ND	-----	ND	-----	-----
Gasoline	Chlorinated Source Water, Carbon Treated	11/19/08	10:51	16	-----	2.61	8.45	0.00	578	1.00	696	3	8.51	0.06	697	4	571	5	0.82	0.04	1.16	0.21	-----	ND	ND	-----	ND	-----	-----
Gasoline	Chlorinated Source Water, Carbon Treated	11/19/08	10:59	24	-----	4.29	8.47	0.02	578	1.00	695	2	8.59	0.14	696	3	583	7	0.81	0.05	1.14	0.19	-----	ND	ND	-----	ND	-----	-----
Gasoline	Chlorinated Source Water, Carbon Treated	11/19/08	11:06	31	-----	6.06	8.44	0.01	576	1.00	695	2	8.6	0.15	695	2	585	9	0.74	0.12	1.22	0.27	-----	ND	ND	-----	ND	-----	-----
Gasoline	Chlorinated Source Water, Carbon Treated	11/19/08	11:13	38	-----	7.93	8.44	0.01	576	1.00	694	1	8.59	0.14	694	1	586	10	0.73	0.13	1.34	0.39	-----	ND	ND	-----	ND	-----	-----
Gasoline	Chlorinated Source Water, Carbon Treated	11/20/08	8:58	1343	-----	7.93	8.37	0.08	580	3.00	639	54	8.57	0.12	619	74	580	4	0.53	0.33	1.69	0.74	-----	ND	ND	-----	ND	-----	-----

Mercuric Chloride 10-16-08

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Mercuric chloride	Chlorinated Source Water, Carbon Treated	10/16/08	10:12	0	22.97	0.00	8.64	0.00	548	0	667	0	8.66	0.00	660	0	549	0	0.91	0.00	0.88	0.00	-----	ND	-----	-----	ND	-----	-----
Mercuric chloride	Chlorinated Source Water, Carbon Treated	10/16/08	10:21	9	-----	0.81	8.60	0.04	548	0	679	12	8.62	8.62	676	16	546	3	0.90	0.01	0.91	0.03	-----	ND	-----	-----	ND	-----	-----
Mercuric chloride	Chlorinated Source Water, Carbon Treated	10/16/08	10:27	15	-----	3.08	8.51	0.13	549	1	689	22	8.5	8.50	688	28	548	1	0.86	0.05	0.91	0.03	-----	ND	-----	-----	ND	-----	-----
Mercuric chloride	Chlorinated Source Water, Carbon Treated	10/16/08	10:34	22	-----	7.25	8.22	0.42	550	2	711	44	8.23	8.23	712	52	548	1	0.82	0.09	0.9	0.02	-----	ND	-----	-----	ND	-----	-----
Mercuric chloride	Chlorinated Source Water, Carbon Treated	10/16/08	10:42	30	-----	16.65	7.82	0.82	552	4	741	74	7.71	7.71	743	83	548	1	0.83	0.08	0.93	0.05	-----	0.026	220	0.026	ND	-----	-----
Mercuric chloride	Chlorinated Source Water, Carbon Treated	10/16/08	10:49	37	-----	26.55	7.56	1.08	553	5	745	78	7.43	7.43	762	102	546	3	0.84	0.07	0.93	0.05	-----	0.066	220	0.066	ND	-----	-----
Mercuric chloride	Chlorinated Source Water, Carbon Treated	10/17/08	10:32	1460	-----	26.55	7.59	1.05	541	7	725	58	7.68	7.68	719	59	554	5	0.66	0.25	0.96	0.08	-----	0.068	220	0.068	ND	-----	-----

Nicotine 9-4-08

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Nicotine	Chlorinated Source Water, Carbon Treated	9/4/08	14:11	0	-----	0.00	8.68	0.00	490	0.00	542	0	8.66	0.00	540	0	471	0	1.11	0.00	-----	-----	0.00	-----	-----	-----	ND	0.000	-----
Nicotine	Chlorinated Source Water, Carbon Treated	9/4/08	14:23	12	-----	1.01	8.65	0.03	491	1.00	586	44	8.67	0.01	563	23	469	2	0.99	0.12	-----	-----	0.00	-----	-----	-----	0.06	0.060	-----
Nicotine	Chlorinated Source Water, Carbon Treated	9/4/08	14:32	21	-----	2.43	8.72	0.04	489	1.00	596	54	8.68	0.02	568	28	469	2	0.84	0.27	-----	-----	0.00	-----	-----	-----	0.06	0.060	-----
Nicotine	Chlorinated Source Water, Carbon Treated	9/4/08	14:44	33	-----	5.04	8.70	0.02	488	2.00	590	48	8.73	0.07	557	17	466	5	0.55	0.55	-----	-----	0.00	-----	-----	-----	0.125	0.125	-----
Nicotine	Chlorinated Source Water, Carbon Treated	9/4/08	14:55	44	-----	10.94	8.76	0.08	487	3.00	531	11	8.74	0.08	507	33	465	6	0.15	0.96	-----	-----	0.01	-----	-----	-----	0.257	0.257	-----
Nicotine	Chlorinated Source Water, Carbon Treated	9/4/08	15:04	53	-----	17.16	8.81	0.13	486	4.00	460	82	8.77	0.11	530	10	463	8	0.04	1.07	-----	-----	0.01	-----	-----	-----	0.424	0.424	-----

Oxamyl 10-30-08

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Oxamyl	Chlorinated Source Water, Carbon Treated	10/30/08	10:11	0	19.04	0.00	8.67	0.00	561	0	653.0	0	8.56	0.00	646	0	565	0	0.9	0.00	0.89	0.00	0.00	ND	ND	-----	ND	-----	-----
Oxamyl	Chlorinated Source Water, Carbon Treated	10/30/08	10:19	8	-----	0.95	8.67	0.00	561	0	661.0	8	8.6	0.04	660	14	566	1	0.83	0.07	1.20	0.31	0.36	ND	ND	-----	ND	-----	-----
Oxamyl	Chlorinated Source Water, Carbon Treated	10/30/08	10:27	16	-----	2.28	8.67	0.00	559	2	663.0	10	8.62	0.06	664	18	565	0	0.84	0.06	1.67	0.78	0.88	0.087	224	0.087	0.051	0.051	-----
Oxamyl	Chlorinated Source Water, Carbon Treated	10/30/08	10:35	24	-----	4.74	8.67	0.00	558	3	662.0	9	8.65	0.09	668	22	563	2	0.8	0.10	2.47	1.58	1.81	0.180	225	0.180	0.111	0.111	-----
Oxamyl	Chlorinated Source Water, Carbon Treated	10/30/08	10:44	33	-----	10.27	8.66	0.01	560	1	627.0	26	8.66	0.10	667	21	555	10	0.67	0.23	4.41	3.52	3.93	0.391	225	0.391	0.243	0.243	-----
Oxamyl	Chlorinated Source Water, Carbon Treated	10/30/08	10:52	41	-----	16.11	8.65	0.02	556	5	644.0	9	8.65	0.09	664	18	554	11	0.53	0.37	6.50	5.61	6.17	0.613	226	0.613	0.384	0.384	-----
Oxamyl	Chlorinated Source Water, Carbon Treated	10/31/08	15:55	1784	-----	16.11	8.52	0.15	566	5	559.0	94	8.56	0.00	400	246	562	3	0.03	0.87	6.17	5.28	6.17	0.514	232	0.514	0.256	0.256	-----

Phorate 11-17-08

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Phorate	Chlorinated Source Water, Carbon Treated	11/17/08	9:10	0	16.71	0.00	8.43	0.00	596	0	656	0	8.69	0.00	639	0	601	0	0.78	0.00	0.53	0.00	0.00	ND	ND	-----	ND	-----	-----
Phorate	Chlorinated Source Water, Carbon Treated	11/17/08	9:19	9	-----	1.26	8.45	0.02	595	1	661	5	8.71	0.02	650	11	600	1	0.50	0.28	0.70	0.17	0.58	ND	ND	-----	ND	-----	-----
Phorate	Chlorinated Source Water, Carbon Treated	11/17/08	9:26	16	-----	3.09	8.45	0.02	595	1	641	15	8.70	0.01	643	4	602	1	0.26	0.52	0.89	0.36	1.34	ND	ND	-----	ND	-----	-----
Phorate	Chlorinated Source Water, Carbon Treated	11/17/08	9:33	23	-----	5.10	8.44	0.01	594	2	607	49	8.68	0.01	622	17	601	0	0.00	0.78	1.16	0.63	2.09	ND	ND	-----	ND	-----	-----
Phorate	Chlorinated Source Water, Carbon Treated	11/17/08	9:41	31	-----	7.77	8.44	0.01	593	3	581	75	8.67	0.02	598	41	601	0	0.00	0.78	1.32	0.79	3.01	ND	ND	-----	ND	-----	-----
Phorate	Chlorinated Source Water, Carbon Treated	11/17/08	9:48	38	-----	12.26	8.44	0.01	592	4	562	94	8.66	0.03	576	63	600	1	0.00	0.78	1.58	1.05	4.47	ND	ND	-----	ND	-----	-----
Phorate	Chlorinated Source Water, Carbon Treated	11/18/08	8:53	1423	-----	12.26	8.36	0.07	594	2	443	213	8.57	0.12	327	312	601	0	0.02	0.76	1.96	1.43	4.47	ND	ND	-----	ND	-----	-----

Potassium Cyanide 2-3-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Potassium cyanide	Chlorinated Source Water, Carbon Treated	2/3/09	10:11	0	9.90	0.00	8.38	0.00	337	0	652	0	8.71	0.00	206	0	291	0	0.80	0.00	1.02	0.00	-----	ND	-----	-----	ND	-----	-----
Potassium cyanide	Chlorinated Source Water, Carbon Treated	2/3/09	10:23	12	-----	1.01	8.61	0.23	338	1	550	102	8.85	0.14	204	2	290	1	0.01	0.79	1.05	0.03	-----	ND	-----	-----	ND	-----	-----
Potassium cyanide	Chlorinated Source Water, Carbon Treated	2/3/09	10:32	21	-----	5.27	8.85	0.47	346	9	398	254	9.07	0.36	211	5	303	12	0.05	0.75	1.33	0.31	-----	ND	-----	-----	ND	-----	-----
Potassium cyanide	Chlorinated Source Water, Carbon Treated	2/3/09	10:42	31	-----	10.86	9.06	0.68	357	20	343	309	9.22	0.51	225	19	303	12	0.00	0.80	1.78	0.76	-----	ND	-----	-----	ND	-----	-----
Potassium cyanide	Chlorinated Source Water, Carbon Treated	2/3/09	10:51	40	-----	22.67	9.27	0.89	382	45	298	354	9.41	0.70	268	62	343	52	0.04	0.76	2.78	1.76	-----	ND	-----	-----	ND	-----	-----
Potassium cyanide	Chlorinated Source Water, Carbon Treated	2/3/09	10:58	47	-----	47.65	9.47	1.09	436	99	262	390	9.61	0.90	282	76	400	109	0.05	0.75	4.93	3.91	-----	ND	-----	-----	ND	-----	-----
Potassium cyanide	Chlorinated Source Water, Carbon Treated	2/4/09	15:12	1741	-----	47.65	9.44	1.06	456	119	278	374	9.67	0.96	243	37	459	168	0.02	0.78	4.83	3.81	-----	ND	-----	-----	ND	-----	-----

Sodium Arsenite 8-26-08

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Sodium Arsenite	Chlorinated Source Water, Carbon Treated	8/26/08	10:01	0	-----	0.00	8.73	0.00	523	0	685	0	8.70	0.00	566	0	529	0	1.19	0.00	-----	-----	-----	-----	-----	-----	ND	-----	-----
Sodium Arsenite	Chlorinated Source Water, Carbon Treated	8/26/08	10:11	10	-----	1.01	8.71	0.02	522	1	676	9	8.67	0.03	567	1	527	2	0.60	0.59	-----	-----	-----	-----	-----	-----	ND	-----	-----
Sodium Arsenite	Chlorinated Source Water, Carbon Treated	8/26/08	10:32	31	-----	5.05	8.75	0.02	517	6	204	481	8.71	0.01	258	308	521	8	0.01	1.18	-----	-----	-----	-----	-----	-----	ND	-----	-----
Sodium Arsenite	Chlorinated Source Water, Carbon Treated	8/26/08	10:37	36	-----	10.95	8.83	0.10	511	12	125	560	8.83	0.13	144	422	516	13	0.01	1.18	-----	-----	-----	-----	-----	-----	ND	-----	-----

Sodium Fluoroacetate 8-22-08

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Sodium Fluoroacetate	Chlorinated Source Water, Carbon Treated	8/22/08	14:04	0	-----	0.00	8.81	0.00	524	0	623.9	0.0	8.84	0.00	572.9	0.0	526	0	1.12	0.00	-----	-----	-----	-----	-----	-----	ND	-----	-----
Sodium Fluoroacetate	Chlorinated Source Water, Carbon Treated	8/22/08	14:12	8	-----	1.01	8.93	0.12	522	2	637.0	13.1	8.84	0.00	584.3	11.4	518	8	1.09	0.03	-----	-----	-----	-----	-----	-----	ND	-----	-----
Sodium Fluoroacetate	Chlorinated Source Water, Carbon Treated	8/22/08	14:22	18	-----	5.05	8.85	0.04	518	6	647.0	23.1	8.84	0.00	592.0	19.1	504	22	1.04	0.08	-----	-----	-----	-----	-----	-----	ND	-----	-----
Sodium Fluoroacetate	Chlorinated Source Water, Carbon Treated	8/22/08	14:50	46	-----	10.95	8.69	0.12	512	12	680.0	56.1	8.85	0.01	-----	-----	485	41	0.95	0.17	-----	-----	-----	-----	-----	-----	ND	-----	-----

Sodium Thiosulfate 8-22-08

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Sodium Thiosulfate	Chlorinated Source Water, Carbon Treated	8/22/08	13:04	10	-----	0.00	8.78	0.05	523	1	594	48	8.80	0.08	574	18	526	1	1.04	0.00	-----	-----	-----	-----	-----	-----	ND	-----	-----
Sodium Thiosulfate	Chlorinated Source Water, Carbon Treated	8/22/08	13:14	20	-----	1.01	8.80	0.07	523	1	582	36	8.80	0.08	552	4	525	2	0.65	0.39	-----	-----	-----	-----	-----	-----	ND	-----	-----
Sodium Thiosulfate	Chlorinated Source Water, Carbon Treated	8/22/08	13:34	40	-----	5.18	8.72	0.01	520	4	294	252	8.80	0.08	251	305	519	8	0.02	1.02	-----	-----	-----	-----	-----	-----	ND	-----	-----
Sodium Thiosulfate	Chlorinated Source Water, Carbon Treated	8/22/08	13:44	50	-----	10.48	8.79	0.06	517	7	265	281	8.81	0.09	226	330	515	12	0.03	1.01	-----	-----	-----	-----	-----	-----	-----	-----	-----

Strychnine 1-14-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Strychnine	Chlorinated Source Water, Carbon Treated	1/14/09	14:37	0	10.51	0.00	8.42	0.00	291	0	654	0	8.56	0.00	471	0	272	0	1.05	0.00	1.24	0.00	-----	ND	ND	-----	ND	-----	-----
Strychnine	Chlorinated Source Water, Carbon Treated	1/14/09	14:46	9	-----	1.01	8.43	0.01	291	0	658	4	8.5	0.06	479	8	273	1	1.07	0.02	1.53	0.29	-----	ND	ND	-----	ND	-----	-----
Strychnine	Chlorinated Source Water, Carbon Treated	1/14/09	14:55	18	-----	3.34	8.43	0.01	294	3	660	6	8.49	0.07	489	18	274	2	0.97	0.08	2.23	0.99	-----	ND	ND	-----	ND	-----	-----
Strychnine	Chlorinated Source Water, Carbon Treated	1/14/09	15:05	28	-----	9.04	8.46	0.04	291	0	661	7	8.49	0.07	485	14	273	1	0.90	0.15	4.67	3.43	-----	0.029	256	0.029	0.027	0.027	-----
Strychnine	Chlorinated Source Water, Carbon Treated	1/14/09	15:16	39	-----	20.72	8.51	0.09	289	2	652	2	8.51	0.05	477	6	273	1	0.81	0.24	8.32	7.08	-----	0.096	255	0.096	0.095	0.095	-----
Strychnine	Chlorinated Source Water, Carbon Treated	1/14/09	15:30	53	-----	45.03	8.53	0.11	285	6	655	1	8.53	0.03	457	14	269	3	0.68	0.37	20.89	19.65	-----	0.199	255	0.199	0.197	0.197	-----
Strychnine	Chlorinated Source Water, Carbon Treated	1/15/09	9:38	1141	-----	45.03	8.46	0.04	288	3	535	119	8.57	0.01	310	161	284	12	0.06	0.99	20.07	18.83	-----	0.671	255	0.671	0.669	0.669	-----

