



Water and Waste Department • Service des eaux et des déchets

2011

ANNUAL REPORT

**CITY OF WINNIPEG
WATER SUPPLY SYSTEM**

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DRINKING WATER SYSTEM AND SOURCE

“Section 32(2) (a) a brief description of the drinking water system, including its water supply source.”

The City of Winnipeg gets its water from Shoal Lake, which is on the border between Manitoba and Ontario, and covers 277 square kilometres. The intake for Winnipeg's water system is on Indian Bay on the western end of Shoal Lake, and is only accessible by rail or boat. Water flows from Shoal Lake to Winnipeg by gravity through a 135 kilometre long aqueduct. The water is stored in Deacon Reservoir, a large reservoir that can hold 8.8 billion litres, enough water to supply Winnipeg for about 20 days. Water passes from Deacon Reservoir to a Drinking Water Treatment Plant, and then on to three smaller reservoirs and pumping stations in different areas of the city. Each day, an average of 219 million litres of water is delivered to approximately 196,000 accounts in Winnipeg.

DISINFECTION METHODS

“Section 32(2) (b) a description of the disinfection methods used.”

The first step in the disinfection process used to involve periodic chlorination of 8 hours per week at the Intake. As of October 31, 2011, periodic chlorination was suspended because it was determined that it was not necessary in the winter months. The tank cars were removed from the Intake but will return for the summer months to resume periodic chlorination. At the Water Treatment Plant, the water passes through several disinfection treatment steps including ozonation, chlorination and UV light disinfection. Finally, the water is chlorinated again at the pumping stations before being distributed to homes and businesses.

DRINKING WATER PARAMETERS

“Section 32(2) (c) a list of all bacteriological, chemical, physical and microbial drinking water quality standards that apply to the water system.”

Winnipeg water is intensively monitored on a routine basis to ensure that the water is safe and that regulatory and licence requirements are met. Table 1 provides a list of all the parameters analysed. The results of most of these tests are found in Appendix A. We measure how water quality changes from source to tap and the quality of water delivered to customers with these tests. We also respond to customer inquiries and complaints about water quality.

OCCASIONS OF A RESULT NOT MEETING A WATER QUALITY STANDARD AND CORRECTIVE ACTION TAKEN

“Section 32(2) (d) a summary of any incidents of failure to meet a drinking water quality standard, and a description of corrective action.”

Because water quality is so important, our level of monitoring and sampling exceeds regulatory requirements. The City of Winnipeg ensures that a high quality of water is delivered to customers and actions are taken to continuously improve water quality. Table 2 includes all occasions of a result not meeting a water quality standard and corrective action taken in 2011.

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Table 1. Drinking Water Parameters

Analyses Conducted by City of Winnipeg	Analyses Conducted by Contract Labs
Parameter	Parameter
Plankton Count	Giardia
Chlorophyll a	Cryptosporidium
Threshold Odour Number	Total Coliform
pH	Esherichia Coli
Turbidity	Heterotrophic Plate Count
Fluoride	Taste and Odour Compounds
True Colour	- IPMP
Total Solids	- IBMP
Total Dissolved Solids	- MIB
Total Alkalinity	- 246TCA
Total Hardness	- 236TCA
Specific Conductance	- Geosmin
Total Organic Carbon	- 345TCV
Soluble Organic Carbon	Microcystin LR
Free Chlorine	Mercury
Total Chlorine	NDMA
Temperature	MTBE
UV Transmissivity	Total Kjeldahl Nitrogen
Toxicity	Total Phosphorus
Dissolved Oxygen	Dissolved Reactive Phosphorus
Transparency	Total Inorganic Carbon
Zebra Mussels	Ammonia (Dissolved)
Trihalomethanes (Total)	Barium
Bromodichloromethane	Beryllium
Haloacetic Acids	Bismuth
Aldehydes	Cesium
Nitrate Nitrogen	Cobalt
Soluble Phosphate	Lithium
Chloride	Molybdenum
Sulphate	Selenium
Aluminum	Silicon
Antimony	Silver
Arsenic	Strontium
Boron	Tellurium
Calcium	Thallium
Cadmium	Thorium
Chromium	Tin
Copper	Titanium
Iron	Vanadium
Lead	Rubidium
Magnesium	Tungsten
Manganese	Volatile Organic Carbons
Nickel	Polychlorinated Biphenyls
Potassium	Organochlorine Pesticides
Sodium	Pesticides
Uranium	Herbicides
Zinc	Perchlorate
Zirconium	

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Table 2. Occasions of a Result not Meeting a Water Quality Standard and Corrective Action Taken

Date	Location	Type of result not meeting a water quality standard	Initial test result	Description of corrective actions taken
Apr 27, 2011	[REDACTED]	Total coliform >1 MPNU/100mL	1	All locations were re-sampled until negative results were found. Resampling also indicated that the chlorine levels at all locations were normal and provided adequate disinfection.
Apr 27, 2011		Esherichia coliform >1 MPNU/100mL	1	
May 16, 2011		Total coliform >1 MPNU/100mL	1	
June 13, 2011		Total coliform >1 MPNU/100mL	19	
June 13, 2011		Total coliform >1 MPNU/100mL	88	
June 14, 2011		Total coliform >1 MPNU/100mL	3	
July 4, 2011		Total coliform >1 MPNU/100mL	29	
Aug 2, 2011		Total coliform >1 MPNU/100mL	1	
Aug 23, 2011		Total coliform >1 MPNU/100mL	200	
Aug 23, 2011		Total coliform >1 MPNU/100mL	3	
Aug 29, 2011		Total coliform >1 MPNU/100mL	1	
Aug 29, 2011		Total coliform >1 MPNU/100mL	4	
Aug 30, 2011		Total coliform >1 MPNU/100mL	2	
Aug 30, 2011		Total coliform >1 MPNU/100mL	2	
Aug 30, 2011		Total coliform >1 MPNU/100mL	21	
Aug 30, 2011		Total coliform >1 MPNU/100mL	18	
Sep 26, 2011		Total coliform >1 MPNU/100mL	8	
Nov 29, 2011		Total coliform >1 MPNU/100mL	1	
Dec 6, 2011	Total coliform >1 MPNU/100mL	1		
Aug 29, 2011	[REDACTED]	Free chlorine residual <0.10 mg/L	0.06	All locations were re-sampled and/or alternate locations were sampled, and/or other actions were taken (such as adjusting watermain valves).
Sep 19, 2011	[REDACTED]	Free chlorine residual <0.10 mg/L	0.07	
				Chlorine set points were adjusted to ensure that the target level of disinfection was met.

MAJOR EXPENSES

“Section 32(2) (i) a description of any major expenses incurred to repair, replace or install equipment.”

1. A new 750 mm diameter feeder main was installed from Waverley Street to Kenaston Boulevard to provide water service to the Waverley West development.
2. Feeder main valves works:
 - a. Replaced two existing valves and installed one new valve at Lagimodiere Boulevard and Grassie Boulevard.
 - b. Replaced two existing valves at Henderson Avenue and Martin Avenue.
 - c. Replaced one existing valve on Hespler Avenue east of the Redwood Bridge
 - d. Replaced one existing valve on Redwood Avenue west of the Redwood Bridge.
3. Water main renewals were completed at 42 locations in the City’s water distribution system.

APPENDIX A
WATER QUALITY SUMMARY REPORTS

City of Winnipeg
Environmental Standards Division
2011 Shoal Lake Water Quality Summary

PARAMETER	UNITS	GUIDELINES FOR CANADIAN DRINKING WATER QUALITY	AVERAGE	MINIMUM	MAXIMUM	COMMENTS
Odour	<i>units</i>	Inoffensive	125	70	200	Raw water - guideline does not apply
Plankton (algae) count	<i>cells/mL</i>	no guideline	46,339	1,000	655,000	Algae contribute to odours and may cause filter clogging
Chlorophyll-a	<i>parts per billion</i>	no guideline	6	<1	15	Chlorophyll is found in algae
Cryptosporidium	<i>oocysts per 100 L</i>	no guideline	<1	<1	<1	14 samples taken in 2011 - no positive results
Giardia	<i>cysts per 100 L</i>	no guideline	<1	<1	<1	14 samples taken in 2011 - no positive results
Turbidity (clearness)	<i>NTU</i>	no guideline	1.18	0.33	3.39	-
Colour, True	<i>TCU</i>	no more than 15	5.2	1.0	13.0	Raw water - guideline does not apply
Total Solids	<i>parts per million</i>	no guideline	103	88	115	-
Total Dissolved Solids	<i>parts per million</i>	no more than 500	89	73	102	Raw water - guideline does not apply
Conductivity	<i>microsiemens per centimetre</i>	no guideline	148	127	165	Another measure of dissolved solids
pH	<i>units</i>	between 6.5 and 8.5	8.05	7.44	8.73	Raw water - guideline does not apply
Temperature	<i>degrees Celcius</i>	no more than 15	8.1	2.0	22.5	Raw water - guideline does not apply
Total Alkalinity	<i>parts per million as calcium carbonate</i>	no guideline	73	64	81	-
Total Hardness	<i>parts per million as calcium carbonate</i>	between 80 and 100	75	68	80	Raw water - guideline does not apply
Total Organic Carbon	<i>parts per million</i>	no guideline	11	8	14	-
Soluble Organic Carbon	<i>parts per million</i>	no guideline	10	8	13	-
Total Kjeldahl Nitrogen (TKN)	<i>parts per million</i>	no guideline	0.58	0.37	0.90	TKN is a combination of ammonia and organic nitrogen
Total Phosphorus	<i>parts per billion</i>	no guideline	16	3	50	Phosphorus can contribute to algae growth
Dissolved Reactive Phosphorus	<i>parts per billion</i>	no guideline	3	<1	<10	-
Fluoride	<i>parts per million</i>	no more than 1.5	<0.08	<0.08	<0.08	Raw water - guideline does not apply
Nitrate Nitrogen	<i>parts per million</i>	no more than 10	0.016	<0.003	0.099	Raw water - guideline does not apply
Chloride	<i>parts per million</i>	no more than 250	<5	<5	<5	Raw water - guideline does not apply
Sulphate	<i>parts per million</i>	no more than 500	<5	<5	6.0	Raw water - guideline does not apply
Trihalomethanes	<i>parts per billion</i>	no more than 100	<0.5	<0.5	0.6	Raw water - guideline does not apply
Bromodichloromethane	<i>parts per billion</i>	no more than 16	<0.5	<0.5	<0.5	Raw water - guideline does not apply
Haloacetic acids	<i>parts per billion</i>	no more than 80	<5	<5	<5	Raw water - guideline does not apply
Aldehydes	<i>parts per billion</i>	no guideline	<2	<2	4	-
Calcium	<i>parts per million</i>	no guideline	19.7	16.8	21.9	Contributes to hardness
Magnesium	<i>parts per million</i>	no guideline	5.8	5.1	6.5	Contributes to hardness
Sodium	<i>parts per million</i>	no more than 200	2.0	1.8	2.3	Raw water - guideline does not apply
Potassium	<i>parts per million</i>	no guideline	1.3	1.1	1.5	Raw water - guideline does not apply
Iron	<i>parts per million</i>	no more than 0.3	0.03	<0.01	0.06	Raw water - guideline does not apply

City of Winnipeg
Environmental Standards Division
2011 Shoal Lake Water Quality Summary

PARAMETER	UNITS	GUIDELINES FOR CANADIAN DRINKING WATER QUALITY	AVERAGE	MINIMUM	MAXIMUM	COMMENTS
Copper	<i>parts per million</i>	no more than 1.0	0.003	<0.001	0.017	Raw water - guideline does not apply
Lead	<i>parts per million</i>	no more than 0.010	<0.001	<0.001	<0.001	Raw water - guideline does not apply
Aluminum	<i>parts per million</i>	no more than 0.1	0.002	<0.001	0.004	Raw water - guideline does not apply
Antimony	<i>parts per million</i>	no more than 0.0006	<0.001	<0.001	<0.001	Raw water - guideline does not apply
Arsenic	<i>parts per million</i>	no more than 0.010	<0.001	<0.001	0.001	Raw water - guideline does not apply
Nickel	<i>parts per million</i>	no guideline	<0.001	<0.001	0.001	-
Chromium	<i>parts per million</i>	no more than 0.05	<0.001	<0.001	<0.001	Raw water - guideline does not apply
Boron	<i>parts per million</i>	no more than 5	0.014	0.009	0.019	Raw water - guideline does not apply
Cadmium	<i>parts per million</i>	no more than 0.005	<0.001	<0.001	<0.001	Raw water - guideline does not apply
Manganese	<i>parts per million</i>	no more than 0.05	0.009	0.003	0.021	Raw water - guideline does not apply
Uranium	<i>parts per million</i>	no more than 0.02	<0.001	<0.001	<0.001	Raw water - guideline does not apply
Zinc	<i>parts per million</i>	no more than 5.0	0.002	<0.001	0.009	Raw water - guideline does not apply
Zirconium	<i>parts per million</i>	no guideline	<0.001	<0.001	<0.001	-
Mercury	<i>parts per million</i>	no more than 0.001	<0.000001	<0.000001	0.000005	Raw water - guideline does not apply

Guidelines from 'Summary of Guidelines for Canadian Drinking Water Quality' by Health Canada, revised February 1, 2012

City of Winnipeg
Environmental Standards Division
2011 Water Treatment Plant - Raw Water
Drinking Water Quality Summary

PARAMETER	UNITS	GUIDELINES FOR CANADIAN DRINKING WATER QUALITY	AVERAGE	MINIMUM	MAXIMUM	COMMENTS
Odour	<i>units</i>	Inoffensive	98	60	200	Raw water - guideline does not apply
Geosmin	<i>parts per trillion</i>	no guideline	1.7	<0.5	6	Common taste and odour compound
IPMP - 2-isopropyl-3-methoxy-pyrazine	<i>parts per trillion</i>	no guideline	<0.5	<0.5	<0.5	Common taste and odour compound
IBMP - 2-isobutyl-3-methoxy-pyrazine	<i>parts per trillion</i>	no guideline	<0.5	<0.5	<0.5	Common taste and odour compound
MIB - 2-methylisoborneol	<i>parts per trillion</i>	no guideline	0.58	<0.5	1.3	Common taste and odour compound
246 TCA - 2,4,6-trichloroanisole	<i>parts per trillion</i>	no guideline	<0.5	<0.5	<2.0	Common taste and odour compound
236 TCA - 2,3,6-trichloroanisole	<i>parts per trillion</i>	no guideline	<0.5	<0.5	<1.0	Common taste and odour compound
345 TCV - 3,4,5-trichloroveratrole	<i>parts per trillion</i>	no guideline	<0.5	<0.5	<0.5	Common taste and odour compound
MTBE - methyl tertiary-butyl ether	<i>parts per million</i>	no more than 0.015	<0.0005	<0.0005	<0.0005	Raw water - guideline does not apply
NDMA - N-nitrosodimethylamine	<i>parts per billion</i>	under review	0.0027	<0.002	0.0066	Guideline under review by Health Canada
Plankton (algae) count	<i>cells/mL</i>	no guideline	33,143	900	344,700	Algae contribute to odours and may cause filter clogging
Chlorophyll-a	<i>parts per billion</i>	no guideline	7	1	22	Chlorophyll is found in algae
Microcystin LR	<i>parts per billion</i>	no more than 1.5	<0.2	<0.2	<0.2	Raw water - guideline does not apply
Cryptosporidium*	<i>oocysts per 100 L</i>	no guideline	<1	<1	<1	12 samples taken in 2011 - no positive results
Giardia*	<i>cysts per 100 L</i>	no guideline	<1	<1	<1	12 samples taken in 2011 - no positive results
Turbidity (clearness)	<i>NTU</i>	no guideline	1.21	0.44	3.95	-
Colour, True	<i>TCU</i>	no more than 15	5.5	0.5	15.0	Raw water - guideline does not apply
Total Solids	<i>parts per million</i>	no guideline	105	80	124	-
Total Dissolved Solids	<i>parts per million</i>	no more than 500	90	70	107	Raw water - guideline does not apply
Conductivity	<i>microsiemens per centimetre</i>	no guideline	158	122	177	Another measure of dissolved solids
pH	<i>units</i>	between 6.5 and 8.5	8.00	7.41	8.82	Raw water - guideline does not apply
Temperature	<i>degrees Celcius</i>	no more than 15	10.1	1.0	24.1	Raw water - guideline does not apply
Total Alkalinity	<i>parts per million as calcium carbonate</i>	no guideline	75	66	82	-
Total Hardness	<i>parts per million as calcium carbonate</i>	between 80 and 100	78	71	85	80 to 100 parts per million is recommended
Total Organic Carbon	<i>parts per million</i>	no guideline	11	8	15	-
Dissolved Organic Carbon	<i>parts per million</i>	no guideline	10	8	14	-
Total Inorganic Carbon	<i>parts per million</i>	no guideline	13.7	<1.0	19.0	-
Total Phosphorus	<i>parts per million</i>	no guideline	<0.20	<0.20	<0.20	Phosphorus can contribute to algae growth
Ammonia Dissolved	<i>parts per million</i>	no guideline	0.020	<0.010	0.058	-
Nitrate Nitrogen	<i>parts per million</i>	no more than 10	0.031	0.020	0.053	Raw water - guideline does not apply
Chloride	<i>parts per million</i>	no more than 250	<5	<5	<5	Raw water - guideline does not apply
Sulphate	<i>parts per million</i>	no more than 500	<5	<5	5.0	Raw water - guideline does not apply
UV Transmittance (Filtered)	<i>percent transmissivity</i>	no guideline	75.8	71.6	93.3	-
UV Transmittance (Unfiltered)	<i>percent transmissivity</i>	no guideline	73.3	69.0	77.0	-

City of Winnipeg
Environmental Standards Division
2011 Water Treatment Plant - Raw Water
Drinking Water Quality Summary

PARAMETER	UNITS	GUIDELINES FOR CANADIAN DRINKING WATER QUALITY	AVERAGE	MINIMUM	MAXIMUM	COMMENTS
Chlorine (free)	<i>parts per million</i>	no guideline	0.02	<0.02	0.18	-
Chlorine (total)	<i>parts per million</i>	no guideline	0.04	<0.02	0.20	-
Trihalomethanes	<i>parts per billion</i>	no more than 100	<0.5	<0.5	1.1	Raw water - guideline does not apply
Bromodichloromethane	<i>parts per billion</i>	no more than 16	<0.5	<0.5	<0.5	Raw water - guideline does not apply
Haloacetic acids	<i>parts per billion</i>	no more than 80	<5	<5	13	Raw water - guideline does not apply
Aldehydes	<i>parts per billion</i>	no guideline	3	<2	9	-
Tetrachloroethylene	<i>parts per billion</i>	no more than 30	<0.50	<0.50	<0.50	Meets the guideline
1,1,1-Trichloroethane	<i>parts per billion</i>	no guideline	<0.50	<0.50	<0.50	-
1,1,2-Trichloroethane	<i>parts per billion</i>	no guideline	<0.50	<0.50	<0.50	-
Trichloroethylene	<i>parts per billion</i>	no more than 5	<0.50	<0.50	<0.50	Meets the guideline
Carbofuran	<i>parts per billion</i>	no more than 90	<0.20	<0.20	<0.20	Meets the guideline
Propoxur	<i>parts per billion</i>	no more than 0.7	<0.20	<0.20	<0.20	Meets the guideline
Aldrin	<i>parts per billion</i>	no more than 0.7	<0.010	<0.010	<0.010	Meets the guideline
Lindane (gamma-BHC)	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
alpha-Chlordane	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
gamma-Chlordane	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
p,p-DDT	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
Dieldrin	<i>parts per billion</i>	no more than 0.7	<0.010	<0.010	<0.010	Meets the guideline
Heptachlor	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
Heptachlor Epoxide	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
Methoxychlor	<i>parts per billion</i>	no more than 900	<0.010	<0.010	<0.010	Meets the guideline
alpha-BHC	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
beta-BHC	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
delta-BHC	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
p,p-DDD	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
p,p-DDE	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
o,p-DDD	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
o,p-DDE	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
o,p-DDT	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
Alpha Endosulfan	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
Beta Endosulfan	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
Endrin	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
Mirex	<i>parts per billion</i>	no guideline	<0.010	<0.010	<0.010	-
Simazine	<i>parts per billion</i>	no more than 10	<0.10	<0.10	<0.10	Meets the guideline
Alachlor	<i>parts per billion</i>	no guideline	<0.10	<0.10	<0.10	-
Atrazine	<i>parts per billion</i>	no more than 5	<0.10	<0.10	<0.10	Meets the guideline
Metribuzin	<i>parts per billion</i>	no more than 80	<0.20	<0.20	<0.20	Meets the guideline
Azinphosmethyl	<i>parts per billion</i>	no more than 20	<0.10	<0.10	<0.10	Meets the guideline
Chlorpyrifos	<i>parts per billion</i>	no more than 90	<0.10	<0.10	<0.10	Meets the guideline
Diazinon	<i>parts per billion</i>	no more than 20	<0.10	<0.10	<0.10	Meets the guideline
Dimethoate	<i>parts per billion</i>	no more than 20	<0.10	<0.10	<0.10	Meets the guideline
Malathion	<i>parts per billion</i>	no more than 190	<0.10	<0.10	<0.10	Meets the guideline
Parathion	<i>parts per billion</i>	no more than 50	<0.10	<0.10	<0.10	Meets the guideline
Terbufos	<i>parts per billion</i>	no more than 1	<0.10	<0.10	<0.10	Meets the guideline
Methyl Parathion	<i>parts per billion</i>	no guideline	<0.10	<0.10	<0.10	-
2,4-D	<i>parts per billion</i>	no more than 100	<0.050	<0.050	<0.050	Meets the guideline
2,4-DB	<i>parts per billion</i>	no guideline	<0.050	<0.050	<0.050	-
2,4-DP	<i>parts per billion</i>	no guideline	<0.050	<0.050	<0.050	-
2,4,5-T	<i>parts per billion</i>	no guideline	<0.050	<0.050	<0.050	-
2,4,5-TP	<i>parts per billion</i>	no guideline	<0.050	<0.050	<0.050	-
Bromoxynil	<i>parts per billion</i>	no more than 5	<0.020	<0.020	<0.020	Meets the guideline
Dicamba	<i>parts per billion</i>	no more than 120	<0.0060	<0.0060	<0.0060	Meets the guideline

City of Winnipeg
Environmental Standards Division
2011 Water Treatment Plant - Raw Water
Drinking Water Quality Summary

PARAMETER	UNITS	GUIDELINES FOR CANADIAN DRINKING WATER QUALITY	AVERAGE	MINIMUM	MAXIMUM	COMMENTS
Dinoseb	<i>parts per billion</i>	no more than 10	<0.050	<0.050	<0.050	Meets the guideline
MCPA	<i>parts per billion</i>	no more than 100	<0.025	<0.025	<0.025	Meets the guideline
MCPB	<i>parts per billion</i>	no guideline	<0.050	<0.050	<0.050	-
Mecoprop	<i>parts per billion</i>	no guideline	<0.050	<0.050	<0.050	-
Picloram	<i>parts per billion</i>	no more than 190	<0.20	<0.20	<0.20	Meets the guideline
Trichlopyr	<i>parts per billion</i>	no guideline	<0.050	<0.050	<0.050	-
Diclofop-methyl	<i>parts per billion</i>	no more than 9	<0.10	<0.10	<0.10	Meets the guideline
Eptam	<i>parts per billion</i>	no guideline	<0.20	<0.20	<0.20	-
Propaclar	<i>parts per billion</i>	no guideline	<0.20	<0.20	<0.20	-
Propanil	<i>parts per billion</i>	no guideline	<0.20	<0.20	<0.20	-
Triallate	<i>parts per billion</i>	no guideline	<0.10	<0.10	<0.10	-
Trifluralin	<i>parts per billion</i>	no more than 45	<0.030	<0.030	<0.030	Meets the guideline
Arochlor 1016	<i>parts per billion</i>	no guideline	<0.020	<0.020	<0.020	-
Arochlor 1221	<i>parts per billion</i>	no guideline	<0.020	<0.020	<0.020	-
Arochlor 1232	<i>parts per billion</i>	no guideline	<0.020	<0.020	<0.020	-
Arochlor 1242	<i>parts per billion</i>	no guideline	<0.020	<0.020	<0.020	-
Arochlor 1248	<i>parts per billion</i>	no guideline	<0.020	<0.020	<0.020	-
Arochlor 1254	<i>parts per billion</i>	no guideline	<0.020	<0.020	<0.020	-
Arochlor 1260	<i>parts per billion</i>	no guideline	<0.020	<0.020	<0.020	-
Calcium	<i>parts per million</i>	no guideline	22.2	21.5	22.7	Contributes to hardness
Magnesium	<i>parts per million</i>	no guideline	6.27	5.63	6.84	Contributes to hardness
Sodium	<i>parts per million</i>	no more than 200	2.2	1.8	4.4	Raw water - guideline does not apply
Potassium	<i>parts per million</i>	no guideline	1.25	1.12	1.35	-
Iron	<i>parts per million</i>	no more than 0.3	0.05	0.01	0.02	Raw water - guideline does not apply
Copper	<i>parts per million</i>	no more than 1.0	0.00051	0.00041	0.00068	Raw water - guideline does not apply
Lead	<i>parts per million</i>	no more than 0.010	<0.000090	<0.000090	<0.000090	Raw water - guideline does not apply
Aluminum	<i>parts per million</i>	no more than 0.1	0.0054	<0.0050	0.0080	Raw water - guideline does not apply
Arsenic	<i>parts per million</i>	no more than 0.010	0.00074	0.00057	0.00097	Raw water - guideline does not apply
Chromium	<i>parts per million</i>	no more than 0.05	<0.0010	<0.0010	<0.0010	Raw water - guideline does not apply
Nickel	<i>parts per million</i>	no guideline	<0.0020	<0.0020	<0.0020	-
Cadmium	<i>parts per million</i>	no more than 0.005	<0.000010	<0.000010	<0.000010	Raw water - guideline does not apply
Manganese	<i>parts per million</i>	no more than 0.05	0.0091	0.0033	0.0190	Raw water - guideline does not apply
Zinc	<i>parts per million</i>	no more than 5.0	<0.0050	<0.0050	<0.0050	Raw water - guideline does not apply
Mercury	<i>parts per million</i>	no more than 0.001	<0.000001	<0.000001	<0.000001	Raw water - guideline does not apply
Antimony	<i>parts per million</i>	no more than 0.006	<0.00020	<0.00020	<0.00020	Raw water - guideline does not apply
Barium	<i>parts per million</i>	no more than 1	0.0155	0.0138	0.0178	Raw water - guideline does not apply
Beryllium	<i>parts per million</i>	no guideline	<0.00020	<0.00020	<0.00020	-
Bismuth	<i>parts per million</i>	no guideline	<0.00020	<0.00020	<0.00020	-
Boron	<i>parts per million</i>	no more than 5	0.012	<0.010	0.025	Raw water - guideline does not apply
Cesium	<i>parts per million</i>	no guideline	<0.00010	<0.00010	<0.00010	-
Cobalt	<i>parts per million</i>	no guideline	<0.00020	<0.00020	<0.00020	-
Lithium	<i>parts per million</i>	no guideline	0.0017	<0.0020	0.0026	-
Molybdenum	<i>parts per million</i>	no guideline	<0.00020	<0.00020	<0.00020	-
Rubidium	<i>parts per million</i>	no guideline	0.00167	0.00153	0.00184	-

City of Winnipeg
Environmental Standards Division
2011 Water Treatment Plant - Raw Water
Drinking Water Quality Summary

PARAMETER	UNITS	GUIDELINES FOR CANADIAN DRINKING WATER QUALITY	AVERAGE	MINIMUM	MAXIMUM	COMMENTS
Selenium	<i>parts per million</i>	no more than 0.01	<0.0010	<0.0010	<0.0010	Raw water - guideline does not apply
Silicon	<i>parts per million</i>	no guideline	0.623	0.296	1.470	-
Silver	<i>parts per million</i>	no guideline	<0.00010	<0.00010	<0.00010	-
Strontium	<i>parts per million</i>	no guideline	0.0402	0.0373	0.0444	-
Tellurium	<i>parts per million</i>	no guideline	<0.00020	<0.00020	<0.00020	-
Thallium	<i>parts per million</i>	no guideline	<0.00010	<0.00010	<0.00010	-
Thorium	<i>parts per million</i>	no guideline	<0.00010	<0.00010	<0.00010	-
Tin	<i>parts per million</i>	no guideline	0.00031	<0.00020	0.00094	-
Titanium	<i>parts per million</i>	no guideline	0.00013	<0.00020	0.00022	-
Tungsten	<i>parts per million</i>	no guideline	<0.0010	<0.0010	<0.0010	-
Uranium	<i>parts per million</i>	no more than 0.02	<0.00010	<0.00010	<0.00010	Raw water - guideline does not apply
Vanadium	<i>parts per million</i>	no guideline	<0.00020	<0.00020	<0.00020	-
Zirconium	<i>parts per million</i>	no guideline	<0.00040	<0.00040	<0.00040	-

Guidelines from 'Summary of Guidelines for Canadian Drinking Water Quality' by Health Canada, revised February 1, 2012

*Data reported was collected from Deacon Prechlorination Cell 1/3

City of Winnipeg
Environmental Standards Division
2011 Water Treatment Plant
Finished Water - Deacon Booster Pumping Station 1 and 2
Drinking Water Quality Summary

PARAMETER	UNITS	GUIDELINES FOR CANADIAN DRINKING WATER QUALITY	AVERAGE	MINIMUM	MAXIMUM	COMMENTS
Odour	<i>units</i>	Inoffensive	23	20	35	Meets the guideline
Geosmin	<i>parts per trillion</i>	no guideline	<0.5	<0.5	<0.9	Common taste and odour compound
IPMP - 2-isopropyl-3-methoxypyrazine	<i>parts per trillion</i>	no guideline	<0.5	<0.5	<0.5	Common taste and odour compound
IBMP - 2-isobutyl-3-methoxypyrazine	<i>parts per trillion</i>	no guideline	<0.5	<0.5	<0.5	Common taste and odour compound
MIB - 2-methylisoborneol	<i>parts per trillion</i>	no guideline	0.68	<0.5	<2.0	Common taste and odour compound
246 TCA - 2,4,6-trichloroanisole	<i>parts per trillion</i>	no guideline	<0.5	<0.5	<2.0	Common taste and odour compound
236 TCA - 2,3,6-trichloroanisole	<i>parts per trillion</i>	no guideline	<0.5	<0.5	<1.0	Common taste and odour compound
345 TCV - 3,4,5-trichloroveratrole	<i>parts per trillion</i>	no guideline	<0.5	<0.5	<0.5	Common taste and odour compound
MTBE - methyl tertiary-butyl ether	<i>parts per million</i>	no more than 0.015	<0.0005	<0.0005	<0.0005	Meets the guideline
NDMA - N-nitrosodimethylamine	<i>parts per billion</i>	under review	0.0020	0.0015	0.0028	Guideline under review by Health Canada
Plankton (algae) count	<i>cells/mL</i>	no guideline	<100	<100	<100	Algae contribute to odours and may cause filter clogging
Chlorophyll-a*	<i>parts per billion</i>	no guideline	<1	<1	1	Chlorophyll is found in algae
Microcystin LR	<i>parts per billion</i>	no more than 1.5	<0.2	<0.2	<0.2	Meets the guideline
Turbidity (clearness)	<i>NTU</i>	no more than 1	0.19	0.10	0.30	Meets the guideline
Colour, True	<i>TCU</i>	no more than 15	2.0	0.5	7.5	Meets the guideline
Total Solids	<i>parts per million</i>	no guideline	192	169	217	-
Total Dissolved Solids	<i>parts per million</i>	no more than 500	178	131	201	Meets the guideline
Conductivity	<i>microsiemens per centimetre</i>	no guideline	320	293	363	Another measure of dissolved solids
pH	<i>units</i>	between 6.5 and 8.5	7.89	7.47	9.27	Does not always meet the guideline
Temperature	<i>degrees Celcius</i>	no more than 15	10.2	1.0	23.9	Does not always meet the guideline
Total Alkalinity	<i>parts per million as calcium carbonate</i>	no guideline	70	56	80	-
Total Hardness	<i>parts per million as calcium carbonate</i>	between 80 and 100	78	71	86	80 to 100 parts per million is recommended
Total Organic Carbon	<i>parts per million</i>	no guideline	4	2	6	-
Dissolved Organic Carbon	<i>parts per million</i>	no guideline	4	2	6	-
Total Inorganic Carbon	<i>parts per million</i>	no guideline	13.0	<1.0	18.7	-
Total Phosphorus	<i>parts per million</i>	no guideline	<0.20	<0.20	<0.20	Phosphorus can contribute to algae growth
Ammonia Dissolved	<i>parts per million</i>	no guideline	<0.010	<0.010	0.014	-
Nitrate Nitrogen	<i>parts per million</i>	no more than 10	<0.050	<0.050	0.064	Meets the guideline
Chloride	<i>parts per million</i>	no more than 250	19	13	25	Meets the guideline
Sulphate	<i>parts per million</i>	no more than 500	52	46	61	Meets the guideline
UV Transmittance (Filtered)	<i>percent transmissivity</i>	no guideline	95.1	90.7	98.1	-
UV Transmittance (Unfiltered)	<i>percent transmissivity</i>	no guideline	93.6	87.9	96.6	-

City of Winnipeg
Environmental Standards Division
2011 Water Treatment Plant
Finished Water - Deacon Booster Pumping Station 1 and 2
Drinking Water Quality Summary

PARAMETER	UNITS	GUIDELINES FOR CANADIAN DRINKING WATER QUALITY	AVERAGE	MINIMUM	MAXIMUM	COMMENTS
Chlorine (free)	<i>parts per million</i>	no guideline	1.17	0.82	1.88	-
Chlorine (total)	<i>parts per million</i>	no guideline	1.38	1.03	2.07	-
Trihalomethanes	<i>parts per billion</i>	no more than 100	10	<0.5	19	Meets the guideline
Bromodichloromethane	<i>parts per billion</i>	no more than 16	1	<0.5	3	Meets the guideline
Haloacetic acids	<i>parts per billion</i>	no more than 80	14	<5	24	Meets the guideline
Aldehydes	<i>parts per billion</i>	no guideline	21	10	35	-
Calcium	<i>parts per million</i>	no guideline	21.1	20.2	21.7	Contr butes to hardness
Magnesium	<i>parts per million</i>	no guideline	5.9	5.4	6.6	Contr butes to hardness
Sodium	<i>parts per million</i>	no more than 200	34.0	27.5	43.8	Meets the guideline
Potassium	<i>parts per million</i>	no guideline	1.2	1.1	1.3	-
Iron	<i>parts per million</i>	no more than 0.3	0.10	<0.01	0.25	Meets the guideline
Copper	<i>parts per million</i>	no more than 1.0	0.003	0.003	0.003	Meets the guideline
Lead	<i>parts per million</i>	no more than 0.01	<0.0009	<0.0009	<0.0009	Meets the guideline
Aluminum	<i>parts per million</i>	no more than 0.1	0.006	<0.005	0.007	Meets the guideline
Arsenic	<i>parts per million</i>	no more than 0.01	0.0004	0.0003	0.0005	Meets the guideline
Chromium	<i>parts per million</i>	no more than 0.05	<0.001	<0.001	<0.001	Meets the guideline
Nickel	<i>parts per million</i>	no guideline	0.002	0.002	0.003	-
Cadmium	<i>parts per million</i>	no more than 0.005	<0.00001	<0.00001	<0.00001	Meets the guideline
Manganese	<i>parts per million</i>	no more than 0.05	0.027	0.023	0.031	Meets the guideline
Zinc	<i>parts per million</i>	no more than 5.0	<0.005	<0.005	<0.005	Meets the guideline
Mercury	<i>parts per million</i>	no more than 0.001	<0.000001	<0.000001	<0.000001	Meets the guideline
Antimony	<i>parts per million</i>	no more than 0.006	<0.00020	<0.00020	<0.00020	Meets the guideline
Barium	<i>parts per million</i>	no more than 1	0.0159	0.0146	0.0179	Meets the guideline
Beryllium	<i>parts per million</i>	no guideline	<0.00020	<0.00020	<0.00020	-
Bismuth	<i>parts per million</i>	no guideline	<0.00020	<0.00020	<0.00020	-
Boron	<i>parts per million</i>	no more than 5	0.010	<0.010	0.013	Meets the guideline
Cesium	<i>parts per million</i>	no guideline	<0.00010	<0.00010	<0.00010	-
Cobalt	<i>parts per million</i>	no guideline	0.00022	0.00021	0.00023	-
Lithium	<i>parts per million</i>	no guideline	0.0021	<0.0020	0.0029	-
Molybdenum	<i>parts per million</i>	no guideline	<0.00020	<0.00020	<0.00020	-
Rubidium	<i>parts per million</i>	no guideline	0.00163	0.00156	0.00177	-
Selenium	<i>parts per million</i>	no more than 0.01	<0.0010	<0.0010	<0.0010	Meets the guideline
Silicon	<i>parts per million</i>	no guideline	0.57	0.23	1.38	-
Silver	<i>parts per million</i>	no guideline	<0.00010	<0.00010	<0.00010	-
Strontium	<i>parts per million</i>	no guideline	0.0394	0.0387	0.0411	-
Tellurium	<i>parts per million</i>	no guideline	<0.00020	<0.00020	<0.00020	-
Thallium	<i>parts per million</i>	no guideline	<0.00010	<0.00010	<0.00010	-
Thorium	<i>parts per million</i>	no guideline	<0.00010	<0.00010	<0.00010	-
Tin	<i>parts per million</i>	no guideline	0.00031	<0.00020	0.00093	-
Titanium	<i>parts per million</i>	no guideline	0.00021	<0.00020	0.00033	-
Tungsten	<i>parts per million</i>	no guideline	<0.0010	<0.0010	<0.0010	-
Uranium	<i>parts per million</i>	no more than 0.02	<0.00010	<0.00010	<0.00010	Meets the guideline
Vanadium	<i>parts per million</i>	no guideline	<0.00020	<0.00020	<0.00020	-
Zirconium	<i>parts per million</i>	no more than 0.1	<0.00040	<0.00040	<0.00040	Meets the guideline

Guidelines from 'Summary of Guidelines for Canadian Drinking Water Quality' by Health Canada, revised February 1, 2012

*Data reported was collected from Branch I at McPhillips/Branch II at Hurst

**City of Winnipeg
Environmental Standards Division
2011 Winnipeg Distribution System Water Quality Summary**

PARAMETER	UNITS	GUIDELINES FOR CANADIAN DRINKING WATER QUALITY	AVERAGE	MINIMUM	MAXIMUM	COMMENTS
Odour ¹	<i>units</i>	Inoffensive	32	25	50	Normally meets the guideline
Chlorophyll-a ¹	<i>parts per billion</i>	no guideline	<1	<1	<1	Chlorophyll is found in algae
Turbidity (clearness) ²	<i>NTU</i>	no guideline	0.26	0.13	1.70	-
Colour, True ³	<i>TCU</i>	no more than 15	2.0	0.5	10.0	Meets the guideline
pH ²	<i>units</i>	between 6.5 and 8.5	7.47	7.16	7.83	Meets the guideline
Temperature ²	<i>degrees Celcius</i>	no more than 15	11.1	2.1	25.6	Does not always meet the guideline
Total Alkalinity ³	<i>parts per million as calcium</i>	no guideline	68	57	78	-
Total Hardness ³	<i>parts per million as calcium</i>	between 80 and 100	80	71	87	Does not always meet the guideline
Fluoride ^{*3}	<i>parts per million</i>	no more than 1.5	0.72	0.57	0.88	Meets the guideline
Soluble Phosphate ³	<i>parts per million as phosphorus</i>	no guideline	1.98	1.87	2.11	Added for Lead Control Program
Chloride ³	<i>parts per million</i>	no more than 250	19	16	23	Meets the guideline
Sulphate ³	<i>parts per million</i>	no more than 500	52	44	60	Meets the guideline
Chlorine (free) ²	<i>parts per million</i>	no guideline	0.56	0.06	1.32	-
Chlorine (total) ²	<i>parts per million</i>	no guideline	0.76	0.13	1.46	-
Trihalomethanes ⁴	<i>parts per billion</i>	no more than 100	33	10	61	Meets the guideline
Bromodichloromethane ⁴	<i>parts per billion</i>	no more than 16	5	2	9	Meets the guideline
Haloacetic acids ⁴	<i>parts per billion</i>	no more than 80	25	7	45	Meets the guideline
Aldehydes ⁴	<i>parts per billion</i>	no guideline	23	9	35	-
Calcium ⁴	<i>parts per million</i>	no guideline	21.1	18.2	23.9	Contributes to hardness
Magnesium ⁴	<i>parts per million</i>	no guideline	6.1	4.9	6.9	Contributes to hardness
Sodium ⁴	<i>parts per million</i>	no more than 200	34.6	27.7	38.7	Meets the guideline
Potassium ⁴	<i>parts per million</i>	no guideline	1.2	0.9	1.4	-
Iron ⁴	<i>parts per million</i>	no more than 0.3	0.08	0.04	0.14	Meets the guideline
Copper ⁴	<i>parts per million</i>	no more than 1.0	0.067	0.018	0.181	Meets the guideline
Lead ⁴	<i>parts per million</i>	no more than 0.01	<0.001	<0.001	<0.001	Meets the guideline
Aluminum ⁴	<i>parts per million</i>	no more than 0.1	0.005	<0.001	0.039	Meets the guideline
Arsenic ⁴	<i>parts per million</i>	no more than 0.01	<0.001	<0.001	<0.001	Meets the guideline
Chromium ⁴	<i>parts per million</i>	no more than 0.05	0.002	<0.001	0.002	Meets the guideline
Nickel ⁴	<i>parts per million</i>	no guideline	0.002	0.002	0.004	-
Cadmium ⁴	<i>parts per million</i>	no more than 0.005	<0.001	<0.001	<0.001	Meets the guideline
Manganese ⁴	<i>parts per million</i>	no more than 0.05	0.025	0.018	0.068	Does not always meet the guideline
Zinc ⁴	<i>parts per million</i>	no more than 5.0	0.001	<0.001	0.012	Meets the guideline
Mercury ⁴	<i>parts per million</i>	no more than 0.001	<0.000001	<0.000001	<0.000001	Meets the guideline
Antimony ⁴	<i>parts per million</i>	no more than 0.006	<0.001	<0.001	<0.001	Meets the guideline
Boron ⁴	<i>parts per million</i>	no more than 5	0.011	0.009	0.016	Meets the guideline
Uranium ⁴	<i>parts per million</i>	no more than 0.02	<0.001	<0.001	<0.001	Meets the guideline
Zirconium ⁴	<i>parts per million</i>	no guideline	<0.001	<0.001	<0.001	-

Guidelines from 'Summary of Guidelines for Canadian Drinking Water Quality' by Health Canada, revised February 1, 2012

*Fluoride was added in accordance with the Provincial Fluoridation Program guideline to reach an optimal concentration of 0.85 parts per million until March 22, 2011 when the setpoint was changed to 0.70 parts per million.

¹Data reported was collected from MacLean, Hurst, and McPhillips Pumping Station Discharges.

²Data reported was collected from 39 distribution system locations.

³Data reported was collected from a composite sample of the 60 distribution system locations and MacLean, Hurst, and McPhillips Pumping Station Discharges.

⁴Data reported was collected from 6 distribution system locations.

City of Winnipeg
Environmental Standards Division
2011 Winnipeg Distribution System Water Quality Summary

PARAMETER	GUIDELINE	OUR TEST RESULTS	COMMENTS
Number of total coliform bacteria tests in year	1820 samples	2,964	More testing than required by the guideline/provincial regulation
Number of times that total coliform bacteria show up in a test	no more than 10% of samples with positive total coliform or no consecutive positives from the same site.	0.64% (19 positive tests)	All resamples were negative and met the guideline/provincial regulation
Number of Escherichia coli bacteria tests in year	1820 samples	2,964	More testing than required by the guideline/provincial regulation
Number of times that Escherichia coli bacteria show up in a test	no bacteria present in the sample	0.03% (1 positive test)	The resample was negative and met the guideline/provincial regulation
Number of heterotrophic (bacteria) plate count (HPC) tests done	no guideline	2,964	Heterotrophic plate count is not required under the provincial regulations.

Guidelines from 'Summary of Guidelines for Canadian Drinking Water Quality' by Health Canada, revised February 1, 2012
 Data reported was collected from 60 distribution system locations and MacLean, Hurst, and McPhillips Pumping Station Discharges

APPENDIX B
COMPLIANCE SUBMISSION REPORTS

2011 Monthly Chlorine Reports



WATER TREATMENT PLANT CHLORINE GRAB SAMPLING REPORT

Water System Code: 252.00	Deacon Booster Pumping Station Branch 1		Deacon Booster Pumping Station Branch 2	
Licence No. PWS-09-412RR	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Free Chlorine (mg/L)	Total Chlorine (mg/L)
Date				
01-Jan-2011	NS	NS	NS	NS
02-Jan-2011	NS	NS	NS	NS
03-Jan-2011	NS	NS	NS	NS
04-Jan-2011	1.04	1.21	0.97	1.08
05-Jan-2011	0.99	1.10	0.92	1.13
06-Jan-2011	1.03	1.15	1.01	1.23
07-Jan-2011	0.91	1.08	0.91	1.12
08-Jan-2011	NS	NS	NS	NS
09-Jan-2011	NS	NS	NS	NS
10-Jan-2011	1.10	1.27	1.02	1.22
11-Jan-2011	1.07	1.27	1.00	1.18
12-Jan-2011	1.12	1.39	1.19	1.36
13-Jan-2011	1.08	1.26	0.95	1.22
14-Jan-2011	1.12	1.40	1.17	1.30
15-Jan-2011	NS	NS	NS	NS
16-Jan-2011	NS	NS	NS	NS
17-Jan-2011	1.04	1.32	1.07	1.27
18-Jan-2011	1.04	1.26	1.03	1.22
19-Jan-2011	1.00	1.19	1.05	1.25
20-Jan-2011	1.06	1.29	1.06	1.27
21-Jan-2011	1.13	1.35	1.14	1.33
22-Jan-2011	NS	NS	NS	NS
23-Jan-2011	NS	NS	NS	NS
24-Jan-2011	1.16	1.42	1.14	1.38
25-Jan-2011	1.12	1.30	1.06	1.33
26-Jan-2011	1.07	1.26	0.99	1.18
27-Jan-2011	1.01	1.24	1.05	1.24
28-Jan-2011	1.09	1.25	1.08	1.32
29-Jan-2011	NS	NS	NS	NS
30-Jan-2011	NS	NS	NS	NS
31-Jan-2011	1.07	1.33	1.07	1.30
Total number of measurements taken, A:	20		20	
Chlorine Standard for Monitoring Location (mg/L):	0.50		0.50	
Number of measurements meeting standard, B:	20		20	
Compliance with Chlorine Standard, C= B/A X 100%:	100%		100%	

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

Report Compiled By: J. Jones

Approved in LIMS By: S. Fletcher

WATER TREATMENT PLANT FREE CHLORINE ON-LINE SAMPLING
Deacon Booster Pumping Station

Water System Code: **252.00**

License Number: **PWS-09-412 R**

Report Created: **February 2, 2011**

Report Period: **January 2011**

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
1/1/2011	0.88	0.79	0.86	0.76
2/1/2011	0.87	0.74	0.83	0.75
3/1/2011	0.87	0.74	0.82	0.75
4/1/2011	0.88	0.75	0.88	0.81
5/1/2011	0.87	0.76	0.93	0.82
6/1/2011	0.88	0.78	0.96	0.91
7/1/2011	0.87	0.74	0.92	0.85
8/1/2011	0.94	0.82	0.93	0.85
9/1/2011	1.02	0.91	0.99	0.95
10/1/2011	1.04	0.92	0.98	0.85
11/1/2011	1.08	0.98	1.00	0.91
12/1/2011	1.10	1.04	1.07	0.96
13/01/2011	1.01	0.77	0.92	0.64
14/01/2011	1.11	0.70	1.00	0.56
15/01/2011	1.10	0.96	1.03	0.86
16/01/2011	1.11	0.87	1.09	0.86
17/01/2011	1.01	0.85	0.96	0.84
18/01/2011	1.04	0.92	1.06	0.90
19/01/2011	1.05	0.97	1.09	0.99
20/01/2011	1.04	0.94	1.10	1.00
21/01/2011	1.05	0.95	1.07	0.98
22/01/2011	1.00	0.90	1.06	0.99
23/01/2011	1.04	0.93	1.08	0.99
24/01/2011	1.01	0.80	1.03	0.57
25/01/2011	0.95	0.83	0.94	0.81
26/01/2011	0.99	0.83	0.97	0.77
27/01/2011	1.00	0.84	1.05	0.88
28/01/2011	1.10	0.82	1.16	0.67
29/01/2011	1.20	1.01	1.29	1.11
30/01/2011	1.18	1.09	1.25	1.13
31/01/2011	1.08	0.93	1.12	0.97

Total Number of Measurements, A:	2582697	2582930
Minimum Free Chlorine Standard:	0.5	0.5
Number of Measurements Meeting Standard, B:	2582697	2582930
COMPLIANCE, C = B/A X 100%:	100.00	100.00

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Submitted By (Print):

Doug Sulymka

Signature: *Original signed by Doug Sulymka*



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT CHLORINE GRAB SAMPLING REPORT

Water System Code: 252.00 Licence No. PWS-09-412R	Deacon Booster Pumping Station Branch 1		Deacon Booster Pumping Station Branch 2	
	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Free Chlorine (mg/L)	Total Chlorine (mg/L)
Date				
01-Feb-2011	1.09	1.26	1.09	1.30
02-Feb-2011	1.10	1.26	1.13	1.33
03-Feb-2011	1.14	1.29	1.12	1.33
04-Feb-2011	1.07	1.20	1.04	1.26
05-Feb-2011	NS	NS	NS	NS
06-Feb-2011	NS	NS	NS	NS
07-Feb-2011	1.06	1.26	1.04	1.27
08-Feb-2011	1.29	1.42	1.23	1.33
09-Feb-2011	1.27	1.48	1.13	1.37
10-Feb-2011	1.24	1.47	1.18	1.42
11-Feb-2011	1.14	1.37	1.10	1.32
12-Feb-2011	NS	NS	NS	NS
13-Feb-2011	NS	NS	NS	NS
14-Feb-2011	0.99	1.19	0.91	1.18
15-Feb-2011	1.00	1.22	1.05	1.24
16-Feb-2011	1.02	1.32	1.09	1.17
17-Feb-2011	1.08	1.30	1.07	1.28
18-Feb-2011	1.22	1.53	1.29	1.52
19-Feb-2011	NS	NS	NS	NS
20-Feb-2011	NS	NS	NS	NS
21-Feb-2011	NS	NS	NS	NS
22-Feb-2011	1.14	1.29	1.07	1.32
23-Feb-2011	0.88	1.10	0.97	1.16
24-Feb-2011	0.82	1.03	0.85	1.08
25-Feb-2011	1.01	1.27	1.02	1.24
26-Feb-2011	NS	NS	NS	NS
27-Feb-2011	NS	NS	NS	NS
28-Feb-2011	1.08	1.30	1.03	1.23
Total number of measurements taken, A:	19		19	
Chlorine Standard for Monitoring Location (mg/L):	0.50		0.50	
Number of measurements meeting standard, B:	19		19	
Compliance with Chlorine Standard, C= B/A X 100%:	100%		100%	

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

Report Compiled By: J. Jones

Approved in LIMS By: S. Fletcher

Date Approved: 28-Feb-11



WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT

Water System Code: 252.00	Deacon Booster Pumping Station Branch 1		Deacon Booster Pumping Station Branch 2	
Licence No. PWS-09-412RR	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Free Chlorine (mg/L)	Total Chlorine (mg/L)
Date				
01-Mar-2011	1.09	1.28	0.99	1.24
02-Mar-2011	1.15	1.33	1.14	1.35
03-Mar-2011	1.08	1.30	1.18	1.39
04-Mar-2011	1.03	1.28	1.07	1.30
05-Mar-2011	NS	NS	NS	NS
06-Mar-2011	NS	NS	NS	NS
07-Mar-2011	0.90	1.11	1.02	1.28
08-Mar-2011	1.03	1.21	1.10	1.31
09-Mar-2011	1.31	1.41	1.27	1.37
10-Mar-2011	1.07	1.26	1.04	1.25
11-Mar-2011	1.18	1.47	1.24	1.44
12-Mar-2011	NS	NS	NS	NS
13-Mar-2011	NS	NS	NS	NS
14-Mar-2011	1.23	1.54	1.17	1.37
15-Mar-2011	1.24	1.39	1.19	1.39
16-Mar-2011	1.07	1.30	1.14	1.28
17-Mar-2011	1.00	1.33	1.09	1.30
18-Mar-2011	1.13	1.39	1.06	1.32
19-Mar-2011	NS	NS	NS	NS
20-Mar-2011	NS	NS	NS	NS
21-Mar-2011	1.20	1.33	1.11	1.36
22-Mar-2011	1.18	1.31	1.00	1.23
23-Mar-2011	1.20	1.45	1.22	1.30
24-Mar-2011	1.22	1.38	1.07	1.23
25-Mar-2011	1.13	1.29	1.09	1.23
26-Mar-2011	NS	NS	NS	NS
27-Mar-2011	NS	NS	NS	NS
28-Mar-2011	1.17	1.31	1.04	1.19
29-Mar-2011	1.21	1.38	1.08	1.36
30-Mar-2011	1.07	1.36	1.07	1.33
31-Mar-2011	1.11	1.36	1.09	1.27
Total number of measurements taken, A:	23		23	
Chlorine Standard for Monitoring Location (mg/L):	0.50		0.50	
Number of measurements meeting standard, B:	23		23	
Compliance with Chlorine Standard, C= B/A X 100%:	100%		100%	

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

Report Compiled By: J. Jones

Approved in LIMS By: S. Fletcher

Date Approved: 4-Apr-11



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT

Water System Code: 252.00 Licence No. PWS-09-412RR	Deacon Booster Pumping Station Branch 1		Deacon Booster Pumping Station Branch 2	
	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Free Chlorine (mg/L)	Total Chlorine (mg/L)
Date				
01-Apr-2011	1.20	1.34	1.17	1.39
02-Apr-2011	NS	NS	NS	NS
03-Apr-2011	NS	NS	NS	NS
04-Apr-2011	1.19	1.36	1.15	1.30
05-Apr-2011	1.09	1.36	1.09	1.31
06-Apr-2011	OL	OL	OL	OL
07-Apr-2011	1.14	1.34	1.16	1.31
08-Apr-2011	1.23	1.35	1.13	1.38
09-Apr-2011	NS	NS	NS	NS
10-Apr-2011	NS	NS	NS	NS
11-Apr-2011	1.00	1.24	0.99	1.22
12-Apr-2011	1.15	1.30	1.05	1.24
13-Apr-2011	1.04	1.27	0.99	1.18
14-Apr-2011	0.98	1.32	1.05	1.21
15-Apr-2011	1.08	1.38	0.99	1.22
16-Apr-2011	NS	NS	NS	NS
17-Apr-2011	NS	NS	NS	NS
18-Apr-2011	1.14	1.24	1.01	1.22
19-Apr-2011	1.14	1.36	1.08	1.21
20-Apr-2011	1.01	1.26	0.99	1.17
21-Apr-2011	0.99	1.26	0.95	1.12
22-Apr-2011	NS	NS	NS	NS
23-Apr-2011	NS	NS	NS	NS
24-Apr-2011	NS	NS	NS	NS
25-Apr-2011	NS	NS	NS	NS
26-Apr-2011	1.02	1.33	0.99	1.20
27-Apr-2011	1.06	1.26	1.08	1.20
28-Apr-2011	1.09	1.29	1.07	1.29
29-Apr-2011	1.14	1.25	1.09	1.21
30-Apr-2011	NS	NS	NS	NS
Total number of measurements taken, A:	18		18	
Chlorine Standard for Monitoring Location (mg/L):	0.50		0.50	
Number of measurements meeting standard, B:	18		18	
Compliance with Chlorine Standard, C= B/A X 100%:	100%		100%	

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

The Water Treatment Plant was shutdown on April 6 for maintenance.

Report Compiled By: J. Jones

Approved in LIMS By: S. Fletcher

Date Approved: 4-May-11



WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT

Water System Code: 252.00	Deacon Booster Pumping Station Branch 1		Deacon Booster Pumping Station Branch 2	
Licence No. PWS-09-412RR	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Free Chlorine (mg/L)	Total Chlorine (mg/L)
Date				
01-May-2011	NS	NS	NS	NS
02-May-2011	0.99	1.17	0.99	1.14
03-May-2011	0.96	1.24	0.91	1.09
04-May-2011	0.96	1.23	1.00	1.25
05-May-2011	0.86	1.17	0.90	1.25
06-May-2011	1.00	1.18	0.94	1.21
07-May-2011	NS	NS	NS	NS
08-May-2011	NS	NS	NS	NS
09-May-2011	0.98	1.12	0.88	1.17
10-May-2011	0.89	1.13	0.86	1.05
11-May-2011	1.08	1.29	1.04	1.23
12-May-2011	1.22	1.38	1.07	1.31
13-May-2011	1.18	1.40	1.11	1.27
14-May-2011	NS	NS	NS	NS
15-May-2011	NS	NS	NS	NS
16-May-2011	1.31	1.46	1.20	1.35
17-May-2011	1.19	1.37	1.18	1.28
18-May-2011	1.18	1.40	1.10	1.31
19-May-2011	1.24	1.39	1.11	1.25
20-May-2011	1.13	1.34	1.03	1.38
21-May-2011	NS	NS	NS	NS
22-May-2011	NS	NS	NS	NS
23-May-2011	NS	NS	NS	NS
24-May-2011	1.11	1.26	1.03	1.18
25-May-2011	1.14	1.31	0.99	1.12
26-May-2011	1.15	1.36	0.97	1.17
27-May-2011	1.10	1.28	0.96	1.12
28-May-2011	NS	NS	NS	NS
29-May-2011	NS	NS	NS	NS
30-May-2011	1.09	1.32	1.01	1.20
31-May-2011	1.08	1.31	0.96	1.16
Total number of measurements taken, A:	21		21	
Chlorine Standard for Monitoring Location (mg/L):	0.50		0.50	
Number of measurements meeting standard, B:	21		21	
Compliance with Chlorine Standard, C= B/A X 100%:	100%		100%	

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

Report Compiled By: J. Jones/R.Grosselle

Approved in LIMS By: S. Fletcher



WATER TREATMENT PLANT FREE CHLORINE ON-LINE MONITORING REPORT
Deacon Booster Pumping Station

Water System Code: **252.00**
 Licence Number: **PWS-09-412 RR**

Report Created: **June 3, 2011** Report Period: **May 2011**

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
5/1/2011	0.97	0.83	0.94	0.84
5/2/2011	0.96	0.77	0.94	0.86
5/3/2011	0.89	0.52	0.94	0.84
5/4/2011	0.98	0.87	0.97	0.90
5/5/2011	1.01	0.67	1.00	0.68
5/6/2011	1.17	0.87	1.05	0.91
5/7/2011	1.13	0.82	1.02	0.91
5/8/2011	1.41	0.91	1.11	0.97
5/9/2011	1.08	0.59	1.01	0.81
5/10/2011	1.08	0.70	0.82	0.60
5/11/2011	1.09	0.84	1.00	0.77
5/12/2011	1.04	0.86	0.96	0.81
5/13/2011	1.07	0.96	0.99	0.82
5/14/2011	1.07	0.95	1.00	0.87
5/15/2011	1.04	0.92	0.99	0.86
5/16/2011	1.09	0.96	1.01	0.78
5/17/2011	1.13	0.97	1.10	0.93
5/18/2011	1.10	1.01	1.11	0.97
5/19/2011	1.15	0.85	1.07	0.89
5/20/2011	1.08	0.89	1.07	0.91
5/21/2011	0.94	0.83	1.02	0.91
5/22/2011	0.93	0.82	1.12	0.79
5/23/2011	0.95	0.85	0.92	0.62
5/24/2011	1.00	0.91	1.13	0.81
5/25/2011	1.00	0.80	0.92	0.75
5/26/2011	1.07	0.83	0.94	0.76
5/27/2011	1.04	0.85	1.00	0.83
5/28/2011	1.11	0.87	1.01	0.92
5/29/2011	1.08	0.92	0.98	0.88
5/30/2011	1.07	0.86	1.02	0.86
5/31/2011	1.10	0.69	1.04	0.54

Total Number of Measurements, A:	2576407	2570055
Minimum Free Chlorine Standard:	0.5	0.5
Number of Measurements Meeting Standard, B:	2576407	2570055
COMPLIANCE, C = B/A X 100%:	100.00	100.00

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Submitted By (Print): D.Wagner

Signature: Original signed by D.Wagner



WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT				
Water System Code: 252.00	Deacon Booster Pumping Station Branch 1		Deacon Booster Pumping Station Branch 2	
Licence No. PWS-09-412RR	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Free Chlorine (mg/L)	Total Chlorine (mg/L)
Date				
01-Jun-2011	1.19	1.31	1.03	1.19
02-Jun-2011	1.20	1.44	1.12	1.27
03-Jun-2011	1.21	1.46	1.18	1.34
04-Jun-2011	NS	NS	NS	NS
05-Jun-2011	NS	NS	NS	NS
06-Jun-2011	1.16	1.40	1.08	1.32
07-Jun-2011	1.30	1.50	1.19	1.40
08-Jun-2011	1.15	1.34	1.06	1.21
09-Jun-2011	1.14	1.41	1.10	1.28
10-Jun-2011	1.18	1.35	1.14	1.32
11-Jun-2011	NS	NS	NS	NS
12-Jun-2011	NS	NS	NS	NS
13-Jun-2011	1.08	1.21	0.96	1.17
14-Jun-2011	1.16	1.37	1.10	1.27
15-Jun-2011	1.23	1.44	1.10	1.32
16-Jun-2011	1.20	1.35	1.16	1.32
17-Jun-2011	1.28	1.46	1.13	1.38
18-Jun-2011	NS	NS	NS	NS
19-Jun-2011	NS	NS	NS	NS
20-Jun-2011	1.22	1.41	1.13	1.34
21-Jun-2011	1.26	1.46	1.22	1.37
22-Jun-2011	1.38	1.52	1.22	1.38
23-Jun-2011	1.25	1.39	1.15	1.37
24-Jun-2011	1.28	1.48	1.18	1.37
25-Jun-2011	NS	NS	NS	NS
26-Jun-2011	NS	NS	NS	NS
27-Jun-2011	1.12	1.31	1.11	1.21
28-Jun-2011	1.25	1.42	1.20	1.36
29-Jun-2011	1.25	1.41	1.18	1.34
30-Jun-2011	1.29	1.51	1.27	1.47
Total number of measurements taken, A:	22		22	
Chlorine Standard for Monitoring Location (mg/L):	0.50		0.50	
Number of measurements meeting standard, B:	22		22	
Compliance with Chlorine Standard, C= B/A X 100%:	100%		100%	

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

Report Compiled By: J. Jones

Approved in LIMS By: S. Fletcher

Date Approved: 5-Jul-11



WATER TREATMENT PLANT FREE CHLORINE ON-LINE MONITORING REPORT
Deacon Booster Pumping Station

Water System Code: **252.00**
 Licence Number: **PWS 09 412 RR**

Report Created: **July 7, 2011**

Report Period: **June 2011**

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
6/1/2011	1.27	0.72	1.03	0.84
6/2/2011	1.02	0.76	1.01	0.87
6/3/2011	0.94	0.76	1.03	0.82
6/4/2011	1.00	0.79	1.06	0.95
6/5/2011	1.06	0.88	1.10	1.02
6/6/2011	1.14	0.76	1.12	0.64
6/7/2011	1.15	0.96	1.24	1.05
6/8/2011	1.08	1.00	1.12	1.04
6/9/2011	1.13	0.85	1.13	0.98
6/10/2011	0.97	0.71	1.16	0.94
6/11/2011	0.95	0.59	1.16	1.00
6/12/2011	0.96	0.73	1.07	0.95
6/13/2011	1.11	0.85	1.03	0.93
6/14/2011	1.06	0.79	1.06	0.99
6/15/2011	1.09	0.86	1.14	1.07
6/16/2011	1.32	0.90	1.08	0.91
6/17/2011	1.36	1.11	1.12	0.97
6/18/2011	1.32	1.13	1.12	1.02
6/19/2011	1.29	1.11	1.10	1.01
6/20/2011	1.23	1.00	1.14	1.02
6/21/2011	1.27	1.02	1.25	1.01
6/22/2011	1.26	1.01	1.18	1.04
6/23/2011	1.29	1.01	1.09	0.88
6/24/2011	1.30	1.05	1.13	0.88
6/25/2011	1.34	1.07	1.18	0.92
6/26/2011	1.28	1.07	1.15	1.03
6/27/2011	1.24	1.02	1.09	0.93
6/28/2011	1.25	0.95	1.04	0.87
6/29/2011	1.24	0.99	1.14	0.97
6/30/2011	1.12	0.94	1.16	0.97

Total Number of Measurements, A:	21600	21598
Minimum Free Chlorine Standard:	0.5	0.5
Number of Measurements Meeting Standard, B:	21600	21598
COMPLIANCE, C = B/A X 100%:	100.00	100.00

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Submitted By (Print): J. Hume Signature: Original signed by J. Hume



WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT

Water System Code: 252.00	Deacon Booster Pumping Station Branch 1		Deacon Booster Pumping Station Branch 2	
Licence No. PWS-09-412RR	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Free Chlorine (mg/L)	Total Chlorine (mg/L)
Date				
01-Jul-2011	NS	NS	NS	NS
02-Jul-2011	NS	NS	NS	NS
03-Jul-2011	NS	NS	NS	NS
04-Jul-2011	1.18	1.40	1.09	1.40
05-Jul-2011	1.09	1.29	1.00	1.15
06-Jul-2011	0.87	1.13	0.91	1.12
07-Jul-2011	1.09	1.31	1.05	1.24
08-Jul-2011	1.08	1.30	1.05	1.27
09-Jul-2011	NS	NS	NS	NS
10-Jul-2011	NS	NS	NS	NS
11-Jul-2011	1.07	1.25	1.05	1.22
12-Jul-2011	1.11	1.31	1.07	1.22
13-Jul-2011	1.33	1.56	1.30	1.49
14-Jul-2011	1.19	1.39	1.23	1.37
15-Jul-2011	1.19	1.40	1.13	1.43
16-Jul-2011	NS	NS	NS	NS
17-Jul-2011	NS	NS	NS	NS
18-Jul-2011	1.25	1.47	1.13	1.32
19-Jul-2011	1.31	1.52	1.20	1.49
20-Jul-2011	1.26	1.45	1.12	1.29
21-Jul-2011	1.49	1.71	1.40	1.62
22-Jul-2011	1.44	1.66	1.32	1.58
23-Jul-2011	NS	NS	NS	NS
24-Jul-2011	NS	NS	NS	NS
25-Jul-2011	1.46	1.65	1.46	1.62
26-Jul-2011	OL	OL	OL	OL
27-Jul-2011	1.44	1.68	1.37	1.65
28-Jul-2011	1.81	1.94	1.60	1.81
29-Jul-2011	1.43	1.57	1.21	1.51
30-Jul-2011	NS	NS	NS	NS
31-Jul-2011	NS	NS	NS	NS
Total number of measurements taken, A:	19		19	
Chlorine Standard for Monitoring Location (mg/L):	0.50		0.50	
Number of measurements meeting standard, B:	19		19	
Compliance with Chlorine Standard, C= B/A X 100%:	100%		100%	

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

The Water Treatment Plant was shutdown on July 26 for maintenance at the time of sampling.