B globigii in media 11-24-08

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
B. globigii in media	Chlorinated Source Water, Carbon Treated	11/24/08	15:43	0	13.95	0.00	8.51	0.00	566	0	649	0	8.77	0.00	596	0	556	0	0.75	0.00	0.99	0.00	-----	ND	ND	-----	ND	-----	-----
B. globigii in media	Chlorinated Source Water, Carbon Treated	11/24/08	15:52	9	-----	1,054.05	8.51	0.00	566	0	655	6	8.76	0.01	599	3	557	1	0.79	0.04	0.97	0.02	-----	0.003	224	0.003	ND	-----	-----
B. globigii in media	Chlorinated Source Water, Carbon Treated	11/24/08	16:00	17	-----	10,638.19	8.51	0.00	565	1	643	6	8.76	0.01	591	5	564	8	0.57	0.18	1.02	0.03	-----	0.006	224	0.006	ND	-----	-----
B. globigii in media	Chlorinated Source Water, Carbon Treated	11/24/08	16:07	24	-----	111,928.70	8.52	0.01	564	2	625	24	8.75	0.02	535	61	569	13	0.47	0.28	1.37	0.38	-----	0.010	224	0.010	ND	-----	-----
B. globigii in media	Chlorinated Source Water, Carbon Treated	11/24/08	16:15	32	-----	1,179,812.19	8.52	0.01	566	0	543	106	8.74	0.03	445	151	573	17	0.01	0.74	4.81	3.82	-----	0.046	223	0.046	0.014	0.014	-----
B. globigii in media	Chlorinated Source Water, Carbon Treated	11/24/08	16:22	39	-----	12,356,980.31	8.51	0.00	596	30	335	314	8.73	0.04	380	216	608	52	0.01	0.74	41.68	40.69	-----	0.390	223	0.390	0.168	0.168	-----
B. globigii in media	Chlorinated Source Water, Carbon Treated	11/25/08	9:31	1068	-----	12,356,980.31	8.45	0.06	605	39	279	370	8.47	0.30	322	274	618	62	0.04	0.71	39.56	38.57	-----	0.379	223	0.379	0.164	0.164	-----

B globigii washed 12-23-08

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
B globigii washed	Chlorinated Source Water, Carbon Treated	12/23/08	10:24	0	12.29	0.00	8.43	0.00	457	0	668	0	8.53	0.00	478	0	444	0	0.81	0.00	1.21	0.00	-----	ND	ND	0.000	ND	0.000	-----
B globigii washed	Chlorinated Source Water, Carbon Treated	12/23/08	10:31	7	-----	1216.21	8.43	0.00	457	0	670	2	8.51	0.02	487	9	443	1	0.82	0.01	1.09	0.12	-----	ND	ND	0.000	ND	0.000	-----
B globigii washed	Chlorinated Source Water, Carbon Treated	12/23/08	10:39	15	-----	12765.81	8.43	0.00	456	1	650	18	8.50	0.03	490	12	445	1	0.80	0.01	1.11	0.10	-----	ND	ND	0.000	ND	0.000	-----
B globigii washed	Chlorinated Source Water, Carbon Treated	12/23/08	10:45	21	-----	134311.67	8.42	0.01	455	2	667	1	8.49	0.04	492	14	444	0	0.75	0.06	1.09	0.12	-----	ND	ND	0.000	ND	0.000	-----
B globigii washed	Chlorinated Source Water, Carbon Treated	12/23/08	10:51	27	-----	1415465.45	8.41	0.02	454	3	635	33	8.47	0.06	493	15	444	0	0.79	0.02	1.11	0.10	-----	ND	ND	0.000	ND	0.000	-----
B globigii washed	Chlorinated Source Water, Carbon Treated	12/23/08	10:58	34	-----	14794522.57	8.4	0.03	449	8	429	239	8.45	0.08	443	35	441	3	0.77	0.04	1.29	0.08	-----	0.024	254	0.024	0.024	0.024	-----
B globigii washed	Chlorinated Source Water, Carbon Treated	12/24/08	9:45	1401	-----	14794522.57	8.23	0.20	455	2	322	346	8.32	0.21	262	216	460	16	0.17	0.64	1.42	0.21	-----	0.019	254	0.019	0.019	0.019	-----

Soy Broth 11-4-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Stock Concentration (mg/L)	Volume of Test Water (L)	Volume of media added (L)	Concentration of media in test water (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
										pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Soy broth	Chlorinated Source Water, Carbon Treated	12/9/08	10:39	0	12.12	30,000	1.55	0.0000000	0	8.22	0.00	601	0	642	0	8.30	0.00	503	0	584	0	0.64	0.00	1.15	0	----	ND	ND	0.000	ND	0.000	----
Soy broth	Chlorinated Source Water, Carbon Treated	12/9/08	10:48	9	----	30,000	1.48	0.0000013	1,054	8.24	0.02	601	0	683	41	8.32	0.02	521	18	587	3	0.67	0.03	1.45	0.30	----	ND	ND	0.000	ND	0.000	----
Soy broth	Chlorinated Source Water, Carbon Treated	12/9/08	10:56	17	----	30,000	1.41	0.0000125	10,638	8.25	0.03	601	0	673	31	8.43	0.13	518	15	590	6	0.55	0.09	1.54	0.39	----	ND	ND	0.000	ND	0.000	----
Soy broth	Chlorinated Source Water, Carbon Treated	12/9/08	11:03	24	----	30,000	1.34	0.0001250	111,929	8.26	0.04	601	0	639	3	8.42	0.12	477	26	591	7	0.27	0.37	1.85	0.70	----	ND	ND	0.000	ND	0.000	----
Soy broth	Chlorinated Source Water, Carbon Treated	12/9/08	11:10	31	----	30,000	1.27	0.0012500	1,179,812	8.17	0.05	618	17	577	65	8.31	0.01	404	99	610	26	0.03	0.61	20.83	19.68	----	0.039	221	0.039	ND	0.000	----
Soy broth	Chlorinated Source Water, Carbon Treated	12/9/08	11:18	39	----	30,000	1.20	0.0125000	12,356,980	7.71	0.51	775	174	538	104	7.83	0.47	366	137	769	185	0.04	0.60	113.09	111.94	----	0.789	224	0.789	0.173	0.173	----

Sporemedia 10-22-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Stock Concentration (mg/L)	Volume of Test Water (L)	Volume of media added (L)	Concentration of media in test water (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
										pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
SporeMedia	Chlorinated Source Water, Carbon Treated	12/1/08	10:00	0	13.11	8,000	1.55	0.0000000	0.000	8.28	0.00	590	0	643	0	8.32	0.00	455	0	584	0	0.73	0.00	1.05	0.00	-----	ND	ND	-----	ND	-----	-----
SporeMedia	Chlorinated Source Water, Carbon Treated	12/1/08	10:09	9	-----	8,000	1.48	0.0000013	0.007	8.34	0.06	590	0	653	10	8.36	0.04	470	15	587	3	0.75	0.02	0.97	0.08	-----	ND	ND	-----	ND	-----	-----
SporeMedia	Chlorinated Source Water, Carbon Treated	12/1/08	10:16	16	-----	8,000	1.41	0.0000125	0.078	8.37	0.09	589	1	655	12	8.45	0.13	473	18	588	4	0.71	0.02	1.02	0.03	-----	ND	ND	-----	ND	-----	-----
SporeMedia	Chlorinated Source Water, Carbon Treated	12/1/08	10:23	23	-----	8,000	1.34	0.0001250	0.829	8.38	0.10	589	1	647	4	8.46	0.14	470	15	589	5	0.59	0.14	1.18	0.13	-----	ND	ND	-----	ND	-----	-----
SporeMedia	Chlorinated Source Water, Carbon Treated	12/1/08	10:30	30	-----	8,000	1.27	0.0012500	8.736	8.39	0.11	588	2	505	138	8.44	0.12	399	56	590	6	0.01	0.72	2.69	1.64	-----	ND	ND	-----	ND	-----	-----
SporeMedia	Chlorinated Source Water, Carbon Treated	12/1/08	10:37	37	-----	8,000	1.20	0.0125000	84.155	8.13	0.15	596	6	341	302	8.16	0.16	349	106	600	16	0.04	0.69	28.14	27.09	-----	0.164	223	0.164	0.061	0.061	-----

Water 2 Chlorinated Ground Water with Conventional Treatment

Aldicarb 10-15-08

							YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix			Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		
Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)	Calculated TOC (mg/L)	UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	Comments
Aldicarb	Chlorinated Groundwater	10/15/08	10:53	0	21.91	0.00	8.85	0.00	447	0	619	0	8.86	0.00	584	0	453	0	0.87	0.00	0.60	0.00	0.00	0.085	221	0.000	ND	0.000	-----
Aldicarb	Chlorinated Groundwater	10/15/08	11:02	9	-----	0.50	8.83	0.02	446	1	624	5	8.86	0.00	607	23	452	1	0.75	0.12	0.74	0.14	0.22	0.088	221	0.088	ND	0.000	-----
Aldicarb	Chlorinated Groundwater	10/15/08	11:10	17	-----	1.03	8.84	0.01	444	3	624	5	8.86	0.00	600	16	452	1	0.53	0.34	0.90	0.30	0.46	0.093	221	0.093	ND	0.000	-----
Aldicarb	Chlorinated Groundwater	10/15/08	11:17	24	-----	1.59	8.84	0.01	447	0	616	3	8.86	0.00	586	2	452	1	0.38	0.49	1.05	0.45	0.70	0.104	221	0.104	ND	0.000	-----
Aldicarb	Chlorinated Groundwater	10/15/08	11:24	31	-----	2.18	8.86	0.01	447	0	566	53	8.86	0.00	558	26	451	2	0.23	0.64	1.29	0.69	0.96	0.111	222	0.111	ND	0.000	-----
Aldicarb	Chlorinated Groundwater	10/15/08	11:31	38	-----	2.80	8.83	0.02	447	0	551	68	8.85	0.01	504	80	450	3	0.04	0.83	1.45	0.85	1.24	0.177	221	0.177	ND	0.000	-----

Cesium Chloride 9-23-08

							YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix			Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		
Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)	Calculated TOC (mg/L)	UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	Comments
Cesium chloride	Chlorinated Groundwater	9/23/08	13:29	0	22.44	0.00	9.02	0.00	436	0	608	0	9.06	0.00	625	0.00	454	0	0.83	0.00	0.72	0.00	0.00	ND	ND	0.000	ND	0.000	-----
Cesium chloride	Chlorinated Groundwater	9/23/08	13:46	17	-----	0.10	9.00	0.02	436	0	617	9	9.05	0.01	650	25	454	0	0.72	0.11	0.72	0.72	0.00	ND	ND	0.000	ND	0.000	-----
Cesium chloride	Chlorinated Groundwater	9/23/08	13:56	27	-----	0.26	8.99	0.03	436	0	620	12	9.05	0.01	656	31	455	1	0.72	0.11	0.74	0.74	0.00	ND	ND	0.000	ND	0.000	-----
Cesium chloride	Chlorinated Groundwater	9/23/08	14:03	34	-----	0.54	8.99	0.03	436	0	622	14	9.05	0.01	659	34	455	1	0.71	0.12	0.73	0.73	0.00	ND	ND	0.000	ND	0.000	-----
Cesium chloride	Chlorinated Groundwater	9/23/08	14:10	41	-----	1.13	8.96	0.06	437	1	625	17	9.05	0.01	660	35	455	1	0.70	0.13	0.73	0.73	0.00	ND	ND	0.000	ND	0.000	-----
Cesium chloride	Chlorinated Groundwater	9/23/08	14:17	48	-----	1.76	8.93	0.09	437	1	629	21	9.05	0.01	661	36	455	1	0.71	0.12	0.74	0.74	0.00	ND	ND	0.000	ND	0.000	-----

Gasoline 11-20-08

							YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix			Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		
Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)	Calculated TOC (mg/L)	UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	Comments
Gasoline	Chlorinated Groundwater	11/20/08	9:30	0	18.40	0.00	8.81	0.00	463	0	625	0	9.00	0.00	658	0	467	0	0.93	0.00	0.69	0.00	-----	ND	0.000	-----	ND	0.000	-----
Gasoline	Chlorinated Groundwater	11/20/08	9:39	9	-----	1.01	8.81	0.00	463	0	642	17	8.99	0.01	667	9	467	0	0.93	0.00	0.75	0.06	-----	ND	0.000	-----	ND	0.000	-----
Gasoline	Chlorinated Groundwater	11/20/08	9:46	16	-----	2.61	8.81	0.00	463	0	646	21	8.98	0.02	671	13	468	1	0.93	0.00	0.09	0.60	-----	ND	0.000	-----	ND	0.000	-----
Gasoline	Chlorinated Groundwater	11/20/08	9:52	22	-----	4.29	8.81	0.00	463	0	649	24	8.98	0.02	674	16	468	1	0.94	0.01	0.83	0.14	-----	ND	0.000	-----	ND	0.000	-----
Gasoline	Chlorinated Groundwater	11/20/08	9:59	29	-----	6.06	8.82	0.01	463	0	650	25	8.98	0.02	675	17	468	1	0.88	0.05	0.99	0.30	-----	ND	0.000	-----	ND	0.000	-----
Gasoline	Chlorinated Groundwater	11/20/08	10:05	35	-----	7.93	8.81	0.00	463	0	634	9	8.97	0.03	676	18	467	0	0.90	0.03	1.11	0.42	-----	ND	0.000	-----	ND	0.000	-----

Mercuric Chloride 10-2-08

							YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix			Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		
Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)	Calculated TOC (mg/L)	UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	Comments
Mercuric chloride	Chlorinated Groundwater	10/2/08	10:40	0	20.97	0.00	8.62	0.00	435	0	606	0	8.66	0.00	601	0	454	0	0.64	0.00	0.68	0.00	-----	ND	ND	0.00	ND	0.00	-----
Mercuric chloride	Chlorinated Groundwater	10/2/08	10:49	9	-----	1.02	8.58	0.04	435	0	621	15	8.61	0.05	625	24	455	1	0.64	0.00	0.66	0.02	-----	ND	ND	0.00	ND	0.00	-----
Mercuric chloride	Chlorinated Groundwater	10/2/08	10:54	14	-----	3.86	8.44	0.18	436	1	639	33	8.41	0.25	665	64	455	1	0.61	0.03	0.73	0.05	-----	ND	ND	0.00	ND	0.00	-----
Mercuric chloride	Chlorinated Groundwater	10/2/08	10:59	19	-----	9.09	8.23	0.39	439	4	660	54	8.2	0.46	698	97	457	3	0.61	0.03	0.68	0.00	-----	ND	ND	0.00	ND	0.00	-----
Mercuric chloride	Chlorinated Groundwater	10/2/08	11:06	26	-----	20.87	7.69	0.93	440	5	701	95	7.74	0.92	733	132	459	5	0.63	0.01	0.7	0.02	-----	0.033	220	0.033	ND	0.00	-----
Mercuric chloride	Chlorinated Groundwater	10/2/08	11:11	31	-----	33.28	7.45	1.17	440	5	721	115	7.53	1.13	756	155	460	6	0.62	0.02	0.73	0.05	-----	0.067	220	0.067	ND	0.00	-----

Nicotine 9-24-08

							YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix			Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		
Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)	Calculated TOC (mg/L)	UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	Comments
Nicotine	Chlorinated Groundwater	9/24/08	10:20	0	22.40	0.00	9.09	0.00	433	0	586	0	9.07	0.00	650	0	451	0	0.84	0.00	0.53	0.00	0.00	ND	ND	0.000	ND	0.000	-----
Nicotine	Chlorinated Groundwater	9/24/08	10:35	15	-----	0.51	9.09	0.00	431	2	591	5	9.06	0.01	657	7	451	0	0.75	0.09	0.91	0.38	0.38	ND	ND	0.000	ND	0.000	-----
Nicotine	Chlorinated Groundwater	9/24/08	10:45	25	-----	2.46	9.10	0.01	430	3	590	4	9.10	0.03	651	1	450	1	0.66	0.18	2.08	1.55	1.82	0.032	261	0.032	0.027	0.027	-----
Nicotine	Chlorinated Groundwater	9/24/08	10:52	32	-----	5.07	9.10	0.01	431	2	585	1	9.10	0.03	643	7	449	2	0.5	0.34	3.64	3.11	3.75	0.071	260	0.071	0.069	0.069	-----
Nicotine	Chlorinated Groundwater	9/24/08	10:59	39	-----	10.97	9.11	0.02	430	3	567	19	9.11	0.04	625	25	446	5	0.28	0.56	7.08	6.55	8.12	0.180	261	0.180	0.156	0.156	-----
Nicotine	Chlorinated Groundwater	9/24/08	11:07	47	-----	17.20	9.11	0.02	428	5	533	53	9.11	0.04	595	55	444	7	0.12	0.72	10.76	10.23	12.72	0.289	261	0.289	0.250	0.250	-----

Nicotine 10-29-08

							YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix			Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		
Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)	Calculated TOC (mg/L)	UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	Comments
Nicotine	Chlorinated Groundwater	10/29/08	11:13	0	17.32	0.00	9.14	0.00	437	0	562	0	9.19	0.00	557	0	445	0	1.13	0.00	0.82	0.00	0.00	ND	ND	0.000	ND	0.000	-----
Nicotine	Chlorinated Groundwater	10/29/08	11:20	7	-----	1.01	9.14	0.00	436	1	571	9	9.18	0.01	544	13	446	1	0.98	0.15	1.51	0.69	0.75	ND	ND	0.000	ND	0.000	-----
Nicotine	Chlorinated Groundwater	10/29/08	11:27	14	-----	2.43	9.20	0.06	437	0	576	14	9.18	0.01	545	12	446	1	0.84	0.29	2.54	1.72	1.80	0.016	260	0.016	0.010	0.010	-----
Nicotine	Chlorinated Groundwater	10/29/08	11:34	21	-----	5.05	9.15	0.01	437	0	576	14	9.18	0.01	538	19	447	2	0.68	0.45	4.49	3.67	3.73	0.069	260	0.069	0.056	0.056	-----
Nicotine	Chlorinated Groundwater	10/29/08	11:41	28	-----	10.94	9.15	0.01	436	1	570	8	9.18	0.01	529	28	446	1	0.51	0.62	8.92	8.10	8.09	0.184	260	0.184	0.155	0.155	-----
Nicotine	Chlorinated Groundwater	10/29/08	11:48	35	-----	17.16	9.15	0.01	437	0	533	29	9.19	0.00	490	67	445	0	0.28	0.85	13.90	13.08	12.69	0.316	260	0.316	0.269	0.269	-----

Nicotine 4-23-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Nicotine	Chlorinated Groundwater	4/23/09	15:02	0	17.60	0.00	8.83	0.00	485	0	573.0	0.0	8.74	0.00	298.9	0.0	494	0	0.94	0.00	0.74	0.00	0.00	ND	0.000	0.000	0.000	0.000	Stir bar added at 15:06.
Nicotine	Chlorinated Groundwater	4/23/09	15:12	10	18.03	1.21	8.81	0.02	486	1	632.7	59.7	8.74	0.00	317.5	18.6	492	2	0.83	0.11	1.62	0.88	0.89	0.019	254	0.019	0.019	0.019	
Nicotine	Chlorinated Groundwater	4/23/09	15:19	17	18.29	2.90	8.80	0.03	484	1	618.1	45.1	8.74	0.00	316.4	17.5	492	2	0.72	0.22	2.87	2.13	2.15	0.058	260	0.058	0.053	0.053	UV-Vis absorbance at 254nm was extrapolated for samples 6-11, as the measured data point was lost during electronic
Nicotine	Chlorinated Groundwater	4/23/09	15:27	25	18.59	6.02	8.83	0.00	484	1	605.6	32.6	8.75	0.01	306.1	7.2	491	3	0.52	0.42	5.18	4.44	4.45	0.107	261	0.107	0.094	0.094	
Nicotine	Chlorinated Groundwater	4/23/09	15:33	31	18.76	13.04	8.84	0.01	484	1	589.5	16.5	8.77	0.03	283.8	15.1	491	3	0.21	0.73	10.83	10.09	9.65	0.232	261	0.232	0.200	0.200	
Nicotine	Chlorinated Groundwater	4/23/09	15:39	37	18.85	17.99	9.24	0.41	484	1	568.7	4.3	8.77	0.03	262.9	36.0	490	4	0.13	0.81	14.28	13.54	13.31	0.312	260	0.312	0.265	0.265	

Oxamyl 11-3-08

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Oxamyl	Chlorinated Groundwater	11/3/08	9:34	0	19.06	0.00	9.00	0.00	452	0	568	0	9.07	0.00	552	0	453	0	0.96	0.00	0.78	0.00	0.00	ND	ND	0.000	ND	0.000	-----
Oxamyl	Chlorinated Groundwater	11/3/08	9:47	13	-----	1.00	8.99	0.01	451	1	601	33	9.10	0.03	619	67	451	2	1.00	0.04	1.07	0.29	0.38	ND	ND	0.000	ND	0.000	-----
Oxamyl	Chlorinated Groundwater	11/3/08	9:53	19	-----	2.40	8.99	0.01	450	2	605	37	9.10	0.03	628	76	449	4	0.95	0.01	1.51	0.73	0.92	0.030	240	0.030	0.006	0.006	-----
Oxamyl	Chlorinated Groundwater	11/3/08	10:00	26	-----	4.98	8.99	0.01	449	3	607	39	9.09	0.02	635	83	447	6	0.84	0.12	2.33	1.55	1.91	0.118	240	0.118	0.064	0.064	-----
Oxamyl	Chlorinated Groundwater	11/3/08	10:07	33	-----	10.79	8.97	0.03	450	2	605	37	9.08	0.01	638	86	446	7	0.68	0.28	4.26	3.48	4.14	0.321	237	0.321	0.197	0.197	-----
Oxamyl	Chlorinated Groundwater	11/3/08	10:15	41	-----	16.93	8.97	0.03	450	2	592	24	9.06	0.01	626	74	444	9	0.35	0.61	6.33	5.55	6.49	0.536	236	0.536	0.336	0.336	-----

Phorate 11-18-08

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Phorate	Chlorinated Groundwater	11/18/08	9:57	0	18.53	0.00	7.84	0.00	453	0	715	0	7.98	0.00	727	0	458	0	0.69	0.00	0.89	0.00	0.00	ND	-----	-----	ND	0.000	-----
Phorate	Chlorinated Groundwater	11/18/08	10:05	8	-----	0.79	7.85	0.01	452	1	720	5	7.98	0.00	735	8	457	1	0.71	0.02	0.53	1.25	0.26	ND	-----	-----	ND	0.000	-----
Phorate	Chlorinated Groundwater	11/18/08	10:11	14	-----	1.62	7.85	0.01	452	1	722	7	7.98	0.00	736	9	456	2	0.61	0.08	0.90	0.88	0.52	ND	-----	-----	ND	0.000	-----
Phorate	Chlorinated Groundwater	11/18/08	10:18	21	-----	2.49	7.85	0.01	451	2	721	6	7.98	0.00	736	9	454	4	0.56	0.13	0.92	0.86	0.80	ND	-----	-----	ND	0.000	-----
Phorate	Chlorinated Groundwater	11/18/08	10:25	28	-----	3.41	7.84	0.00	450	3	721	6	7.96	0.02	734	7	458	0	0.51	0.18	0.92	0.86	1.10	ND	-----	-----	ND	0.000	-----
Phorate	Chlorinated Groundwater	11/18/08	10:31	34	-----	4.39	7.84	0.00	450	3	719	4	7.96	0.02	730	3	458	0	0.42	0.27	0.95	0.83	1.42	ND	-----	-----	ND	0.000	-----
Phorate	Chlorinated Groundwater	11/18/08	10:39	42	-----	6.46	7.85	0.01	448	5	643	72	7.95	0.03	718	9	456	2	0.35	0.34	0.96	0.82	2.08	ND	-----	-----	ND	0.000	-----
Phorate	Chlorinated Groundwater	11/18/08	10:52	55	-----	6.46	7.80	0.04	449	4	646	69	7.94	0.04	686	41	456	2	0.00	0.69	1.09	0.69	2.08	ND	-----	-----	ND	0.000	-----

Potassium cyanide not studied for this water.
Sodium Arsenite not studied for this water.

Sodium Fluoroacetate 10-7-08

							YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix			Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		
Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)	Calculated TOC (mg/L)	UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	Comments
Sodium fluoroacetate	Chlorinated Groundwater	10/7/08	13:16	0	22.58	0.00	9.09	0.00	455	0	572	0	9.06	0.00	642	0	458	0	0.97	0.00	0.62	0.00	0.00	ND	ND	0.000	ND	0.000	-----
Sodium fluoroacetate	Chlorinated Groundwater	10/7/08	13:28	12	-----	1.01	9.09	0.00	456	1	613	41	9.06	0.00	652	10	461	3	0.98	0.01	0.81	0.19	0.24	ND	ND	0.000	ND	0.000	-----
Sodium fluoroacetate	Chlorinated Groundwater	10/7/08	13:39	23	-----	17.62	9.08	0.01	468	13	629	57	9.06	0.00	658	16	472	14	0.96	0.01	3.74	3.12	4.23	ND	ND	0.000	ND	0.000	-----

Sodium Thiosulfate 10-7-08

							YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix			Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		
Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)	Calculated TOC (mg/L)	UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	Comments
Sodium thiosulfate	Chlorinated Groundwater	10/7/08	9:46	0	23.14	0.00	9.10	0.00	455	0	623	0	9.09	0.00	630	0	453	0	1.04	0.00	0.65	0.00	-----	ND	ND	0.000	ND	0.000	-----
Sodium thiosulfate	Chlorinated Groundwater	10/7/08	10:00	14	-----	1.22	9.09	0.01	457	2	603	20	9.07	0.02	628	2	454	1	0.34	0.70	0.68	0.03	-----	ND	ND	0.000	ND	0.000	-----
Sodium thiosulfate	Chlorinated Groundwater	10/7/08	10:07	21	-----	1.85	9.08	0.02	457	2	548	75	9.06	0.03	537	93	453	0	0.02	1.02	0.68	0.03	-----	ND	ND	0.000	ND	0.000	-----
Sodium thiosulfate	Chlorinated Groundwater	10/7/08	10:14	28	-----	2.52	9.09	0.01	458	3	480	143	9.06	0.03	471	159	454	1	0.02	1.02	0.70	0.05	-----	ND	ND	0.000	ND	0.000	-----
Sodium thiosulfate	Chlorinated Groundwater	10/7/08	10:22	36	-----	3.23	9.08	0.02	459	4	449	174	9.06	0.03	403	227	454	1	0.02	1.02	0.69	0.04	-----	ND	ND	0.000	ND	0.000	-----
Sodium thiosulfate	Chlorinated Groundwater	10/7/08	10:30	44	-----	3.98	9.08	0.02	460	5	427	196	9.05	0.04	364	266	455	2	0.02	1.02	0.74	0.09	-----	ND	ND	0.000	ND	0.000	-----

Strychnine 1-19-09

							YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix			Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		
Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)	Calculated TOC (mg/L)	UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	Comments
Strychnine	Chlorinated Groundwater	1/19/09	13:43	0	15.29	0.00	8.01	0.00	496	0	685	0	8.12	0.00	461	0	489	0	0.78	0.00	1.04	0.00	-----	ND	ND	0.000	ND	0.000	-----
Strychnine	Chlorinated Groundwater	1/19/09	13:52	9	-----	1.01	8.02	0.01	496	0	694	9	8.10	0.02	477	16	490	1	0.74	0.04	3.18	2.14	-----	ND	ND	0.000	ND	0.000	-----
Strychnine	Chlorinated Groundwater	1/19/09	13:59	16	-----	5.46	8.04	0.03	496	0	696	11	8.12	0.00	484	23	490	1	0.71	0.07	2.45	1.41	-----	ND	ND	0.000	ND	0.000	-----
Strychnine	Chlorinated Groundwater	1/19/09	14:09	26	-----	11.08	8.08	0.07	495	1	699	14	8.14	0.02	490	29	489	0	0.70	0.08	6.35	5.31	-----	0.044	254	0.044	0.044	0.044	-----
Strychnine	Chlorinated Groundwater	1/19/09	14:16	33	-----	16.98	8.10	0.09	494	2	690	5	8.17	0.05	491	30	488	1	0.64	0.14	6.51	5.47	-----	0.095	255	0.095	0.094	0.094	-----
Strychnine	Chlorinated Groundwater	1/19/09	14:24	41	-----	24.10	8.13	0.12	494	2	697	12	8.19	0.07	489	28	487	2	0.56	0.22	10.36	9.32	-----	0.151	255	0.151	0.151	0.151	-----

Soy Broth 12-11-08

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Stock Concentration (mg/L)	Volume of Test Water (L)	Volume of media added (L)	Concentration of media in test water (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
										pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Soy broth	Chlorinated Groundwater	12/11/08	8:51	0	17.22	30,000	1.55	0.0000000	0	7.90	0.00	468	0	694	0	7.94	0.00	533	0	470	0	0.68	0.00	0.85	0.00	-----	ND	ND	0.000	ND	0.000	-----
Soy broth	Chlorinated Groundwater	12/11/08	8:58	7	-----	30,000	1.48	0.0000013	1,054	7.93	0.03	464	4	699	5	7.96	0.02	544	11	470	0	0.65	0.03	0.85	0.00	-----	ND	ND	0.000	ND	0.000	-----
Soy broth	Chlorinated Groundwater	12/11/08	9:04	13	-----	30,000	1.41	0.0000125	10,638	7.95	0.05	463	5	695	1	8.04	0.10	542	9	469	1	0.56	0.12	0.97	0.12	-----	ND	ND	0.000	ND	0.000	-----
Soy broth	Chlorinated Groundwater	12/11/08	9:12	21	-----	30,000	1.34	0.0001250	111,929	7.96	0.06	468	0	655	39	8.08	0.14	463	70	468	2	0.14	0.54	1.47	0.62	-----	ND	ND	0.000	ND	0.000	-----
Soy broth	Chlorinated Groundwater	12/11/08	9:22	31	-----	30,000	1.27	0.0012500	1,179,812	7.87	0.03	482	14	599	95	7.97	0.03	388	145	483	13	0.01	0.67	10.72	9.87	-----	ND	ND	0.000	ND	0.000	-----
Soy broth	Chlorinated Groundwater	12/11/08	9:30	39	-----	30,000	1.20	0.0125000	12,356,980	7.54	0.36	636	168	539	155	7.60	0.34	349	184	645	175	0.00	0.68	102.73	101.88	-----	0.734	224	0.734	0.167	0.167	-----

Sporemedia 12-3-08

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Stock Concentration (mg/L)	Volume of Test Water (L)	Volume of media added (L)	Concentration of media in test water (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
										pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
SporeMedia	Chlorinated Groundwater	12/3/08	9:22	0	18.40	8,000	1.55	0.0000000	0.000	8.06	0.00	465	0	674	0	8.09	0.00	542	0	473	0	0.74	0.00	0.75	0.00	-----	ND	ND	0.000	ND	0.000	-----
SporeMedia	Chlorinated Groundwater	12/3/08	9:30	8	-----	8,000	1.48	0.0000013	0.007	8.06	0.00	465	0	684	10	8.09	0.00	549	7	473	0	0.75	0.01	0.75	0.00	-----	ND	ND	0.000	ND	0.000	-----
SporeMedia	Chlorinated Groundwater	12/3/08	9:37	15	-----	8,000	1.41	0.0000125	0.078	8.07	0.01	465	0	686	12	8.09	0.00	550	8	472	1	0.69	0.05	0.77	0.02	-----	ND	ND	0.000	ND	0.000	-----
SporeMedia	Chlorinated Groundwater	12/3/08	9:43	21	-----	8,000	1.34	0.0001250	0.829	8.07	0.01	465	0	679	5	8.08	0.01	543	1	472	1	0.61	0.13	0.97	0.22	-----	ND	ND	0.000	ND	0.000	-----
SporeMedia	Chlorinated Groundwater	12/3/08	9:50	28	-----	8,000	1.27	0.0012500	8.736	8.04	0.02	466	1	476	198	8.04	0.05	424	118	472	1	0.02	0.72	2.94	2.19	-----	ND	ND	0.000	ND	0.000	-----
SporeMedia	Chlorinated Groundwater	12/3/08	9:56	34	-----	8,000	1.20	0.0125000	84.155	7.75	0.31	475	10	376	298	7.75	0.34	372	170	482	9	0.05	0.69	28.81	28.06	-----	0.179	224	0.179	0.063	0.063	-----

B globigii in media 12-3-08

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
B. globigii in media	Chlorinated Groundwater	12/3/08	10:05	0	18.51	0	8.01	0.00	465	0.00	644	0.00	8.07	0.00	505	0.00	472	0	0.75	0.00	0.77	0.00	-----	ND	ND	0.000	ND	0.000	-----
B. globigii in media	Chlorinated Groundwater	12/3/08	10:13	8	-----	1,054	8.05	0.04	465	0.00	680	36	8.07	0.00	562	57	471	1	0.72	0.03	0.76	0.01	-----	ND	ND	0.000	ND	0.000	-----
B. globigii in media	Chlorinated Groundwater	12/3/08	10:19	14	-----	10,638	8.06	0.05	465	0.00	669	25	8.07	0.00	564	59	470	2	0.66	0.09	0.82	0.05	-----	ND	ND	0.000	ND	0.000	-----
B. globigii in media	Chlorinated Groundwater	12/3/08	10:25	20	-----	111,929	8.07	0.06	464	1	669	25	8.07	0.00	544	39	470	2	0.51	0.24	1.03	0.26	-----	ND	ND	0.000	ND	0.000	-----
B. globigii in media	Chlorinated Groundwater	12/3/08	10:32	27	-----	1,179,812	8.14	0.13	467	2	570	74	8.13	0.06	420	85	473	1	0.08	0.67	4.55	3.78	-----	ND	ND	0.000	ND	0.000	-----
B. globigii in media	Chlorinated Groundwater	12/3/08	10:39	34	-----	12,356,980	8.51	0.5	499	34	389	255	8.50	0.43	342	163	506	34	0.03	0.72	46.13	45.36	-----	0.256	224	0.256	0.126	0.126	-----