Report Compiled By: J. Jones

Approved in LIMS By: S. Fletcher

Date Approved: 3-Aug-11



WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT

Water System Code: 252.00	Deacon Booster Pumping Station Branch 1		Deacon Booster Pumping Station Branch 2	
Licence No. PWS-09-412RR	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Free Chlorine (mg/L)	Total Chlorine (mg/L)
Date				
01-Aug-2011	NS	NS	NS	NS
02-Aug-2011	1.53	1.72	1.42	1.63
03-Aug-2011	1.53	1.75	1.52	1.72
04-Aug-2011	1.23	1.46	1.22	1.37
05-Aug-2011	1.26	1.46	1.22	1.40
06-Aug-2011	NS	NS	NS	NS
07-Aug-2011	NS	NS	NS	NS
08-Aug-2011	1.21	1.40	1.19	1.41
09-Aug-2011	1.37	1.60	1.30	1.46
10-Aug-2011	1.44	1.67	1.38	1.54
11-Aug-2011	1.29	1.49	1.15	1.31
12-Aug-2011	1.41	1.62	1.33	1.58
13-Aug-2011	NS	NS	NS	NS
14-Aug-2011	NS	NS	NS	NS
15-Aug-2011	1.29	1.55	1.28	1.46
16-Aug-2011	1.37	1.62	1.44	1.62
17-Aug-2011	1.70	1.92	1.67	1.88
18-Aug-2011	1.82	2.01	1.88	2.07
19-Aug-2011	1.40	1.69	1.44	1.64
20-Aug-2011	NS	NS	NS	NS
21-Aug-2011	NS	NS	NS	NS
22-Aug-2011	1.10	1.24	1.02	1.22
23-Aug-2011	1.22	1.43	1.21	1.38
24-Aug-2011	1.42	1.59	1.34	1.55
25-Aug-2011	1.37	1.55	1.37	1.58
26-Aug-2011	1.59	1.77	1.46	1.72
27-Aug-2011	NS	NS	NS	NS
28-Aug-2011	NS	NS	NS	NS
29-Aug-2011	1.10	1.32	1.16	1.34
30-Aug-2011	1.39	1.60	1.37	1.55
31-Aug-2011	1.31	1.55	1.27	1.51
Total number of measurements taken, A:	22		22	
Chlorine Standard for Monitoring Location (mg/L):	0.50		0.50	
Number of measurements meeting standard, B:	22		22	
Compliance with Chlorine Standard, C= B/A X 100%:	100%		100%	

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

Report Compiled By: H.Demchenko

Approved in LIMS By: G.Levesque/S.Fletcher



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT

Water System Code: 252.00 Licence No. PWS-09-412RR	Deacon Booster Pumping Station Branch 1		Deacon Booster Pumping Station Branch 2	
	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Free Chlorine (mg/L)	Total Chlorine (mg/L)
Date				
01-Sep-2011	1.27	1.45	1.14	1.36
02-Sep-2011	1.21	1.46	1.19	1.46
03-Sep-2011	NS	NS	NS	NS
04-Sep-2011	NS	NS	NS	NS
05-Sep-2011	NS	NS	NS	NS
06-Sep-2011	1.16	1.32	1.05	1.25
07-Sep-2011	1.36	1.62	1.32	1.53
08-Sep-2011	1.24	1.40	1.24	1.40
09-Sep-2011	1.12	1.31	1.13	1.26
10-Sep-2011	NS	NS	NS	NS
11-Sep-2011	NS	NS	NS	NS
12-Sep-2011	1.26	1.49	1.14	1.33
13-Sep-2011	1.25	1.53	1.26	1.47
14-Sep-2011	1.40	1.61	1.27	1.49
15-Sep-2011	1.40	1.64	1.28	1.49
16-Sep-2011	1.44	1.58	1.30	1.42
17-Sep-2011	NS	NS	NS	NS
18-Sep-2011	NS	NS	NS	NS
19-Sep-2011	1.12	1.28	1.04	1.21
20-Sep-2011	1.24	1.39	1.16	1.35
21-Sep-2011	1.33	1.49	1.20	1.33
22-Sep-2011	1.18	1.47	1.18	1.40
23-Sep-2011	1.22	1.41	1.22	1.36
24-Sep-2011	NS	NS	NS	NS
25-Sep-2011	NS	NS	NS	NS
26-Sep-2011	1.29	1.48	1.23	1.39
27-Sep-2011	1.15	1.40	1.06	1.28
28-Sep-2011	1.31	1.49	1.24	1.41
29-Sep-2011	1.18	1.38	1.14	1.37
30-Sep-2011	1.34	1.62	1.21	1.49
Total number of measurements taken, A:	21		21	
Chlorine Standard for Monitoring Location (mg/L):	0.50		0.50	
Number of measurements meeting standard, B:	21		21	
Compliance with Chlorine Standard, C= B/A X 100%:	100%		100%	

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

Report Compiled By: H. Demchenko / R. Grosselle

Approved in LIMS By: S. Fletcher

Date Approved: 7-Oct-11



WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT

Water System Code: 252.00	Deacon Booster Pumping Station Branch 1		Deacon Booster Pumping Station Branch 2	
Licence No. PWS-09-412RR	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Free Chlorine (mg/L)	Total Chlorine (mg/L)
Date				
01-Oct-2011	NS	NS	NS	NS
02-Oct-2011	NS	NS	NS	NS
03-Oct-2011	1.53	1.71	1.44	1.64
04-Oct-2011	1.51	1.75	1.51	1.79
05-Oct-2011	1.44	1.67	1.52	1.73
06-Oct-2011	1.50	1.75	1.51	1.78
07-Oct-2011	1.66	1.93	1.60	1.85
08-Oct-2011	NS	NS	NS	NS
09-Oct-2011	NS	NS	NS	NS
10-Oct-2011	NS	NS	NS	NS
11-Oct-2011	1.25	1.50	1.18	1.44
12-Oct-2011	NS	NS	NS	NS
13-Oct-2011	1.43	1.73	1.37	1.63
14-Oct-2011	1.30	1.60	1.31	1.53
15-Oct-2011	NS	NS	NS	NS
16-Oct-2011	NS	NS	NS	NS
17-Oct-2011	1.31	1.56	1.36	1.60
18-Oct-2011	1.37	1.61	1.41	1.63
19-Oct-2011	1.22	1.54	1.40	1.61
20-Oct-2011	1.43	1.62	1.44	1.63
21-Oct-2011	1.34	1.57	1.29	1.50
22-Oct-2011	NS	NS	NS	NS
23-Oct-2011	NS	NS	NS	NS
24-Oct-2011	1.16	1.46	1.22	1.38
25-Oct-2011	1.31	1.52	1.22	1.44
26-Oct-2011	1.18	1.43	1.21	1.37
27-Oct-2011	1.33	1.61	1.23	1.51
28-Oct-2011	1.41	1.58	1.24	1.49
29-Oct-2011	NS	NS	NS	NS
30-Oct-2011	NS	NS	NS	NS
31-Oct-2011	1.23	1.48	1.20	1.35
Total number of measurements taken, A:	19		19	
Chlorine Standard for Monitoring Location (mg/L):	0.50		0.50	
Number of measurements meeting standard, B:	19		19	
Compliance with Chlorine Standard, C= B/A X 100%:	100%		100%	

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

On October 12, there were no samples taken because the plant was off line at the time of sampling.

Report Compiled By: H.Demchenko

Approved in LIMS By: S.Fletcher

Date Approved: 7-Nov-11



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT

Water System Code: 252.00	Deacon Booster Pumping Station Branch 1		Deacon Booster Pumping Station Branch 2	
Licence No. PWS-09-412RR	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Free Chlorine (mg/L)	Total Chlorine (mg/L)
Date				
01-Nov-2011	1.04	1.39	1.21	1.33
02-Nov-2011	1.17	1.35	1.22	1.40
03-Nov-2011	1.22	1.52	1.33	1.57
04-Nov-2011	1.27	1.51	1.29	1.52
05-Nov-2011	NS	NS	NS	NS
06-Nov-2011	NS	NS	NS	NS
07-Nov-2011	1.52	1.70	1.45	1.63
08-Nov-2011	1.54	1.78	1.45	1.73
09-Nov-2011	OL	OL	OL	OL
10-Nov-2011	1.67	1.90	1.53	1.81
11-Nov-2011	NS	NS	NS	NS
12-Nov-2011	NS	NS	NS	NS
13-Nov-2011	NS	NS	NS	NS
14-Nov-2011	1.37	1.60	1.26	1.51
15-Nov-2011	1.28	1.58	1.23	1.47
16-Nov-2011	1.29	1.52	1.28	1.42
17-Nov-2011	1.21	1.45	1.21	1.37
18-Nov-2011	1.23	1.52	1.24	1.44
19-Nov-2011	NS	NS	NS	NS
20-Nov-2011	NS	NS	NS	NS
21-Nov-2011	1.13	1.29	1.18	1.36
22-Nov-2011	1.05	1.28	1.12	1.37
23-Nov-2011	1.17	1.33	1.06	1.26
24-Nov-2011	1.06	1.26	0.99	1.15
25-Nov-2011	1.16	1.38	1.06	1.31
26-Nov-2011	NS	NS	NS	NS
27-Nov-2011	NS	NS	NS	NS
28-Nov-2011	1.06	1.34	1.08	1.26
29-Nov-2011	1.05	1.32	1.01	1.24
30-Nov-2011	OL	OL	OL	OL
Total number of measurements taken, A:	19		19	
Chlorine Standard for Monitoring Location (mg/L):	0.50		0.50	
Number of measurements meeting standard, B:	19		19	
Compliance with Chlorine Standard, C= B/A X 100%:	100%		100%	

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

On November 9th and 30th, there were no samples taken because the plant was off line at the time of sampling.

Report Compiled By: H.Demchenko

Approved in LIMS By: S.Fletcher

Date Approved: 6-Dec-11



WATER TREATMENT PLANT FREE CHLORINE ON-LINE MONITORING REPORT
Deacon Booster Pumping Station

Water System Code: **252.00**
 Licence Number: **PWS-09-412 RR**

Report Created: **December 12, 2011** Report Period: **November 2011**

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
1/11/2011	1.13	0.95	1.14	0.96
2/11/2011	1.13	0.85	1.18	0.92
3/11/2011	1.13	0.88	1.26	1.03
4/11/2011	1.01	0.73	1.17	0.87
5/11/2011	1.50	0.78	1.39	0.91
6/11/2011	1.66	1.17	1.36	1.05
7/11/2011	1.48	1.14	1.28	1.10
8/11/2011	1.35	1.06	1.38	1.14
9/11/2011	1.32	0.94	1.55	1.02
10/11/2011	1.44	0.67	1.40	0.97
11/11/2011	1.84	1.10	1.65	1.25
12/11/2011	1.79	1.27	1.50	1.01
13/11/2011	1.53	1.17	1.37	1.04
14/11/2011	1.18	0.82	1.19	0.85
15/11/2011	1.07	0.78	1.20	0.85
16/11/2011	1.01	0.87	1.14	0.91
17/11/2011	0.97	0.84	1.08	0.94
18/11/2011	1.10	0.74	1.25	0.99
19/11/2011	1.25	1.08	1.34	1.15
20/11/2011	1.03	0.70	1.24	0.95
21/11/2011	1.01	0.52	1.21	1.00
22/11/2011	1.00	0.59	1.00	0.70
23/11/2011	1.31	0.86	0.97	0.78
24/11/2011	1.14	0.88	1.09	0.89
25/11/2011	1.18	0.93	1.13	0.95
26/11/2011	1.17	1.01	1.12	1.04
27/11/2011	1.12	0.93	1.07	0.97
28/11/2011	1.07	0.69	1.08	0.84
29/11/2011	1.13	0.90	1.05	0.87
30/11/2011	1.04	0.86	1.01	0.64

Total Number of Measurements, A: 21343 21371
 Minimum Free Chlorine Standard: 0.5 0.5
 Number of Measurements Meeting Standard, B: 21343 21371
 COMPLIANCE, C = B/A X 100%: 100.00 100.00

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Chlorine\2011\11 2011

Submitted By (Print): D.Sulymka Signature: Original signed by D.Sulymka



WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT

Water System Code: 252.00	Deacon Booster Pumping Station Branch 1		Deacon Booster Pumping Station Branch 2	
Licence No. PWS-09-412RR	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Free Chlorine (mg/L)	Total Chlorine (mg/L)
Date				
01-Dec-2011	1.10	1.31	1.02	1.25
02-Dec-2011	1.09	1.29	1.07	1.23
03-Dec-2011	NS	NS	NS	NS
04-Dec-2011	NS	NS	NS	NS
05-Dec-2011	1.15	1.32	1.03	1.24
06-Dec-2011	1.10	1.32	1.01	1.28
07-Dec-2011	1.17	1.32	1.13	1.32
08-Dec-2011	1.07	1.30	1.04	1.30
09-Dec-2011	1.08	1.28	1.03	1.26
10-Dec-2011	NS	NS	NS	NS
11-Dec-2011	NS	NS	NS	NS
12-Dec-2011	1.10	1.29	1.06	1.25
13-Dec-2011	1.05	1.21	1.06	1.28
14-Dec-2011	1.06	1.25	1.09	1.27
15-Dec-2011	1.02	1.24	1.01	1.19
16-Dec-2011	1.04	1.26	1.00	1.21
17-Dec-2011	NS	NS	NS	NS
18-Dec-2011	NS	NS	NS	NS
19-Dec-2011	1.00	1.24	1.00	1.21
20-Dec-2011	1.11	1.31	1.06	1.29
21-Dec-2011	1.06	1.28	0.99	1.23
22-Dec-2011	1.11	1.33	1.02	1.26
23-Dec-2011	1.13	1.35	1.11	1.27
24-Dec-2011	NS	NS	NS	NS
25-Dec-2011	NS	NS	NS	NS
26-Dec-2011	NS	NS	NS	NS
27-Dec-2011	NS	NS	NS	NS
28-Dec-2011	1.06	1.34	1.08	1.34
29-Dec-2011	1.09	1.36	1.03	1.27
30-Dec-2011	1.03	1.34	1.14	1.30
31-Dec-2011	NS	NS	NS	NS
Total number of measurements taken, A:	20		20	
Chlorine Standard for Monitoring Location (mg/L):	0.50		0.50	
Number of measurements meeting standard, B:	20		20	
Compliance with Chlorine Standard, C= B/A X 100%:	100%		100%	

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

Report Compiled By: H.Demchenko

Approved in LIMS By: S.Fletcher

Date Approved: 3-Jan-12

2011 Monthly Turbidity Reports



WATER TREATMENT PLANT TURBIDITY GRAB SAMPLING REPORT

Water System Code: 252.00	Turbidity (NTU)								
Licence No. PWS-09-412RR	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
Date	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
01-Jan-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
02-Jan-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
03-Jan-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
04-Jan-2011	0.65	0.20	0.25	0.19	0.18	0.14	0.15	0.15	0.15
05-Jan-2011	0.73	0.17	0.19	0.18	OL	0.17	0.17	0.18	0.22
06-Jan-2011	0.79	0.22	0.29	0.20	0.21	OL	0.22	OL	0.19
07-Jan-2011	0.65	0.19	0.20	0.23	0.29	0.23	0.18	0.21	0.22
08-Jan-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
09-Jan-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
10-Jan-2011	0.65	0.23	0.25	OL	0.22	0.21	0.18	0.21	0.16
11-Jan-2011	0.67	0.29	OL	0.23	0.24	0.17	0.21	0.17	0.19
12-Jan-2011	0.81	0.18	0.18	0.17	0.16	0.19	0.15	0.17	OL
13-Jan-2011	0.58	0.22	OL	0.17	0.20	0.19	0.16	0.15	0.17
14-Jan-2011	0.55	0.15	0.15	0.14	0.14	0.17	OL	0.14	0.15
15-Jan-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
16-Jan-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
17-Jan-2011	0.84	0.20	0.22	0.19	OL	0.24	OL	0.21	0.23
18-Jan-2011	0.63	0.22	0.23	0.23	0.18	0.26	OL	0.17	OL
19-Jan-2011	0.58	0.22	0.21	OL	0.24	0.17	OL	0.23	0.19
20-Jan-2011	0.56	0.22	0.23	0.23	OL	0.20	OL	OL	0.22
21-Jan-2011	0.65	0.26	OL	0.24	0.22	0.19	OL	0.22	0.17
22-Jan-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
23-Jan-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
24-Jan-2011	0.64	0.21	0.21	0.29	0.22	0.18	OL	0.21	0.18
25-Jan-2011	0.65	0.20	0.22	0.20	0.26	0.20	OL	OL	0.20
26-Jan-2011	0.61	0.27	0.28	0.24	0.21	0.18	OL	0.22	OL
27-Jan-2011	0.61	0.25	0.23	OL	0.24	0.18	OL	0.24	0.20
28-Jan-2011	0.62	0.23	0.21	0.21	0.17	OL	OL	0.16	0.24
29-Jan-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
30-Jan-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
31-Jan-2011	0.72	0.22	0.24	0.21	0.17	0.16	OL	0.18	0.22
Total number of measurements taken, A:		20	17	17	17	18	8	17	17
Turbidity Standard for Monitoring Location (NTU):		0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Number of measurements meeting standard, B:		20	17	17	17	18	8	17	17
Compliance with Turbidity Standard, C= B/A X 100%:		100%	100%	100%	100%	100%	100%	100%	100%

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

Report Compiled By: J. Jones

Approved in LIMS By: S. Fletcher

Date Approved: 3-Feb-11



**CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES DIVISION**

Water System Code: 252.00
License Number: PWS 09 412

Date	January Turbidity (NTU)																
	Raw	Filter #1		Filter #2		Filter #3		Filter #4		Filter #5		Filter #6		Filter #7		Filter #8	
	Avg	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
1/1/2011	0.76	0.11	0.15	0.12	0.13	0.11	0.14	0.12	0.24	0.15	0.28	0.12	0.23	0.05	0.18	0.06	0.17
2/1/2011	0.80	0.16	0.28	0.11	0.25	0.11	0.25	0.13	0.15	0.15	0.19	0.09	0.24	0.04	0.06	0.06	0.09
3/1/2011	0.84	0.14	0.25	0.12	0.14	0.11	0.14	0.13	0.28	0.19	0.28	0.11	0.15	0.06	0.21	0.06	0.19
4/1/2011	0.84	0.14	0.19	0.09	0.22	0.09	0.23	0.11	0.14	0.16	0.27	0.09	0.22	0.02	0.05	0.05	0.08
5/1/2011	0.77	0.07	0.23	0.09	0.11	0.08	0.11	0.09	0.23	0.17	0.19	0.10	0.13	0.05	0.18	0.05	0.22
6/1/2011	0.61	0.16	0.21	0.10	0.24	0.09	0.25	0.12	0.15	0.11	0.27	0.11	0.24	0.05	0.22	0.04	0.07
7/1/2011	0.61	0.11	0.29	0.09	0.25	0.11	0.13	0.12	0.25	0.10	0.11	0.11	0.26	0.05	0.06	0.08	0.26
8/1/2011	0.62	0.15	0.18	0.13	0.23	0.10	0.24	0.09	0.13	0.09	0.20	0.10	0.13	0.06	0.21	0.04	0.20
9/1/2011	0.61	0.13	0.27	0.11	0.25	0.11	0.13	0.13	0.26	0.09	0.11	0.10	0.23	0.04	0.05	0.05	0.08
10/1/2011	0.59	0.15	0.18	0.12	0.15	0.11	0.24	0.11	0.27	0.09	0.21	0.11	0.12	0.06	0.21	0.05	0.21
11/1/2011	0.57	0.14	0.27	0.11	0.26	0.11	0.13	0.14	0.20	0.09	0.11	0.11	0.24	0.04	0.21	0.05	0.08
12/1/2011	0.56	0.12	0.17	0.09	0.14	0.07	0.19	0.08	0.13	0.07	0.22	0.09	0.32	0.04	0.11	0.04	0.17
13/01/2011	0.58	0.10	0.23	0.08	0.20	0.07	0.09	0.09	0.21	0.06	0.17	0.09	0.13	0.02	0.18	0.02	0.05
14/01/2011	0.53	0.11	0.21	0.09	0.18	0.07	0.21	0.09	0.26	0.07	0.11	0.01	0.07	0.02	0.17	0.03	0.16
15/01/2011	0.54	0.14	0.27	0.11	0.25	0.10	0.13	0.10	0.24	0.08	0.23	OL	OL	0.05	0.09	0.03	0.26
16/01/2011	0.53	0.11	0.28	0.09	0.24	0.09	0.24	0.12	0.18	0.07	0.20	OL	OL	0.05	0.22	0.04	0.07
17/01/2011	0.52	0.13	0.15	0.11	0.13	0.08	0.25	0.10	0.24	0.10	0.20	OL	OL	0.03	0.20	0.04	0.16
18/01/2011	0.51	0.14	0.28	0.11	0.25	0.11	0.15	0.09	0.25	0.08	0.21	OL	OL	0.03	0.06	0.04	0.17
19/01/2011	0.51	0.14	0.27	0.11	0.27	0.11	0.25	0.13	0.15	0.08	0.23	OL	OL	0.06	0.18	0.05	0.07
20/01/2011	0.51	0.14	0.18	0.13	0.15	0.08	0.26	0.11	0.28	0.11	0.16	OL	OL	0.05	0.22	0.06	0.19
21/01/2011	0.51	0.13	0.27	0.10	0.27	0.12	0.17	0.11	0.14	0.06	0.24	OL	OL	0.05	0.07	0.05	0.21
22/01/2011	0.51	0.11	0.26	0.12	0.13	0.10	0.28	0.12	0.23	0.11	0.14	OL	OL	0.05	0.23	0.06	0.07
23/01/2011	0.51	0.17	0.25	0.11	0.24	0.12	0.15	0.10	0.27	0.09	0.22	OL	OL	0.04	0.07	0.06	0.37
24/01/2011	0.50	0.12	0.27	0.10	0.28	0.11	0.28	0.13	0.16	0.09	0.12	OL	OL	0.06	0.26	0.04	0.08
25/01/2011	0.50	0.13	0.17	0.12	0.16	0.08	0.24	0.11	0.30	0.09	0.30	OL	OL	0.05	0.22	0.06	0.26
26/01/2011	0.50	0.16	0.29	0.11	0.28	0.10	0.13	0.10	0.27	0.09	0.22	OL	OL	0.04	0.06	0.05	0.18
27/01/2011	0.50	0.14	0.30	0.10	0.23	0.09	0.24	0.12	0.16	0.09	0.11	OL	OL	0.05	0.27	0.03	0.06
28/01/2011	0.50	0.14	0.16	0.11	0.14	0.08	0.09	0.08	0.25	0.07	0.17	OL	OL	0.02	0.17	0.04	0.25
29/01/2011	0.50	0.12	0.49	0.09	0.27	0.09	0.40	0.10	0.30	0.06	0.19	OL	OL	0.03	0.07	0.04	0.16
30/01/2011	0.51	0.11	0.26	0.10	0.12	0.07	0.22	0.10	0.22	0.09	0.17	OL	OL	0.04	0.18	0.03	0.05
31/01/2011	0.51	0.14	0.18	0.11	0.27	0.08	0.10	0.09	0.26	0.08	0.21	OL	OL	0.03	0.05	0.05	0.16
Total Number of Measurements Taken, A:																	
		217715		220091		219453		150400		226911		97563		223296		218598	
Turbidity Standard for Monitoring Location (NTU):																	
		0.3		0.3		0.3		0.3		0.3		0.3		0.3		0.3	
Number of Measurements Meeting Standard, B:																	
		217557		220091		219220		150359		226911		97562		223296		218595	
Compliance with Turbidity Standard, C = B/A x 100%:																	
		99.9274		100		99.8938		99.9727		100		99.999		100		99.9986	

Notes: 1. OL Off Line

Submitted By (Print): D.Sulymka

Signature: Original signed by D.Sulymka



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT TURBIDITY GRAB SAMPLING REPORT									
Water System Code: 252.00	Turbidity (NTU)								
Licence No. PWS-09-412R									
Date	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
01-Feb-2011	0.62	OL	0.18	0.25	0.19	0.15	OL	0.17	0.15
02-Feb-2011	0.62	0.19	0.20	0.19	0.25	0.18	OL	0.15	0.17
03-Feb-2011	0.65	0.21	OL	0.21	0.18	0.13	OL	0.15	0.19
04-Feb-2011	0.67	0.18	0.21	OL	0.21	0.17	OL	0.21	0.16
05-Feb-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
06-Feb-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
07-Feb-2011	0.55	0.21	0.21	0.20	0.22	0.18	OL	0.23	0.17
08-Feb-2011	0.58	0.23	0.28	0.23	0.19	0.16	OL	0.17	0.21
09-Feb-2011	0.55	OL	0.24	0.29	0.22	0.17	OL	0.20	0.17
10-Feb-2011	0.56	0.24	0.25	0.27	0.34	0.20	OL	OL	0.19
11-Feb-2011	0.60	0.24	OL	0.25	0.22	0.16	OL	0.19	0.22
12-Feb-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
13-Feb-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
14-Feb-2011	0.74	0.29	0.24	0.28	0.22	0.18	OL	0.20	OL
15-Feb-2011	0.74	0.22	0.24	OL	0.26	0.19	OL	0.20	0.18
16-Feb-2011	0.81	0.24	0.29	0.24	0.20	0.23	OL	OL	0.22
17-Feb-2011	0.73	0.32	0.23	0.26	0.24	OL	OL	OL	0.27
18-Feb-2011	0.75	OL	0.26	0.29	0.23	0.18	OL	OL	0.30
19-Feb-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
20-Feb-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
21-Feb-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
22-Feb-2011	0.73	0.20	0.21	OL	0.21	0.21	OL	OL	0.22
23-Feb-2011	0.72	0.22	0.22	0.21	0.23	OL	OL	OL	0.25
24-Feb-2011	0.69	0.22	0.30	0.21	0.18	0.16	OL	OL	0.18
25-Feb-2011	0.69	OL	0.20	0.22	0.20	0.18	OL	OL	0.18
26-Feb-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
27-Feb-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
28-Feb-2011	0.63	0.23	OL	0.19	0.16	0.17	OL	OL	0.17
Total number of measurements taken, A:		15	16	16	19	17	0	10	18
Turbidity Standard for Monitoring Location (NTU):		0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Number of measurements meeting standard, B:		14	16	16	18	17	0	10	18
Compliance with Turbidity Standard, C= B/A X 100%:		93%	100%	100%	95%	100%	OL	100%	100%

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

Report Compiled By: J. Jones

Approved in LIMS By: S. Fletcher

Date Approved: 28-Feb-11



**CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES DIVISION**

Water System Code: 252.00
License Number: PWS 09 412

WATER TREATMENT PLANT TURBIDITY ON-LINE SAMPLING REPORT

February 2011 Turbidity (NTU)