B globigii washed 1-6-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
B globigii washed	Chlorinated Groundwater	1/6/09	10:44	0	16.75	0	9.05	0.00	493	0	552	0	9.08	0.00	296	0	498	0	0.95	0.00	0.65	0.00	-----	ND	ND	0.000	ND	0.000	-----
B globigii washed	Chlorinated Groundwater	1/6/09	10:51	7	-----	1,216	9.04	0.01	494	1	570	18	9.07	0.01	324	28	497	1	0.96	0.01	0.65	0.00	-----	ND	ND	0.000	ND	0.000	-----
B globigii washed	Chlorinated Groundwater	1/6/09	10:58	14	-----	12,766	9.04	0.01	494	1	575	23	9.07	0.01	363	67	499	1	0.94	0.01	0.66	0.01	-----	ND	ND	0.000	ND	0.000	-----
B globigii washed	Chlorinated Groundwater	1/6/09	11:04	20	-----	134,312	9.04	0.01	494	1	577	25	9.07	0.01	370	74	498	0	0.97	0.02	0.66	0.01	-----	ND	ND	0.000	ND	0.000	-----
B globigii washed	Chlorinated Groundwater	1/6/09	11:11	27	-----	1,415,465	9.04	0.01	494	1	548	4	9.06	0.02	373	77	498	0	0.95	0.00	0.67	0.02	-----	ND	ND	0.000	ND	0.000	-----
B globigii washed	Chlorinated Groundwater	1/6/09	11:17	33	-----	14,794,523	9.03	0.02	489	4	274	278	9.05	0.03	358	62	493	5	0.82	0.13	0.93	0.28	-----	0.015	238	0.015	0.014	0.014	-----

Water 3 Chlorinated Unfiltered Water (Lake)

Aldicarb 3-10-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Aldicarb	Chlorinated Source Water (Unfiltered)	3/10/09	10:39	0	22.89	0.0000	7.20	0.00	90	0	748.6	0.0	7.15	0.00	415.0	0.0	77.0	0.0	0.90	0.00	1.54	0.00	0.00	ND	ND	0.000	ND	0.000	-----
Aldicarb	Chlorinated Source Water (Unfiltered)	3/10/09	10:47	8	-----	0.5168	7.19	0.01	91	1	747.6	1.0	7.14	0.01	380.5	34.5	77.2	0.2	0.71	0.19	1.71	0.17	0.00	ND	ND	0.000	ND	0.000	-----
Aldicarb	Chlorinated Source Water (Unfiltered)	3/10/09	10:54	15	-----	1.0592	7.17	0.03	91	1	741.4	7.2	7.13	0.02	371.4	43.6	77.0	0.0	0.47	0.43	1.93	0.39	0.24	ND	ND	0.000	ND	0.000	-----
Aldicarb	Chlorinated Source Water (Unfiltered)	3/10/09	11:00	21	-----	1.6298	7.13	0.07	91	1	731.3	17.3	7.11	0.04	323.3	91.7	76.9	0.1	0.28	0.62	2.44	0.90	0.49	ND	ND	0.000	ND	0.000	-----
Aldicarb	Chlorinated Source Water (Unfiltered)	3/10/09	11:07	28	-----	2.2317	7.12	0.08	90	0	565.9	182.7	7.10	0.05	287.6	127.4	77.4	0.4	0.08	0.82	2.72	1.18	0.76	0.004	234	0.004	ND	0.000	-----
Aldicarb	Chlorinated Source Water (Unfiltered)	3/10/09	11:14	35	-----	2.8685	7.08	0.12	91	1	579.3	169.3	7.09	0.06	262.0	153.0	77.1	0.1	0.04	0.86	2.72	1.18	1.04	0.010	234	0.010	ND	0.000	-----

Cesium Chloride 2-27-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Cesium chloride	Chlorinated Source Water (Unfiltered)	2/27/09	13:46	0	20.35	0.00	7.09	0.00	89	0	753	0	7.14	0.00	360	0	-----	-----	0.79	0.00	1.47	0.00	-----	ND	-----	-----	ND	-----	-----
Cesium chloride	Chlorinated Source Water (Unfiltered)	2/27/09	13:59	13	-----	0.10	7.03	0.06	90	1	764	11	7.15	0.01	345	15	-----	-----	0.79	0.00	1.52	0.05	-----	ND	-----	-----	ND	-----	-----
Cesium chloride	Chlorinated Source Water (Unfiltered)	2/27/09	14:06	20	-----	0.26	7.04	0.05	90	1	732	21	7.16	0.02	343	17	-----	-----	0.77	0.02	1.47	0.00	-----	ND	-----	-----	ND	-----	-----
Cesium chloride	Chlorinated Source Water (Unfiltered)	2/27/09	14:15	29	-----	0.54	7.09	0.00	88	1	759	6	7.16	0.02	377	17	-----	-----	0.73	0.06	1.50	0.02	-----	ND	-----	-----	ND	-----	-----
Cesium chloride	Chlorinated Source Water (Unfiltered)	2/27/09	14:26	40	-----	1.13	7.13	0.04	90	1	766	13	7.17	0.03	361	1	-----	-----	0.71	0.08	1.59	0.11	-----	ND	-----	-----	ND	-----	-----
Cesium chloride	Chlorinated Source Water (Unfiltered)	2/27/09	14:37	51	-----	1.76	7.13	0.04	92	3	769	16	7.18	0.04	347	13	-----	-----	0.7	0.09	1.52	0.05	-----	ND	-----	-----	ND	-----	-----

Cesium Chloride 5-19-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Cesium chloride	Chlorinated Source Water (Unfiltered)	5/19/09	13:49	0	22.66	0.00	7.21	0.00	91	0	797.0	0.0	7.18	0.00	399.9	0.00	80.2	0.0	0.89	0.00	1.52	0.00	----	ND	ND	0	ND	0	----
Cesium chloride	Chlorinated Source Water (Unfiltered)	5/19/09	13:57	8	22.60	0.10	7.26	0.05	93	2	798.7	1.7	7.17	0.01	416.4	16.50	80.6	0.4	0.90	0.01	1.46	0.07	----	222	0.007	0.007	ND	0	----
Cesium chloride	Chlorinated Source Water (Unfiltered)	5/19/09	14:05	16	22.36	0.26	7.26	0.05	92	1	801.0	4.0	7.17	0.01	417.4	17.50	80.8	0.6	0.90	0.01	1.48	0.04	----	220	0.034	0.034	0.001	0.001	----
Cesium chloride	Chlorinated Source Water (Unfiltered)	5/19/09	14:14	25	22.25	0.54	7.31	0.10	93	2	746.7	50.3	7.2	0.02	421.5	21.60	81.0	0.8	0.91	0.02	1.50	0.02	----	ND	ND	0	ND	0	----
Cesium chloride	Chlorinated Source Water (Unfiltered)	5/19/09	14:22	33	22.21	1.13	7.2	0.01	93	2	800.3	3.3	7.21	0.03	414.7	14.80	81.7	1.5	0.88	0.01	1.66	0.14	----	ND	ND	0	ND	0	----
Cesium chloride	Chlorinated Source Water (Unfiltered)	5/19/09	14:30	41	21.98	1.76	7.23	0.02	93	2	806.1	9.1	7.20	0.02	409.4	9.50	82.2	2.0	0.90	0.01	1.50	0.02	----	ND	ND	0	ND	0	----

Gasoline 3-18-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Gasoline	Chlorinated Source Water (Unfiltered)	3/18/09	12:14	0	23.04	0.00	7.11	0.00	89	0	755.3	0.0	7.17	0.00	433.0	0.0	77.6	0.0	0.99	0.00	1.45	0.00	0.00	ND	ND	-----	ND	-----	-----
Gasoline	Chlorinated Source Water (Unfiltered)	3/18/09	12:23	9	-----	1.01	7.1	0.01	89	0	762.3	7.0	7.18	0.01	423.3	9.7	77.0	0.6	0.98	0.01	1.48	0.03	0.85	ND	ND	-----	ND	-----	-----
Gasoline	Chlorinated Source Water (Unfiltered)	3/18/09	12:29	15	-----	2.61	7.14	0.03	90	1	764.7	9.4	7.20	0.03	396.2	36.8	78.0	0.4	0.96	0.03	1.56	0.11	2.20	ND	ND	-----	ND	-----	-----
Gasoline	Chlorinated Source Water (Unfiltered)	3/18/09	12:34	20	-----	4.29	7.14	0.03	88	1	766.6	11.3	7.19	0.02	394.1	38.9	78.2	0.6	0.93	0.06	1.7	0.25	3.61	ND	ND	-----	ND	-----	-----
Gasoline	Chlorinated Source Water (Unfiltered)	3/18/09	12:40	26	-----	6.06	7.13	0.02	89	0	768.5	13.2	7.20	0.03	395.7	37.3	78.0	0.4	0.89	0.10	1.81	0.36	5.10	ND	ND	-----	ND	-----	-----
Gasoline	Chlorinated Source Water (Unfiltered)	3/18/09	12:46	32	-----	7.93	7.23	0.12	89	0	767.7	12.4	7.19	0.02	418.7	14.3	77.9	0.3	0.92	0.07	1.85	0.40	6.68	ND	ND	-----	ND	-----	-----

Mercuric Chloride 2-19-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Mercuric chloride	Chlorinated Source Water (Unfiltered)	2/19/09	12:40	0	----	0.00	6.88	0.00	85	0	776	0	7.04	0.00	417	0	----	----	0.58	0.00	1.40	0.00	----	ND	ND	----	ND	----	
Mercuric chloride	Chlorinated Source Water (Unfiltered)	2/19/09	12:52	12	----	1.02	6.81	0.07	86	1	787	11	6.97	0.07	390	27	----	----	0.56	0.02	1.42	0.01	----	ND	ND	----	ND	----	
Mercuric chloride	Chlorinated Source Water (Unfiltered)	2/19/09	13:00	20	----	3.89	6.72	0.16	85	0	790	14	6.86	0.18	420	3	----	----	0.56	0.02	1.41	0.01	----	ND	ND	----	ND	----	
Mercuric chloride	Chlorinated Source Water (Unfiltered)	2/19/09	13:09	29	----	15.16	6.5	0.38	87	2	797	21	6.63	0.41	443	26	----	----	0.54	0.04	1.40	0.00	----	220	0.010	0.0099	ND	----	Free chlorine reading taken at 1315
Mercuric chloride	Chlorinated Source Water (Unfiltered)	2/19/09	13:21	41	----	20.69	6.45	0.43	86	1	799	23	6.57	0.47	519	102	----	----	0.54	0.04	1.42	0.01	----	220	0.027	0.0269	ND	----	
Mercuric chloride	Chlorinated Source Water (Unfiltered)	2/19/09	13:30	50	----	33.18	6.6	0.28	88	3	763	13	6.47	0.57	408	9	----	----	0.55	0.03	1.64	0.23	----	220	0.079	0.0789	ND	----	

Nicotine 4-8-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Nicotine	Chlorinated Source Water (Unfiltered)	4/8/09	11:51	0	23.72	0.00	7.10	0.00	91	0	762.3	0.0	7.01	0.00	416.0	0.0	77.5	0.0	0.86	0.00	1.47	0.00	0.00	ND	ND	0.000	ND	0.000	UV-Vis analysis run on 6/18/09
Nicotine	Chlorinated Source Water (Unfiltered)	4/8/09	12:01	10	-----	1.03	7.09	0.01	92	1	714.3	48.0	7.04	0.03	372.7	43.3	77.3	0.2	0.50	0.36	2.23	0.76	0.76	ND	ND	0.000	ND	0.000	
Nicotine	Chlorinated Source Water (Unfiltered)	4/8/09	12:08	17	-----	2.46	7.12	0.02	93	2	706.2	56.1	7.10	0.09	321.3	94.7	76.6	0.9	0.14	0.72	3.28	1.81	1.82	0.018	260	0.018	0.014	0.014	
Nicotine	Chlorinated Source Water (Unfiltered)	4/8/09	12:14	23	-----	2.84	7.10	0.00	96	5	661.0	101.3	7.13	0.12	293.0	123.0	76.1	1.4	0.13	0.73	3.64	2.17	2.10	0.021	260	0.021	0.016	0.016	
Nicotine	Chlorinated Source Water (Unfiltered)	4/8/09	12:22	31	-----	3.24	7.22	0.12	106	15	624.6	137.7	7.15	0.14	293.3	122.7	78.1	0.6	0.06	0.80	3.98	2.51	2.39	0.022	260	0.022	0.016	0.016	
Nicotine	Chlorinated Source Water (Unfiltered)	4/8/09	12:29	38	-----	3.66	7.24	0.14	117	26	602.0	160.3	7.18	0.17	291.8	124.2	78.3	0.8	0.06	0.80	4.25	2.78	2.70	0.024	260	0.024	0.018	0.018	

Nicotine 4-15-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Nicotine	Chlorinated Source Water (Unfiltered)	4/15/09	11:14	0	16.54	0.00	7.05	0.00	91	0	751.1	0.0	7.04	0.00	400.0	0.0	71.5	0.0	0.86	0.00	1.57	0.00	0.00	ND	ND	0.000	ND	0.000	
Nicotine	Chlorinated Source Water (Unfiltered)	4/15/09	11:27	13	-----	1.03	7.05	0.00	89	2	772.8	21.7	7.07	0.03	358.8	41.2	71.3	0.2	0.64	0.22	2.41	0.84	0.76	ND	ND	0.000	ND	0.000	
Nicotine	Chlorinated Source Water (Unfiltered)	4/15/09	11:34	20	-----	2.11	7.11	0.06	89	2	756.0	4.9	7.12	0.08	331.3	68.7	71.4	0.1	0.42	0.44	3.34	1.77	1.56	0.018	260	0.018	0.014	0.014	UV-Vis analysis run on 6/18/09
Nicotine	Chlorinated Source Water (Unfiltered)	4/15/09	11:41	27	-----	2.30	7.14	0.09	91	0	741.9	9.2	7.12	0.08	305.2	94.8	70.1	1.4	0.22	0.64	3.49	1.92	1.70	0.021	260	0.021	0.016	0.016	
Nicotine	Chlorinated Source Water (Unfiltered)	4/15/09	11:48	34	-----	2.40	7.19	0.14	92	1	725.7	25.4	7.11	0.07	282.2	117.8	69.8	1.7	0.18	0.68	3.61	2.04	1.78	0.022	260	0.022	0.016	0.016	
Nicotine	Chlorinated Source Water (Unfiltered)	4/15/09	11:55	41	-----	2.51	7.18	0.13	89	2	709.1	42.0	7.10	0.06	267.1	132.9	70.7	0.8	0.11	0.75	3.59	2.02	1.86	0.024	260	0.024	0.018	0.018	

Oxamyl 3-5-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Oxamyl	Chlorinated Source Water (Unfiltered)	3/5/09	14:06	0	19.69	0.00	7.14	0.00	89	0.00	760	0	7.15	0.00	384	0	76.1	0.0	0.94	0.00	1.71	0.00	0.00	ND	ND	0.000	ND	0.000	
Oxamyl	Chlorinated Source Water (Unfiltered)	3/5/09	14:13	7	-----	1.01	7.16	0.02	90	1.00	764	4	7.15	0.00	381	3	76.0	0.1	0.83	0.11	2.18	0.48	0.39	0.018	220	0.018	0.006	0.006	
Oxamyl	Chlorinated Source Water (Unfiltered)	3/5/09	14:21	15	-----	2.41	7.15	0.01	90	1.00	767	7	7.15	0.00	320	64	76.2	0.1	0.83	0.11	3.08	1.37	0.92	0.069	220	0.069	0.035	0.035	UV-Vis analysis run on 6/18/09
Oxamyl	Chlorinated Source Water (Unfiltered)	3/5/09	14:29	23	-----	5.00	7.14	0.00	90	1.00	771	11	7.17	0.02	412	28	74.3	1.8	0.81	0.13	5.23	3.52	1.92	0.169	220	0.169	0.091	0.091	
Oxamyl	Chlorinated Source Water (Unfiltered)	3/5/09	14:37	31	-----	10.84	7.12	0.02	91	2.00	771	11	7.16	0.01	467	83	76.3	0.2	0.76	0.18	7.59	5.88	4.15	0.396	220	0.396	0.220	0.220	
Oxamyl	Chlorinated Source Water (Unfiltered)	3/5/09	14:47	41	-----	17.00	7.14	0.00	90	1.00	768	8	7.10	0.05	444	60	77.3	1.2	0.67	0.27	1.53	0.17	6.51	0.627	220	0.627	0.350	0.350	

Sodium Fluoroacetate 3-11-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Sodium fluoroacetate	Chlorinated Source Water (Unfiltered)	3/11/09	14:28	0	21.29	0.00	7.25	0.00	90	0	763.5	0.0	7.21	0.00	470.5	0.0	75.2	0.0	1.00	0.00	1.54	0.00	0.00	ND	ND	0.000	ND	0.000	-----
Sodium fluoroacetate	Chlorinated Source Water (Unfiltered)	3/11/09	14:39	11	-----	1.01	7.26	0.01	91	1	749.8	13.7	7.21	0.00	460.6	9.9	77.1	1.9	1.00	0.00	1.73	0.19	0.24	ND	ND	0.000	ND	0.000	-----
Sodium fluoroacetate	Chlorinated Source Water (Unfiltered)	3/11/09	14:47	19	-----	17.62	7.21	0.04	104	14	768.3	4.8	7.22	0.01	451.5	19.0	88.7	13.5	0.96	0.04	5.57	4.03	4.23	ND	ND	0.000	ND	0.000	-----

Sodium Fluoroacetate 6-3-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Sodium fluoroacetate	Chlorinated Source Water (Unfiltered)	6/3/09	10:56	0	23.79	0.00	7.06	0.00	90	0	784.9	0.0	6.95	0.00	456.7	0.0	77.3	0.0	0.88	0.00	1.50	0.00	0.00	ND	ND	0.000	ND	0.000	-----
Sodium fluoroacetate	Chlorinated Source Water (Unfiltered)	6/3/09	11:06	10	23.38	1.01	7.03	0.03	91	1	795.2	10.3	6.97	0.00	458.3	1.6	76.9	0.4	0.89	0.01	1.74	0.23	0.24	ND	ND	0.000	ND	0.000	-----
Sodium fluoroacetate	Chlorinated Source Water (Unfiltered)	6/3/09	11:15	19	23.03	17.58	7.03	0.03	103	13	783.3	1.6	6.98	0.01	446.5	10.2	87.4	10.1	0.82	0.06	5.25	3.75	4.22	ND	ND	0.000	ND	0.000	-----

Phorate 3-17-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			(Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Phorate	Chlorinated Source Water (Unfiltered)	3/17/09	11:36	0	23.70	0.00	7.20	0.00	91	0	749.4	0.0	7.15	0.00	476.6	0.0	78.1	0.0	1.04	0.00	1.58	0.00	-----	ND	ND	-----	ND	-----	-----
Phorate	Chlorinated Source Water (Unfiltered)	3/17/09	11:48	12	-----	0.79	7.22	0.02	91	0	752.5	3.1	7.12	0.03	511	34.4	77.5	0.6	0.86	0.18	1.57	0.01	-----	ND	ND	-----	ND	-----	-----
Phorate	Chlorinated Source Water (Unfiltered)	3/17/09	11:53	17	-----	1.62	7.18	0.02	90	1	750.0	0.6	7.09	0.06	485.4	8.8	78.5	0.4	0.78	0.26	1.64	0.06	-----	ND	ND	-----	ND	-----	-----
Phorate	Chlorinated Source Water (Unfiltered)	3/17/09	11:59	23	-----	2.49	7.18	0.02	90	1	738.4	11.0	7.04	0.11	431.5	45.1	78.4	0.3	0.26	0.78	1.78	0.20	-----	ND	ND	-----	ND	-----	-----
Phorate	Chlorinated Source Water (Unfiltered)	3/17/09	12:05	29	-----	3.41	7.15	0.05	76	15	713.5	35.9	6.99	0.16	330.6	146.0	78.4	0.3	0.02	1.02	1.89	0.31	-----	ND	ND	-----	ND	-----	-----
Phorate	Chlorinated Source Water (Unfiltered)	3/17/09	12:11	35	-----	4.39	7.05	0.15	92	1	688.0	61.4	6.99	0.16	275.5	201.1	79.7	1.6	0.04	1.00	2.04	0.46	-----	ND	ND	-----	ND	-----	-----

Potassium Cyanide 5-7-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Potassium cyanide	Chlorinated Source Water (Unfiltered)	5/7/09	10:30	0	21.87	0.00	7.12	0.00	91	0	798.5	0.0	7.15	0.0	493.5	0.0	79.0	0.0	0.91	0.00	1.50	0.00	-----	ND	ND	-----	ND	-----	-----
Potassium cyanide	Chlorinated Source Water (Unfiltered)	5/7/09	10:39	9	21.79	0.07	7.12	0.00	91	0	797.4	1.1	7.18	0.0	469.6	23.9	79.0	0.0	0.83	0.08	1.49	0.01	-----	ND	ND	-----	ND	-----	-----
Potassium cyanide	Chlorinated Source Water (Unfiltered)	5/7/09	10:48	18	21.59	0.21	7.18	0.06	92	1	787.6	10.9	7.23	0.1	431.0	62.5	79.5	0.5	0.64	0.27	1.47	0.03	-----	ND	ND	-----	ND	-----	-----
Potassium cyanide	Chlorinated Source Water (Unfiltered)	5/7/09	10:56	26	21.44	0.36	7.20	0.08	91	0	778.1	20.4	7.27	0.1	381.5	112.0	79.6	0.6	0.45	0.46	1.53	0.03	-----	ND	ND	-----	ND	-----	-----
Potassium cyanide	Chlorinated Source Water (Unfiltered)	5/7/09	11:04	34	21.31	0.52	7.24	0.12	93	2	762.2	36.3	7.33	0.2	323.6	169.9	80.5	1.5	0.18	0.73	1.56	0.06	-----	ND	ND	-----	ND	-----	-----
Potassium cyanide	Chlorinated Source Water (Unfiltered)	5/7/09	11:11	41	21.27	0.60	7.27	0.15	92	1	742.0	56.5	7.36	0.2	276.6	216.9	80.5	1.5	0.12	0.79	1.56	0.06	-----	ND	ND	-----	ND	-----	-----

Sodium Arsenite 3-26-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Sodium arsenite	Chlorinated Source Water (Unfiltered)	3/26/09	10:53	0	22.91	0.00	7.00	0.00	88	0.00	744.9	0.0	7.06	0.00	465.9	0.0	78.0	0.0	0.81	0.00	1.50	0.00	-----	ND	ND	-----	ND	-----	-----
Sodium arsenite	Chlorinated Source Water (Unfiltered)	3/26/09	11:02	9	-----	0.10	7.05	0.05	90	2.00	744.0	0.9	7.13	0.07	420.6	45.3	77.4	0.6	0.76	0.05	1.55	0.05	-----	ND	ND	-----	ND	-----	-----
Sodium arsenite	Chlorinated Source Water (Unfiltered)	3/26/09	11:08	15	-----	0.21	7.05	0.05	89	1.00	743.9	1.0	7.12	0.06	459.7	6.2	78.0	0.0	0.71	0.10	1.54	0.04	-----	ND	ND	-----	ND	-----	-----
Sodium arsenite	Chlorinated Source Water (Unfiltered)	3/26/09	11:13	20	-----	0.43	7.02	0.02	90	2.00	741.7	3.2	7.09	0.03	440.7	25.2	78.0	0.0	0.56	0.25	1.56	0.06	-----	ND	ND	-----	ND	-----	-----
Sodium arsenite	Chlorinated Source Water (Unfiltered)	3/26/09	11:19	26	-----	0.67	7.01	0.01	91	3.00	734.1	10.8	7.07	0.01	413.3	52.6	78.7	0.7	0.43	0.38	1.55	0.05	-----	ND	ND	-----	ND	-----	-----
Sodium arsenite	Chlorinated Source Water (Unfiltered)	3/26/09	11:25	32	-----	1.09	7.10	0.10	89	1.00	686.6	58.3	7.03	0.03	348.1	117.8	79.2	1.2	0.22	0.59	1.57	0.07	-----	ND	ND	-----	ND	-----	-----

Strychnine 4-23-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Strychnine	Chlorinated Source Water (Unfiltered)	4/23/09	10:17	0	23.39	0.00	7.18	0.00	90	0	779.7	0.0	7.11	0.00	455.5	0.0	77.5	0.0	1.03	0.00	1.32	0.00	-----	ND	-----	-----	ND	-----	-----
Strychnine	Chlorinated Source Water (Unfiltered)	4/23/09	10:30	13	22.90	1.01	7.22	0.04	91	1	709.9	69.8	7.12	0.01	406.9	48.6	77.4	0.1	0.99	0.04	1.53	0.21	-----	ND	-----	-----	ND	-----	-----
Strychnine	Chlorinated Source Water (Unfiltered)	4/23/09	10:38	21	22.75	5.81	7.21	0.03	90	0	770.0	9.7	7.14	0.03	360.6	94.9	77.2	0.3	0.93	0.10	2.48	1.16	-----	ND	-----	-----	ND	-----	-----
Strychnine	Chlorinated Source Water (Unfiltered)	4/23/09	10:46	29	22.61	11.43	7.28	0.10	91	1	770.5	9.2	7.21	0.10	359.8	95.7	77.4	0.1	0.77	0.26	4.27	2.95	-----	0.034	248	0.034	0.030	0.034	-----
Strychnine	Chlorinated Source Water (Unfiltered)	4/23/09	10:53	36	22.47	17.26	7.37	0.19	90	0	766.8	12.9	7.31	0.20	359.0	96.5	77.7	0.2	0.72	0.32	9.53	8.21	-----	0.189	254	0.189	0.189	0.189	-----
Strychnine	Chlorinated Source Water (Unfiltered)	4/23/09	11:03	46	22.33	24.54	7.47	0.29	90	0	751.6	28.1	7.44	0.33	352.6	102.9	78.0	0.5	0.48	0.56	10.70	9.38	-----	0.325	254	0.325	0.325	0.325	-----

Sodium Thiosulfate 3-12-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Sodium thiosulfate	Chlorinated Source Water (Unfiltered)	3/12/09	10:25	0	21.76	0.00	7.19	0.00	87	0	766.6	0.0	7.20	0.00	466.1	0.0	75.4	0.0	0.84	0.00	1.32	0.00	-----	ND	-----	ND	-----	-----	-----
Sodium thiosulfate	Chlorinated Source Water (Unfiltered)	3/12/09	10:34	9	-----	0.61	7.20	0.01	90	3	758.9	7.7	7.17	0.03	402.0	64.1	75.6	0.2	0.54	0.30	1.35	0.03	-----	ND	-----	ND	-----	-----	-----
Sodium thiosulfate	Chlorinated Source Water (Unfiltered)	3/12/09	10:42	17	-----	0.93	7.17	0.02	89	2	751.7	14.9	7.15	0.05	363.0	103.1	76.4	1.0	0.34	0.50	1.31	0.01	-----	ND	-----	ND	-----	-----	-----
Sodium thiosulfate	Chlorinated Source Water (Unfiltered)	3/12/09	10:49	24	-----	1.27	7.17	0.02	90	3	733.0	33.6	7.14	0.06	317.0	149.1	76.7	1.3	0.17	0.67	1.34	0.02	-----	ND	-----	ND	-----	-----	-----
Sodium thiosulfate	Chlorinated Source Water (Unfiltered)	3/12/09	10:56	31	-----	1.62	7.14	0.05	92	5	537.7	228.9	7.13	0.07	271.4	194.7	77.2	1.8	0.04	0.80	1.31	0.01	-----	ND	-----	ND	-----	-----	-----
Sodium thiosulfate	Chlorinated Source Water (Unfiltered)	3/12/09	11:02	37	-----	2.00	7.14	0.05	91	4	546.2	220.4	7.08	0.12	246.8	219.3	77.4	2.0	0.03	0.81	1.30	0.02	-----	ND	-----	ND	-----	-----	-----

Soy Broth

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Stock Concentration (mg/L)	Volume of Test Water (L)	Volume of media added (L)	Concentration of media in test water (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Comments
										pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		
Soy broth	Chlorinated Source Water (Unfiltered)	4/14/09	10:44	0	26.56	30,000	1.55	0.0000000	0.000	7.13	0.00	90	0	760.0	0.0	6.98	0.00	497.9	0.0	77.0	0.0	0.90	0.00	1.57	0.00	-----	-----
Soy broth	Chlorinated Source Water (Unfiltered)	4/14/09	10:57	13	-----	30,000	1.48	0.0000006	0.012	7.13	0.00	90	0	730.3	29.7	7.04	0.06	497.2	0.7	76.2	0.8	0.86	0.04	1.56	0.01	-----	-----
Soy broth	Chlorinated Source Water (Unfiltered)	4/14/09	11:03	19	-----	30,000	1.41	0.0000058	0.131	7.11	0.02	92	2	760.6	0.6	7.05	0.07	494.4	3.5	77.2	0.2	0.81	0.09	1.55	0.01	-----	-----
Soy broth	Chlorinated Source Water (Unfiltered)	4/14/09	11:09	25	-----	30,000	1.34	0.0000580	1.387	7.08	0.05	93	3	757.1	2.9	7.02	0.04	453.7	44.2	78.2	1.2	0.56	0.34	2.02	0.46	-----	-----
Soy broth	Chlorinated Source Water (Unfiltered)	4/14/09	11:15	31	-----	30,000	1.27	0.0005800	14.611	7.07	0.06	103	13	712.6	47.4	7.01	0.03	322.0	175.9	86.2	9.2	0.05	0.85	7.40	5.84	-----	-----
Soy broth	Chlorinated Source Water (Unfiltered)	4/14/09	11:21	37	-----	30,000	1.20	0.0058000	140.749	7.30	0.17	202	112	649.7	110.3	7.18	0.20	286.6	211.3	170.0	93.0	0.05	0.85	8.61	7.05	-----	-----

Sporemedia

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Stock Concentration (mg/L)	Volume of Test Water (L)	Volume of media added (L)	Concentration of media in test water (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Comments
										pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		
SporeMedia	Chlorinated Source Water (Unfiltered)	4/1/09	10:46	0	23.13	8,000	1.55	0.0000000	0.000	7.01	0.00	88	0	734.2	0.0	6.98	0.00	459.0	0.0	70.4	0.0	0.87	0.00	1.44	0.00	-----	-----
SporeMedia	Chlorinated Source Water (Unfiltered)	4/1/09	10:53	7	-----	8,000	1.48	0.0000006	0.003	7.04	0.03	89	1	738.2	4.0	6.98	0.00	457.9	1.1	72.1	1.7	0.92	0.05	1.44	0.00	-----	-----
SporeMedia	Chlorinated Source Water (Unfiltered)	4/1/09	10:59	13	-----	8,000	1.41	0.0000058	0.035	7.04	0.03	90	2	671.2	63.0	6.98	0.00	458.5	0.5	71.4	1.0	0.87	0.00	1.48	0.04	-----	-----
SporeMedia	Chlorinated Source Water (Unfiltered)	4/1/09	11:05	19	-----	8,000	1.34	0.0000580	0.370	7.07	0.06	90	2	714.4	19.8	6.96	0.02	459.0	0.0	74.8	4.4	0.79	0.08	1.64	0.20	-----	-----
SporeMedia	Chlorinated Source Water (Unfiltered)	4/1/09	11:11	25	-----	8,000	1.27	0.0005800	3.896	7.10	0.09	91	3	594.6	139.6	6.90	0.08	359.9	99.1	75.3	4.9	0.10	0.77	3.05	1.61	-----	-----
SporeMedia	Chlorinated Source Water (Unfiltered)	4/1/09	11:17	31	-----	8,000	1.20	0.0058000	140.749	7.07	0.06	97	9	462.5	271.7	6.85	0.13	306.0	153.0	83.5	13.1	0.03	0.84	21.89	20.45	-----	-----