Date	Raw	Filter #1		Filter #2		Filter #3		Filter #4		Filter #5		Filter #6		Filter #7		Filter #8	
	Avg	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
2/1/2011	0.50	0.14	0.27	0.08	0.23	0.08	0.22	0.11	0.13	0.07	0.10	OL	OL	0.04	0.17	0.04	0.20
2/2/2011	0.50	0.11	0.15	0.10	0.14	0.07	0.22	0.10	0.25	0.08	0.22	OL	OL	0.03	0.16	0.03	0.05
2/3/2011	0.50	0.14	0.27	0.10	0.26	0.09	0.12	0.09	0.26	0.07	0.22	OL	OL	0.03	0.05	0.04	0.20
2/4/2011	0.51	0.13	0.30	0.08	0.24	0.08	0.23	0.11	0.15	0.08	0.11	OL	OL	0.04	0.19	0.04	0.16
2/5/2011	0.52	0.13	0.15	0.12	0.25	0.06	0.24	0.10	0.21	0.07	0.21	OL	OL	0.03	0.19	0.04	0.06
2/6/2011	0.53	0.12	0.24	0.09	0.28	0.10	0.17	0.10	0.14	0.08	0.22	OL	OL	0.04	0.06	0.04	0.16
2/7/2011	0.53	0.14	0.25	0.12	0.14	0.09	0.25	0.13	0.26	0.10	0.13	OL	OL	0.06	0.21	0.04	0.06
2/8/2011	0.52	0.16	0.19	0.12	0.26	0.10	0.12	0.11	0.26	0.10	0.21	OL	OL	0.04	0.23	0.06	0.19
2/9/2011	0.51	0.14	0.27	0.11	0.24	0.10	0.26	0.12	0.16	0.09	0.11	OL	OL	0.06	0.12	0.04	0.20
2/10/2011	0.48	0.14	0.19	0.12	0.17	0.09	0.26	0.11	0.26	0.10	0.36	OL	OL	0.04	0.25	0.05	0.08
2/11/2011	0.47	0.16	0.33	0.12	0.27	0.11	0.16	0.12	0.30	0.08	0.27	OL	OL	0.03	0.26	0.06	0.22
2/12/2011	0.50	0.16	0.27	0.11	0.24	0.11	0.24	0.13	0.16	0.10	0.14	OL	OL	0.06	0.26	0.05	0.29
2/13/2011	0.57	0.16	0.19	0.15	0.20	0.09	0.27	0.13	0.28	0.11	0.25	OL	OL	0.06	0.23	0.06	0.13
2/14/2011	0.61	0.14	0.27	0.13	0.26	0.12	0.18	0.12	0.16	0.10	0.24	OL	OL	0.06	0.23	0.05	0.18
2/15/2011	0.61	0.13	0.25	0.13	0.15	0.11	0.24	0.15	0.24	0.11	0.14	OL	OL	0.06	0.11	0.06	0.23
2/16/2011	0.62	0.16	0.19	0.12	0.27	0.10	0.26	0.11	0.26	0.11	0.26	OL	OL	OL	OL	0.06	0.10
2/17/2011	0.65	0.16	0.27	0.11	0.32	0.11	0.22	0.11	0.26	0.10	0.29	OL	OL	OL	OL	0.06	0.20
2/18/2011	0.64	0.15	0.27	0.13	0.29	0.11	0.29	0.13	0.21	0.09	0.28	OL	OL	OL	OL	0.06	0.26
2/19/2011	0.64	0.13	0.25	0.12	0.17	0.10	0.26	0.11	0.27	0.09	0.28	OL	OL	OL	OL	0.04	0.25
2/20/2011	0.64	0.16	0.20	0.12	0.28	0.09	0.26	0.11	0.28	0.09	0.25	OL	OL	OL	OL	0.05	0.25
2/21/2011	0.65	0.15	0.28	0.11	0.25	0.10	0.14	0.10	0.23	0.10	0.16	OL	OL	OL	OL	0.03	0.05
2/22/2011	0.65	0.13	0.23	0.10	0.24	0.11	0.20	0.12	0.14	0.09	0.28	OL	OL	OL	OL	0.06	0.19
2/23/2011	0.66	0.14	0.17	0.09	0.13	0.11	0.24	0.13	0.30	0.06	0.27	OL	OL	OL	OL	0.05	0.25
2/24/2011	0.66	0.13	0.27	0.08	0.22	0.11	0.15	0.11	0.21	0.05	0.22	OL	OL	OL	OL	0.05	0.17
2/25/2011	0.65	0.11	0.24	0.06	0.20	0.10	0.26	0.10	0.25	0.06	0.17	OL	OL	OL	OL	0.04	0.06
2/26/2011	0.64	0.10	0.26	0.06	0.08	0.08	0.26	0.11	0.19	0.05	0.22	OL	OL	OL	OL	0.04	0.24
2/27/2011	0.62	0.12	0.14	0.08	0.27	0.08	0.10	0.12	0.31	0.06	0.24	OL	OL	OL	OL	0.05	0.22
2/28/2011	0.61	0.12	0.27	0.07	0.21	0.10	0.24	0.12	0.27	0.06	0.08	OL	OL	OL	OL	0.05	0.24

Total Number of Measurements Taken, A:	299657	298309	303082	213755	317840	OL	219979	306868
Turbidity Standard for Monitoring Location (NTU):	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Number of Measurements Meeting Standard, B:	299652	298304	303082	213750	317825	OL	219979	306868
Compliance with Turbidity Standard, C = B/A x 100%:	99.998	99.998	100.000	99.998	99.995	OL	100.000	100.000

OL: Off Line

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2011\2011-02

Submitted By (Print): D.Sulymka

Signature: Original signed by D.Sulymka



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT TURBIDITY GRAB MONITORING REPORT

Water System Code: 252.00	Turbidity (NTU)								
Licence No. PWS-09-412RR	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
Date	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
01-Mar-2011	0.59	0.17	0.16	0.29	0.17	0.18	OL	OL	0.17
02-Mar-2011	0.64	0.19	0.17	0.19	0.21	0.15	OL	OL	0.20
03-Mar-2011	0.63	0.16	0.15	0.12	0.20	0.16	OL	OL	0.16
04-Mar-2011	0.61	0.26	0.18	0.19	0.14	0.18	OL	OL	OL
05-Mar-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
06-Mar-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
07-Mar-2011	0.60	0.11	0.12	0.11	OL	0.11	OL	0.14	OL
08-Mar-2011	0.59	0.13	0.14	0.11	0.12	0.12	OL	OL	0.13
09-Mar-2011	0.54	0.15	0.10	0.14	0.12	0.14	OL	0.13	OL
10-Mar-2011	0.56	0.17	0.18	0.17	0.27	OL	OL	0.21	0.19
11-Mar-2011	0.58	0.19	0.20	0.18	0.20	0.17	OL	0.17	OL
12-Mar-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
13-Mar-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
14-Mar-2011	0.46	OL	0.16	0.25	0.18	0.21	OL	0.19	0.20
15-Mar-2011	0.56	0.17	0.17	0.17	0.25	OL	OL	0.19	0.18
16-Mar-2011	0.44	0.23	0.25	OL	0.25	0.29	OL	OL	0.23
17-Mar-2011	0.48	0.20	0.28	0.23	0.24	0.18	OL	OL	0.20
18-Mar-2011	0.51	0.23	0.19	0.23	0.18	0.18	OL	OL	0.26
19-Mar-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
20-Mar-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
21-Mar-2011	0.52	0.18	0.19	0.19	0.17	0.23	OL	0.25	OL
22-Mar-2011	0.51	0.22	0.22	0.21	0.18	0.18	OL	0.16	0.30
23-Mar-2011	0.56	0.18	0.18	0.18	0.17	OL	OL	OL	OL
24-Mar-2011	0.47	0.25	0.22	0.20	0.24	OL	OL	OL	OL
25-Mar-2011	0.48	0.15	0.16	0.16	0.21	OL	OL	0.16	0.12
26-Mar-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
27-Mar-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
28-Mar-2011	0.57	0.13	0.15	0.14	0.21	0.14	OL	0.13	OL
29-Mar-2011	0.56	OL	OL	0.20	0.20	0.15	0.20	0.22	0.15
30-Mar-2011	0.54	0.19	0.19	OL	0.22	0.24	0.17	0.21	OL
31-Mar-2011	0.60	0.22	0.23	0.28	0.27	OL	OL	OL	OL
Total number of measurements taken, A:	21	22	21	22	17	2	12	13	
Turbidity Standard for Monitoring Location (NTU):	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Number of measurements meeting standard, B:	21	22	21	22	17	2	12	13	
Compliance with Turbidity Standard, C= B/A X 100%:	100%	100%	100%	100%	100%	100%	100%	100%	100%

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

Report Compiled By: J. Jones

Approved in LIMS By: S. Fletcher

Date Approved: 4-Apr-11



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES DIVISION

Water System Code: 252.00
 Licence Number: PWS-09-412 RR

WATER TREATMENT PLANT TURBIDITY ON-LINE MONITORING REPORT

March Turbidity (NTU)

Date	Raw Avg	Filter #1		Filter #2		Filter #3		Filter #4		Filter #5		Filter #6		Filter #7		Filter #8	
		Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
3/1/2011	0.60	0.11	0.23	0.07	0.21	0.10	0.23	0.12	0.14	0.07	0.28	OL	OL	OL	OL	0.05	0.10
3/2/2011	0.58	0.11	0.14	0.06	0.10	0.08	0.29	0.12	0.27	0.06	0.32	OL	OL	OL	OL	0.05	0.23
3/3/2011	0.57	0.11	0.27	0.06	0.20	0.09	0.13	0.10	0.23	0.07	0.24	OL	OL	OL	OL	0.03	0.19
3/4/2011	0.55	0.10	0.28	0.05	0.25	0.08	0.29	0.09	0.21	0.05	0.14	OL	OL	0.09	0.20	OL	OL
3/5/2011	0.54	0.07	0.21	0.03	0.22	0.06	0.21	0.10	0.27	0.04	0.26	OL	OL	0.04	0.22	OL	OL
3/6/2011	0.54	0.08	0.26	0.03	0.18	0.06	0.20	0.09	0.25	0.03	0.16	OL	OL	0.03	0.06	OL	OL
3/7/2011	0.53	0.07	0.10	0.04	0.10	0.06	0.26	0.09	0.24	0.03	0.16	OL	OL	0.04	0.23	OL	OL
3/8/2011	0.51	0.07	0.26	0.03	0.19	0.05	0.07	0.07	0.22	0.02	0.03	OL	OL	0.03	0.16	0.03	0.27
3/9/2011	0.47	0.09	0.21	0.03	0.19	0.07	0.21	0.10	0.16	0.05	0.17	OL	OL	0.04	0.21	0.04	0.20
3/10/2011	0.44	0.10	0.12	0.08	0.11	0.07	0.22	0.11	0.26	0.06	0.24	OL	OL	0.08	0.15	0.05	0.07
3/11/2011	0.44	0.11	0.28	0.07	0.27	0.10	0.12	0.12	0.13	0.07	0.08	OL	OL	0.05	0.25	0.06	0.16
3/12/2011	0.43	0.10	0.25	0.08	0.10	0.08	0.25	0.13	0.25	0.10	0.24	OL	OL	0.10	0.13	0.06	0.08
3/13/2011	0.42	0.12	0.15	0.07	0.26	0.09	0.11	0.12	0.27	0.06	0.09	OL	OL	0.07	0.26	0.07	0.23
3/14/2011	0.42	0.09	0.25	0.06	0.26	0.09	0.32	0.13	0.16	0.09	0.23	OL	OL	0.06	0.09	0.05	0.27
3/15/2011	0.41	0.10	0.52	0.07	0.10	0.09	0.26	0.10	0.27	0.06	0.21	OL	OL	0.07	0.23	0.04	0.07
3/16/2011	0.39	0.14	0.28	0.11	0.27	0.14	0.28	0.13	0.27	0.10	0.20	OL	OL	0.02	0.09	0.05	0.29
3/17/2011	0.39	0.13	0.16	0.12	0.25	0.14	0.25	0.13	0.25	0.11	0.26	OL	OL	OL	OL	0.07	0.11
3/18/2011	0.38	0.15	0.25	0.11	0.22	0.14	0.17	0.11	0.24	0.11	0.13	OL	OL	0.04	0.38	0.07	0.26
3/19/2011	0.39	0.10	0.27	0.09	0.25	0.12	0.25	0.11	0.16	0.12	0.27	OL	OL	0.06	0.11	0.05	0.07
3/20/2011	0.40	0.11	0.26	0.09	0.13	0.11	0.20	0.11	0.27	0.13	0.27	OL	OL	0.08	0.25	OL	OL
3/21/2011	0.40	0.11	0.13	0.09	0.25	0.09	0.29	0.10	0.28	0.13	0.26	OL	OL	0.07	0.26	OL	OL
3/22/2011	0.42	0.12	0.28	0.04	0.23	0.13	0.28	0.11	0.12	0.15	0.17	OL	OL	0.07	0.28	0.05	0.25
3/23/2011	0.43	0.11	0.26	0.06	0.18	0.11	0.26	0.11	0.25	0.07	0.25	OL	OL	0.03	0.09	0.02	0.23
3/24/2011	0.43	0.10	0.26	0.06	0.26	0.10	0.24	0.10	0.23	0.09	0.20	OL	OL	0.01	0.12	0.02	0.10
3/25/2011	0.45	0.08	0.10	0.06	0.12	0.09	0.26	0.10	0.22	0.15	0.24	OL	OL	0.05	0.24	0.03	0.21
3/26/2011	0.46	0.10	0.30	0.05	0.25	0.10	0.20	0.09	0.25	0.15	0.26	OL	OL	0.04	0.18	0.02	0.03
3/27/2011	0.46	0.09	0.25	0.04	0.23	0.08	0.26	0.09	0.11	0.19	0.21	OL	OL	0.04	0.14	0.03	0.20
3/28/2011	0.47	0.10	0.11	0.05	0.10	0.08	0.27	0.09	0.23	0.07	0.27	OL	OL	0.06	0.09	0.06	0.20
3/29/2011	0.47	0.07	0.29	0.04	0.25	0.10	0.13	0.07	0.11	0.02	0.04	0.18	0.28	0.08	0.26	0.07	0.09
3/30/2011	0.49	0.12	0.27	0.07	0.09	0.11	0.26	0.13	0.28	0.05	0.25	0.10	0.30	0.08	0.11	0.02	0.26
3/31/2011	0.50	0.13	0.27	0.09	0.26	0.13	0.27	0.14	0.28	0.02	0.14	0.10	0.30	0.04	0.28	0.04	0.21

Total Number of Measurements Taken, A:	213431	213981	222648	152149	220187	15051	169217	157211
Turbidity Standard for Monitoring Location (NTU):	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Number of Measurements Meeting Standard, B:	213426	213981	222645	152149	220098	15051	169212	157211
Compliance with Turbidity Standard, C = B/A x 100%:	99.998	100.000	99.999	100.000	99.960	100.000	99.997	100.000

OL: Off Line

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2011\2011-03

Submitted By (Print): D.Sulymka

Signature: Original signed by D.Sulymka



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT TURBIDITY GRAB MONITORING REPORT

Water System Code: 252.00	Turbidity (NTU)								
Licence No. PWS-09-412RR	Turbidity (NTU)								
Date	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
01-Apr-2011	0.59	0.26	0.29	0.24	0.23	OL	0.21	0.20	0.19
02-Apr-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
03-Apr-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
04-Apr-2011	0.60	0.19	0.19	0.17	0.14	0.11	0.15	0.16	0.13
05-Apr-2011	0.61	0.14	0.13	0.17	0.16	0.12	0.11	0.15	0.18
06-Apr-2011	OL	OL	OL	OL	OL	OL	OL	OL	OL
07-Apr-2011	0.64	0.14	0.15	0.30	0.18	0.17	0.11	O/L	0.10
08-Apr-2011	0.76	0.15	O/L	0.12	0.14	0.12	0.14	0.12	0.11
09-Apr-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
10-Apr-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
11-Apr-2011	0.75	0.11	0.10	0.11	0.09	OL	0.11	0.10	0.12
12-Apr-2011	0.76	0.09	0.11	0.14	0.10	0.10	OL	0.12	0.10
13-Apr-2011	0.94	OL	OL	OL	OL	0.12	0.16	0.12	0.13
14-Apr-2011	0.78	OL	OL	OL	OL	0.13	0.15	0.16	0.17
15-Apr-2011	0.78	0.14	0.13	0.14	OL	0.10	OL	0.16	0.13
16-Apr-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
17-Apr-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
18-Apr-2011	0.64	OL	0.16	0.19	0.14	0.10	OL	0.10	0.13
19-Apr-2011	0.66	0.11	0.10	0.11	0.13	OL	0.13	0.17	OL
20-Apr-2011	0.58	OL	0.13	0.13	OL	0.11	0.18	0.14	0.14
21-Apr-2011	0.69	0.13	0.17	OL	0.15	0.10	0.11	0.10	OL
22-Apr-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
23-Apr-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
24-Apr-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
25-Apr-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
26-Apr-2011	0.83	0.13	OL	0.13	0.17	0.13	OL	0.09	0.13
27-Apr-2011	0.70	0.10	0.10	0.12	0.10	0.11	OL	OL	0.10
28-Apr-2011	0.69	0.10	0.15	0.10	0.10	0.11	OL	0.09	OL
29-Apr-2011	0.73	0.13	0.09	0.11	0.09	0.10	OL	0.11	0.09
30-Apr-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total number of measurements taken, A:		14	14	15	14	15	11	16	15
Turbidity Standard for Monitoring Location (NTU):		0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Number of measurements meeting standard, B:		14	14	15	14	15	11	16	15
Compliance with Turbidity Standard, C= B/A X 100%:		100%	100%	100%	100%	100%	100%	100%	100%

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

The Water Treatment Plant was shutdown on April 6 for maintenance.

Report Compiled By: J. Jones

Approved in LIMS By: S. Fletcher

Date Approved: 4-May-11



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES DIVISION

Water System Code: 252.00
 Licence Number: PWS-09-412 RR

WATER TREATMENT PLANT TURBIDITY ON-LINE MONITORING REPORT

April Turbidity (NTU)

Date	Raw Avg	Filter #1		Filter #2		Filter #3		Filter #4		Filter #5		Filter #6		Filter #7		Filter #8	
		Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
4/1/2011	0.50	0.15	0.28	0.08	0.26	0.11	0.24	0.10	0.25	0.03	0.28	0.18	0.26	0.10	0.15	0.09	0.11
4/2/2011	0.52	0.07	0.29	0.03	0.07	0.10	0.14	0.11	0.13	0.02	0.12	0.19	0.28	0.08	0.25	0.08	0.27
4/3/2011	0.53	0.10	0.15	0.04	0.14	0.08	0.26	0.08	0.26	0.02	0.24	0.05	0.20	0.08	0.24	0.07	0.24
4/4/2011	0.54	0.09	0.20	0.05	0.19	0.06	0.09	0.07	0.24	0.02	0.20	0.10	0.28	0.07	0.09	0.06	0.07
4/5/2011	0.55	0.09	0.30	0.04	0.06	0.09	0.24	0.09	0.12	0.01	0.04	0.08	0.25	0.07	0.19	0.06	0.23
4/6/2011	0.70	0.05	0.22	0.02	0.24	0.04	0.22	0.04	0.20	0.01	0.23	0.05	0.23	0.03	0.17	0.03	0.17
4/7/2011	0.62	0.13	0.55	0.08	0.53	0.12	0.47	0.11	0.47	0.05	0.61	0.08	0.54	0.09	0.50	0.07	0.47
4/8/2011	0.65	0.08	0.25	0.03	0.23	0.05	0.07	0.06	0.20	0.02	0.24	0.08	0.27	0.04	0.26	0.05	0.06
4/9/2011	0.70	0.04	0.23	0.04	0.21	0.06	0.24	0.06	0.11	0.04	0.20	0.08	0.24	0.06	0.26	0.03	0.22
4/10/2011	0.71	0.07	0.12	0.03	0.13	0.05	0.18	0.05	0.17	0.05	0.16	0.06	0.20	0.05	0.24	0.03	0.05
4/11/2011	0.73	0.06	0.19	0.03	0.05	0.04	0.15	0.05	0.17	0.06	0.21	0.07	0.09	0.04	0.06	0.04	0.17
4/12/2011	0.75	0.06	0.17	0.03	0.15	0.05	0.10	0.05	0.06	0.07	0.10	0.02	0.07	0.05	0.19	0.02	0.04
4/13/2011	0.80	0.03	0.16	0.01	0.12	0.02	0.14	0.02	0.14	0.06	0.26	0.05	0.24	0.05	0.25	0.03	0.21
4/14/2011	0.82	0.03	0.12	0.02	0.31	0.01	0.24	0.04	0.11	0.06	0.18	0.07	0.22	0.05	0.25	0.05	0.24
4/15/2011	0.75	0.06	0.12	0.04	0.05	0.07	0.10	0.03	0.14	0.03	0.06	0.06	0.20	0.03	0.19	0.02	0.04
4/16/2011	0.66	0.05	0.22	0.03	0.26	0.04	0.20	0.08	0.10	0.06	0.20	0.05	0.08	0.04	0.08	0.03	0.21
4/17/2011	0.66	0.09	0.11	0.05	0.08	0.08	0.10	0.07	0.24	0.04	0.25	0.08	0.25	0.04	0.25	0.02	0.05
4/18/2011	0.67	0.05	0.18	0.05	0.26	0.06	0.26	0.05	0.10	0.07	0.09	0.07	0.28	0.04	0.06	0.05	0.25
4/19/2011	0.70	0.08	0.10	0.05	0.19	0.04	0.26	0.08	0.18	0.06	0.26	0.08	0.11	0.06	0.28	0.03	0.18
4/20/2011	0.73	0.05	0.23	0.05	0.07	0.08	0.15	0.06	0.27	0.06	0.09	0.08	0.29	0.05	0.19	0.06	0.08
4/21/2011	0.82	0.06	0.10	0.05	0.24	0.05	0.28	0.09	0.12	0.08	0.21	0.05	0.10	0.06	0.09	0.04	0.22
4/22/2011	0.90	0.10	0.25	0.05	0.22	0.09	0.11	0.09	0.24	0.07	0.25	OL	OL	0.07	0.21	0.04	0.06
4/23/2011	0.80	0.08	0.23	0.07	0.08	0.08	0.26	0.07	0.10	0.07	0.09	OL	OL	0.06	0.22	0.06	0.24
4/24/2011	0.85	0.09	0.12	0.07	0.20	0.08	0.10	0.09	0.19	0.06	0.25	OL	OL	0.06	0.08	0.04	0.06
4/25/2011	0.88	0.07	0.24	0.06	0.08	0.06	0.27	0.06	0.09	0.06	0.08	OL	OL	0.04	0.28	0.04	0.25
4/26/2011	0.93	0.08	0.10	0.04	0.20	0.06	0.08	0.08	0.24	0.06	0.21	OL	OL	0.04	0.05	0.02	0.19
4/27/2011	0.98	0.07	0.26	0.05	0.06	0.07	0.22	0.07	0.21	0.05	0.07	OL	OL	0.03	0.13	0.03	0.05
4/28/2011	1.05	0.08	0.10	0.05	0.13	0.05	0.22	0.07	0.09	0.05	0.22	OL	OL	0.03	0.05	0.02	0.11
4/29/2011	1.18	0.07	0.13	0.04	0.05	0.07	0.09	0.06	0.22	0.06	0.16	OL	OL	0.04	0.21	0.03	0.04
4/30/2011	1.99	0.07	0.09	0.06	0.24	0.06	0.20	0.07	0.08	0.05	0.27	OL	OL	0.03	0.16	0.03	0.26

Total Number of Measurements Taken, A:	191765	194125	193435	137839	203427	130969	209870	195585
Turbidity Standard for Monitoring Location (NTU):	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Number of Measurements Meeting Standard, B:	191387	193782	193135	137579	202985	130549	209486	195236
Compliance with Turbidity Standard, C = B/A x 100%:	99.803	99.823	99.845	99.811	99.783	99.679	99.817	99.822

OL: Off Line

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2011\2011-04

Submitted By (Print): D.Sulymka

Signature: Original signed by D.Sulymka



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT TURBIDITY GRAB MONITORING REPORT

Water System Code: 252.00	Turbidity (NTU)								
Licence No. PWS-09-412RR	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
Date	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
01-May-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
02-May-2011	0.80	0.09	0.09	OL	0.09	0.09	OL	0.11	0.09
03-May-2011	0.84	0.09	OL	0.11	0.13	0.10	OL	0.08	0.11
04-May-2011	0.88	0.10	0.08	0.12	0.09	0.08	OL	0.09	0.08
05-May-2011	0.90	0.11	0.11	0.12	0.11	0.11	OL	0.08	0.15
06-May-2011	0.85	0.09	0.11	0.12	0.09	0.13	OL	0.09	0.10
07-May-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
08-May-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
09-May-2011	0.90	0.11	0.11	0.13	0.09	OL	OL	0.18	0.08
10-May-2011	0.77	0.12	OL	0.10	0.12	0.10	OL	0.17	0.19
11-May-2011	0.91	OL	0.15	0.20	OL	0.15	OL	0.12	0.13
12-May-2011	0.85	0.15	0.18	0.12	0.10	OL	OL	OL	0.11
13-May-2011	0.84	OL	0.11	0.10	0.11	0.12	OL	0.12	OL
14-May-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
15-May-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
16-May-2011	0.86	0.08	0.10	0.09	OL	0.08	OL	0.08	0.10
17-May-2011	0.83	0.11	OL	0.11	OL	0.09	0.10	0.11	0.13
18-May-2011	0.91	0.14	0.10	OL	0.15	0.13	0.27	0.11	0.14
19-May-2011	0.81	0.17	0.15	0.19	OL	0.11	0.11	0.13	0.10
20-May-2011	0.86	OL	0.14	0.12	0.12	0.11	0.11	0.09	0.13
21-May-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
22-May-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
23-May-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
24-May-2011	0.95	0.16	0.15	0.12	0.10	0.13	0.09	OL	0.13
25-May-2011	0.95	0.11	0.11	0.15	0.11	0.09	0.12	0.09	OL
26-May-2011	0.99	0.11	0.13	0.12	0.12	OL	OL	0.12	0.10
27-May-2011	0.87	OL	OL	0.14	0.13	0.10	0.09	0.10	0.12
28-May-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
29-May-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
30-May-2011	1.04	0.17	0.11	0.14	0.13	OL	OL	0.09	0.12
31-May-2011	0.77	OL	OL	OL	OL	0.16	0.13	0.13	0.18
Total number of measurements taken, A:	16	16	18	16	17	8	19	19	
Turbidity Standard for Monitoring Location (NTU):	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Number of measurements meeting standard, B:	16	16	18	16	17	8	19	19	
Compliance with Turbidity Standard, C= B/A X 100%:	100%	100%	100%	100%	100%	100%	100%	100%	100%

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

Report Compiled By: J. Jones/R. Grosselle

Approved in LIMS By: S. Fletcher

Date Approved: 31-May-11



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES DIVISION

Water System Code: 252.00
 Licence Number: PWS-09-412 RR

WATER TREATMENT PLANT TURBIDITY ON-LINE MONITORING REPORT

May Turbidity (NTU)

Date	Raw	Filter #1		Filter #2		Filter #3		Filter #4		Filter #5		Filter #6		Filter #7		Filter #8	
		Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
5/1/2011	3.31	0.07	0.26	0.05	0.18	0.06	0.08	0.06	0.22	0.07	0.10	OL	OL	0.03	0.05	0.02	0.03
5/2/2011	1.19	0.07	0.09	0.05	0.09	0.05	0.23	0.06	0.07	0.05	0.16	OL	OL	0.03	0.16	0.03	0.26
5/3/2011	0.62	0.07	0.21	0.04	0.15	0.05	0.07	0.05	0.21	0.06	0.07	OL	OL	0.02	0.04	0.02	0.17
5/4/2011	0.57	0.06	0.32	0.05	0.06	0.05	0.21	0.05	0.07	0.05	0.18	OL	OL	0.03	0.18	0.02	0.04
5/5/2011	0.68	0.08	0.09	0.04	0.11	0.05	0.07	0.06	0.21	0.06	0.07	OL	OL	0.02	0.16	0.02	0.11
5/6/2011	1.16	0.06	0.13	0.05	0.15	0.07	0.20	0.06	0.19	0.04	0.10	OL	OL	0.03	0.05	0.02	0.04
5/7/2011	1.48	0.08	0.10	0.06	0.12	0.06	0.16	0.06	0.08	0.05	0.26	OL	OL	0.02	0.23	0.02	0.19
5/8/2011	1.37	0.08	0.20	0.06	0.19	0.07	0.09	0.06	0.23	0.06	0.08	OL	OL	0.02	0.12	0.02	0.19
5/9/2011	0.86	0.05	0.17	0.05	0.13	0.06	0.20	0.06	0.14	0.05	0.25	OL	OL	0.02	0.12	0.02	0.04
5/10/2011	0.68	0.08	0.27	0.03	0.28	0.05	0.07	0.07	0.09	0.07	0.08	OL	OL	0.02	0.23	0.03	0.24
5/11/2011	0.76	0.05	0.29	0.06	0.08	0.05	0.40	0.05	0.30	0.06	0.22	OL	OL	0.04	0.17	0.02	0.04
5/12/2011	0.88	0.09	0.11	0.05	0.29	0.05	0.29	0.05	0.08	0.04	0.23	OL	OL	0.03	0.27	0.03	0.28
5/13/2011	0.90	0.06	0.26	0.04	0.27	0.07	0.11	0.06	0.29	0.05	0.07	OL	OL	0.02	0.04	0.02	0.25
5/14/2011	0.90	0.07	0.19	0.05	0.16	0.05	0.26	0.02	0.06	0.05	0.26	OL	OL	0.03	0.21	0.02	0.12
5/15/2011	0.94	0.08	0.24	0.06	0.08	0.06	0.16	OL	OL	0.05	0.18	OL	OL	0.03	0.20	0.02	0.03
5/16/2011	0.90	0.08	0.11	0.05	0.21	0.05	0.20	OL	OL	0.05	0.18	0.08	0.19	0.03	0.23	0.02	0.16
5/17/2011	0.79	0.07	0.14	0.05	0.19	0.07	0.09	0.02	0.18	0.05	0.07	0.07	0.08	0.02	0.03	0.02	0.14
5/18/2011	0.83	0.05	0.26	0.05	0.07	0.05	0.22	0.06	0.08	0.05	0.36	0.07	0.17	0.03	0.16	0.01	0.26
5/19/2011	0.89	0.08	0.09	0.06	0.21	0.05	0.10	0.05	0.25	0.05	0.27	0.04	0.29	0.02	0.11	0.02	0.03
5/20/2011	0.97	0.06	0.28	0.05	0.28	0.07	0.27	0.06	0.14	0.06	0.08	0.08	0.10	0.02	0.29	0.02	0.24
5/21/2011	0.95	0.06	0.09	0.07	0.11	0.05	0.28	0.07	0.22	0.05	0.24	0.04	0.24	0.03	0.05	0.01	0.29
5/22/2011	0.94	0.08	0.29	0.05	0.25	0.08	0.09	0.03	0.08	0.04	0.08	0.08	0.09	0.02	0.24	0.02	0.05
5/23/2011	1.03	0.06	0.10	0.07	0.09	0.06	0.28	0.08	0.29	0.06	0.29	0.06	0.26	0.03	0.21	0.01	0.31
5/24/2011	1.06	0.08	0.21	0.06	0.29	0.06	0.09	0.07	0.24	0.05	0.20	0.05	0.09	0.02	0.29	0.02	0.04
5/25/2011	1.13	0.07	0.28	0.05	0.08	0.07	0.25	0.07	0.08	0.07	0.08	0.08	0.17	0.03	0.04	0.02	0.27
5/26/2011	1.16	0.09	0.11	0.08	0.16	0.05	0.08	0.06	0.11	0.05	0.20	0.05	0.23	0.03	0.24	0.02	0.03
5/27/2011	1.09	0.06	0.26	0.05	0.27	0.07	0.21	0.04	0.07	0.07	0.08	0.08	0.10	0.03	0.05	0.02	0.25
5/28/2011	1.10	0.09	0.10	0.08	0.10	0.04	0.08	0.07	0.26	0.04	0.28	0.04	0.32	0.04	0.28	0.01	0.03
5/29/2011	1.14	0.05	0.29	0.05	0.26	0.07	0.28	0.04	0.26	0.06	0.07	0.08	0.09	0.03	0.05	0.01	0.30
5/30/2011	1.19	0.08	0.21	0.07	0.09	0.07	0.39	0.06	0.09	0.02	0.28	0.01	0.08	0.05	0.28	0.01	0.02
5/31/2011	1.18	0.08	0.33	0.07	0.33	0.07	0.31	0.07	0.34	0.07	0.24	0.07	0.29	0.07	0.23	0.03	0.36
Total Number of Measurements Taken, A:		200857		200876		201952		131585		209525		93668		210890		200700	
Turbidity Standard for Monitoring Location (NTU):		0.3		0.3		0.3		0.3		0.3		0.3		0.3		0.3	
Number of Measurements Meeting Standard, B:		200670		200711		201841		131434		209523		93665		210890		200692	
Compliance with Turbidity Standard, C = B/A x 100%:		* 99.907		* 99.9179		* 99.945		* 99.8852		* 99.999		* 99.997		100		* 99.996	