B globigii in media

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Concentration (count per mL) of B. globigii Standard	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		
B. globigii in media	Chlorinated Source Water (Unfiltered)	3/31/09	11:03	0	-----	0	7.06	0.00	88	0	555.5	0.0	7.1	0.00	450.9	0.0	76.7	0.0	1.01	0.00	1.49	0.00	-----	-----
B. globigii in media	Chlorinated Source Water (Unfiltered)	3/31/09	11:15	12	-----	470	7.07	0.01	87	1	764.1	208.6	7.13	0.03	464.7	13.8	75.9	0.8	0.97	0.04	1.48	0.01	-----	-----
B. globigii in media	Chlorinated Source Water (Unfiltered)	3/31/09	11:23	20	-----	4,936	7.06	0.00	89	1	766.0	210.5	7.13	0.03	446.9	4.0	75.8	0.9	0.92	0.09	1.45	0.04	-----	-----
B. globigii in media	Chlorinated Source Water (Unfiltered)	3/31/09	11:30	27	-----	51,938	7.08	0.02	90	2	753.0	197.5	7.12	0.02	419.8	31.1	75.7	1.0	0.78	0.23	1.59	0.10	-----	-----
B. globigii in media	Chlorinated Source Water (Unfiltered)	3/31/09	11:39	36	-----	547,754	7.07	0.01	91	3	661.0	105.5	7.11	0.01	320.2	130.7	78.4	1.7	0.07	0.94	2.46	0.97	-----	-----
B. globigii in media	Chlorinated Source Water (Unfiltered)	3/31/09	11:47	44	-----	5,769,019	7.88	0.82	114	26	390.3	165.2	7.95	0.85	285.3	165.6	95.8	19.1	0.00	1.01	13.82	12.33	-----	-----

B globigii washed

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Concentration (count per mL) of B. globigii Standard	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Free Chlorine (mg/L)	Change in Free Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		
B. globigii (washed)	Water 3	5/21/09	5/21/09 12:56 PM	0	21.51	0	7.23	0.00	89	0	783.5	0.00	7.22	0.00	447.8	0.0	79.0	0.0	0.96	0.00	1.47	0.00	-----	-----
B. globigii (washed)	Water 3	5/21/09	5/21/09 1:07 PM	11	21.30	1,014	7.20	0.03	92	3	792.4	8.90	7.23	0.01	435.2	12.6	78.9	0.1	0.96	0.00	1.47	0.00	-----	-----
B. globigii (washed)	Water 3	5/21/09	5/21/09 1:15 PM	19	21.20	10,638	7.31	0.08	93	4	788.2	4.70	7.23	0.01	422.9	24.9	78.9	0.1	0.94	0.02	1.48	0.01	-----	-----
B. globigii (washed)	Water 3	5/21/09	5/21/09 1:22 PM	26	21.11	111,929	7.34	0.11	89	0	781.4	2.10	7.23	0.01	413.0	34.8	78.2	0.8	0.92	0.04	1.49	0.02	-----	-----
B. globigii (washed)	Water 3	5/21/09	5/21/09 1:29 PM	33	21.03	1,179,812	7.33	0.10	89	0	764.7	18.80	7.23	0.01	400.9	46.9	78.3	0.7	0.90	0.06	1.51	0.05	-----	-----
B. globigii (washed)	Water 3	5/21/09	5/21/09 1:37 PM	41	20.92	12,356,981	7.16	0.07	89	0	639.0	144.50	7.19	0.03	409.9	37.9	78.7	0.3	0.88	0.09	1.52	0.06	-----	-----

Water 4 Chloraminated Unfiltered Source Water

Aldicarb 10-8/09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Aldicarb	Chloraminated Source Water	10/8/09	11:32	0	23.33	0.00	8.30	0.00	60.0	0.0	344.0	0.0	8.28	0.00	220.0	0.0	53.7	0.00	1.81	0.00	1.49	0.00	0.00	ND	ND	0.000	ND	0.000	-----
Aldicarb	Chloraminated Source Water	10/8/09	11:40	8	23.23	1.01	8.26	0.04	60.0	0.0	353.7	9.7	8.22	0.06	227.0	7.0	53.7	0.00	1.75	0.06	1.92	0.43	0.45	0.004	240	0.004	0.002	0.002	-----
Aldicarb	Chloraminated Source Water	10/8/09	11:47	15	23.94	2.43	8.21	0.09	60.0	0.0	363.0	19.0	8.18	0.10	230.1	10.1	53.8	0.10	1.79	0.02	2.39	0.90	1.07	0.013	242	0.013	0.008	0.008	-----
Aldicarb	Chloraminated Source Water	10/8/09	11:53	21	23.08	5.03	8.15	0.15	60.5	0.5	369.1	25.1	8.10	0.18	235.0	15.0	53.9	0.20	1.75	0.06	3.49	2.00	2.22	0.04	244	0.040	0.029	0.029	-----
Aldicarb	Chloraminated Source Water	10/8/09	12:01	29	23.01	10.90	8.05	0.25	61.0	1.0	377.2	33.2	7.98	0.30	239.9	19.9	53.9	0.20	1.64	0.17	5.85	4.36	4.81	0.092	244	0.092	0.068	0.068	-----
Aldicarb	Chloraminated Source Water	10/8/09	12:09	37	22.99	17.08	7.93	0.37	61.0	1.0	379.8	35.8	7.87	0.41	242.9	22.9	54.0	0.30	1.54	0.27	8.45	6.96	7.54	0.147	242	0.147	0.107	0.107	-----

Cesium Chloride 9-10-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Cesium chloride	Chloraminated Source Water	9/10/09	13:57	0	22	0.00	7.42	0.00	56.5	0.0	503.0	0.0	7.26	0.00	253.0	0.0	48.9	0.0	1.57	0.00	1.60	0.00	-----	ND	ND	-----	ND	-----	-----
Cesium chloride	Chloraminated Source Water	9/10/09	14:05	8	21.79	0.25	7.40	0.02	58.5	2.0	484.4	18.6	7.25	0.01	253.3	0.3	49.1	0.2	1.54	0.03	1.54	0.06	-----	ND	ND	-----	ND	-----	-----
Cesium chloride	Chloraminated Source Water	9/10/09	14:12	15	21.65	0.66	7.38	0.04	58.5	2.0	497.0	6.0	7.25	0.01	254.7	1.7	49.1	0.2	1.53	0.04	1.50	0.10	-----	ND	ND	-----	ND	-----	-----
Cesium chloride	Chloraminated Source Water	9/10/09	14:19	22	21.51	1.36	7.39	0.03	56.5	0.0	496.0	7.0	7.25	0.01	253.7	0.7	49.5	0.6	1.48	0.09	1.53	0.07	-----	ND	ND	-----	ND	-----	-----
Cesium chloride	Chloraminated Source Water	9/10/09	14:26	29	21.37	2.84	7.39	0.03	57.0	0.5	496.8	6.2	7.25	0.01	254.9	1.9	49.8	0.9	1.55	0.02	1.50	0.10	-----	ND	ND	-----	ND	-----	-----
Cesium chloride	Chloraminated Source Water	9/10/09	14:33	36	21.25	4.41	7.37	0.05	58.5	2.0	487.7	15.3	7.24	0.02	254.6	1.6	50.5	1.6	1.51	0.06	1.52	0.08	-----	ND	ND	-----	ND	-----	-----

Gasoline 10-20-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Gasoline	Chloraminated Source Water	10/20/09	11:13	0	22.77	0.00	7.07	0.00	65.0	0.0	480.9	0.0	7.01	0.00	305.2	0.0	53.6	0.0	1.68	0.00	1.42	0.00	0.00	ND	ND	ND	ND	ND	-----
Gasoline	Chloraminated Source Water	10/20/09	11:21	8	22.59	1.01	7.18	0.11	61.5	3.5	491.2	10.3	7.11	0.10	306.4	1.2	53.1	0.5	1.70	0.02	1.47	0.05	0.85	ND	ND	ND	ND	ND	-----
Gasoline	Chloraminated Source Water	10/20/09	11:27	14	22.49	2.61	7.22	0.15	64.0	1.0	495.3	14.4	7.14	0.13	306.7	1.5	53.0	0.6	1.61	0.07	1.51	0.09	2.20	ND	ND	ND	ND	ND	-----
Gasoline	Chloraminated Source Water	10/20/09	11:33	20	22.4	4.29	7.21	0.14	63.5	1.5	499.2	18.3	7.15	0.14	305.4	0.2	53.0	0.6	1.62	0.06	1.70	0.28	3.61	ND	ND	ND	ND	ND	-----
Gasoline	Chloraminated Source Water	10/20/09	11:39	26	22.33	6.06	7.22	0.15	62.5	2.5	500.7	19.8	7.18	0.17	307.1	1.9	52.7	0.9	1.58	0.10	1.86	0.44	5.10	ND	ND	ND	ND	ND	-----
Gasoline	Chloraminated Source Water	10/20/09	11:46	33	22.26	7.93	7.26	0.19	61.0	4.0	499.0	18.1	7.20	0.19	308.0	2.8	52.8	0.8	1.59	0.09	1.96	0.54	6.68	ND	ND	ND	ND	ND	-----

Mercuric Chloride 9-15-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Mercuric Chloride	Chloraminated Source Water	9/15/09	10:03	0	22.3	0.00	7.10	0.00	57.0	0.0	448.3	0.0	7.12	0.00	241.0	0.0	48.8	0.0	1.40	0.00	2.39	0.00	-----	ND	ND	0.000	ND	0.000	-----
Mercuric Chloride	Chloraminated Source Water	9/15/09	10:12	9	22.01	1.01	7.05	0.05	57.0	0.0	473.6	25.3	7.03	0.09	255.5	14.5	48.8	0.0	1.39	0.01	2.33	0.06	-----	ND	ND	0.000	ND	0.000	-----
Mercuric Chloride	Chloraminated Source Water	9/15/09	10:19	16	21.78	3.85	6.87	0.23	57.5	0.5	460.6	12.3	6.83	0.29	270.4	29.4	49.1	0.3	1.40	0.00	2.33	0.06	-----	ND	ND	0.000	ND	0.000	-----
Mercuric Chloride	Chloraminated Source Water	9/15/09	10:29	26	21.54	9.06	6.62	0.48	58.0	1.0	487.0	38.7	6.54	0.58	297.8	56.8	50.4	1.6	1.37	0.03	2.36	0.03	-----	ND	ND	0.000	ND	0.000	-----
Mercuric Chloride	Chloraminated Source Water	9/15/09	10:36	33	21.38	20.81	6.34	0.76	58.5	1.5	499.5	51.2	6.26	0.86	329.9	88.9	51.7	2.9	1.34	0.06	2.39	0.00	-----	0.015	220	0.015	ND	0.000	-----
Mercuric Chloride	Chloraminated Source Water	9/15/09	10:43	40	21.23	33.18	6.23	0.87	59.0	2.0	498.1	49.8	6.14	0.98	341.2	100.2	52.4	3.6	1.32	0.08	2.41	0.02	-----	0.049	220	0.049	ND	0.000	-----

Nicotine 9-9-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Nicotine	Chloraminated Source Water	9/9/09	9:57	0	25.85	0.00	7.92	0.00	57.5	0.0	302.0	0.0	7.75	0.00	239.9	0.0	50.1	0.0	1.55	0.00	1.68	0.00	0.00	ND	ND	0.000	ND	0.000	-----
Nicotine	Chloraminated Source Water	9/9/09	10:04	7	25.28	1.07	7.96	0.04	57.5	0.0	305.6	3.6	7.81	0.06	244.7	4.8	49.7	0.4	1.54	0.01	2.68	1.00	0.79	0.006	256	0.006	0.006	0.006	-----
Nicotine	Chloraminated Source Water	9/9/09	10:11	14	24.79	2.58	8.01	0.09	57.5	0.0	303.1	1.1	7.90	0.15	248.9	9.0	49.6	0.5	1.57	0.02	3.95	2.27	1.91	0.046	260	0.046	0.038	0.038	-----
Nicotine	Chloraminated Source Water	9/9/09	10:17	20	24.37	6.52	7.97	0.05	58.5	1.0	307.9	5.9	8.03	0.28	251.9	12.0	50.0	0.1	1.52	0.03	7.84	6.16	4.83	0.143	260	0.143	0.122	0.122	-----
Nicotine	Chloraminated Source Water	9/9/09	10:26	29	23.82	12.76	8.07	0.15	59.5	2.0	304.5	2.5	8.18	0.43	252.8	12.9	50.0	0.1	1.44	0.11	14.28	12.60	9.44	0.293	260	0.293	0.251	0.251	-----
Nicotine	Chloraminated Source Water	9/9/09	10:33	36	23.46	19.34	8.37	0.45	59.5	2.0	286.6	15.4	8.25	0.50	253.3	13.4	50.6	0.5	1.38	0.17	22.39	20.71	14.31	0.465	260	0.465	0.401	0.401	-----

Oxamyl 8-31-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Oxamyl	Chloraminated Source Water	8/31/09	14:45	0	23.29	0.00	8.25	0.00	57.5	0.0	385.0	0.0	8.00	0.00	233.5	0.0	49.3	0.0	1.67	0.00	1.64	0.00	0.00	ND	ND	0.000	ND	0.000	-----
Oxamyl	Chloraminated Source Water	8/31/09	14:51	6	22.97	1.02	8.26	0.01	56.0	1.5	369.9	15.1	8.00	0.00	236.1	2.6	49.0	0.3	1.70	0.03	2.02	0.38	0.39	0.027	230	0.027	0.014	0.014	-----
Oxamyl	Chloraminated Source Water	8/31/09	14:58	13	22.72	2.45	8.21	0.04	56.5	1.0	397.4	12.4	7.98	0.02	236.9	3.4	49.7	0.4	1.66	0.01	2.51	0.87	0.94	0.086	220	0.086	0.046	0.046	-----
Oxamyl	Chloraminated Source Water	8/31/09	15:05	20	22.58	5.07	8.19	0.06	56.0	1.5	402.6	17.6	7.96	0.04	239.9	6.4	49.7	0.4	1.65	0.02	3.64	2.00	1.94	0.199	220	0.199	0.109	0.109	-----
Oxamyl	Chloraminated Source Water	8/31/09	15:12	27	22.5	10.99	8.18	0.07	56.0	1.5	405.0	20.0	7.94	0.06	239.9	6.4	49.6	0.3	1.67	0.00	5.72	4.08	4.21	0.438	220	0.438	0.244	0.244	-----
Oxamyl	Chloraminated Source Water	8/31/09	15:19	34	22.28	17.24	8.14	0.11	56.0	1.5	410.4	25.4	7.90	0.10	240.6	7.1	49.5	0.2	1.65	0.02	8.11	6.47	6.61	0.701	220	0.701	0.386	0.386	-----

Phorate 9-3-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Phorate	Chloraminated Source Water	9/3/09	9:55	0	23.63	0.00	7.97	0.00	58.5	0.0	380.0	0.0	7.73	0.00	227.0	0.0	49.2	0.0	1.65	0.00	1.56	0.00	0.00	ND	ND	-----	ND	ND	-----
Phorate	Chloraminated Source Water	9/3/09	10:07	12	23.26	0.79	7.87	0.10	58.5	0.0	399.8	19.8	7.77	0.04	241.2	14.2	48.7	0.5	1.54	0.11	1.56	0.00	0.26	ND	ND	-----	ND	ND	-----
Phorate	Chloraminated Source Water	9/3/09	10:17	22	22.81	3.28	7.83	0.14	57.5	1.0	380.8	0.8	7.67	0.06	245.9	18.9	49.3	0.1	1.59	0.06	1.77	0.21	1.06	ND	ND	-----	ND	ND	-----
Phorate	Chloraminated Source Water	9/3/09	10:26	31	22.51	12.01	7.80	0.17	57.5	1.0	414.5	34.5	7.62	0.11	246.2	19.2	49.3	0.1	1.52	0.13	2.05	0.49	3.87	ND	ND	-----	ND	ND	-----
Phorate	Chloraminated Source Water	9/3/09	10:34	39	22.25	16.62	7.76	0.21	59.5	1.0	419.4	39.4	7.68	0.05	245.1	18.1	49.4	0.2	1.55	0.10	2.26	0.70	5.36	ND	ND	-----	ND	ND	-----
Phorate	Chloraminated Source Water	9/3/09	10:43	48	22	21.49	7.73	0.24	57.5	1.0	421.3	41.3	7.56	0.17	245.2	18.2	49.4	0.2	1.46	0.19	2.42	0.86	6.93	ND	ND	-----	ND	ND	-----

Potassium Cyanide 9-22-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Potassium cyanide	Chloraminated Source Water	9/22/09	10:17	0	22.96	0.00	8.73	0.00	61.0	0.0	314.2	0.0	8.59	0.00	234.9	0.0	53.9	0.0	1.85	0.00	1.49	0.00	-----	ND	ND	-----	ND	-----	-----
Potassium cyanide	Chloraminated Source Water	9/22/09	10:25	8	22.79	0.14	8.75	0.02	61.0	0.0	290.8	23.4	8.59	0.00	245.0	10.1	53.9	0.0	1.82	0.03	1.61	0.12	-----	ND	ND	-----	ND	-----	-----
Potassium cyanide	Chloraminated Source Water	9/22/09	10:32	15	22.64	0.49	8.68	0.05	61.5	0.5	292.3	21.9	8.60	0.01	239.8	4.9	54.2	0.3	1.81	0.04	1.55	0.06	-----	ND	ND	-----	ND	-----	-----
Potassium cyanide	Chloraminated Source Water	9/22/09	10:39	22	22.51	0.86	8.68	0.05	61.0	0.0	289.5	24.7	8.60	0.01	233.7	1.2	54.8	0.9	1.74	0.11	1.53	0.04	-----	ND	ND	-----	ND	-----	-----
Potassium cyanide	Chloraminated Source Water	9/22/09	10:46	29	22.4	1.65	8.75	0.02	61.5	0.5	275.7	38.5	8.62	0.03	241.8	6.9	56.1	2.2	1.56	0.29	1.54	0.05	-----	ND	ND	-----	ND	-----	-----
Potassium cyanide	Chloraminated Source Water	9/22/09	10:54	37	22.27	2.90	8.77	0.04	63.5	2.5	256.0	58.2	8.69	0.10	253.4	18.5	58.8	4.9	1.06	0.79	1.81	0.32	-----	ND	ND	-----	ND	-----	-----