* Data is in compliance with Operating Licence Section 3 Table 1 Water Quality Standards.
 OL = Off Line

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Submitted By (Print): D.Wagner

Signature: Original signed by D.Wagner



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT TURBIDITY GRAB MONITORING REPORT

Water System Code: 252.00	Turbidity (NTU)								
Licence No. PWS-09-412RR	Turbidity (NTU)								
Date	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
01-Jun-2011	1.08	0.09	0.10	0.11	0.10	0.11	OL	0.13	0.15
02-Jun-2011	0.87	0.16	0.16	0.13	OL	0.16	0.12	0.17	0.17
03-Jun-2011	0.86	0.16	0.11	0.11	0.10	OL	0.13	0.10	0.10
04-Jun-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
05-Jun-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
06-Jun-2011	1.00	0.15	0.21	0.14	OL	0.16	0.12	0.12	0.13
07-Jun-2011	0.98	OL	0.14	0.16	0.17	OL	0.11	0.14	0.13
08-Jun-2011	0.90	0.16	0.17	0.22	0.18	0.13	OL	OL	0.13
09-Jun-2011	0.86	0.20	0.21	0.17	OL	0.18	0.15	0.16	0.15
10-Jun-2011	0.81	OL	0.11	0.14	0.14	OL	0.19	0.11	0.13
11-Jun-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
12-Jun-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
13-Jun-2011	0.85	OL	0.08	0.10	0.11	0.14	0.08	0.09	0.11
14-Jun-2011	0.66	0.09	0.09	0.11	0.10	0.09	OL	OL	0.10
15-Jun-2011	0.70	OL	OL	0.09	0.09	0.10	0.10	0.09	0.10
16-Jun-2011	0.68	0.08	0.09	0.10	0.08	0.08	OL	0.10	OL
17-Jun-2011	0.70	0.10	0.11	OL	OL	0.10	0.08	0.09	0.09
18-Jun-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
19-Jun-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
20-Jun-2011	0.63	OL	OL	0.08	0.07	0.08	0.07	0.07	0.06
21-Jun-2011	0.71	0.07	0.08	0.09	0.08	0.09	OL	0.08	OL
22-Jun-2011	0.79	0.09	0.08	0.09	0.08	0.07	0.08	OL	OL
23-Jun-2011	0.82	OL	OL	0.08	0.07	0.10	0.07	0.08	0.09
24-Jun-2011	0.84	0.07	0.07	0.09	0.09	0.07	OL	0.08	OL
25-Jun-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
26-Jun-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
27-Jun-2011	0.83	0.07	0.07	0.07	OL	0.08	0.06	OL	0.06
28-Jun-2011	1.09	OL	OL	OL	OL	0.08	0.08	0.08	0.10
29-Jun-2011	0.93	0.08	0.08	0.07	0.09	0.09	OL	0.09	OL
30-Jun-2011	0.98	0.09	OL	0.12	OL	0.09	0.08	0.08	0.09
Total number of measurements taken, A:		15	17	20	15	19	15	18	17
Turbidity Standard for Monitoring Location (NTU):		0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Number of measurements meeting standard, B:		15	17	20	15	19	15	18	17
Compliance with Turbidity Standard, C= B/A X 100%:		100%	100%	100%	100%	100%	100%	100%	100%

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

Report Compiled By: J. Jones

Approved in LIMS By: S. Fletcher

Date Approved: 5-Jul-11



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES DIVISION

Water System Code: 252.00
 Licence Number: PWS 09 412 RR

WATER TREATMENT PLANT TURBIDITY ON-LINE MONITORING REPORT

June Turbidity (NTU)		Filter #1		Filter #2		Filter #3		Filter #4		Filter #5		Filter #6		Filter #7		Filter #8	
Date	Raw	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
6/1/2011	1.28	0.10	0.24	0.07	0.10	0.09	0.26	0.07	0.11	0.06	0.23	0.07	0.26	0.07	0.28	0.03	0.26
6/2/2011	1.13	0.10	0.13	0.08	0.26	0.08	0.16	0.05	0.21	0.08	0.17	0.07	0.23	0.08	0.20	0.02	0.14
6/3/2011	1.27	0.06	0.23	0.06	0.23	0.06	0.26	0.06	0.22	0.05	0.16	0.08	0.11	0.07	0.10	0.02	0.16
6/4/2011	1.17	0.05	0.24	0.07	0.10	0.08	0.11	0.07	0.09	0.05	0.26	0.06	0.23	0.09	0.22	0.02	0.20
6/5/2011	1.13	0.09	0.24	0.10	0.21	0.09	0.21	0.09	0.21	0.07	0.10	0.09	0.19	0.11	0.20	0.03	0.19
6/6/2011	0.81	0.12	0.14	0.09	0.26	0.09	0.25	0.09	0.26	0.09	0.26	0.06	0.11	0.09	0.25	0.03	0.07
6/7/2011	0.64	0.09	0.25	0.08	0.24	0.10	0.14	0.07	0.13	0.07	0.26	0.11	0.22	0.15	0.17	0.04	0.27
6/8/2011	0.73	0.09	0.24	0.13	0.15	0.11	0.28	0.13	0.27	0.08	0.18	0.09	0.28	0.13	0.30	0.04	0.30
6/9/2011	0.60	0.14	0.18	0.10	0.26	0.09	0.22	0.06	0.21	0.10	0.26	0.09	0.16	0.12	0.28	0.05	0.08
6/10/2011	0.99	0.04	0.25	0.05	0.25	0.07	0.09	0.06	0.10	0.05	0.18	0.08	0.25	0.04	0.13	0.02	0.20
6/11/2011	1.03	0.09	0.11	0.08	0.10	0.06	0.22	0.07	0.20	0.04	0.29	0.05	0.23	0.03	0.17	0.01	0.25
6/12/2011	1.03	0.10	0.26	0.07	0.25	0.04	0.20	0.05	0.12	0.06	0.08	0.06	0.09	0.02	0.21	0.01	0.02
6/13/2011	1.17	0.06	0.24	0.04	0.26	0.05	0.07	0.04	0.06	0.03	0.17	0.06	0.28	0.02	0.04	0.01	0.25
6/14/2011	1.50	0.09	0.10	0.08	0.09	0.04	0.26	0.06	0.24	0.04	0.06	0.04	0.25	0.02	0.22	0.00	0.01
6/15/2011	1.67	0.06	0.25	0.05	0.21	0.04	0.06	0.04	0.28	0.04	0.25	0.07	0.08	0.02	0.04	0.01	0.28
6/16/2011	1.43	0.06	0.09	0.06	0.08	0.06	0.24	0.06	0.07	0.03	0.18	0.04	0.24	0.02	0.22	0.00	0.24
6/17/2011	1.35	0.08	0.19	0.05	0.13	0.04	0.12	0.03	0.12	0.05	0.06	0.05	0.08	0.01	0.15	0.01	0.01
6/18/2011	1.38	0.05	0.21	0.04	0.11	0.04	0.05	0.04	0.05	0.03	0.19	0.05	0.09	0.02	0.04	0.01	0.11
6/19/2011	1.50	0.08	0.09	0.07	0.19	0.03	0.08	0.04	0.17	0.03	0.05	0.04	0.22	0.02	0.11	0.01	0.18
6/20/2011	1.41	0.05	0.10	0.04	0.19	0.03	0.05	0.03	0.26	0.04	0.11	0.07	0.08	0.02	0.04	0.01	0.01
6/21/2011	1.21	0.07	0.17	0.07	0.08	0.04	0.25	0.05	0.06	0.03	0.11	0.05	0.14	0.02	0.18	0.00	0.18
6/22/2011	1.14	0.08	0.10	0.07	0.14	0.04	0.14	0.04	0.16	0.03	0.05	0.04	0.07	0.02	0.21	0.00	0.05
6/23/2011	1.25	0.06	0.26	0.05	0.21	0.03	0.05	0.03	0.24	0.03	0.26	0.06	0.23	0.04	0.05	0.01	0.01
6/24/2011	1.51	0.06	0.09	0.07	0.08	0.04	0.25	0.04	0.05	0.02	0.05	0.04	0.09	0.04	0.19	0.01	0.23
6/25/2011	NR	0.07	0.10	0.04	0.10	0.02	0.07	0.02	0.07	0.04	0.05	0.06	0.07	0.04	0.06	0.01	0.01
6/26/2011	NR	0.06	0.10	0.06	0.08	0.04	0.06	0.04	0.05	0.03	0.07	0.05	0.08	0.01	0.13	0.00	0.03
6/27/2011	NR	0.08	0.09	0.08	0.31	0.04	0.09	OL	OL	0.03	0.04	0.06	0.07	0.03	0.12	0.01	0.01
6/28/2011	NR	0.04	0.09	0.03	0.09	0.02	0.06	OL	OL	0.02	0.07	0.04	0.10	0.06	0.09	0.01	0.12
6/29/2011	1.14	0.03	0.05	0.02	0.11	0.01	0.02	0.04	0.25	0.01	0.27	0.03	0.16	0.02	0.10	0.01	0.24
6/30/2011	1.11	0.04	0.16	0.03	0.22	0.02	0.14	0.04	0.27	0.03	0.04	0.03	0.06	0.02	0.11	0.02	0.03

Total Number of Measurements Taken, A:	14156	13819	14378	10205	15020	14568	13943	13697
Turbidity Standard for Monitoring Location (NTU):	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Number of Measurements Meeting Standard, B:	14156	13818	14378	10205	15020	14568	13943	13697
Compliance with Turbidity Standard, C = B/A x 100%:	100	* 99.993	100	100	100	100	100	100

* Data is in compliance with Operating Licence Section 3 Table 1 Water Quality Standards
 OL = Off Line

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NOTE: As of June 1, 2011 continuous turbidity monitoring is recorded at approximately 2 minute intervals.
 There were no raw turbidity results from June 25 to June 28 because the results were not representative.

Submitted By (Print): J. Hume

Signature: _____ Original signed by J. Hume



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT TURBIDITY GRAB MONITORING REPORT

Water System Code: 252.00	Turbidity (NTU)								
Licence No. PWS-09-412RR	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
Date	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
01-Jul-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
02-Jul-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
03-Jul-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
04-Jul-2011	1.66	0.08	0.10	0.09	0.09	OL	OL	0.09	0.10
05-Jul-2011	1.38	0.18	OL	0.21	0.18	0.12	OL	0.11	0.13
06-Jul-2011	1.30	OL	0.13	0.16	0.15	0.15	OL	0.11	0.13
07-Jul-2011	1.41	0.12	0.13	0.14	0.15	0.11	OL	0.15	OL
08-Jul-2011	1.27	0.15	0.18	0.18	OL	0.11	OL	0.10	0.11
09-Jul-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
10-Jul-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
11-Jul-2011	1.36	0.14	OL	OL	0.12	0.12	0.14	0.12	0.12
12-Jul-2011	1.56	0.15	0.11	0.13	0.12	OL	OL	0.11	0.15
13-Jul-2011	1.62	0.11	0.12	0.14	OL	0.14	0.11	OL	0.10
14-Jul-2011	1.60	0.13	0.11	0.16	0.13	OL	0.10	0.11	OL
15-Jul-2011	1.25	0.17	0.15	OL	0.15	0.12	OL	0.13	0.12
16-Jul-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
17-Jul-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
18-Jul-2011	1.20	0.11	0.09	0.12	0.10	0.11	0.08	OL	OL
19-Jul-2011	1.14	0.11	0.10	OL	0.11	0.09	0.13	0.10	0.10
20-Jul-2011	0.97	0.18	0.15	0.16	0.20	0.11	OL	0.19	0.18
21-Jul-2011	0.98	0.14	0.11	0.11	0.12	0.10	OL	0.10	0.10
22-Jul-2011	1.12	OL	0.14	0.11	0.15	0.11	0.10	0.10	0.10
23-Jul-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
24-Jul-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
25-Jul-2011	1.06	OL	0.30	0.27	OL	0.30	0.22	0.23	0.26
26-Jul-2011	OL	OL	OL	OL	OL	OL	OL	OL	OL
27-Jul-2011	1.18	0.16	0.14	0.13	0.15	0.10	OL	0.10	0.10
28-Jul-2011	1.18	0.13	OL	0.13	0.18	0.12	0.10	0.11	0.11
29-Jul-2011	1.75	0.14	0.13	0.17	0.14	0.14	0.10	0.13	0.15
30-Jul-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
31-Jul-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total number of measurements taken, A:	16	16	16	16	16	16	9	17	16
Turbidity Standard for Monitoring Location (NTU):	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Number of measurements meeting standard, B:	16	16	16	16	16	16	9	17	16
Compliance with Turbidity Standard, C= B/A X 100%:	100%	100%	100%	100%	100%	100%	100%	100%	100%

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

The Water Treatment Plant was shutdown on July 26 for maintenance at the time of sampling.

Report Compiled By: J. Jones

Approved in LIMS By: S. Fletcher

Date Approved: 3-Aug-11



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES DIVISION

Water System Code: 252.00
 Licence Number: PWS-09-412 RR

WATER TREATMENT PLANT TURBIDITY ON-LINE MONITORING REPORT

July Turbidity (NTU)

Date	Raw	Filter #1		Filter #2		Filter #3		Filter #4		Filter #5		Filter #6		Filter #7		Filter #8	
	Avg	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
1/7/2011	1.12	0.03	0.23	0.03	0.04	0.02	0.04	0.06	0.07	0.02	0.21	0.04	0.17	0.03	0.05	0.01	0.17
2/7/2011	1.33	0.06	0.07	0.03	0.30	0.04	0.42	0.04	0.29	0.03	0.16	0.03	0.05	0.02	0.22	0.01	0.05
3/7/2011	1.85	0.04	0.10	0.02	0.05	0.02	0.15	0.06	0.08	0.03	0.08	0.04	0.15	0.03	0.05	0.02	0.02
4/7/2011	3.43	0.05	0.07	0.05	0.09	0.04	0.05	0.07	0.15	0.01	0.14	0.00	0.05	0.03	0.12	0.01	0.17
5/7/2011	2.80	0.07	0.17	0.05	0.11	0.06	0.14	0.08	0.17	0.04	0.06	0.00	0.00	0.03	0.09	0.02	0.04
6/7/2011	1.31	0.06	0.24	0.05	0.21	0.05	0.11	0.08	0.12	0.04	0.19	OL	OL	0.04	0.07	0.03	0.23
7/7/2011	1.40	0.06	0.22	0.07	0.10	0.06	0.08	0.09	0.20	0.05	0.13	OL	OL	0.05	0.24	0.03	0.25
8/7/2011	1.44	0.09	0.11	0.07	0.25	0.07	0.21	0.09	0.27	0.06	0.09	OL	OL	0.05	0.26	0.03	0.16
9/7/2011	1.46	0.09	0.25	0.04	0.19	0.06	0.18	0.07	0.13	0.07	0.25	0.12	0.21	0.07	0.11	0.06	0.12
10/7/2011	1.55	0.05	0.18	0.07	0.10	0.06	0.08	0.09	0.21	0.06	0.22	0.07	0.12	0.05	0.19	0.05	0.18
11/7/2011	1.58	0.09	0.11	0.04	0.18	0.04	0.17	0.08	0.20	0.04	0.08	0.09	0.16	0.06	0.11	0.04	0.05
12/7/2011	1.57	0.08	0.20	0.05	0.08	0.06	0.10	0.10	0.12	OL	OL	0.06	0.20	0.06	0.09	0.03	0.11
13/07/2011	1.51	0.08	0.24	0.06	0.21	0.08	0.10	0.08	0.21	0.06	0.22	0.08	0.21	0.04	0.22	0.02	0.05
14/07/2011	1.42	0.11	0.14	0.05	0.31	0.08	0.15	0.09	0.26	0.07	0.13	0.08	0.12	0.03	0.05	0.02	0.16
15/07/2011	1.37	0.09	0.24	0.07	0.23	0.06	0.18	0.13	0.17	0.06	0.28	0.06	0.23	0.05	0.26	0.03	0.16
16/07/2011	1.39	0.10	0.25	0.07	0.22	0.07	0.17	0.08	0.20	0.07	0.27	0.06	0.15	0.01	0.06	0.04	0.22
17/07/2011	1.25	0.05	0.21	0.06	0.62	0.08	0.12	0.07	0.21	0.08	0.17	0.06	0.09	0.04	0.22	0.03	0.22
18/07/2011	1.22	0.09	0.15	0.04	0.47	0.05	0.25	0.09	0.21	0.06	0.22	0.06	0.22	0.03	0.25	0.03	0.17
19/07/2011	1.16	0.10	0.25	0.06	0.54	0.06	0.10	0.09	0.12	0.08	0.13	0.06	0.12	0.04	0.13	0.04	0.13
20/07/2011	1.20	0.11	0.17	0.07	0.14	0.07	0.16	0.10	0.21	0.08	0.18	0.07	0.18	0.04	0.13	0.04	0.14
21/07/2011	1.27	0.10	0.18	0.06	0.18	0.07	0.23	0.09	0.48	0.08	0.20	0.07	0.16	0.04	0.12	0.04	0.06
22/07/2011	1.29	0.11	0.25	0.06	0.97	0.07	0.19	0.10	0.33	0.08	0.21	0.07	0.19	0.04	0.14	0.04	0.16
23/07/2011	1.27	0.08	0.28	0.05	0.26	0.07	0.19	0.09	0.41	0.09	0.11	0.05	0.08	0.04	0.07	0.03	0.26
24/07/2011	1.28	0.11	0.13	0.05	0.09	0.07	0.19	0.09	0.73	0.06	0.55	0.06	0.25	0.02	0.19	0.02	0.26
25/07/2011	1.28	0.06	0.23	0.06	0.23	0.06	0.21	0.07	0.56	0.08	0.23	0.05	0.24	0.04	0.18	0.04	0.18
26/07/2011	1.26	0.07	0.43	0.02	0.28	0.06	0.43	0.06	0.53	0.05	0.45	0.04	0.46	0.02	0.10	0.02	0.24
27/07/2011	1.28	0.09	0.32	0.06	0.19	0.08	0.28	0.12	0.47	0.08	0.17	0.06	0.18	0.04	0.12	0.04	0.10
28/07/2011	1.06	0.10	0.81	0.06	0.15	0.08	0.20	0.11	0.19	0.08	0.10	0.07	0.17	0.04	0.06	0.04	0.17
29/07/2011	1.36	0.09	0.51	0.06	0.82	0.09	0.12	0.12	0.25	0.09	0.24	0.07	0.14	0.04	0.15	0.04	0.16
30/07/2011	1.61	0.07	0.23	0.05	0.14	0.07	0.17	0.11	0.43	0.08	0.18	0.06	0.08	0.04	0.12	0.03	0.27
31/07/2011	1.67	0.08	0.72	0.05	0.10	0.05	0.22	0.09	0.53	0.05	0.20	0.04	0.26	0.02	0.22	0.01	0.13

Total Number of Measurements Taken, A:	15328	15316	15555	13067	15339	13139	15964	15447
Turbidity Standard for Monitoring Location (NTU):	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Number of Measurements Meeting Standard, B:	15311	15308	15543	13051	15335	13136	15964	15447
Compliance with Turbidity Standard, C = B/A x 100%:	* 99.889	* 99.9478	* 99.923	* 99.8776	* 99.974	* 99.977	100	100

* Data is in compliance with Operating Licence Section 3 Table 1 Water Quality Standards
 OL = Off Line

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2011\2011-07

Submitted By (Print): D.Sulymka

Signature: Original signed by D.Sulymka



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT TURBIDITY GRAB MONITORING REPORT

Water System Code: 252.00	Turbidity (NTU)								
Licence No. PWS-09-412RR	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
Date	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
01-Aug-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
02-Aug-2011	1.56	0.09	0.09	0.10	O/L	0.08	0.07	0.07	0.08
03-Aug-2011	1.65	0.08	0.09	0.12	0.09	O/L	0.07	O/L	0.07
04-Aug-2011	1.62	0.17	0.18	O/L	0.14	0.09	O/L	0.08	0.08
05-Aug-2011	1.29	O/L	0.19	0.17	0.17	0.13	O/L	0.12	0.12
06-Aug-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
07-Aug-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
08-Aug-2011	1.72	0.17	0.14	0.20	0.14	O/L	0.20	O/L	0.17
09-Aug-2011	1.92	0.14	0.11	O/L	0.12	0.09	0.10	0.09	O/L
10-Aug-2011	2.08	0.16	0.15	O/L	0.14	0.11	O/L	0.10	0.10
11-Aug-2011	2.02	O/L	0.12	0.11	0.15	0.10	O/L	0.08	0.07
12-Aug-2011	2.01	0.11	0.11	0.12	O/L	0.10	0.09	O/L	0.08
13-Aug-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
14-Aug-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
15-Aug-2011	2.46	O/L	0.09	0.08	0.10	0.07	O/L	0.07	0.06
16-Aug-2011	2.89	0.09	0.09	0.12	0.14	0.07	0.09	0.08	0.08
17-Aug-2011	2.90	0.07	0.07	0.08	0.07	0.08	0.07	O/L	0.07
18-Aug-2011	2.83	0.13	0.08	0.13	0.09	0.06	0.07	0.06	O/L
19-Aug-2011	2.61	0.14	0.12	O/L	0.12	0.07	0.08	0.06	0.06
20-Aug-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
21-Aug-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
22-Aug-2011	3.15	0.12	0.08	0.10	0.09	O/L	0.07	0.06	0.07
23-Aug-2011	3.30	0.09	0.08	O/L	0.09	0.07	0.10	0.07	0.07
24-Aug-2011	3.52	O/L	0.12	0.10	0.10	0.15	0.09	0.10	0.13
25-Aug-2011	3.64	0.12	0.11	0.12	O/L	0.11	0.08	0.10	0.09
26-Aug-2011	3.37	0.11	0.11	0.13	0.10	O/L	0.09	0.08	0.10
27-Aug-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
28-Aug-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
29-Aug-2011	3.67	0.11	O/L	0.12	0.10	0.14	0.09	0.10	0.10
30-Aug-2011	3.42	0.09	0.08	0.10	0.09	0.08	0.08	O/L	0.08
31-Aug-2011	3.95	0.09	0.09	0.11	0.09	0.08	0.08	0.07	O/L
Total number of measurements taken, A:		18	21	17	19	18	17	17	19
Turbidity Standard for Monitoring Location (NTU):		0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Number of measurements meeting standard, B:		18	21	17	19	18	17	17	19
Compliance with Turbidity Standard, C= B/A X 100%:		100%	100%	100%	100%	100%	100%	100%	100%

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

Report Compiled By: H.Demchenko

Approved in LIMS By: G.Levesque/S.Fletcher

Date Approved: 14-Sep-11



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES DIVISION

Water System Code: 252.00
 Licence Number: PWS-09-412 RR

WATER TREATMENT PLANT TURBIDITY ON-LINE MONITORING REPORT

August	Turbidity (NTU)																	
	Date	Raw	Filter #1		Filter #2		Filter #3		Filter #4		Filter #5		Filter #6		Filter #7		Filter #8	
		Avg	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
8/1/2011	1.62	0.07	0.54	0.04	0.19	0.05	0.22	0.10	0.32	0.06	0.15	0.04	0.14	0.03	0.09	0.02	0.08	
8/2/2011	1.73	0.06	0.10	0.04	0.22	0.07	0.10	0.08	0.25	0.06	0.11	0.05	0.07	0.02	0.25	0.01	0.26	
8/3/2011	1.80	0.09	0.33	0.04	0.06	0.06	0.24	0.08	0.19	0.05	0.23	0.04	0.17	0.02	0.25	0.01	0.07	
8/4/2011	1.86	0.07	0.32	0.06	0.21	0.06	0.23	0.14	0.25	0.05	0.20	0.07	0.28	0.04	0.19	0.03	0.16	
8/5/2011	1.70	0.07	0.26	0.05	0.22	0.07	0.33	0.10	0.23	0.06	0.14	0.05	0.25	0.03	0.08	0.03	0.14	
8/6/2011	2.03	0.11	0.24	0.06	0.23	0.09	0.12	0.10	0.22	0.07	0.09	0.05	0.15	0.04	0.14	0.02	0.20	
8/7/2011	2.24	0.09	0.26	0.05	0.27	0.11	0.20	0.09	0.23	0.07	0.21	0.06	0.09	0.03	0.10	0.03	0.11	
8/8/2011	2.29	0.14	0.28	0.05	0.09	0.10	0.31	0.10	0.28	0.07	0.19	0.07	0.24	0.03	0.17	0.03	0.23	
8/9/2011	2.41	0.12	0.28	0.06	0.21	0.09	0.26	0.11	0.15	0.06	0.13	0.06	0.24	0.03	0.26	0.02	0.24	
8/10/2011	2.48	0.09	0.21	0.07	0.25	0.09	0.23	0.09	0.27	0.07	0.25	0.06	0.22	0.04	0.07	0.02	0.24	
8/11/2011	2.52	0.06	0.24	0.07	0.24	0.05	0.15	0.07	0.34	0.09	0.11	0.04	0.24	0.03	0.19	0.02	0.03	
8/12/2011	2.51	0.07	0.16	0.06	0.16	0.07	0.15	0.06	0.17	0.09	0.15	0.05	0.08	0.03	0.16	0.03	0.14	
8/13/2011	2.53	0.11	0.14	0.07	0.10	0.05	0.21	0.06	0.12	0.09	0.21	0.06	0.09	0.03	0.13	0.02	0.20	
8/14/2011	2.90	0.09	0.22	0.08	0.14	0.05	0.15	0.08	0.11	0.09	0.18	0.04	0.09	0.03	0.05	0.01	0.06	
8/15/2011	2.98	0.09	0.26	0.06	0.21	0.05	0.25	0.06	0.21	0.11	0.17	0.04	0.21	0.04	0.13	0.02	0.17	
8/16/2011	3.12	0.09	0.20	0.07	0.24	0.06	0.08	0.07	0.18	0.05	0.19	0.06	0.18	0.04	0.06	0.02	0.04	
8/17/2011	3.46	0.09	0.11	0.07	0.19	0.05	0.10	0.07	0.18	0.04	0.16	0.06	0.09	0.04	0.06	0.02	0.05	
8/18/2011	3.54	0.11	0.27	0.08	0.10	0.06	0.16	0.08	0.23	0.04	0.09	0.06	0.11	0.05	0.09	0.02	0.06	
8/19/2011	3.51	0.12	0.27	0.09	0.17	0.07	0.33	0.11	0.13	0.04	0.16	0.06	0.12	0.05	0.11	0.03	0.12	
8/20/2011	3.57	0.11	0.17	0.09	0.23	0.07	0.20	0.11	0.25	0.04	0.06	0.06	0.15	0.06	0.07	0.03	0.27	
8/21/2011	3.61	0.13	0.21	0.09	0.22	0.06	0.14	0.11	0.16	0.04	0.16	0.06	0.21	0.06	0.14	0.03	0.05	
8/22/2011	3.70	0.16	0.19	0.09	0.17	0.07	0.28	0.11	0.21	0.04	0.09	0.08	0.09	0.06	0.09	0.03	0.11	
8/23/2011	3.78	0.07	0.22	0.10	0.11	0.06	0.20	0.12	0.14	0.05	0.27	0.07	0.20	0.07	0.18	0.03	0.13	
8/24/2011	3.90	0.05	0.16	0.09	0.26	0.07	0.23	0.10	0.24	0.05	0.06	0.07	0.25	0.08	0.09	0.03	0.05	
8/25/2011	4.17	0.07	0.23	0.11	0.26	0.10	0.19	0.09	0.25	0.07	0.23	0.09	0.26	0.09	0.16	0.07	0.24	
8/26/2011	4.29	0.07	0.09	0.11	0.22	0.11	0.26	0.09	0.25	0.07	0.12	0.10	0.13	0.09	0.24	0.06	0.12	
8/27/2011	4.30	0.07	0.24	0.12	0.14	0.10	0.57	0.09	0.12	0.07	0.12	0.09	0.22	0.09	0.20	0.07	0.22	
8/28/2011	3.94	0.05	0.11	0.11	0.20	0.09	0.22	0.09	0.24	0.06	0.21	0.08	0.19	0.13	0.15	0.07	0.22	
8/29/2011	4.08	0.06	0.22	0.11	0.22	0.07	0.18	0.08	0.17	0.09	0.23	0.09	0.23	0.12	0.19	0.09	0.11	
8/30/2011	3.58	0.05	0.09	0.10	0.23	0.07	0.10	0.08	0.22	0.07	0.11	0.10	0.11	0.12	0.20	0.08	0.18	
8/31/2011	3.85	0.06	0.15	0.14	0.16	0.06	0.18	0.07	0.27	0.07	0.16	0.09	0.15	0.14	0.27	0.08	0.22	
Total Number of Measurements Taken, A:			15282		15652		15841		12871		16215		15998		16163		15982	
Turbidity Standard for Monitoring Location (NTU):			0.3		0.3		0.3		0.3		0.3		0.3		0.3		0.3	
Number of Measurements Meeting Standard, B:			15275		15652		15836		12869		16215		15998		16163		15982	
Compliance with Turbidity Standard, C = B/A x 100%:			99.954	*	100.000		99.968	*	99.984	*	100.000		100.000		100.000		100.000	

* Data is in compliance with Operating Licence Section 3 Table 1 Water Quality Standards
 OL = Off Line

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Submitted By (Print): D.Sulymka Signature: Original signed by D.Sulymka



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT TURBIDITY GRAB MONITORING REPORT

Water System Code: 252.00	Turbidity (NTU)								
Licence No. PWS-09-412RR	Turbidity (NTU)								
Date	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
01-Sep-2011	2.95	0.12	0.11	0.10	0.10	0.10	O/L	0.08	0.10
02-Sep-2011	3.13	0.11	O/L	0.12	0.20	0.10	0.08	0.14	0.08
03-Sep-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
04-Sep-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
05-Sep-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
06-Sep-2011	2.12	0.08	0.08	0.09	0.08	0.09	0.07	O/L	0.08
07-Sep-2011	2.12	0.09	0.12	O/L	0.09	0.07	0.12	0.07	0.06
08-Sep-2011	2.38	0.09	O/L	0.09	0.17	0.09	0.07	0.09	0.07
09-Sep-2011	2.29	0.10	0.08	0.10	0.08	0.08	0.12	0.08	0.09
10-Sep-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
11-Sep-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
12-Sep-2011	2.07	0.10	0.11	0.13	O/L	0.14	0.09	0.12	0.10
13-Sep-2011	2.73	0.17	0.14	0.13	0.14	0.11	0.14	0.11	O/L
14-Sep-2011	2.69	O/L	0.15	0.18	0.16	0.12	0.11	0.10	0.10
15-Sep-2011	2.58	0.12	0.12	0.16	O/L	0.12	0.09	0.13	0.09
16-Sep-2011	2.45	0.15	0.15	0.14	0.14	0.09	0.14	0.09	0.08
17-Sep-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
18-Sep-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
19-Sep-2011	3.27	0.13	0.14	0.17	0.14	0.13	0.13	O/L	0.14
20-Sep-2011	2.54	0.15	0.16	O/L	0.16	0.17	0.10	0.15	0.15
21-Sep-2011	2.22	0.17	0.18	0.18	O/L	O/L	0.16	0.10	0.15
22-Sep-2011	2.58	0.11	0.11	0.11	0.11	0.08	0.11	0.10	0.14
23-Sep-2011	2.48	O/L	0.14	0.19	0.18	0.19	0.12	0.14	0.13
24-Sep-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
25-Sep-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
26-Sep-2011	1.95	0.14	0.14	0.14	0.13	0.09	0.12	0.09	O/L
27-Sep-2011	2.39	0.14	O/L	0.15	0.14	0.10	0.23	0.10	O/L
28-Sep-2011	1.82	0.15	O/L	O/L	0.18	0.12	0.15	0.16	0.15
29-Sep-2011	1.62	O/L	0.11	0.13	O/L	0.11	0.08	0.08	0.11
30-Sep-2011	1.68	0.12	0.12	0.15	0.11	0.09	0.13	O/L	0.11
Total number of measurements taken, A:		18	17	18	17	20	20	18	18
Turbidity Standard for Monitoring Location (NTU):		0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Number of measurements meeting standard, B:		18	17	18	17	20	20	18	18
Compliance with Turbidity Standard, C= B/A X 100%:		100%	100%	100%	100%	100%	100%	100%	100%

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

Report Compiled By: H. Demchenko / R. Grosselle

Approved in LIMS By: S. Fletcher

Date Approved: 7-Oct-11



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT TURBIDITY GRAB MONITORING REPORT

Water System Code: 252.00	Turbidity (NTU)								
Licence No. PWS-09-412RR	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
Date	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
01-Oct-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
02-Oct-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
03-Oct-2011	1.37	0.12	OL	0.10	OL	0.09	0.09	0.11	0.10
04-Oct-2011	1.35	0.14	0.18	0.16	0.17	OL	0.15	0.13	0.13
05-Oct-2011	1.21	OL	0.11	OL	0.14	0.11	0.13	0.12	0.15
06-Oct-2011	1.14	0.15	OL	0.15	0.17	0.13	OL	0.17	0.13
07-Oct-2011	1.30	0.15	0.12	0.14	OL	0.13	0.13	OL	0.14
08-Oct-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
09-Oct-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
10-Oct-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
11-Oct-2011	1.36	0.12	0.13	0.15	0.13	OL	0.11	0.10	0.14
12-Oct-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
13-Oct-2011	1.76	0.15	0.14	OL	0.15	OL	0.15	0.14	0.23
14-Oct-2011	2.13	0.15	0.15	0.17	0.16	0.12	OL	0.15	OL
15-Oct-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
16-Oct-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
17-Oct-2011	2.67	0.15	0.15	0.16	0.19	OL	0.16	0.14	OL
18-Oct-2011	2.51	0.17	0.16	0.18	0.22	0.15	OL	OL	0.13
19-Oct-2011	2.50	0.20	OL	0.19	OL	0.17	0.18	0.18	0.14
20-Oct-2011	2.29	0.47	OL	0.28	0.26	0.22	0.25	0.19	0.28
21-Oct-2011	2.75	0.12	0.12	0.13	0.13	0.11	0.13	0.12	OL
22-Oct-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
23-Oct-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
24-Oct-2011	2.01	0.14	0.15	0.19	0.13	OL	0.13	0.14	0.16
25-Oct-2011	2.20	0.19	0.21	0.18	0.18	0.19	OL	0.20	0.15
26-Oct-2011	1.93	0.18	OL	0.18	0.19	0.15	0.12	0.12	0.13
27-Oct-2011	1.85	0.17	0.13	0.17	0.14	OL	0.15	0.18	0.17
28-Oct-2011	1.95	0.12	0.18	0.15	0.15	0.11	0.11	OL	0.10
29-Oct-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
30-Oct-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
31-Oct-2011	1.57	0.14	0.11	0.18	OL	0.15	0.13	0.16	0.12
Total number of measurements taken, A:	18	14	17	15	13	15	16	16	16
Turbidity Standard for Monitoring Location (NTU):	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Number of measurements meeting standard, B:	17	14	17	15	13	15	16	16	16
Compliance with Turbidity Standard, C= B/A X 100%:	94%	100%	100%	100%	100%	100%	100%	100%	100%

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

On October 12, there were no samples taken because the plant was off line at the time of sampling.

Report Compiled By: H.Demchenko

Approved in LIMS By: S.Fletcher

Date Approved: 7-Nov-11



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT TURBIDITY GRAB MONITORING REPORT

Water System Code: 252.00	Turbidity (NTU)								
Licence No. PWS-09-412RR	Turbidity (NTU)								
Date	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
01-Nov-2011	1.74	0.12	0.12	0.13	0.12	OL	0.13	0.12	0.13
02-Nov-2011	1.55	0.15	0.14	0.16	0.15	0.12	0.13	OL	0.12
03-Nov-2011	1.67	0.15	0.13	0.20	OL	0.15	0.14	0.13	0.16
04-Nov-2011	1.65	0.15	0.13	0.13	0.13	OL	0.15	0.13	0.12
05-Nov-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
06-Nov-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
07-Nov-2011	1.25	0.12	0.11	0.13	0.12	0.09	0.15	0.11	OL
08-Nov-2011	1.31	0.11	OL	0.13	0.12	0.10	0.11	OL	0.09
09-Nov-2011	OL	OL	OL	OL	OL	OL	OL	OL	OL
10-Nov-2011	1.46	0.19	0.24	0.28	0.24	0.12	OL	OL	0.31
11-Nov-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
12-Nov-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
13-Nov-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
14-Nov-2011	1.05	OL	0.10	0.13	0.11	OL	0.11	0.10	0.12
15-Nov-2011	1.37	0.10	0.12	0.13	0.13	0.10	OL	OL	0.10
16-Nov-2011	1.09	OL	0.09	OL	0.14	0.15	0.13	0.11	0.12
17-Nov-2011	0.78	0.10	0.14	0.11	0.12	OL	0.13	0.12	0.16
18-Nov-2011	0.71	0.14	OL	0.14	0.14	OL	0.13	0.14	0.13
19-Nov-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
20-Nov-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
21-Nov-2011	0.79	0.15	0.11	0.12	OL	0.12	0.11	OL	0.10
22-Nov-2011	0.94	OL	OL	0.14	0.13	0.15	0.12	0.13	0.13
23-Nov-2011	0.82	0.11	0.11	0.14	0.15	0.12	OL	0.11	OL
24-Nov-2011	1.08	0.11	0.11	0.17	OL	0.10	OL	0.11	0.09
25-Nov-2011	0.79	OL	0.12	0.11	0.10	0.12	0.11	OL	0.12
26-Nov-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
27-Nov-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
28-Nov-2011	0.82	0.08	0.08	0.11	OL	0.09	0.14	0.12	OL
29-Nov-2011	0.96	0.11	0.09	0.13	0.12	0.11	OL	0.09	OL
30-Nov-2011	OL	OL	OL	OL	OL	OL	OL	OL	OL
Total number of measurements taken, A:	15	16	18	15	14	14	13	15	
Turbidity Standard for Monitoring Location (NTU):	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	
Number of measurements meeting standard, B:	15	16	18	15	14	14	13	14	
Compliance with Turbidity Standard, C= B/A X 100%:	100%	100%	100%	100%	100%	100%	100%	93%	

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

On November 9th and 30th, there were no samples taken because the plant was off line at the time of sampling.

Report Compiled By: H.Demchenko

Approved in LIMS By: S.Fletcher

Date Approved: 6-Dec-11



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES DIVISION

Water System Code: 252.00
 Licence Number: PWS 09 412 RR

WATER TREATMENT PLANT TURBIDITY ON-LINE MONITORING REPORT

November Turbidity (NTU)

Date	Raw Avg	Filter #1		Filter #2		Filter #3		Filter #4		Filter #5		Filter #6		Filter #7		Filter #8	
		Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
1/11/11	1.89	0.07	0.15	0.05	0.06	0.07	0.23	0.09	0.10	0.07	0.17	0.09	0.22	0.04	0.05	0.03	0.14
2/11/11	1.75	0.07	0.10	0.05	0.12	0.09	0.12	0.10	0.22	0.07	0.19	0.07	0.13	0.04	0.20	0.03	0.13
3/11/11	1.61	0.07	0.19	0.04	0.10	0.08	0.14	0.09	0.15	0.09	0.18	0.09	0.11	0.04	0.25	0.04	0.05
4/11/11	1.73	0.07	0.25	0.06	0.07	0.08	0.11	0.11	0.12	0.08	0.22	0.10	0.28	0.06	0.08	0.04	0.17
5/11/11	1.65	0.10	0.11	0.07	0.25	0.12	0.30	0.12	0.27	0.10	0.11	0.09	0.27	0.05	0.25	0.04	0.27
6/11/11	0.82	0.09	0.24	0.07	0.20	0.09	0.26	0.10	0.24	0.10	0.25	0.10	0.13	0.05	0.08	0.05	0.08
7/11/11	0.54	0.07	0.23	0.05	0.12	0.07	0.11	0.10	0.13	0.09	0.24	0.05	0.23	0.04	0.24	0.03	0.23
8/11/11	0.49	0.07	0.09	0.02	0.20	0.07	0.25	0.10	0.26	0.10	0.12	0.04	0.14	0.02	0.12	0.02	0.03
9/11/11	0.65	0.03	0.20	0.02	0.11	0.01	0.07	0.05	0.16	0.04	0.26	0.04	0.21	0.02	0.18	0.02	0.23
10/11/11	1.32	0.06	0.08	0.03	0.10	0.06	0.12	0.08	0.22	0.09	0.12	0.04	0.12	0.03	0.11	0.02	0.04
11/11/11	0.42	0.05	0.17	0.02	0.05	0.05	0.17	0.07	0.25	0.08	0.17	0.06	0.08	0.03	0.05	0.03	0.09
12/11/11	0.82	0.05	0.07	0.04	0.10	0.06	0.07	0.11	0.12	0.06	0.13	0.05	0.24	0.05	0.10	0.02	0.23
13/11/2011	0.38	0.07	0.23	0.03	0.13	0.06	0.23	0.08	0.25	0.10	0.12	0.04	0.07	0.03	0.18	0.02	0.04
14/11/2011	0.70	0.05	0.26	0.03	0.05	0.04	0.22	0.07	0.12	0.11	0.24	0.07	0.11	0.04	0.06	0.04	0.17
15/11/2011	0.76	0.07	0.08	0.04	0.26	0.07	0.10	0.11	0.26	0.08	0.11	0.04	0.14	0.03	0.15	0.02	0.21
16/11/2011	0.88	0.05	0.27	0.03	0.23	0.05	0.24	0.08	0.25	0.09	0.16	0.06	0.08	0.03	0.06	0.04	0.06
17/11/2011	0.53	0.05	0.27	0.02	0.05	0.05	0.20	0.08	0.24	0.06	0.12	0.05	0.21	0.04	0.26	0.02	0.21
18/11/2011	0.48	0.05	0.21	0.02	0.22	0.06	0.21	0.07	0.22	0.07	0.13	0.05	0.20	0.04	0.09	0.03	0.12
19/11/2011	0.95	0.04	0.07	0.02	0.23	0.06	0.20	0.09	0.13	0.06	0.16	0.04	0.23	0.03	0.22	0.02	0.23
20/11/2011	0.77	0.07	0.23	0.01	0.22	0.05	0.24	0.10	0.23	0.08	0.11	0.05	0.25	0.05	0.09	0.03	0.17
21/11/2011	0.35	0.05	0.18	0.02	0.03	0.04	0.25	0.06	0.20	0.08	0.24	0.04	0.06	0.04	0.22	0.03	0.04
22/11/2011	0.74	0.05	0.22	0.02	0.16	0.05	0.09	0.10	0.12	0.09	0.23	0.07	0.21	0.04	0.23	0.03	0.25
23/11/2011	0.92	0.05	0.08	0.02	0.19	0.07	0.15	0.09	0.26	0.07	0.18	0.05	0.23	0.05	0.07	0.03	0.23
24/11/2011	0.93	0.06	0.21	0.02	0.04	0.05	0.13	0.07	0.19	0.08	0.11	0.05	0.22	0.04	0.17	0.02	0.10
25/11/2011	0.93	0.04	0.14	0.01	0.27	0.04	0.25	0.09	0.22	0.09	0.18	0.05	0.17	0.03	0.08	0.03	0.06
26/11/2011	0.92	0.04	0.08	0.01	0.04	0.03	0.06	0.09	0.11	0.07	0.14	0.05	0.07	0.03	0.29	0.03	0.15
27/11/2011	0.92	0.04	0.09	0.01	0.09	0.05	0.12	0.07	0.21	0.08	0.24	0.05	0.10	0.03	0.06	0.02	0.09
28/11/2011	0.91	0.03	0.06	0.00	0.03	0.04	0.08	0.08	0.18	0.04	0.15	0.04	0.08	0.03	0.08	0.02	0.13
29/11/2011	0.91	0.04	0.09	0.01	0.19	0.04	0.10	0.08	0.13	0.07	0.13	0.04	0.22	0.03	0.10	0.02	0.13
30/11/2011	0.90	0.04	0.09	0.01	0.02	0.03	0.20	0.07	0.10	0.06	0.13	0.02	0.15	0.02	0.17	0.01	0.21

Total Number of Measurements Taken, A:	14146	13999	14500	11462	14971	14803	15189	14817
Turbidity Standard for Monitoring Location (NTU):	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Number of Measurements Meeting Standard, B:	14146	13999	14500	11462	14971	14803	15189	14817
Compliance with Turbidity Standard, C = B/A x 100%:	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000

OL = Off Line

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2011\2011-11

Submitted By (Print): D.Sulymka

Signature: Original signed by D.Sulymka



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT TURBIDITY GRAB MONITORING REPORT

Water System Code: 252.00	Turbidity (NTU)								
Licence No. PWS-09-412RR	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
Date	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
01-Dec-2011	1.05	OL	0.10	0.09	0.10	0.15	0.08	OL	0.08
02-Dec-2011	1.01	0.09	OL	0.13	OL	0.14	0.11	0.07	0.09
03-Dec-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
04-Dec-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
05-Dec-2011	0.82	0.08	0.11	0.10	0.10	0.12	0.09	0.08	0.10
06-Dec-2011	0.79	0.13	0.07	0.11	OL	0.07	0.12	0.08	0.08
07-Dec-2011	0.83	0.10	0.09	OL	0.09	0.08	0.06	0.08	0.10
08-Dec-2011	0.81	0.12	0.13	0.09	0.10	0.12	0.10	0.11	OL
09-Dec-2011	0.83	0.10	OL	0.13	0.13	0.10	0.11	0.09	0.09
10-Dec-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
11-Dec-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
12-Dec-2011	0.83	0.10	0.14	0.13	0.15	OL	0.14	0.09	0.10
13-Dec-2011	0.66	0.14	0.12	0.14	0.11	0.10	0.15	0.09	0.11
14-Dec-2011	0.74	0.09	0.13	OL	0.12	0.11	0.09	0.11	0.12
15-Dec-2011	0.82	0.11	OL	0.12	0.15	0.09	0.11	0.09	0.09
16-Dec-2011	0.70	OL	0.11	0.16	0.10	0.10	OL	0.11	0.11
17-Dec-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
18-Dec-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
19-Dec-2011	0.73	0.14	0.12	OL	0.14	0.11	0.10	0.12	0.17
20-Dec-2011	0.71	0.13	0.16	0.15	0.11	OL	0.10	OL	0.09
21-Dec-2011	0.74	OL	0.11	0.18	0.14	0.10	OL	0.10	0.11
22-Dec-2011	0.69	0.11	0.12	0.13	OL	0.11	0.11	0.13	OL
23-Dec-2011	0.68	0.15	OL	0.17	0.14	0.11	0.19	0.11	0.11
24-Dec-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
25-Dec-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
26-Dec-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
27-Dec-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
28-Dec-2011	0.72	0.14	OL	0.17	0.14	OL	0.15	0.11	0.10
29-Dec-2011	0.77	OL	0.13	OL	0.18	0.13	0.11	0.12	0.12
30-Dec-2011	0.65	0.13	0.14	0.15	0.13	0.16	0.11	OL	OL
31-Dec-2011	NS	NS	NS	NS	NS	NS	NS	NS	NS
Total number of measurements taken, A:	16	15	16	17	17	18	17	17	17
Turbidity Standard for Monitoring Location (NTU):	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Number of measurements meeting standard, B:	16	15	16	17	17	18	17	17	17
Compliance with Turbidity Standard, C= B/A X 100%:	100%	100%	100%	100%	100%	100%	100%	100%	100%

NS: No Sample NA: Not Analyzed OL: Off Line

Comments:

Report Compiled By: H.Demchenko

Approved in LIMS By: S.Fletcher

Date Approved: 3-Jan-12

2011 Monthly UV Monitoring Reports

UV Monitoring Report – Monthly



Water System Code: 252.00
License Number: PWS-09-412 R

Report Period: January 2011

Date	UVR-D100A				UVR-D200A				UVR-D300A				UVR-D400A				UVR-D500A				UVR-D600A				Total				% Volume Treated To Dose		
	Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]						
	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total		Untreated	Below
1/1/2011	0.00	0.00	58.23	58.23	0.00	0.00	0.00	0.00	0.00	0.00	66.90	66.90	0.00	0.00	0.00	0.00	0.00	0.00	65.16	65.16	0.00	0.00	0.00	0.00	0.00	0.00	190.28	190.28	100.0		
1/2/2011	0.00	0.00	62.40	62.40	0.00	0.00	0.00	0.00	0.00	0.00	70.39	70.39	0.00	0.00	0.00	0.00	0.00	0.00	57.23	57.23	0.00	0.00	0.00	0.00	0.00	0.00	190.02	190.02	100.0		
1/3/2011	0.00	0.00	75.23	75.23	0.00	0.00	0.00	0.00	0.00	0.00	66.95	66.95	0.00	0.00	0.00	0.00	0.00	0.00	51.51	51.51	0.00	0.00	0.00	0.00	0.00	0.00	193.69	193.69	100.0		
1/4/2011	0.00	0.00	73.58	73.58	1.46	0.44	23.36	25.27	0.00	1.59	55.35	56.94	0.00	0.00	0.00	0.00	0.00	0.21	25.27	25.48	0.00	0.26	12.82	13.08	1.46	2.51	190.39	194.36	98.0		
1/5/2011	0.00	0.00	60.57	60.57	1.00	0.29	23.32	24.61	0.00	0.30	62.58	62.88	0.00	0.00	0.00	0.00	0.00	0.65	1.53	2.18	0.00	0.14	44.67	44.81	1.00	1.37	192.68	195.06	98.8		
1/6/2011	0.00	0.03	68.96	68.99	0.00	0.00	0.00	0.00	0.00	0.00	61.03	61.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.57	68.57	0.00	0.03	198.56	198.58	100.0		
1/7/2011	0.00	0.00	43.19	43.19	0.54	0.13	28.80	29.46	0.00	0.00	56.32	56.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.06	68.06	0.54	0.13	196.37	197.04	99.7			
1/8/2011	0.00	0.00	0.00	0.00	0.00	0.00	64.49	64.49	0.00	0.00	63.13	63.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64.82	64.82	0.00	0.00	192.44	192.44	100.0			
1/9/2011	0.00	0.00	11.48	11.48	0.00	0.00	63.59	63.59	0.00	0.00	47.55	47.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	65.57	65.57	0.00	0.00	188.18	188.18	100.0			
1/10/2011	0.00	0.00	24.59	24.59	0.00	0.00	72.46	72.46	0.00	0.00	23.91	23.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.76	73.76	0.00	0.00	194.72	194.72	100.0			
1/11/2011	0.00	0.00	0.00	0.00	0.00	0.00	79.80	79.80	0.00	0.00	46.09	46.09	0.00	0.00	0.00	0.00	0.00	0.00	23.53	23.53	0.00	0.13	50.06	50.19	0.00	0.13	199.48	199.61	99.9		
1/12/2011	0.00	0.00	0.00	0.00	0.00	0.00	81.28	81.28	0.00	0.00	47.74	47.74	0.00	0.00	0.00	0.00	0.00	0.00	42.83	42.83	0.00	0.01	32.70	32.72	0.00	0.01	204.56	204.58	100.0		
1/13/2011	0.00	0.00	0.04	0.04	0.00	0.00	79.45	79.45	0.00	0.00	47.08	47.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70.30	70.30	0.00	0.00	196.86	196.86	100.0			
1/14/2011	0.00	0.00	0.00	0.00	0.00	0.00	78.80	78.80	0.00	0.00	44.57	44.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70.31	70.31	0.00	0.00	193.68	193.68	100.0			
1/15/2011	0.00	0.00	0.00	0.00	0.00	0.00	77.90	77.90	0.00	0.00	44.23	44.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69.88	69.88	0.00	0.00	192.01	192.01	100.0			
1/16/2011	0.00	0.00	0.00	0.00	0.00	0.00	77.27	77.27	0.00	0.00	43.81	43.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.94	68.94	0.00	0.00	190.03	190.03	100.0			
1/17/2011	0.00	0.00	0.00	0.00	0.00	0.00	77.91	77.91	0.00	0.00	44.43	44.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70.70	70.70	0.00	0.00	193.03	193.03	100.0			
1/18/2011	0.00	0.00	0.00	0.00	0.00	0.00	78.44	78.44	0.00	0.00	44.88	44.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.74	71.74	0.00	0.00	195.06	195.06	100.0			
1/19/2011	0.00	0.00	0.00	0.00	0.00	0.00	78.27	78.27	0.00	0.00	44.77	44.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.39	71.39	0.00	0.00	194.43	194.43	100.0			
1/20/2011	0.00	0.00	0.00	0.00	0.00	0.00	79.50	79.50	0.00	0.00	46.01	46.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.42	66.46	0.00	0.04	191.93	191.97	100.0			
1/21/2011	0.00	0.00	0.00	0.00	0.00	0.00	80.92	80.92	0.00	0.00	47.82	47.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	61.36	61.36	0.00	0.00	190.10	190.10	100.0			
1/22/2011	0.00	0.00	0.00	0.00	0.00	0.00	79.71	79.71	0.00	0.00	47.51	47.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.83	60.83	0.00	0.00	188.05	188.05	100.0			
1/23/2011	0.00	0.02	7.74	7.76	0.00	0.00	71.89	71.89	0.00	0.00	47.41	47.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.96	60.96	0.00	0.02	187.99	188.01	100.0			
1/24/2011	0.00	0.00	79.97	79.97	0.00	0.00	0.00	0.00	0.00	0.00	49.68	49.68	0.00	0.00	0.00	0.00	0.00	0.00	60.03	60.03	0.00	0.00	3.23	3.23	0.00	0.00	192.91	192.91	100.0		
1/25/2011	0.00	0.00	81.50	81.50	0.00	0.00	0.00	0.00	0.00	0.00	50.62	50.62	0.00	0.00	0.00	0.00	0.13	0.03	64.22	64.38	0.00	0.00	0.00	0.00	0.13	0.03	196.34	196.51	99.9		
1/26/2011	0.00	0.03	81.90	81.93	0.00	0.00	0.58	0.58	0.00	0.00	50.98	50.98	0.00	0.00	0.00	0.00	0.00	0.00	22.37	22.37	0.09	0.48	41.71	42.27	0.09	0.50	197.54	198.13	99.7		
1/27/2011	0.00	0.00	62.42	62.42	0.00	0.00	43.47	43.47	0.02	0.10	23.66	23.78	0.00	0.00	0.00	0.00	0.00	0.00	57.39	57.39	0.00	0.00	7.96	7.96	0.02	0.10	194.90	195.02	99.9		
1/28/2011	0.00	0.00	44.54	44.54	0.00	0.00	79.09	79.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.80	63.80	0.00	0.00	0.00	0.00	0.00	0.00	187.43	187.43	100.0		
1/29/2011	0.00	0.00	74.74	74.74	0.00	0.00	0.50	0.50	0.00	0.00	46.82	46.82	0.00	0.00	0.00	0.00	0.00	0.00	59.71	59.71	0.00	0.00	0.00	0.00	0.00	0.00	181.77	181.77	100.0		
1/30/2011	0.00	0.00	76.52	76.52	0.00	0.00	0.00	0.00	0.00	0.00	47.74	47.74	0.00	0.00	0.00	0.00	0.00	0.00	45.60	45.60	0.00	0.01	15.14	15.15	0.00	0.01	184.99	185.01	100.0		
1/31/2011	0.00	0.00	78.40	78.40	0.00	0.00	0.00	0.00	0.00	0.00	48.53	48.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.09	62.09	0.00	0.00	189.02	189.02	100.0			

Total [ML]: 0.00 0.07 1066.01 1066.08 3.00 0.86 1420.80 1424.66 0.02 2.00 1488.48 1490.50 0.00 0.00 0.00 0.00 0.13 0.89 640.19 641.22 0.09 1.07 1353.99 1355.15 3.25 4.89 5969.47 5977.60

Report Created: Tuesday, February 01, 2011

Water Volume [%]:

Untreated 0.1%
Below Dose 0.1%
To Dose 99.9%

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV\2011\01-2011

Notes: 1 UV Comparative Dose: 18.1 mJ/cm2

Submitted By (Print): Doug Sulymka

Original Signed By: Doug Sulymka

UV Monitoring Report – Monthly



Water System Code: **252.00**
License Number: **PWS-09-412 R**

Reactor: **UVR-100A**
Report Period: **January 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]					
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total		
1/1/2011	NA	20.1	29.0	24.2	33.5	70.2	58.2	115.5	93.8	119.4	110.0	51.9	77.9	94.6	93.8	97.4	4489	1041	2101	4242	4242	4243	4406	4407	4406	100.0	0.00	0.00	58.23	58.23		
1/2/2011	NA	20.2	25.3	24.2	59.1	66.1	62.4	108.9	99.1	107.6	85.3	63.2	64.1	100.0	97.8	100.3	4513	1065	2125	4244	4244	4244	4430	4431	4430	100.0	0.00	0.00	62.40	62.40		
1/3/2011	NA	18.9	24.7	24.1	60.9	82.1	75.2	121.7	120.7	120.9	OL	OL	OL	120.9	120.7	120.7	4537	1089	2149	4244	4244	4244	4454	4455	4454	100.0	0.00	0.00	75.23	75.23		
1/4/2011	NA	18.7	30.1	24.2	28.6	108.0	73.6	119.3	116.5	117.4	84.4	74.2	79.4	117.3	115.7	116.7	4561	1113	2173	4246	4246	4246	4478	4479	4478	100.0	0.00	0.00	73.58	73.58		
1/5/2011	93.6	19.6	26.2	24.2	29.4	76.6	60.6	100.2	97.8	98.1	OL	OL	OL	98.4	97.5	98.0	4585	1137	2197	4246	4246	4246	4502	4503	4502	100.0	0.00	0.00	60.57	60.57		
1/6/2011	92.7	17.9	31.2	24.2	42.4	86.6	69.0	109.3	108.3	108.3	84.9	72.3	75.7	108.6	108.2	108.3	4609	1161	2221	4247	4247	4248	4526	4527	4526	100.0	0.00	0.03	68.96	68.99		
1/7/2011	92.7	20.4	26.6	24.2	6.3	82.2	69.2	111.7	107.4	107.2	103.3	73.7	74.7	109.0	107.3	107.3	4625	1176	2236	4249	4249	4249	4541	4542	4541	100.0	0.00	0.00	43.19	43.19		
1/8/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4625	1176	2236	4249	4249	4249	4541	4542	4541	OL	0.00	0.00	0.00	0.00		
1/9/2011	NA	20.6	32.7	24.3	9.4	50.1	48.6	99.5	79.4	78.6	118.4	78.5	78.7	OL	OL	OL	4630	1182	2242	4255	4254	4255	4541	4542	4541	100.0	0.00	0.00	11.48	11.48		
1/10/2011	NA	19.9	29.6	24.3	11.8	52.7	49.5	102.6	80.6	80.5	119.7	80.5	80.3	OL	OL	OL	4642	1194	2254	4267	4266	4267	4541	4542	4541	100.0	0.00	0.00	24.59	24.59		
1/11/2011	93.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4642	1194	2254	4267	4266	4267	4541	4542	4541	OL	0.00	0.00	0.00	0.00		
1/12/2011	93.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4642	1194	2254	4267	4266	4267	4541	4542	4541	OL	0.00	0.00	0.00	0.00		
1/13/2011	93.3	24.0	31.3	27.2	8.1	37.2	24.5	118.4	101.4	75.5	131.4	77.7	79.0	OL	OL	OL	4642	1194	2254	4267	4266	4267	4541	4542	4541	100.0	0.00	0.00	0.04	0.04		
1/14/2011	95.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4642	1194	2254	4267	4266	4267	4541	4542	4541	OL	0.00	0.00	0.00	0.00		
1/15/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4642	1194	2254	4267	4266	4267	4541	4542	4541	OL	0.00	0.00	0.00	0.00		
1/16/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4642	1194	2254	4267	4266	4267	4541	4542	4541	OL	0.00	0.00	0.00	0.00		
1/17/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4642	1194	2254	4267	4266	4267	4541	4542	4541	OL	0.00	0.00	0.00	0.00		
1/18/2011	92.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4642	1194	2254	4267	4266	4267	4541	4542	4541	OL	0.00	0.00	0.00	0.00		
1/19/2011	93.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4642	1194	2254	4267	4266	4267	4541	4542	4541	OL	0.00	0.00	0.00	0.00		
1/20/2011	92.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4642	1194	2254	4267	4266	4267	4541	4542	4541	OL	0.00	0.00	0.00	0.00		
1/21/2011	92.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4642	1194	2254	4267	4266	4267	4541	4542	4541	OL	0.00	0.00	0.00	0.00		
1/22/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4642	1194	2254	4267	4266	4267	4541	4542	4541	OL	0.00	0.00	0.00	0.00		
1/23/2011	NA	17.9	25.5	24.2	12.3	79.8	77.3	79.2	79.4	78.3	80.6	78.8	78.7	78.1	77.8	77.9	4645	1197	2256	4269	4269	4269	4543	4544	4543	99.8	0.00	0.02	7.74	7.76		
1/24/2011	NA	19.1	25.2	24.3	74.7	84.1	80.0	103.7	81.6	81.5	106.5	81.6	81.5	81.7	81.6	81.6	4669	1221	2280	4293	4293	4293	4567	4568	4567	100.0	0.00	0.00	79.97	79.97		
1/25/2011	92.5	18.8	25.1	24.3	76.2	87.9	81.5	126.5	83.0	82.9	109.7	83.0	82.9	83.2	83.1	83.1	4693	1245	2304	4317	4317	4317	4591	4592	4591	100.0	0.00	0.00	81.50	81.50		
1/26/2011	92.3	16.8	26.8	24.3	44.7	86.4	81.9	125.1	83.6	83.4	106.6	83.5	83.4	83.7	83.5	83.5	4717	1269	2328	4341	4341	4341	4615	4616	4615	100.0	0.00	0.03	81.90	81.93		
1/27/2011	92.2	18.7	26.5	24.3	42.6	86.0	64.0	126.8	78.0	77.8	108.3	78.0	77.9	82.3	82.1	82.1	4741	1293	2352	4365	4365	4365	4627	4627	4627	100.0	0.00	0.00	62.42	62.42		
1/28/2011	94.0	19.5	25.7	24.3	41.0	52.7	44.5	125.3	72.4	72.2	109.7	72.4	72.3	OL	OL	OL	4765	1317	2376	4389	4389	4389	4627	4627	4627	100.0	0.00	0.00	44.54	44.54		
1/29/2011	NA	19.0	25.7	24.3	38.2	79.8	74.7	124.4	76.7	76.6	105.5	76.7	76.5	76.7	76.5	76.5	4789	1341	2400	4413	4413	4413	4650	4651	4651	100.0	0.00	0.00	74.74	74.74		
1/30/2011	NA	19.0	25.0	24.3	73.4	79.7	76.5	119.7	78.1	77.9	101.7	78.1	77.9	78.2	78.1	78.0	4813	1365	2424	4437	4437	4437	4674	4675	4675	100.0	0.00	0.00	76.52	76.52		
1/31/2011	NA	18.5	25.2	24.3	73.1	82.2	78.4	110.1	80.0	79.8	97.8	79.9	79.8	80.1	80.0	79.9	4837	1389	2448	4461	4461	4461	4698	4699	4699	100.0	0.00	0.00	78.40	78.40		