Sodium Arsenite 9-16-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Sodium arsenite	Chloraminated Source Water	9/16/09	10:08	18	22.75	0.00	7.20	0.00	56.5	0.0	444.7	0.0	6.99	0.00	245.6	0.0	49.2	0.0	1.41	0.00	2.35	0.00	-----	ND	ND	-----	ND	-----	
Sodium arsenite	Chloraminated Source Water	9/16/09	10:17	27	22.56	1.03	7.24	0.04	57.0	0.5	355.1	89.6	7.16	0.17	250.7	5.1	50.1	0.9	1.32	0.09	2.35	0.00	-----	ND	ND	-----	ND	-----	
Sodium arsenite	Chloraminated Source Water	9/16/09	10:24	34	22.43	2.47	7.52	0.32	60.0	3.5	300.4	144.3	7.36	0.37	248.6	3.0	51.1	1.9	1.22	0.19	2.34	0.01	-----	ND	ND	-----	ND	-----	
Sodium arsenite	Chloraminated Source Water	9/16/09	10:30	40	22.32	5.13	8.12	0.92	60.5	4.0	233.2	211.5	8.00	1.01	239.9	5.7	52.9	3.7	1.14	0.27	2.36	0.01	-----	ND	ND	-----	ND	-----	
Sodium arsenite	Chloraminated Source Water	9/16/09	10:37	47	22.2	11.12	8.60	1.40	63.0	6.5	173.2	271.5	8.46	1.47	225.7	19.9	56.5	7.3	0.89	0.52	2.24	0.11	-----	ND	ND	-----	ND	-----	
Sodium arsenite	Chloraminated Source Water	9/16/09	10:44	54	22.09	17.45	8.80	1.60	71.0	14.5	143.3	301.4	8.69	1.70	209.8	35.8	60.5	11.3	0.75	0.66	2.25	0.10	-----	ND	ND	-----	ND	-----	

Sodium Fluoracetate 8-17-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Sodium fluoroacetate	Chloraminated Source Water	8/17/09	9:59	0	23.12	0.00	8.38	0.00	-----	-----	332.5	0.0	8.33	0.00	205.1	0.0	45.0	0.0	1.83	0.00	2.01	0.00	0.00	ND	ND	-----	ND	-----	-----
Sodium fluoroacetate	Chloraminated Source Water	8/17/09	10:09	10	22.72	1.01	8.35	0.03	-----	-----	333.1	0.6	8.35	0.02	207.4	2.3	48.0	3.0	1.85	0.02	2.04	0.03	0.24	ND	ND	-----	ND	-----	-----
Sodium fluoroacetate	Chloraminated Source Water	8/17/09	10:18	19	22.39	17.55	8.37	0.01	-----	-----	334.6	2.1	8.37	0.04	210.7	5.6	67.0	22.0	1.82	0.01	5.68	3.68	4.21	ND	ND	-----	ND	-----	-----

Sodium Thiosulfate 9-30-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Sodium thiosulfate	Chloraminated Source Water	9/30/09	2:34	0	22.3	0.00	8.39	0.00	57.5	0.0	338.6	0.0	8.28	0.00	223.9	0.0	54.2	0.0	1.78	0.00	1.48	0.00	-----	ND	ND	-----	ND	-----	-----
Sodium thiosulfate	Chloraminated Source Water	9/30/09	2:43	9	22.33	1.03	8.33	0.06	58.5	1.0	283.4	55.2	8.18	0.10	222.2	1.7	55.9	1.7	1.30	0.48	1.49	0.01	-----	ND	ND	-----	ND	-----	-----
Sodium thiosulfate	Chloraminated Source Water	9/30/09	2:50	16	22.37	1.75	8.27	0.12	61.0	3.5	271.8	66.8	8.14	0.14	218.8	5.1	57.0	2.8	0.89	0.89	1.46	0.02	-----	ND	ND	-----	ND	-----	-----
Sodium thiosulfate	Chloraminated Source Water	9/30/09	2:56	22	22.41	2.51	8.25	0.14	62.5	5.0	256.7	81.9	8.14	0.14	212.8	11.1	58.3	4.1	0.52	1.26	1.65	0.17	-----	ND	ND	-----	ND	-----	-----
Sodium thiosulfate	Chloraminated Source Water	9/30/09	3:03	29	22.46	3.31	8.22	0.17	64.5	7.0	237.7	100.9	8.12	0.16	204.2	19.7	59.3	5.1	0.19	1.59	1.55	0.07	-----	ND	ND	-----	ND	-----	-----
Sodium thiosulfate	Chloraminated Source Water	9/30/09	3:10	36	22.51	3.73	8.17	0.22	65.0	7.5	220.6	118.0	8.06	0.22	194.6	29.3	60.0	5.8	0.05	1.73	1.51	0.03	-----	ND	ND	-----	ND	-----	-----

Strychnine 9-24-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Strychnine	Chloraminated Source Water	9/24/09	10:05	0	21.18	0.00	8.72	0.00	58.5	0.0	307.0	0.0	8.63	0.00	212.6	0.0	53.9	0.0	1.86	0.00	1.49	0.00	-----	ND	ND	0.000	ND	0.000	-----
Strychnine	Chloraminated Source Water	9/24/09	10:14	9	21.21	1.08	8.64	0.08	59.5	1.0	324.8	17.8	8.57	0.06	214.2	1.6	53.7	0.2	1.89	0.03	1.65	0.16	-----	ND	ND	0.000	ND	0.000	-----
Strychnine	Chloraminated Source Water	9/24/09	10:21	16	21.25	6.16	8.63	0.09	59.0	0.5	335.9	28.9	8.56	0.07	217.2	4.6	53.8	0.1	1.86	0.00	2.59	1.10	-----	ND	ND	0.000	ND	0.000	-----
Strychnine	Chloraminated Source Water	9/24/09	10:28	23	21.28	11.86	8.57	0.15	59.0	0.5	342.4	35.4	8.46	0.17	219.0	6.4	53.7	0.2	1.86	0.00	3.03	1.54	-----	0.039	254	0.039	0.039	0.039	-----
Strychnine	Chloraminated Source Water	9/24/09	10:34	29	21.3	18.85	8.51	0.21	59.5	1.0	348.3	41.3	8.42	0.21	221.0	8.4	53.6	0.3	1.86	0.00	3.91	2.42	-----	0.085	254	0.085	0.085	0.085	-----
Strychnine	Chloraminated Source Water	9/24/09	10:41	36	21.33	25.14	8.57	0.15	59.5	1.0	347.1	40.1	8.37	0.26	223.0	10.4	53.3	0.6	1.81	0.05	5.9	4.41	-----	0.13	254	0.130	0.130	0.130	-----

Soy Broth 11-4-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Stock Concentration (mg/L)	Volume of Test Water (L)	Volume of media added (L)	Concentration of media in test water (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
										pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Soy broth	Chloraminated Source Water	11/4/09	11:43	59	19.86	30,000	1.55	0.000000	0.000	8.39	0.00	62.0	0.0	319.3	0.0	8.30	0.00	242.4	0.0	52.9	0.0	1.76	0.00	1.40	0.00	-----	ND	ND	0.000	ND	0.000	
Soy broth	Chloraminated Source Water	11/4/09	11:51	67	19.80	30,000	1.48	0.000005	0.104	8.32	0.07	61.5	0.5	348.4	29.1	8.26	0.04	247.7	5.3	52.8	0.1	1.72	0.04	1.47	0.07	-----	ND	ND	0.000	ND	0.000	
Soy broth	Chloraminated Source Water	11/4/09	11:57	73	19.77	30,000	1.41	0.000050	1.172	8.29	0.10	66.0	4.0	356.9	37.6	8.22	0.08	250.7	8.3	53.3	0.4	1.67	0.09	3.48	2.08	-----	ND	ND	0.000	ND	0.000	
Soy broth	Chloraminated Source Water	11/4/09	12:04	80	19.75	30,000	1.34	0.000500	12.440	8.17	0.22	67.5	5.5	363.0	43.7	8.05	0.25	254.1	11.7	58.3	5.4	1.67	0.09	5.42	4.02	-----	0.049	220	0.049	0.078	0.078	Absorbance at 220nm: note that this is the shoulder of a peak. Actual peak is below 220 nm.
Soy broth	Chloraminated Source Water	11/4/09	12:11	87	19.74	30,000	1.27	0.005000	131.040	7.73	0.66	130.0	68.0	376.2	56.9	7.60	0.70	263.7	21.3	110.5	57.6	1.62	0.14	51.90	50.50	-----	0.719	220	0.719	0.937	0.937	Absorbance at 220nm: note that this is the shoulder of a peak. Actual peak is below 220 nm.
Soy broth	Chloraminated Source Water	11/4/09	12:17	93	19.77	30,000	1.20	0.050000	1,262.320	7.53	0.86	708.0	646.0	354.2	34.9	7.40	0.90	270.7	28.3	728.0	675.1	0.80	0.96	500.00	498.60	-----	3.216	220	3.216	0.938	0.938	Absorbance at 220nm: note that this is the shoulder of a peak. Actual peak is below 220 nm.

Sporemedia 10-22-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Stock Concentration (mg/L)	Volume of Test Water (L)	Volume of media added (L)	Concentration of media in test water (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
										pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
SporeMedia	Chloraminated Source Water	10/22/09	11:41	0	19.58	8,000	1.55	0.00000	0.000	8.53	0.00	61.0	0.0	391.8	0.0	8.44	0.00	236.3	0.0	53.8	0.0	1.78	0.00	1.40	0.00	-----	ND	ND	0.0	ND	0.0	
SporeMedia	Chloraminated Source Water	10/22/09	11:50	9	19.84	8,000	1.48	0.00005	0.028	8.49	0.04	61.0	0.0	399.3	7.5	8.42	0.02	244.0	7.7	53.7	0.1	1.83	0.05	1.47	0.07	-----	ND	ND	0.0	ND	0.0	
SporeMedia	Chloraminated Source Water	10/22/09	11:57	16	20.03	8,000	1.41	0.00050	0.312	8.43	0.10	60.5	0.5	404.2	12.4	8.39	0.05	248.7	12.4	54.0	0.2	1.71	0.07	3.48	2.08	-----	0.017	220	0.017	0.003	0.003	220 nm was the shoulder of the highest peak. Actual peak is between 200 and 220 nm.
SporeMedia	Chloraminated Source Water	10/22/09	12:04	23	20.21	8,000	1.34	0.00500	3.316	8.39	0.14	63.5	2.5	379.1	12.7	8.32	0.12	251.0	14.7	54.4	0.6	1.82	0.04	5.42	4.02	-----	0.012	220	0.012	ND	0.000	220 nm was the shoulder of the highest peak. Actual peak is between 200 and 220 nm.
SporeMedia	Chloraminated Source Water	10/22/09	12:11	30	20.39	8,000	1.27	0.05000	34.944	7.92	0.61	66.0	5.0	366.7	25.1	7.88	0.56	256.3	20.0	59.8	6.0	1.71	0.07	51.90	50.50	-----	0.201	220	0.201	0.040	0.040	220 nm was the shoulder of the highest peak. Actual peak is between 200 and 220 nm.
SporeMedia	Chloraminated Source Water	10/22/09	12:18	37	20.65	8,000	1.20	0.50000	336.620	7.18	1.35	136.0	75.0	398.6	6.8	7.09	1.35	266.6	30.3	108.2	54.4	1.10	0.68	500.00	498.60	-----	2.442	220	2.442	0.511	0.511	Phoenix TOC result is approximate. 220 nm was the shoulder of the highest peak. Actual peak is between 200 and 220 nm.

B. Globigii in media 10-22-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
B. globigii in media	Chloraminated Source Water	10/22/09	13:19	0	20.72	0	8.25	0.00	62.5	0.0	381.9	0.0	8.20	0.00	227.6	0.0	53.5	0.0	1.72	0.00	1.32	0.00	-----	ND	ND	0.000	ND	0.000	
B. globigii in media	Chloraminated Source Water	10/22/09	13:28	9	20.66	4,054	8.21	0.04	60.0	2.5	404.2	22.3	8.15	0.05	229.9	2.3	52.8	0.7	1.78	0.06	1.35	0.03	-----	ND	ND	0.000	ND	0.000	
B. globigii in media	Chloraminated Source Water	10/22/09	13:35	16	20.63	42,552	8.14	0.11	66.0	3.5	408.1	26.2	8.12	0.08	232.8	5.2	52.7	0.8	1.78	0.06	1.40	0.08	-----	ND	ND	0.000	ND	0.000	
B. globigii in media	Chloraminated Source Water	10/22/09	13:42	23	20.66	447,576	8.17	0.08	67.0	4.5	394.5	12.6	8.11	0.09	235.1	7.5	55.0	1.5	1.70	0.02	2.05	0.73	-----	0.012	220	0.012	ND	0.000	220 nm was the shoulder of the highest peak. Actual peak is between 200 and 220 nm.
B. globigii in media	Chloraminated Source Water	10/22/09	13:48	29	20.73	4,703,835	8.41	0.16	79.5	17.0	316.8	65.1	8.30	0.10	239.5	11.9	67.4	13.9	1.68	0.04	8.52	7.20	-----	0.192	220	0.192	0.051	0.051	220 nm was the shoulder of the highest peak. Actual peak is between 200 and 220 nm.
B. globigii in media	Chloraminated Source Water	10/22/09	13:54	35	20.85	47,787,632	8.68	0.43	238.0	175.5	258.2	123.7	8.56	0.36	238.7	11.1	168.0	114.5	1.39	0.33	72.00	70.68	-----	2.113	220	2.113	0.651	0.651	220 nm was the shoulder of the highest peak. Actual peak is between 200 and 220 nm.

B. Globigii washed 10-28-09

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance)			Hach DR/4000 (Abs. 254 nm)		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
B globigii washed	Chloraminated Source Water	10/28/09	13:38	0	19.67	0	8.38	0.00	60.0	0.0	318.8	0.0	8.32	0.00	235.0	0.0	53.7	0.0	1.79	0.00	1.40	0.00	-----	ND	ND	0.000	ND	0.000	
B globigii washed	Chloraminated Source Water	10/28/09	13:46	8	19.92	6,081	8.31	0.07	61.5	1.5	358.2	39.4	8.26	0.06	241.1	6.1	53.1	0.6	1.76	0.03	1.43	0.03	-----	ND	ND	0.000	ND	0.000	
B globigii washed	Chloraminated Source Water	10/28/09	13:52	14	20.09	63,826	8.27	0.11	62.0	2.0	369.0	50.2	8.22	0.10	245.0	10.0	53.1	0.6	1.75	0.04	1.39	0.01	-----	ND	ND	0.000	ND	0.000	
B globigii washed	Chloraminated Source Water	10/28/09	13:58	20	20.26	671,225	8.20	0.18	60.5	0.5	375.4	56.6	8.17	0.15	250.0	15.0	53.1	0.6	1.71	0.08	1.39	0.01	-----	ND	ND	0.000	ND	0.000	
B globigii washed	Chloraminated Source Water	10/28/09	14:04	26	20.43	7,040,422	8.18	0.20	62.0	2.0	377.8	59.0	8.12	0.20	251.9	16.9	52.9	0.8	1.75	0.04	1.39	0.01	-----	ND	ND	0.000	ND	0.000	
B globigii washed	Chloraminated Source Water	10/28/09	14:11	33	20.60	70,129,916	8.03	0.35	60.5	0.5	324.6	5.8	8.02	0.30	252.6	17.6	50.7	3.0	1.61	0.18	1.41	0.01	-----	0.032	220	0.032	0.004	0.004	Absorbance at 220nm: note that this is the shoulder of a peak. Actual peak is below 220 nm.