Report Created: **Tuesday, February 01, 2011**

Total [ML]: **0.00 0.07 1066.01 1066.08**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
License Number: **PWS-09-412 R**

Reactor: **UVR-300A**
Report Period: **January 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]					
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total		
1/1/2011	NA	21.0	31.2	24.5	34.7	73.5	66.9	82.5	91.3	75.0	104.5	76.6	68.4	68.6	68.6	68.5	3168	3168	3167	3185	3185	3185	3326	3326	3326	100.0	0.00	0.00	66.90	66.90		
1/2/2011	NA	20.2	25.4	24.1	65.8	73.9	70.4	77.4	85.7	72.3	98.7	73.7	70.5	72.1	72.0	71.9	3192	3192	3191	3209	3209	3209	3350	3350	3350	100.0	0.00	0.00	70.39	70.39		
1/3/2011	NA	19.8	25.9	23.5	57.6	76.7	66.9	73.7	82.0	68.7	95.3	71.0	64.8	68.6	68.6	68.5	3216	3216	3215	3233	3233	3233	3374	3374	3374	100.0	0.00	0.00	66.95	66.95		
1/4/2011	NA	13.2	45.9	23.4	3.6	86.0	61.2	72.7	81.1	63.5	91.3	71.0	58.5	62.9	62.9	58.1	3238	3238	3238	3256	3255	3255	3397	3397	3396	97.2	0.00	1.59	55.35	56.94		
1/5/2011	93.6	10.1	34.2	24.0	22.7	87.8	63.5	94.5	97.9	89.7	93.9	36.5	54.4	89.5	89.6	84.1	3262	3262	3262	3265	3265	3265	3420	3420	3420	99.5	0.00	0.30	62.58	62.88		
1/6/2011	92.7	21.5	26.1	24.2	41.7	75.2	61.0	98.3	98.3	98.2	OL	OL	OL	98.3	98.3	89.8	3286	3286	3286	3265	3265	3265	3444	3444	3444	100.0	0.00	0.00	61.03	61.03		
1/7/2011	92.7	21.7	26.1	24.3	32.4	75.1	56.3	91.2	91.8	90.7	OL	OL	OL	90.8	90.8	81.0	3310	3310	3310	3265	3265	3265	3468	3468	3468	100.0	0.00	0.00	56.32	56.32		
1/8/2011	NA	21.5	24.9	24.2	59.6	65.4	63.1	101.6	101.5	101.4	OL	OL	OL	101.6	101.5	78.9	3334	3334	3334	3265	3265	3265	3492	3492	3492	100.0	0.00	0.00	63.13	63.13		
1/9/2011	NA	20.7	27.5	23.3	7.5	64.4	62.1	99.9	99.9	93.6	OL	OL	OL	99.9	99.8	54.5	3352	3352	3352	3265	3265	3265	3511	3511	3511	100.0	0.00	0.00	47.55	47.55		
1/10/2011	NA	21.6	31.2	24.4	24.9	66.8	46.9	116.1	134.9	103.4	152.5	126.6	76.1	92.1	75.1	1.2	3365	3365	3364	3277	3277	3277	3511	3511	3511	100.0	0.00	0.00	23.91	23.92		
1/11/2011	93.6	21.4	29.5	24.4	35.7	48.8	46.1	113.2	132.2	100.6	155.4	126.2	74.9	OL	OL	OL	3389	3389	3388	3301	3301	3301	3511	3511	3511	100.0	0.00	0.00	46.09	46.09		
1/12/2011	93.2	21.5	30.1	24.4	35.2	54.8	47.7	111.2	130.1	98.9	152.2	123.9	77.5	OL	OL	OL	3413	3413	3412	3325	3325	3325	3511	3511	3511	100.0	0.00	0.00	47.74	47.74		
1/13/2011	93.3	21.7	33.4	24.4	3.2	67.8	47.1	108.5	127.4	95.8	148.4	119.8	76.5	OL	OL	OL	3437	3437	3436	3349	3349	3349	3511	3511	3511	100.0	0.00	0.00	47.08	47.08		
1/14/2011	95.0	21.5	28.9	24.4	40.4	48.4	44.6	106.3	123.4	92.5	147.8	115.1	72.5	OL	OL	OL	3461	3461	3460	3373	3373	3373	3511	3511	3511	100.0	0.00	0.00	44.57	44.57		
1/15/2011	NA	21.7	26.6	24.4	39.2	47.4	44.2	97.5	114.3	82.8	135.0	97.5	71.9	OL	OL	OL	3485	3485	3484	3397	3397	3397	3511	3511	3511	100.0	0.00	0.00	44.23	44.23		
1/16/2011	NA	21.5	26.4	24.4	40.8	46.2	43.8	94.7	109.3	78.6	131.5	91.9	71.2	OL	OL	OL	3509	3509	3508	3421	3421	3421	3511	3511	3511	100.0	0.00	0.00	43.81	43.81		
1/17/2011	NA	21.6	25.7	24.4	41.8	47.6	44.4	94.4	112.9	76.7	130.2	89.9	72.2	OL	OL	OL	3533	3533	3532	3445	3445	3445	3511	3511	3511	100.0	0.00	0.00	44.43	44.43		
1/18/2011	92.3	21.5	25.3	24.4	42.3	47.4	44.9	92.0	109.7	73.5	126.7	85.1	72.8	OL	OL	OL	3557	3557	3556	3469	3469	3469	3511	3511	3511	100.0	0.00	0.00	44.88	44.88		
1/19/2011	93.3	21.4	25.4	24.3	41.4	47.2	44.8	88.7	105.2	72.8	121.6	79.6	72.6	OL	OL	OL	3581	3581	3580	3493	3493	3493	3511	3511	3511	100.0	0.00	0.00	44.77	44.77		
1/20/2011	92.8	18.8	35.0	24.3	23.0	55.0	46.0	84.1	100.0	74.4	114.8	75.8	74.0	53.5	51.5	1.1	3605	3605	3604	3517	3517	3517	3512	3511	3511	100.0	0.00	0.00	46.01	46.01		
1/21/2011	92.6	21.3	24.8	24.3	45.6	50.5	47.8	83.0	97.7	77.6	112.1	77.5	77.4	OL	OL	OL	3629	3629	3628	3541	3541	3541	3512	3511	3511	100.0	0.00	0.00	47.82	47.82		
1/22/2011	NA	21.4	24.9	24.3	46.0	49.2	47.5	81.2	95.2	77.0	110.1	77.0	76.9	OL	OL	OL	3653	3653	3652	3565	3565	3565	3512	3511	3511	100.0	0.00	0.00	47.51	47.51		
1/23/2011	NA	21.4	25.0	24.3	44.1	50.1	47.4	78.9	92.2	76.8	106.8	76.9	76.7	OL	OL	OL	3677	3677	3676	3589	3589	3589	3512	3511	3511	100.0	0.00	0.00	47.41	47.41		
1/24/2011	NA	21.3	28.6	24.5	45.7	52.9	49.7	77.4	89.5	65.3	103.8	74.8	65.2	83.6	58.2	27.2	3701	3701	3700	3613	3613	3613	3524	3524	3524	100.0	0.00	0.00	49.68	49.68		
1/25/2011	92.5	21.1	25.5	24.6	47.1	54.2	50.6	73.2	86.2	52.4	100.1	68.2	52.2	91.3	63.0	52.6	3725	3725	3724	3637	3637	3637	3548	3548	3548	100.0	0.00	0.00	50.62	50.62		
1/26/2011	92.3	21.2	27.4	24.6	46.8	70.9	51.0	70.5	84.1	52.7	97.2	67.7	52.6	86.7	63.5	52.8	3749	3749	3748	3661	3661	3661	3572	3572	3572	100.0	0.00	0.00	50.98	50.98		
1/27/2011	92.2	0.0	31.8	24.6	0.0	53.6	50.3	69.7	83.3	51.9	95.7	68.1	51.8	82.6	64.9	24.6	3760	3760	3760	3673	3672	3672	3583	3583	3583	99.5	0.02	0.10	23.66	23.78		
1/28/2011	94.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3760	3760	3760	3673	3672	3672	3583	3583	3583	OL	0.00	0.00	0.00	0.00	0.00	
1/29/2011	NA	21.7	37.2	24.4	17.3	49.8	47.0	OL	OL	OL	138.5	98.4	76.4	108.8	78.9	94.4	3760	3760	3760	3697	3696	3696	3607	3607	3607	100.0	0.00	0.00	46.82	46.82		
1/30/2011	NA	21.6	25.0	24.3	45.6	50.3	47.7	OL	OL	OL	139.9	95.2	77.5	103.7	77.4	98.9	3760	3760	3760	3721	3720	3720	3631	3631	3631	100.0	0.00	0.00	47.74	47.74		
1/31/2011	NA	21.6	25.1	24.3	45.3	51.0	48.5	OL	OL	OL	139.5	97.6	78.7	108.2	78.5	97.1	3760	3760	3760	3745	3744	3744	3655	3655	3655	100.0	0.00	0.00	48.53	48.53		

Report Created: **Tuesday, February 01, 2011**

Total [ML]: **0.02 2.00 1488.48 1490.50**

Water Volume [%]:

Untreated **0.1 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
License Number: **PWS-09-412 R**

Reactor: **UVR-500A**
Report Period: **January 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
1/1/2011	NA	20.6	30.1	24.1	44.8	69.9	65.1	66.9	66.4	72.7	66.6	74.2	66.8	110.7	65.0	75.8	3790	235	3790	823	486	2508	486	2525	486	100.0	0.00	0.00	65.16	65.16
1/2/2011	NA	21.1	25.1	24.3	52.5	61.8	57.2	59.0	57.8	65.0	58.8	70.1	59.0	103.6	58.7	66.4	3814	259	3814	847	510	2532	510	2549	510	100.0	0.00	0.00	57.23	57.23
1/3/2011	NA	20.8	25.4	24.1	48.0	58.2	51.5	53.3	51.6	59.4	53.1	67.5	53.3	97.8	53.1	59.5	3838	283	3838	871	534	2556	534	2573	534	100.0	0.00	0.00	51.51	51.51
1/4/2011	NA	12.5	37.5	23.2	11.6	101.0	50.4	52.2	47.9	58.0	51.7	69.7	52.5	95.9	51.5	57.1	3850	295	3850	883	547	2568	546	2586	546	99.2	0.00	0.21	25.27	25.48
1/5/2011	93.6	14.9	29.9	23.6	3.3	81.4	39.4	48.7	34.0	68.1	40.3	87.4	53.2	98.9	39.1	58.1	3852	297	3851	884	548	2570	548	2587	548	70.3	0.00	0.65	1.53	2.18
1/6/2011	92.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3852	297	3851	884	548	2570	548	2587	548	OL	0.00	0.00	0.00	0.00
1/7/2011	92.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3852	297	3851	884	548	2570	548	2587	548	OL	0.00	0.00	0.00	0.00
1/8/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3852	297	3851	884	548	2570	548	2587	548	OL	0.00	0.00	0.00	0.00
1/9/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3852	297	3851	884	548	2570	548	2587	548	OL	0.00	0.00	0.00	0.00
1/10/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3852	297	3851	884	548	2570	548	2587	548	OL	0.00	0.00	0.00	0.00
1/11/2011	93.6	18.2	40.3	24.4	13.8	75.8	72.2	84.7	74.4	152.5	73.7	130.6	214.4	255.8	75.4	264.5	3860	304	3859	892	556	2578	555	2595	556	100.0	0.00	0.00	23.53	23.53
1/12/2011	93.2	21.3	39.4	24.5	7.4	75.4	72.2	94.6	73.8	156.1	73.7	128.1	153.7	285.3	73.9	273.8	3874	319	3873	907	570	2592	570	2609	570	100.0	0.00	0.00	42.83	42.83
1/13/2011	93.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3874	319	3873	907	570	2592	570	2609	570	OL	0.00	0.00	0.00	0.00
1/14/2011	95.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3874	319	3873	907	570	2592	570	2609	570	OL	0.00	0.00	0.00	0.00
1/15/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3874	319	3873	907	570	2592	570	2609	570	OL	0.00	0.00	0.00	0.00
1/16/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3874	319	3873	907	570	2592	570	2609	570	OL	0.00	0.00	0.00	0.00
1/17/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3874	319	3873	907	570	2592	570	2609	570	OL	0.00	0.00	0.00	0.00
1/18/2011	92.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3874	319	3873	907	570	2592	570	2609	570	OL	0.00	0.00	0.00	0.00
1/19/2011	93.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3874	319	3873	907	570	2592	570	2609	570	OL	0.00	0.00	0.00	0.00
1/20/2011	92.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3874	319	3873	907	570	2592	570	2609	570	OL	0.00	0.00	0.00	0.00
1/21/2011	92.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3874	319	3873	907	570	2592	570	2609	570	OL	0.00	0.00	0.00	0.00
1/22/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3874	319	3873	907	570	2592	570	2609	570	OL	0.00	0.00	0.00	0.00
1/23/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3874	319	3873	907	570	2592	570	2609	570	OL	0.00	0.00	0.00	0.00
1/24/2011	NA	18.5	25.1	24.5	8.3	66.1	63.3	67.3	64.7	131.5	64.7	98.6	132.4	240.6	65.1	227.4	3897	341	3896	929	593	2615	593	2632	593	100.0	0.00	0.00	60.03	60.03
1/25/2011	92.5	0.0	27.2	24.4	60.7	67.9	64.4	81.4	65.9	144.7	65.9	112.5	133.4	238.3	66.6	179.8	3921	365	3920	953	617	2639	617	2656	617	99.7	0.13	0.03	64.22	64.38
1/26/2011	92.3	21.2	34.1	24.5	3.2	67.5	64.5	81.6	66.1	147.1	65.8	105.3	129.6	215.8	66.7	155.2	3929	374	3928	962	625	2647	625	2665	625	100.0	0.00	0.00	22.37	22.37
1/27/2011	92.2	18.6	25.0	24.5	22.2	68.7	65.4	78.3	66.9	145.6	66.9	106.3	125.0	205.3	67.4	149.1	3950	395	3949	983	646	2668	646	2686	646	100.0	0.00	0.00	57.39	57.39
1/28/2011	94.0	20.9	25.0	24.4	61.2	68.1	63.8	76.6	65.3	139.9	64.7	104.9	117.4	207.8	65.4	150.2	3974	419	3973	1007	670	2692	670	2710	670	100.0	0.00	0.00	63.80	63.80
1/29/2011	NA	20.8	25.6	23.8	48.5	63.8	59.7	72.3	61.2	131.5	58.8	102.0	108.1	202.7	61.4	143.4	3998	443	3997	1031	694	2716	694	2734	694	100.0	0.00	0.00	59.71	59.71
1/30/2011	NA	20.6	37.4	22.0	20.0	62.3	60.7	69.0	62.2	124.6	54.3	100.0	101.1	196.3	62.2	135.4	4016	461	4016	1049	713	2734	712	2752	712	100.0	0.00	0.00	45.60	45.60
1/31/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4016	461	4016	1049	713	2734	712	2752	712	OL	0.00	0.00	0.00	0.00

Report Created: **Tuesday, February 01, 2011**

Total [ML]: **0.13 0.89 640.19 641.22**

Water Volume [%]:

Untreated **0.1 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
License Number: **PWS-09-412 R**

Reactor: **UVR-600A**
Report Period: **January 2011**

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
1/1/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1882	1944	1944	2326	2326	2326	285	2251	2251	OL	0.00	0.00	0.00	0.00	
1/2/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1882	1944	1944	2326	2326	2326	285	2251	2251	OL	0.00	0.00	0.00	0.00	
1/3/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1882	1944	1944	2326	2326	2326	285	2251	2251	OL	0.00	0.00	0.00	0.00	
1/4/2011	NA	10.3	34.8	24.0	33.0	78.2	53.6	284.5	112.1	129.2	124.8	105.1	128.8	52.6	75.9	74.7	1888	1950	1949	2332	2332	2332	291	2257	2257	98.0	0.00	0.26	12.82	13.08
1/5/2011	93.6	14.2	56.6	24.2	8.6	80.7	64.5	291.3	109.1	126.9	114.9	106.0	113.8	50.8	76.8	76.5	1905	1966	1966	2349	2349	2349	293	2259	2259	99.7	0.00	0.14	44.67	44.81
1/6/2011	92.7	19.5	25.1	24.2	53.8	78.1	68.6	280.1	110.0	114.8	109.9	110.1	109.8	OL	OL	OL	1929	1990	1990	2373	2373	2373	293	2259	2259	100.0	0.00	0.00	68.57	68.57
1/7/2011	92.7	19.4	25.6	24.1	48.5	83.2	68.0	268.7	109.2	112.1	109.0	109.2	109.0	OL	OL	OL	1953	2014	2014	2397	2397	2397	293	2259	2259	100.0	0.00	0.00	68.06	68.06
1/8/2011	NA	19.2	24.7	24.2	62.3	67.5	64.8	258.5	104.1	106.1	103.8	104.1	103.9	OL	OL	OL	1977	2038	2038	2421	2421	2421	293	2259	2259	100.0	0.00	0.00	64.82	64.82
1/9/2011	NA	19.4	24.7	24.2	54.4	74.4	65.5	245.1	105.3	105.3	105.0	105.2	105.1	OL	OL	OL	2001	2062	2062	2445	2445	2445	293	2259	2259	100.0	0.00	0.00	65.57	65.57
1/10/2011	NA	19.3	25.0	24.1	56.1	80.9	73.7	229.1	118.1	118.1	117.8	118.0	118.0	OL	OL	OL	2025	2086	2086	2469	2469	2469	293	2259	2259	100.0	0.00	0.00	73.76	73.76
1/11/2011	93.6	5.5	33.9	23.6	25.0	76.2	73.6	217.0	117.7	117.8	113.4	117.9	117.5	18.7	53.4	46.5	2041	2103	2103	2485	2485	2485	293	2259	2259	99.7	0.00	0.13	50.06	50.19
1/12/2011	93.2	17.8	32.2	24.4	2.8	83.8	78.7	300.1	116.2	145.0	120.1	103.8	127.6	79.9	81.2	105.9	2051	2113	2113	2495	2495	2495	303	2269	2269	100.0	0.00	0.01	32.70	32.72
1/13/2011	93.3	19.0	30.8	24.5	3.3	84.1	73.7	306.4	115.4	139.0	102.5	104.8	128.0	75.2	76.5	105.7	2074	2136	2136	2518	2518	2518	326	2292	2292	100.0	0.00	0.00	70.30	70.30
1/14/2011	95.0	19.4	26.8	24.5	65.3	77.6	70.3	307.4	111.8	115.6	91.6	103.8	126.8	71.8	72.9	105.7	2098	2160	2160	2542	2542	2542	350	2316	2316	100.0	0.00	0.00	70.31	70.31
1/15/2011	NA	19.3	26.8	24.4	64.1	74.2	69.9	289.3	102.5	90.1	83.6	95.7	114.1	71.3	71.3	95.2	2122	2184	2184	2566	2566	2566	374	2340	2340	100.0	0.00	0.00	69.88	69.88
1/16/2011	NA	19.1	26.6	24.4	66.0	71.6	68.9	279.2	98.6	80.0	81.3	92.3	109.4	70.4	70.4	90.2	2146	2208	2208	2590	2590	2590	398	2364	2364	100.0	0.00	0.00	68.94	68.94
1/17/2011	NA	19.1	26.1	24.4	66.8	74.8	70.7	273.7	98.8	74.1	80.8	92.5	106.2	72.1	72.1	87.3	2170	2232	2232	2614	2614	2614	422	2388	2388	100.0	0.00	0.00	70.70	70.70
1/18/2011	92.3	18.3	25.1	24.4	68.9	74.3	71.7	264.1	95.6	73.2	79.3	89.4	100.5	73.1	73.2	82.5	2194	2256	2256	2638	2638	2638	446	2412	2412	100.0	0.00	0.00	71.74	71.74
1/19/2011	93.3	18.8	25.3	24.4	68.3	73.8	71.4	249.3	91.7	72.8	77.2	85.3	93.8	72.8	72.8	77.2	2218	2280	2280	2662	2662	2662	470	2436	2436	100.0	0.00	0.00	71.39	71.39
1/20/2011	92.8	18.0	28.8	24.4	38.3	73.2	66.4	232.8	86.4	67.9	74.1	80.0	85.7	67.9	67.9	71.1	2242	2304	2304	2686	2686	2686	494	2460	2460	99.9	0.00	0.04	66.42	66.46
1/21/2011	92.6	19.1	25.0	24.5	59.3	64.3	61.4	216.1	79.8	62.8	73.0	77.6	80.2	62.8	62.9	66.7	2266	2328	2328	2710	2710	2710	518	2484	2484	100.0	0.00	0.00	61.36	61.36
1/22/2011	NA	19.0	25.1	24.5	59.0	62.4	60.8	201.9	73.6	62.3	71.5	75.7	76.3	62.3	62.3	63.7	2290	2352	2352	2734	2734	2734	542	2508	2508	100.0	0.00	0.00	60.83	60.83
1/23/2011	NA	19.3	25.1	24.5	57.6	63.8	60.9	210.2	74.8	62.4	69.8	73.7	71.6	62.4	62.5	62.4	2314	2376	2376	2758	2758	2758	566	2532	2532	100.0	0.00	0.00	60.96	60.96
1/24/2011	NA	20.2	37.5	24.6	25.8	63.5	61.8	215.9	75.1	62.9	69.2	72.6	70.6	63.3	63.1	63.3	2315	2377	2377	2759	2759	2759	567	2533	2533	100.0	0.00	0.00	3.23	3.23
1/25/2011	92.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2315	2377	2377	2759	2759	2759	567	2533	2533	OL	0.00	0.00	0.00	0.00
1/26/2011	92.3	0.0	38.9	24.3	6.9	68.3	65.1	138.9	85.3	88.6	98.6	78.2	68.8	65.9	67.4	73.2	2331	2393	2393	2775	2775	2774	583	2549	2549	98.7	0.09	0.48	41.71	42.27
1/27/2011	92.2	0.0	33.7	24.5	0.0	66.3	63.9	139.2	84.3	86.2	98.9	78.3	67.6	65.2	65.5	71.2	2334	2396	2396	2778	2778	2777	586	2552	2552	100.0	0.00	0.00	7.96	7.96
1/28/2011	94.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2334	2396	2396	2778	2778	2777	586	2552	2552	OL	0.00	0.00	0.00	0.00
1/29/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2334	2396	2396	2778	2778	2777	586	2552	2552	OL	0.00	0.00	0.00	0.00
1/30/2011	NA	18.0	32.7	24.6	10.5	62.9	60.8	166.4	129.1	164.4	134.5	110.3	122.7	62.6	76.9	131.0	2340	2402	2402	2784	2784	2783	592	2558	2558	99.9	0.00	0.01	15.14	15.15
1/31/2011	NA	18.9	26.7	24.6	58.9	64.9	62.1	170.2	105.8	153.4	121.5	95.1	110.3	63.6	68.2	116.6	2364	2426	2426	2808	2808	2807	616	2582	2582	100.0	0.00	0.00	62.09	62.09

Report Created: **Tuesday, February 01, 2011**

Total [ML]: **0.09 1.07 1353.99 1355.15**

Water Volume [%]:

Untreated **0.1 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: 252.00
License Number: PWS-09-412 R

Report Period: February 2011

Date	UVR-D100A				UVR-D200A				UVR-D300A				UVR-D400A				UVR-D500A				UVR-D600A				Total				% Volume Treated To Dose		
	Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]						
	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total		Untreated	Below
2/1/2011	0.00	0.00	79.60	79.60	0.00	0.00	0.00	0.00	0.00	0.00	49.28	49.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.99	62.99	0.00	0.00	191.87	191.87	100.0		
2/2/2011	0.00	0.00	79.48	79.48	0.00	0.00	0.00	0.00	0.00	0.00	49.12	49.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.83	62.83	0.00	0.00	191.43	191.43	100.0		
2/3/2011	0.00	0.00	79.40	79.40	0.00	0.00	0.00	0.00	0.00	0.00	49.08	49.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.81	62.81	0.00	0.00	191.30	191.30	100.0		
2/4/2011	0.00	0.00	79.44	79.44	0.00	0.00	0.00	0.00	0.00	0.00	49.20	49.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.91	62.91	0.00	0.00	191.55	191.55	100.0		
2/5/2011	0.00	0.00	79.24	79.24	0.00	0.00	0.00	0.00	0.00	0.00	49.46	49.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.11	63.11	0.00	0.00	191.80	191.80	100.0		
2/6/2011	0.00	0.03	28.36	28.38	0.00	0.23	53.19	53.42	0.00	0.00	49.04	49.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.85	62.85	0.00	0.26	193.43	193.69	99.9		
2/7/2011	0.06	0.00	28.16	28.22	0.00	0.00	55.56	55.56	0.00	0.00	50.09	50.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.06	60.06	0.06	0.00	193.87	193.93	100.0		
2/8/2011	0.00	0.00	80.80	80.80	0.00	0.00	0.00	0.00	0.00	0.00	30.99	30.99	0.00	0.00	20.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	63.00	63.00	0.00	0.00	194.78	194.78	100.0		
2/9/2011	0.00	0.00	80.81	80.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.40	52.40	0.00	0.00	0.00	0.00	0.00	0.00	61.50	61.50	0.00	0.00	194.71	194.71	100.0		
2/10/2011	0.00	0.00	81.13	81.13	0.00	0.00	0.00	0.00	0.00	0.00	19.97	19.97	0.00	0.00	31.75	31.75	0.00	0.00	0.00	0.00	0.00	0.00	62.78	62.78	0.00	0.00	195.63	195.63	100.0		
2/11/2011	0.00	0.00	67.81	67.81	0.00	0.00	36.64	36.64	0.00	0.00	59.43	59.43	0.00	0.00	0.00	0.00	0.00	0.07	0.21	0.28	0.00	0.00	35.99	36.00	0.00	0.07	200.09	200.16	100.0		
2/12/2011	0.00	0.00	84.96	84.96	0.00	0.00	0.00	0.00	0.00	0.00	39.92	39.92	0.00	0.00	13.44	13.44	0.00	0.00	25.73	25.73	0.00	0.00	40.91	40.91	0.00	0.00	204.96	204.96	100.0		
2/13/2011	0.00	0.00	82.78	82.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.83	53.83	0.00	0.00	62.81	62.81	0.00	0.00	0.00	0.00	0.00	0.00	199.42	199.42	100.0		
2/14/2011	0.00	0.00	81.39	81.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.96	52.96	0.00	0.00	61.69	61.69	0.00	0.00	0.00	0.00	0.00	0.00	196.03	196.03	100.0		
2/15/2011	0.00	0.00	81.27	81.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.89	52.89	0.00	0.00	61.55	61.55	0.00	0.00	0.00	0.00	0.00	0.00	195.71	195.71	100.0		
2/16/2011	0.00	0.00	81.19	81.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52.83	52.83	0.00	0.00	61.46	61.46	0.00	0.00	0.00	0.00	0.00	0.00	195.49	195.49	100.0		
2/17/2011	0.00	0.00	82.60	82.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.70	53.70	0.00	0.00	62.58	62.58	0.00	0.00	0.00	0.00	0.00	0.00	198.88	198.88	100.0		
2/18/2011	0.00	0.00	81.80	81.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.14	53.14	0.00	0.00	61.95	61.95	0.00	0.00	0.00	0.00	0.00	0.00	196.89	196.89	100.0		
2/19/2011	0.00	0.00	84.45	84.45	0.00	0.00	0.00	0.00	0.00	0.01	3.23	3.24	0.00	0.00	51.16	51.16	0.00	0.00	64.02	64.02	0.00	0.00	0.00	0.00	0.00	0.01	202.86	202.87	100.0		
2/20/2011	0.00	0.00	84.64	84.64	0.00	0.00	0.00	0.00	0.00	0.00	52.50	52.50	0.00	0.00	0.00	0.00	0.00	0.00	67.10	67.10	0.00	0.00	0.00	0.00	0.00	0.00	204.25	204.25	100.0		
2/21/2011	0.00	0.00	54.09	54.09	0.00	0.00	31.09	31.09	0.00	0.00	52.80	52.80	0.00	0.00	0.24	0.24	0.00	0.00	67.77	67.77	0.00	0.00	0.00	0.00	0.00	0.00	205.99	205.99	100.0		
2/22/2011	0.00	0.00	0.00	0.00	0.00	0.00	83.25	83.25	0.00	0.00	49.92	49.92	0.00	0.00	0.00	0.00	0.00	0.00	64.01	64.01	0.00	0.00	0.00	0.00	0.00	0.00	197.18	197.18	100.0		
2/23/2011	0.00	0.00	0.00	0.00	0.00	0.00	81.37	81.37	0.00	0.00	41.25	41.25	0.20	0.00	7.02	7.22	0.00	0.00	61.51	61.51	0.00	0.00	0.00	0.00	0.20	0.00	191.16	191.36	99.9		
2/24/2011	0.09	0.00	0.00	0.09	0.00	0.00	79.05	79.05	0.00	0.00	48.54	48.54	0.00	0.00	0.00	0.00	0.00	0.00	60.67	60.67	0.00	0.04	2.10	2.14	0.09	0.04	190.37	190.50	99.9		
2/25/2011	0.00	0.00	49.70	49.70	0.00	0.00	31.02	31.02	0.00	0.00	49.54	49.54	0.00	0.00	0.00	0.00	0.00	0.00	62.51	62.51	0.00	0.00	0.00	0.00	0.00	0.00	192.77	192.77	100.0		
2/26/2011	0.00	0.00	78.70	78.70	0.00	0.39	0.21	0.59	0.00	0.00	49.70	49.70	0.00	0.00	0.24	0.24	0.00	0.30	41.63	41.92	0.00	0.00	19.92	19.92	0.00	0.69	190.40	191.08	99.6		
2/27/2011	0.00	0.00	79.67	79.67	0.00	0.00	0.00	0.00	0.00	0.00	50.01	50.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.46	63.46	0.00	0.00	193.14	193.14	100.0		
2/28/2011	0.00	0.00	79.63	79.63	0.00	0.00	0.00	0.00	0.00	0.00	50.01	50.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.32	63.32	0.00	0.00	192.96	192.96	100.0		

Total [ML]: 0.16 0.03 1851.10 1851.28 0.00 0.62 451.38 452.00 0.00 0.01 943.09 943.10 0.20 0.00 495.60 495.80 0.00 0.37 887.20 887.56 0.00 0.04 850.54 850.58 0.36 1.06 5478.92 5480.33