Water 5 Chloraminated Source Water (River) with Conventional Treatment

Cesium Chloride 5-26-10

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Cesium chloride	Chloraminated Source Water	5/26/10	14:52	0	24.81	0.00	6.90	0.00	316	0	517.1	0.0	6.96	0.00	349.1	0.0	315	0	1.85	0.00	1.11	0.00	-----	ND	ND	0.000	ND	0.000	-----
Cesium chloride	Chloraminated Source Water	5/26/10	15:02	10	24.45	0.10	6.93	0.03	316	0	544.3	27.2	7.00	0.04	342.9	6.2	315	0	1.84	0.01	1.09	0.02	-----	ND	ND	0.000	ND	0.000	-----
Cesium chloride	Chloraminated Source Water	5/26/10	15:10	18	24.16	0.26	7.02	0.12	316	0	565.0	47.9	7.09	0.13	355.0	5.9	315	0	1.82	0.03	1.09	0.02	-----	ND	ND	0.000	ND	0.000	-----
Cesium chloride	Chloraminated Source Water	5/26/10	15:18	26	23.93	0.54	7.02	0.12	316	0	563.2	46.1	7.12	0.16	360.1	11.0	316	1	1.81	0.04	ample lo	-----	-----	ND	ND	0.000	ND	0.000	-----
Cesium chloride	Chloraminated Source Water	5/26/10	15:26	34	23.65	1.13	7.05	0.15	318	2	568.3	51.2	7.17	0.21	405.3	56.2	317	2	1.78	0.07	1.07	0.04	-----	ND	ND	0.000	ND	0.000	-----
Cesium chloride	Chloraminated Source Water	5/26/10	15:34	42	23.44	1.76	7.08	0.18	319	3	575.8	58.7	7.20	0.24	422.6	73.5	318	3	1.74	0.11	1.12	0.01	-----	ND	ND	0.000	ND	0.000	-----

Gasoline 3-10-10

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Gasoline	Chloraminated Source Water	3/10/10	10:54	0	23.61	0.00	7.09	0.00	415	0	421.7	0.0	7.04	0.00	282.9	0.0	422	0	2.18	0.00	1.22	0.00	-----	ND	ND	0.000	ND	0.000	-----
Gasoline	Chloraminated Source Water	3/10/10	11:10	16	23.45	1.01	7.17	0.08	418	3	430.0	8.3	7.11	0.07	287.1	4.2	420	2	2.12	0.06	1.27	0.05	-----	ND	ND	0.000	ND	0.000	-----
Gasoline	Chloraminated Source Water	3/10/10	11:19	25	23.40	2.61	7.18	0.09	418	3	422.7	1.0	7.16	0.12	288.0	5.1	422	0	2.12	0.06	1.33	0.11	-----	ND	ND	0.000	ND	0.000	-----
Gasoline	Chloraminated Source Water	3/10/10	11:28	34	23.36	4.29	7.23	0.14	418	3	419.6	2.1	7.18	0.14	288.3	5.4	422	1	2.12	0.06	1.43	0.21	-----	ND	ND	0.000	ND	0.000	-----
Gasoline	Chloraminated Source Water	3/10/10	11:37	43	23.34	6.06	7.27	0.18	418	3	423.9	2.2	7.22	0.18	284.6	1.7	422	2	2.14	0.04	1.51	0.29	-----	ND	ND	0.000	ND	0.000	-----
Gasoline	Chloraminated Source Water	3/10/10	11:47	53	23.33	7.93	7.29	0.20	418	3	413.2	8.5	7.26	0.22	304.6	21.7	422	3	2.14	0.04	1.64	0.42	-----	ND	ND	0.000	ND	0.000	-----

Nicotine 5-12-10

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Nicotine	Chloraminated Source Water	5/12/10	16:26	0	19.00	0.00	7.02	0.00	275	0	395.6	0.0	7.00	0.00	335.3	0.0	271	0	1.76	0.00	1.59	0.00	0.00	0.002	220	0.000	ND	0.000	-----
Nicotine	Chloraminated Source Water	5/12/10	16:34	8	18.92	1.11	7.08	0.06	276	1	390.5	5.1	7.02	0.02	342.4	7.1	271	0	1.73	0.03	1.88	0.29	0.82	0.013	260	0.011	0.011	0.011	-----
Nicotine	Chloraminated Source Water	5/12/10	16:42	16	18.83	2.67	-----	-----	277	2	388.3	7.3	7.08	0.08	347.0	11.7	271	0	1.70	0.06	3.01	1.42	1.97	0.040	260	0.038	0.035	0.035	-----
Nicotine	Chloraminated Source Water	5/12/10	16:49	23	18.79	6.76	7.34	0.32	277	2	383.7	11.9	7.24	0.24	350.1	14.8	272	1	1.70	0.06	6.03	4.44	5.00	0.110	260	0.108	0.096	0.096	-----
Nicotine	Chloraminated Source Water	5/12/10	16:57	31	18.74	13.22	7.61	0.59	279	4	375.4	20.2	7.50	0.50	350.9	15.6	274	3	1.65	0.11	11.10	9.51	9.78	0.224	260	0.222	0.195	0.195	-----
Nicotine	Chloraminated Source Water	5/12/10	17:05	39	18.70	20.04	7.75	0.73	279	4	356.8	38.8	7.71	0.71	352.0	16.7	274	3	1.66	0.10	16.99	15.40	14.82	0.345	260	0.343	0.300	0.300	-----

Oxamyl 3-11-10

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Oxamyl	Chloraminated Source Water	3/11/10	10:14	0	24.89	0.00	7.11	0.00	417	0	477.8	0.0	7.08	0.00	318.5	0.0	424	0	2.04	0.00	1.10	0.00	0.00	0.004	220	0.000	0.001	0.000	-----
Oxamyl	Chloraminated Source Water	3/11/10	10:24	10	24.62	1.01	7.15	0.04	418	1	476.3	1.5	7.13	0.05	323.2	4.7	424	0	2.01	0.03	1.44	0.34	0.39	0.045	220	0.041	0.025	0.024	-----
Oxamyl	Chloraminated Source Water	3/11/10	10:34	20	24.4	2.43	7.18	0.07	418	1	473.1	4.7	7.17	0.09	318.9	0.4	424	0	2.02	0.02	1.93	0.83	0.93	0.105	220	0.101	0.058	0.057	-----
Oxamyl	Chloraminated Source Water	3/11/10	10:43	29	24.21	5.04	7.26	0.15	418	1	469.8	8.0	7.21	0.13	315.2	3.3	424	0	1.99	0.05	2.82	1.72	1.93	0.210	220	0.206	0.117	0.116	-----
Oxamyl	Chloraminated Source Water	3/11/10	10:52	38	24.04	10.92	7.27	0.16	417	0	466.9	10.9	7.26	0.18	311.0	7.5	423	1	1.86	0.18	4.83	3.73	4.19	0.457	220	0.453	0.253	0.252	-----
Oxamyl	Chloraminated Source Water	3/11/10	11:03	49	23.87	17.14	7.39	0.28	416	1	467.4	10.4	7.31	0.23	310.1	8.4	422	2	1.85	0.19	6.97	5.87	6.57	0.709	220	0.705	0.393	0.392	-----

Phorate 3-31-10

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Oxamyl	Chloraminated Source Water	3/11/10	10:14	0	24.89	0.00	7.11	0.00	417	0	477.8	0.0	7.08	0.00	318.5	0.0	424	0	2.04	0.00	1.10	0.00	0.00	0.004	220	0.000	0.001	0.000	-----
Oxamyl	Chloraminated Source Water	3/11/10	10:24	10	24.62	1.01	7.15	0.04	418	1	476.3	1.5	7.13	0.05	323.2	4.7	424	0	2.01	0.03	1.44	0.34	0.39	0.045	220	0.041	0.025	0.024	-----
Oxamyl	Chloraminated Source Water	3/11/10	10:34	20	24.4	2.43	7.18	0.07	418	1	473.1	4.7	7.17	0.09	318.9	0.4	424	0	2.02	0.02	1.93	0.83	0.93	0.105	220	0.101	0.058	0.057	-----
Oxamyl	Chloraminated Source Water	3/11/10	10:43	29	24.21	5.04	7.26	0.15	418	1	469.8	8.0	7.21	0.13	315.2	3.3	424	0	1.99	0.05	2.82	1.72	1.93	0.210	220	0.206	0.117	0.116	-----
Oxamyl	Chloraminated Source Water	3/11/10	10:52	38	24.04	10.92	7.27	0.16	417	0	466.9	10.9	7.26	0.18	311.0	7.5	423	1	1.86	0.18	4.83	3.73	4.19	0.457	220	0.453	0.253	0.252	-----
Oxamyl	Chloraminated Source Water	3/11/10	11:03	49	23.87	17.14	7.39	0.28	416	1	467.4	10.4	7.31	0.23	310.1	8.4	422	2	1.85	0.19	6.97	5.87	6.57	0.709	220	0.705	0.393	0.392	-----

Sodium Fluoracetate 2-16-10

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Sodium fluoroacetate	Chloraminated Source Water	2/16/10	15:25	0	19.95	0.00	7.13	0.00	257	0	483.9	0.0	7.02	0.00	233.8	0.0	252	0	1.92	0.00	1.12	0.00	0.00	ND	ND	0.000	ND	0.000	-----
Sodium fluoroacetate	Chloraminated Source Water	2/16/10	15:35	10	19.86	1.01	7.18	0.05	257	0	484.3	0.4	7.05	0.03	234.0	0.2	252	0	1.92	0.00	1.31	0.19	0.24	ND	ND	0.000	ND	0.000	-----
Sodium fluoroacetate	Chloraminated Source Water	2/16/10	15:44	19	19.79	17.55	7.22	0.09	269	12	487.1	3.2	7.08	0.06	232.6	1.2	265	13	1.90	0.02	4.74	3.62	4.21	ND	ND	0.000	ND	0.000	-----
Sodium fluoroacetate	Chloraminated Source Water	2/17/10	10:25	1140	16.96	17.55	7.30	0.17	269	12	507.0	23.1	7.18	0.16	233.1	0.7	262	10	1.64	0.29	4.82	3.70	4.21	ND	ND	0.000	ND	0.000	-----

Strychnine 4-8-10

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
Strychnine	Chloraminated Source Water	4/8/10	10:24	0	22.82	0.00	7.08	0.00	259	0	413.0	0.0	6.97	0.00	260.1	0.0	251	0	1.52	0.00	1.12	0	-----	ND	ND	0.000	ND	0.000	-----
Strychnine	Chloraminated Source Water	4/8/10	10:33	9	22.84	1.01	7.09	0.01	258	1	396.5	16.5	6.98	0.01	266.2	6.1	251	0	1.50	0.02	1.24	0.12	-----	ND	ND	0.000	ND	0.000	-----
Strychnine	Chloraminated Source Water	4/8/10	10:40	16	22.87	6.24	7.11	0.03	258	1	403.9	9.1	7.01	0.04	269.1	9.0	249	2	1.48	0.04	1.85	0.73	-----	ND	ND	0.000	ND	0.000	-----
Strychnine	Chloraminated Source Water	4/8/10	10:47	23	22.91	11.63	7.13	0.05	257	2	396.0	17.0	7.04	0.07	272.4	12.3	248	3	1.44	0.08	2.67	1.55	-----	0.036	254	0.036	0.036	0.036	-----
Strychnine	Chloraminated Source Water	4/8/10	10:55	31	22.96	17.92	7.23	0.15	258	1	398.2	14.8	7.11	0.14	274.1	14.0	249	2	1.44	0.08	3.89	2.77	-----	0.084	254	0.084	0.084	0.084	-----
Strychnine	Chloraminated Source Water	4/8/10	11:02	38	23.00	25.20	7.28	0.20	257	2	397.6	15.4	7.17	0.20	269.1	9.0	249	2	1.42	0.10	5.09	3.97	-----	0.143	254	0.143	0.143	0.143	-----
Strychnine	Chloraminated Source Water	4/9/10	13:31	1627	20.83	25.20	7.64	0.56	260	1	300.5	112.5	7.55	0.58	220.5	39.6	253	2	0.51	1.02	19.36	18.24	-----	0.763	254	0.763	0.763	0.763	-----

B Globigii in media 5-12-10

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
B. globigii in media	Chloraminated Source Water	5/12/10	17:32	0	18.94	0	6.98	0.00	276	0	391.9	0.0	6.99	0.00	330.0	0.0	272	0	1.74	0.00	1.25	0.00	-----	0.002	220	0.000	ND	0.000	-----
B. globigii in media	Chloraminated Source Water	5/12/10	17:40	8	18.86	608	6.99	0.01	276	0	391.2	0.7	6.99	0.00	332.1	2.1	271	1	1.74	0.00	1.17	0.13	-----	ND	-----	0.000	ND	0.000	-----
B. globigii in media	Chloraminated Source Water	5/12/10	17:47	15	18.78	6,383	7.01	0.03	276	0	391.1	0.8	7.00	0.01	330.8	0.8	271	1	1.72	0.02	1.18	0.07	-----	0.001	220	0.001	ND	0.000	-----
B. globigii in media	Chloraminated Source Water	5/12/10	17:55	23	18.71	67,160	7.04	0.06	276	0	389.5	2.4	7.02	0.03	329.0	1.0	272	0	1.70	0.04	4.27	3.02	-----	ND	-----	0.000	ND	0.000	-----
B. globigii in media	Chloraminated Source Water	5/12/10	18:03	31	18.71	708,197	7.10	0.12	279	3	376.1	15.8	7.07	0.08	326.3	3.7	272	0	1.69	0.05	5.65	4.40	-----	0.045	220	0.045	0.009	0.009	-----
B. globigii in media	Chloraminated Source Water	5/12/10	18:11	39	18.95	7,448,276	7.60	0.62	304	28	331.5	60.4	7.56	0.57	316.2	13.8	296	24	1.57	0.17	23.10	21.85	-----	0.403	220	0.403	0.124	0.124	-----
B. globigii in media	Chloraminated Source Water	5/13/10	17:17	1425	21.98	7,448,276	7.65	0.67	310	34	182.2	209.7	7.63	0.64	224.6	105.4	305	33	0.49	1.25	25.62	24.37	-----	0.363	220	0.363	0.103	0.103	-----

B Globigii washed 5-26-10

Contaminant	Water Matrix	Date	Time	Minutes	Water Temperature (°C)	Theoretical Contaminant Concentration (mg/L)	YSI 556						Orion pH/ISE				Extech		DPD Grab		Phoenix		Calculated TOC (mg/L)	Hach DR/4000 (Max. Absorbance) Analyzed on 6/18/09			Hach DR/4000 (Abs. 254 nm) Analyzed on 6/18/09		Comments
							pH	Change in pH (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	ORP (mV)	Change in ORP (absolute value)	pH	Change in pH (absolute value)	ORP (mV)	Change in ORP (absolute value)	Specific Conductance (uS/cm)	Change in Specific Conductance (absolute value)	Total Chlorine (mg/L)	Change in Total Chlorine (absolute value)	TOC (mg/L)	Change in TOC (absolute value)		UV-Vis Absorbance (200-800 nm)	UV-Vis Wavelength (nm)	Change in UV-Vis (absolute value)	UV-Vis Absorbance at 254 nm	Change in UV-Vis (absolute value)	
B. globigii washed	Chloraminated Source Water	5/26/10	16:22	0	23.35	0	6.90	0.00	315	0	528.6	0.0	6.98	0.00	303.6	0.0	315	0	1.78	0.00	3.48	0.00	-----	ND	ND	0.000	ND	0.000	TOC is high (~3X expected value).
B. globigii washed	Chloraminated Source Water	5/26/10	16:30	8	23.20	3,892	6.92	0.02	315	0	530.8	2.2	7.02	0.04	303.2	0.4	315	0	1.78	0.00	1.11	2.37	-----	ND	ND	0.000	ND	0.000	-----
B. globigii washed	Chloraminated Source Water	5/26/10	16:38	16	23.02	41,105	6.93	0.03	315	0	531.4	2.8	7.04	0.06	308.8	5.2	315	0	1.77	0.01	1.12	2.36	-----	ND	ND	0.000	ND	0.000	-----
B. globigii washed	Chloraminated Source Water	5/26/10	16:46	24	22.89	433,080	6.95	0.05	315	0	532.5	3.9	7.06	0.08	314.3	10.7	315	0	1.73	0.05	2.29	1.19	-----	ND	ND	0.000	ND	0.000	-----
B. globigii washed	Chloraminated Source Water	5/26/10	16:54	32	22.73	4,552,073	6.97	0.07	315	0	532.1	3.5	7.08	0.10	315.9	12.3	315	0	1.73	0.05	1.20	2.28	-----	ND	ND	0.000	ND	0.000	-----
B. globigii washed	Chloraminated Source Water	5/26/10	17:02	40	22.48	46,305,701	7.01	0.11	303	12	478.3	50.3	7.10	0.12	299.1	4.5	302	13	1.49	0.29	1.67	1.81	-----	ND	ND	0.000	ND	0.000	-----
B. globigii washed	Chloraminated Source Water	5/27/10	16:41	1459	22.51	46,305,701	7.33	0.43	306	9	301.0	227.6	7.32	0.34	269.5	34.1	304	11	0.86	0.93	1.65	1.83	-----	ND	ND	0.000	ND	0.000	-----



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