Report Created: Tuesday, March 01, 2011

Water Volume [%]:
Untreated 0.0%
Below Dose 0.0%
To Dose 100.0%

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV\2011\02-2011

Notes: 1 UV Comparative Dose: 18.1 mj/cm2

Submitted By (Print): D.Sulymka

Original Signed By: D.Sulymka

UV Monitoring Report – Monthly



Water System Code: **252.00**
License Number: **PWS-09-412 R**

Reactor: **UVR-100A**
Report Period: **February 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
2/1/2011	93.1	18.3	25.0	24.3	76.8	82.7	79.6	105.0	81.2	80.9	96.5	81.3	81.0	81.5	81.3	81.2	4861	1413	2472	4485	4485	4485	4722	4723	4723	100.0	0.00	0.00	79.60	79.60
2/2/2011	92.7	19.2	25.0	24.3	76.3	82.4	79.5	96.9	81.2	80.7	94.6	81.0	80.8	81.4	81.1	81.0	4885	1437	2496	4509	4509	4509	4746	4747	4747	100.0	0.00	0.00	79.48	79.48
2/3/2011	92.6	18.2	25.0	24.3	75.7	83.2	79.4	88.6	81.1	80.7	92.7	81.0	80.8	81.3	81.1	81.0	4909	1461	2520	4533	4533	4533	4770	4771	4771	100.0	0.00	0.00	79.40	79.40
2/4/2011	92.9	19.2	47.4	24.3	22.0	95.5	79.4	82.3	81.0	80.5	90.4	81.0	80.7	81.4	81.1	80.9	4933	1485	2544	4557	4557	4557	4794	4795	4795	100.0	0.00	0.00	79.44	79.44
2/5/2011	NA	18.3	47.9	24.2	24.8	93.4	79.2	81.1	80.8	79.8	89.2	80.7	80.2	81.1	80.9	80.7	4957	1509	2568	4581	4581	4581	4818	4819	4819	100.0	0.00	0.00	79.24	79.24
2/6/2011	NA	17.3	35.2	23.5	29.9	83.9	79.5	80.8	80.7	76.6	86.7	80.7	78.1	80.7	80.6	80.7	4965	1517	2577	4590	4589	4590	4827	4828	4827	99.9	0.00	0.03	28.36	28.38
2/7/2011	NA	0.0	49.5	24.8	3.1	87.6	76.2	218.5	127.2	166.4	164.9	127.0	127.3	0.2	0.4	OL	4974	1526	2586	4599	4598	4599	4827	4828	4827	99.8	0.06	0.00	28.16	28.22
2/8/2011	92.7	19.9	24.7	24.1	76.8	84.2	80.8	222.1	129.5	168.5	146.6	129.4	129.6	OL	OL	OL	4998	1550	2610	4623	4622	4623	4827	4828	4827	100.0	0.00	0.00	80.80	80.80
2/9/2011	92.7	20.1	24.7	24.2	76.9	84.4	80.8	226.0	129.4	163.1	160.2	129.5	129.5	OL	OL	OL	5022	1574	2634	4647	4646	4647	4827	4828	4827	100.0	0.00	0.00	80.81	80.81
2/10/2011	92.3	20.0	24.6	24.1	76.7	85.1	81.1	189.2	129.9	154.3	155.8	129.9	130.0	OL	OL	OL	5046	1598	2658	4671	4670	4671	4827	4828	4827	100.0	0.00	0.00	81.13	81.13
2/11/2011	92.7	20.2	29.4	25.4	41.6	88.1	67.8	178.2	115.7	149.4	154.8	115.5	115.1	OL	OL	OL	5070	1622	2682	4695	4694	4695	4827	4828	4827	100.0	0.00	0.00	67.81	67.81
2/12/2011	NA	20.1	24.7	24.1	80.8	88.5	85.0	167.0	136.0	140.5	147.3	136.0	136.1	OL	OL	OL	5094	1646	2706	4719	4718	4719	4827	4828	4827	100.0	0.00	0.00	84.96	84.96
2/13/2011	NA	20.1	24.6	24.1	78.2	87.8	82.8	150.4	132.6	132.8	137.9	132.5	132.6	OL	OL	OL	5118	1670	2730	4743	4742	4743	4827	4828	4827	100.0	0.00	0.00	82.78	82.78
2/14/2011	NA	19.8	24.7	24.1	77.6	84.4	81.4	138.9	130.2	130.5	133.7	130.4	130.4	OL	OL	OL	5142	1694	2754	4767	4766	4767	4827	4828	4827	100.0	0.00	0.00	81.39	81.39
2/15/2011	91.7	20.1	24.6	24.1	78.4	83.7	81.2	130.6	130.1	130.4	130.8	130.1	130.0	OL	OL	OL	5166	1718	2778	4791	4790	4791	4827	4828	4827	100.0	0.00	0.00	81.27	81.27
2/16/2011	91.5	20.2	24.7	24.1	77.7	85.1	81.2	130.5	130.1	130.4	130.6	130.1	130.0	OL	OL	OL	5190	1742	2802	4815	4814	4815	4827	4828	4827	100.0	0.00	0.00	81.19	81.19
2/17/2011	92.0	19.8	24.7	24.1	79.1	86.5	82.6	132.6	132.2	132.5	132.6	132.2	132.0	OL	OL	OL	5214	1766	2826	4839	4838	4839	4827	4828	4827	100.0	0.00	0.00	82.60	82.60
2/18/2011	91.4	19.6	24.6	24.1	77.2	86.1	81.8	131.2	130.8	131.1	131.3	130.8	130.5	OL	OL	OL	5238	1790	2850	4863	4862	4863	4827	4828	4827	100.0	0.00	0.00	81.80	81.80
2/19/2011	NA	19.6	24.6	24.1	79.7	87.7	84.5	135.3	135.1	135.2	135.5	135.1	134.8	OL	OL	OL	5262	1814	2874	4887	4886	4887	4827	4828	4827	100.0	0.00	0.00	84.45	84.45
2/20/2011	NA	19.8	24.6	24.1	80.7	89.3	84.6	135.5	135.3	135.3	135.9	135.4	135.0	OL	OL	OL	5286	1838	2898	4911	4910	4911	4827	4828	4827	100.0	0.00	0.00	84.64	84.64
2/21/2011	NA	20.1	26.6	24.1	42.5	88.7	84.6	134.2	134.0	133.8	135.6	134.5	133.6	11.1	59.3	2.2	5302	1853	2913	4926	4926	4926	4827	4828	4828	100.0	0.00	0.00	54.09	54.09
2/22/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	5302	1853	2913	4926	4926	4926	4827	4828	4828	OL	0.00	0.00	0.00	0.00
2/23/2011	92.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	5302	1853	2913	4926	4926	4926	4827	4828	4828	OL	0.00	0.00	0.00	0.00
2/24/2011	92.5	OL	OL	OL	4.0	43.3	28.0	62.4	103.8	80.8	OL	OL	OL	104.9	36.1	109.9	5302	1854	2913	4926	4926	4926	4828	4828	4828	0.0	0.09	0.00	0.00	0.09
2/25/2011	92.8	19.2	29.4	24.1	6.2	83.4	79.7	123.8	124.5	124.1	101.8	84.0	120.0	140.7	123.6	173.9	5317	1869	2928	4927	4927	4927	4843	4843	4843	100.0	0.00	0.00	49.70	49.70
2/26/2011	NA	19.8	24.9	24.1	43.6	96.0	78.7	124.0	124.1	124.0	95.4	80.6	88.0	135.9	124.1	167.2	5341	1893	2952	4928	4928	4928	4867	4867	4867	100.0	0.00	0.00	78.70	78.70
2/27/2011	NA	19.3	24.7	24.1	74.3	84.4	79.7	127.6	127.4	127.3	OL	OL	OL	132.5	127.6	154.6	5365	1917	2976	4928	4928	4928	4891	4891	4891	100.0	0.00	0.00	79.67	79.67
2/28/2011	92.4	19.2	25.0	24.3	75.1	84.1	79.7	92.7	93.2	92.9	94.1	80.8	95.6	125.3	92.8	143.3	5389	1941	3000	4946	4946	4947	4915	4915	4915	100.0	0.00	0.00	79.63	79.63

Report Created: **Tuesday, March 01, 2011**

Total [ML]: **0.16 0.03 1851.10 1851.28**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
License Number: **PWS-09-412 R**

Reactor: **UVR-200A**
Report Period: **February 2011**

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
2/1/2011	93.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4720	4719	4720	4837	4837	4837	4626	4626	4625	OL	0.00	0.00	0.00	0.00	
2/2/2011	92.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4720	4719	4720	4837	4837	4837	4626	4626	4625	OL	0.00	0.00	0.00	0.00	
2/3/2011	92.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4720	4719	4720	4837	4837	4837	4626	4626	4625	OL	0.00	0.00	0.00	0.00	
2/4/2011	92.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4720	4719	4720	4837	4837	4837	4626	4626	4625	OL	0.00	0.00	0.00	0.00	
2/5/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4720	4719	4720	4837	4837	4837	4626	4626	4625	OL	0.00	0.00	0.00	0.00	
2/6/2011	NA	17.2	24.7	24.3	62.3	85.0	83.1	102.6	85.2	84.1	102.1	84.2	84.1	148.3	84.9	84.9	4735	4735	4735	4852	4853	4852	4642	4641	4641	99.6	0.00	0.23	53.19	53.42
2/7/2011	NA	0.0	25.1	24.3	2.0	94.3	82.5	108.7	83.8	83.7	105.3	84.5	83.8	149.6	83.8	83.8	4751	4751	4752	4868	4869	4868	4658	4657	4657	100.0	0.00	0.00	55.56	55.56
2/8/2011	92.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4751	4751	4752	4868	4869	4868	4658	4657	4657	OL	0.00	0.00	0.00	0.00	
2/9/2011	92.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4751	4751	4752	4868	4869	4868	4658	4657	4657	OL	0.00	0.00	0.00	0.00	
2/10/2011	92.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4751	4751	4752	4868	4869	4868	4658	4657	4657	OL	0.00	0.00	0.00	0.00	
2/11/2011	92.7	19.5	26.9	24.2	13.6	89.0	84.6	110.2	87.2	85.4	105.2	85.8	85.4	153.2	86.7	86.1	4762	4761	4762	4878	4879	4879	4668	4668	4667	100.0	0.00	0.00	36.64	36.64
2/12/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4762	4761	4762	4878	4879	4879	4668	4668	4667	OL	0.00	0.00	0.00	0.00	
2/13/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4762	4761	4762	4878	4879	4879	4668	4668	4667	OL	0.00	0.00	0.00	0.00	
2/14/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4762	4761	4762	4878	4879	4879	4668	4668	4667	OL	0.00	0.00	0.00	0.00	
2/15/2011	91.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4762	4761	4762	4878	4879	4879	4668	4668	4667	OL	0.00	0.00	0.00	0.00	
2/16/2011	91.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4762	4761	4762	4878	4879	4879	4668	4668	4667	OL	0.00	0.00	0.00	0.00	
2/17/2011	92.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4762	4761	4762	4878	4879	4879	4668	4668	4667	OL	0.00	0.00	0.00	0.00	
2/18/2011	91.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4762	4761	4762	4878	4879	4879	4668	4668	4667	OL	0.00	0.00	0.00	0.00	
2/19/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4762	4761	4762	4878	4879	4879	4668	4668	4667	OL	0.00	0.00	0.00	0.00	
2/20/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4762	4761	4762	4878	4879	4879	4668	4668	4667	OL	0.00	0.00	0.00	0.00	
2/21/2011	NA	18.6	24.7	24.3	37.5	94.6	84.8	97.8	85.9	85.6	100.5	86.5	85.9	142.4	85.7	86.0	4771	4770	4771	4887	4888	4887	4677	4677	4676	100.0	0.00	0.00	31.09	31.09
2/22/2011	NA	21.0	24.7	24.3	73.8	87.2	83.3	111.7	85.1	84.6	105.0	85.1	84.6	147.7	84.8	84.8	4795	4794	4795	4911	4912	4911	4701	4701	4700	100.0	0.00	0.00	83.25	83.25
2/23/2011	92.5	21.3	24.8	24.3	69.7	85.7	81.4	111.1	93.3	82.7	100.1	83.0	82.7	141.9	83.0	82.9	4819	4818	4819	4935	4936	4935	4725	4725	4724	100.0	0.00	0.00	81.37	81.37
2/24/2011	92.5	0.0	27.7	24.3	2.0	85.2	81.4	108.6	95.6	82.5	97.7	83.2	82.5	137.7	83.2	83.0	4842	4842	4842	4958	4959	4959	4748	4748	4748	100.0	0.00	0.00	79.05	79.05
2/25/2011	92.8	21.1	27.3	23.9	51.4	85.7	82.2	106.1	93.2	81.2	93.4	83.1	83.0	135.2	83.8	83.5	4851	4851	4851	4968	4968	4968	4757	4757	4757	100.0	0.00	0.00	31.02	31.02
2/26/2011	NA	0.0	20.8	15.8	2.4	83.4	71.5	102.2	113.5	64.2	108.4	87.4	37.4	124.9	85.5	76.3	4851	4851	4852	4968	4968	4968	4758	4757	4757	34.7	0.00	0.39	0.21	0.59
2/27/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4851	4851	4852	4968	4968	4968	4758	4757	4757	OL	0.00	0.00	0.00	0.00	
2/28/2011	92.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4851	4851	4852	4968	4968	4968	4758	4757	4757	OL	0.00	0.00	0.00	0.00	

Report Created: **Tuesday, March 01, 2011**

Total [ML]: **0.00 0.62 451.38 452.00**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: 252.00
License Number: PWS-09-412 R

Reactor: UVR-300A
Report Period: February 2011

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
2/1/2011	93.1	21.8	24.9	24.3	47.7	51.1	49.3	OL	OL	OL	134.5	99.9	80.0	105.9	79.8	91.2	3760	3760	3760	3769	3768	3768	3679	3679	3679	100.0	0.00	0.00	49.28	49.28
2/2/2011	92.7	21.8	25.0	24.3	47.2	50.9	49.1	OL	OL	OL	129.9	97.1	79.7	101.1	79.6	85.2	3760	3760	3760	3793	3792	3792	3703	3703	3703	100.0	0.00	0.00	49.12	49.12
2/3/2011	92.6	22.1	25.1	24.3	46.7	51.9	49.1	OL	OL	OL	126.1	93.4	79.6	95.6	79.4	80.5	3760	3760	3760	3817	3816	3816	3727	3727	3727	100.0	0.00	0.00	49.08	49.08
2/4/2011	92.9	21.6	29.2	24.4	18.0	70.2	49.2	52.8	54.6	88.3	122.4	91.8	75.5	93.4	75.3	79.0	3764	3764	3763	3841	3840	3840	3751	3751	3751	100.0	0.00	0.00	49.20	49.20
2/5/2011	NA	21.6	33.1	24.7	20.7	67.7	49.5	54.3	65.9	80.3	122.4	93.3	51.5	93.7	51.2	73.4	3788	3788	3787	3865	3864	3864	3775	3775	3775	100.0	0.00	0.00	49.46	49.46
2/6/2011	NA	21.4	25.5	24.7	46.1	51.5	49.0	69.3	100.1	74.7	118.5	91.9	51.0	91.5	50.8	70.7	3812	3812	3811	3889	3888	3888	3799	3799	3799	100.0	0.00	0.00	49.04	49.04
2/7/2011	NA	21.4	27.4	24.7	43.6	79.4	50.1	75.7	101.5	68.5	112.5	87.2	52.0	86.5	51.8	67.0	3836	3836	3835	3913	3912	3912	3823	3823	3823	100.0	0.00	0.00	50.09	50.09
2/8/2011	92.7	21.3	29.6	24.7	16.5	53.2	50.0	77.3	98.1	64.9	110.2	83.7	52.1	84.2	51.8	40.4	3851	3850	3850	3927	3927	3927	3838	3838	3838	100.0	0.00	0.00	30.99	30.99
2/9/2011	92.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3851	3850	3850	3927	3927	3927	3838	3838	3838	OL	0.00	0.00	0.00	0.00
2/10/2011	92.3	19.7	30.4	24.3	3.4	53.3	50.4	82.0	96.3	81.8	90.3	81.1	52.8	87.7	80.8	32.7	3860	3860	3860	3928	3927	3927	3848	3848	3847	100.0	0.00	0.00	19.97	19.97
2/11/2011	92.7	20.8	26.8	24.6	33.3	71.9	59.4	84.4	103.3	68.7	111.4	85.2	61.2	89.5	61.0	69.4	3884	3884	3884	3952	3951	3951	3872	3872	3871	100.0	0.00	0.00	59.43	59.43
2/12/2011	NA	21.4	27.8	24.6	5.0	55.4	52.6	86.4	103.3	69.5	112.6	85.0	54.7	88.5	54.4	52.9	3902	3902	3902	3970	3970	3969	3890	3890	3890	100.0	0.00	0.00	39.92	39.92
2/13/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3902	3902	3902	3970	3970	3969	3890	3890	3890	OL	0.00	0.00	0.00	0.00
2/14/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3902	3902	3902	3970	3970	3969	3890	3890	3890	OL	0.00	0.00	0.00	0.00
2/15/2011	91.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3902	3902	3902	3970	3970	3969	3890	3890	3890	OL	0.00	0.00	0.00	0.00
2/16/2011	91.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3902	3902	3902	3970	3970	3969	3890	3890	3890	OL	0.00	0.00	0.00	0.00
2/17/2011	92.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3902	3902	3902	3970	3970	3969	3890	3890	3890	OL	0.00	0.00	0.00	0.00
2/18/2011	91.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3902	3902	3902	3970	3970	3969	3890	3890	3890	OL	0.00	0.00	0.00	0.00
2/19/2011	NA	18.0	28.8	24.5	42.6	53.9	51.9	65.8	64.0	57.0	76.8	59.2	53.7	80.1	54.4	4.7	3904	3904	3904	3971	3971	3971	3891	3891	3891	99.7	0.00	0.01	3.23	3.24
2/20/2011	NA	21.3	25.6	24.6	49.4	60.0	52.5	78.6	87.3	61.2	105.5	77.4	54.4	83.9	54.1	63.4	3928	3928	3928	3995	3995	3995	3915	3915	3915	100.0	0.00	0.00	52.50	52.50
2/21/2011	NA	19.6	28.1	24.6	22.5	56.1	52.8	80.6	93.7	60.7	106.6	80.8	54.7	82.8	54.4	61.3	3952	3952	3952	4019	4019	4019	3939	3939	3939	100.0	0.00	0.00	52.80	52.80
2/22/2011	NA	21.5	25.4	24.7	43.5	55.0	49.9	79.2	94.0	57.2	102.6	77.9	51.7	78.8	51.6	55.1	3976	3976	3976	4043	4043	4043	3963	3963	3963	100.0	0.00	0.00	49.92	49.92
2/23/2011	92.5	20.7	33.1	24.7	18.7	51.2	48.2	78.3	93.3	54.9	97.9	76.0	50.1	74.4	49.9	43.6	3996	3996	3996	4064	4064	4063	3984	3984	3984	100.0	0.00	0.00	41.25	41.25
2/24/2011	92.5	21.3	25.7	24.7	46.2	73.6	48.5	78.3	93.1	53.8	98.5	75.3	50.2	70.7	50.2	50.6	4020	4020	4020	4088	4088	4087	4008	4008	4008	100.0	0.00	0.00	48.54	48.54
2/25/2011	92.8	21.3	26.0	24.7	37.1	52.3	49.5	75.5	89.4	51.9	95.4	69.5	51.2	64.8	51.1	51.4	4044	4044	4044	4112	4112	4111	4032	4032	4032	100.0	0.00	0.00	49.54	49.54
2/26/2011	NA	21.2	28.0	24.6	40.5	67.0	49.7	70.1	83.4	51.6	91.0	64.5	51.3	57.7	51.2	51.5	4068	4068	4068	4136	4136	4135	4056	4056	4056	100.0	0.00	0.00	49.70	49.70
2/27/2011	NA	21.0	25.7	24.6	46.5	53.2	50.0	67.9	80.8	51.8	88.6	61.6	51.6	53.6	51.6	51.8	4092	4092	4092	4160	4160	4159	4080	4080	4080	100.0	0.00	0.00	50.01	50.01
2/28/2011	92.4	21.1	25.5	24.6	47.0	53.1	50.0	65.9	78.7	51.8	85.9	59.6	51.6	52.0	51.4	51.7	4116	4116	4116	4184	4184	4183	4104	4104	4104	100.0	0.00	0.00	50.01	50.01

Report Created: Tuesday, March 01, 2011

Total [ML]: 0.00 0.01 943.09 943.10

Water Volume [%]:

Untreated 0.0 %
Below Dose 0.0 %
To Dose 100.0 %

- Notes:
- UV Comparative Dose: 18.1 mJ/cm2
 - UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 - NR - No Result
 - NA - Not Analyzed
 - OL - Off Line

UV Monitoring Report – Monthly



Water System Code: 252.00
License Number: PWS-09-412 R

Reactor: UVR-500A
Report Period: February 2011

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
2/1/2011	93.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4016	461	4016	1049	713	2734	712	2752	712	OL	0.00	0.00	0.00	0.00	
2/2/2011	92.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4016	461	4016	1049	713	2734	712	2752	712	OL	0.00	0.00	0.00	0.00	
2/3/2011	92.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4016	461	4016	1049	713	2734	712	2752	712	OL	0.00	0.00	0.00	0.00	
2/4/2011	92.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4016	461	4016	1049	713	2734	712	2752	712	OL	0.00	0.00	0.00	0.00	
2/5/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4016	461	4016	1049	713	2734	712	2752	712	OL	0.00	0.00	0.00	0.00	
2/6/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4016	461	4016	1049	713	2734	712	2752	712	OL	0.00	0.00	0.00	0.00	
2/7/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4016	461	4016	1049	713	2734	712	2752	713	OL	0.00	0.00	0.00	0.00	
2/8/2011	92.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4016	461	4016	1049	713	2734	712	2752	713	OL	0.00	0.00	0.00	0.00	
2/9/2011	92.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4016	461	4016	1049	713	2734	712	2752	713	OL	0.00	0.00	0.00	0.00	
2/10/2011	92.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4016	461	4016	1049	713	2734	712	2752	713	OL	0.00	0.00	0.00	0.00	
2/11/2011	92.7	12.8	26.3	22.5	3.8	66.5	30.7	37.3	27.1	72.7	29.0	93.7	94.6	127.7	48.5	103.1	4016	461	4016	1049	713	2735	712	2752	713	76.4	0.00	0.07	0.21	0.28
2/12/2011	NA	21.9	28.8	24.2	28.1	69.0	65.6	142.7	107.3	150.4	OL	0.2	OL	227.1	109.8	197.1	4016	471	4016	1049	713	2735	722	2762	722	100.0	0.00	0.00	25.73	25.73
2/13/2011	NA	21.6	24.8	24.2	59.8	67.1	62.8	143.4	101.2	154.8	OL	OL	OL	236.1	101.8	199.3	34	495	33	1049	713	2735	746	2786	746	100.0	0.00	0.00	62.81	62.81
2/14/2011	NA	21.7	24.7	24.2	58.7	63.8	61.7	135.6	99.4	152.0	OL	OL	OL	234.2	99.9	190.5	58	519	57	1049	713	2735	770	2810	770	100.0	0.00	0.00	61.69	61.69
2/15/2011	91.7	21.6	24.8	24.2	59.0	63.3	61.5	125.6	99.4	148.3	OL	OL	OL	221.3	99.7	175.4	82	543	81	1049	713	2735	794	2834	794	100.0	0.00	0.00	61.55	61.55
2/16/2011	91.5	21.3	24.7	24.2	59.1	63.7	61.5	115.9	99.2	142.9	OL	OL	OL	214.0	99.4	164.1	106	567	105	1049	713	2735	818	2858	818	100.0	0.00	0.00	61.46	61.46
2/17/2011	92.0	21.3	24.8	24.2	59.8	65.0	62.6	105.7	100.9	136.4	OL	OL	OL	205.9	101.0	151.1	130	591	129	1049	713	2735	842	2882	842	100.0	0.00	0.00	62.58	62.58
2/18/2011	91.4	22.7	24.7	24.2	58.9	64.8	62.0	100.4	100.0	130.0	OL	OL	OL	199.4	100.1	141.7	154	615	153	1049	713	2735	866	2906	866	100.0	0.00	0.00	61.95	61.95
2/19/2011	NA	23.8	24.8	24.2	61.0	68.8	64.0	103.6	103.3	128.7	OL	OL	OL	199.0	103.5	137.8	178	639	177	1049	713	2735	890	2930	890	100.0	0.00	0.00	64.02	64.02
2/20/2011	NA	23.2	24.7	24.2	64.1	75.9	67.1	108.4	108.1	123.4	OL	OL	OL	191.4	108.3	129.8	202	663	201	1049	713	2735	914	2954	914	100.0	0.00	0.00	67.10	67.10
2/21/2011	NA	23.8	24.7	24.2	52.5	70.2	67.8	109.3	109.1	118.7	OL	OL	OL	185.5	109.1	124.0	226	687	225	1049	713	2735	938	2978	938	100.0	0.00	0.00	67.77	67.77
2/22/2011	NA	23.1	24.7	24.2	56.1	69.3	64.0	103.4	103.2	113.1	OL	OL	OL	176.9	103.1	113.7	250	711	249	1049	713	2735	962	3002	962	100.0	0.00	0.00	64.01	64.01
2/23/2011	92.5	22.0	24.7	24.2	50.6	65.4	61.5	99.3	99.2	107.9	OL	OL	OL	169.2	99.1	104.1	274	735	273	1049	713	2735	986	3026	986	100.0	0.00	0.00	61.51	61.51
2/24/2011	92.5	21.6	27.1	24.2	36.6	76.0	60.7	98.0	97.9	104.2	OL	OL	OL	164.7	97.7	99.7	298	759	297	1049	713	2735	1010	3050	1010	100.0	0.00	0.00	60.67	60.67
2/25/2011	92.8	23.6	24.7	24.2	53.3	65.2	62.5	100.8	100.7	101.9	OL	OL	OL	156.5	100.6	101.0	322	783	321	1049	713	2735	1034	3074	1034	100.0	0.00	0.00	62.51	62.51
2/26/2011	NA	5.4	24.7	24.1	27.6	64.9	62.8	100.9	100.6	102.1	19.1	11.7	52.1	146.2	100.5	100.6	338	799	337	1049	713	2735	1050	3090	1050	99.3	0.00	0.30	41.63	41.92
2/27/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	338	799	337	1049	713	2735	1050	3090	1050	OL	0.00	0.00	0.00	0.00
2/28/2011	92.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	338	799	337	1049	713	2735	1050	3090	1050	OL	0.00	0.00	0.00	0.00

Report Created: Tuesday, March 01, 2011

Total [ML]: 0.00 0.37 887.20 887.56

Water Volume [%]:

Untreated 0.0 %
Below Dose 0.0 %
To Dose 100.0 %

- Notes:
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
License Number: **PWS-09-412 R**

Reactor: **UVR-600A**
Report Period: **February 2011**

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
2/1/2011	93.1	19.5	26.3	24.6	61.3	64.6	63.0	167.6	95.9	130.2	115.3	90.7	101.0	64.5	65.5	115.2	2388	2450	2450	2832	2832	2831	640	2606	2606	100.0	0.00	0.00	62.99	62.99
2/2/2011	92.7	19.0	26.4	24.6	61.0	64.7	62.8	160.0	105.7	117.2	117.1	99.4	101.9	64.3	68.2	111.9	2412	2474	2474	2856	2856	2855	664	2630	2630	100.0	0.00	0.00	62.83	62.83
2/3/2011	92.6	19.1	26.4	24.5	60.9	65.2	62.8	156.3	108.9	120.5	115.6	95.0	97.5	64.3	65.4	103.9	2436	2498	2498	2880	2880	2879	688	2654	2654	100.0	0.00	0.00	62.81	62.81
2/4/2011	92.9	19.0	28.7	24.5	39.8	87.8	62.9	150.2	100.9	99.8	113.8	92.0	90.8	64.4	64.5	98.3	2460	2522	2522	2904	2904	2903	712	2678	2678	100.0	0.00	0.00	62.91	62.91
2/5/2011	NA	19.0	27.7	24.5	37.7	84.4	63.1	138.3	96.7	88.9	112.0	90.5	85.1	64.5	64.7	93.3	2484	2546	2546	2928	2928	2927	736	2702	2702	100.0	0.00	0.00	63.11	63.11
2/6/2011	NA	18.8	26.8	24.5	60.6	66.0	62.9	125.7	87.3	79.0	109.0	88.0	79.2	64.3	64.4	87.9	2508	2570	2570	2952	2952	2951	760	2726	2726	100.0	0.00	0.00	62.85	62.85
2/7/2011	NA	18.6	32.4	24.5	2.7	66.3	62.9	112.7	82.0	70.5	102.9	83.6	72.5	64.3	65.5	82.3	2531	2593	2593	2975	2974	2974	783	2749	2749	100.0	0.00	0.00	60.06	60.06
2/8/2011	92.7	19.1	25.9	24.5	56.5	66.6	63.0	107.6	76.7	65.2	100.7	81.6	69.6	64.5	64.5	77.6	2555	2617	2617	2999	2998	2998	807	2773	2773	100.0	0.00	0.00	63.00	63.00
2/9/2011	92.7	18.8	25.1	24.5	58.9	64.0	61.5	100.4	72.8	63.0	98.4	80.1	65.8	63.0	63.0	74.0	2579	2641	2641	3023	3022	3022	831	2797	2797	100.0	0.00	0.00	61.50	61.50
2/10/2011	92.3	18.5	25.0	24.2	59.4	67.1	62.8	94.8	68.9	64.2	97.0	79.2	64.4	63.2	64.3	70.5	2603	2665	2665	3047	3046	3046	855	2821	2821	100.0	0.00	0.00	62.78	62.78
2/11/2011	92.7	0.0	26.3	24.2	2.5	68.2	62.6	109.6	83.7	84.4	106.1	87.4	77.1	63.4	66.0	86.6	2617	2679	2678	3060	3060	3060	869	2835	2835	100.0	0.00	0.00	35.99	36.00
2/12/2011	NA	18.8	26.5	24.5	46.5	69.2	67.2	182.7	121.9	151.6	131.1	110.4	127.9	68.5	72.2	132.3	2631	2693	2693	3075	3075	3075	884	2849	2849	100.0	0.00	0.00	40.91	40.91
2/13/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2631	2693	2693	3075	3075	3075	884	2849	2849	OL	0.00	0.00	0.00	0.00
2/14/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2631	2693	2693	3075	3075	3075	884	2849	2849	OL	0.00	0.00	0.00	0.00
2/15/2011	91.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2631	2693	2693	3075	3075	3075	884	2849	2849	OL	0.00	0.00	0.00	0.00
2/16/2011	91.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2631	2693	2693	3075	3075	3075	884	2849	2849	OL	0.00	0.00	0.00	0.00
2/17/2011	92.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2631	2693	2693	3075	3075	3075	884	2849	2849	OL	0.00	0.00	0.00	0.00
2/18/2011	91.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2631	2693	2693	3075	3075	3075	884	2849	2849	OL	0.00	0.00	0.00	0.00
2/19/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2631	2693	2693	3075	3075	3075	884	2849	2849	OL	0.00	0.00	0.00	0.00
2/20/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2631	2693	2693	3075	3075	3075	884	2849	2849	OL	0.00	0.00	0.00	0.00
2/21/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2631	2693	2693	3075	3075	3075	884	2849	2849	OL	0.00	0.00	0.00	0.00
2/22/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2631	2693	2693	3075	3075	3075	884	2849	2849	OL	0.00	0.00	0.00	0.00
2/23/2011	92.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2631	2693	2693	3075	3075	3075	884	2849	2849	OL	0.00	0.00	0.00	0.00
2/24/2011	92.5	17.8	26.7	23.7	62.5	78.3	75.2	112.2	94.5	124.7	106.0	83.4	89.2	69.1	78.1	114.3	2632	2694	2694	3076	3075	3075	884	2850	2850	98.3	0.00	0.04	2.10	2.14
2/25/2011	92.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2632	2694	2694	3076	3075	3075	884	2850	2850	OL	0.00	0.00	0.00	0.00
2/26/2011	NA	19.0	26.5	24.5	36.2	64.9	62.0	135.6	94.9	129.6	124.7	92.9	111.2	63.6	65.0	126.2	2640	2702	2702	3083	3083	3083	892	2858	2858	100.0	0.00	0.00	19.92	19.92
2/27/2011	NA	19.0	26.9	24.6	59.9	66.7	63.5	151.9	107.4	121.7	133.1	107.2	118.1	64.9	69.8	123.9	2664	2726	2726	3107	3107	3107	916	2882	2882	100.0	0.00	0.00	63.46	63.46
2/28/2011	92.4	19.2	26.7	24.6	60.6	66.3	63.3	142.1	103.3	117.7	127.9	106.4	112.0	64.8	68.5	115.4	2688	2750	2750	3131	3131	3131	940	2906	2906	100.0	0.00	0.00	63.32	63.32

Report Created: **Tuesday, March 01, 2011**

Total [ML]: **0.00 0.04 850.54 850.58**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: 252.00
Licence Number: PWS-09-412 RR

Report Period: March 2011

Date	UVR-D100A				UVR-D200A				UVR-D300A				UVR-D400A				UVR-D500A				UVR-D600A				Total				% Volume Treated To Dose		
	Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]						
	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total		Untreated	Below
3/1/2011	0.00	0.00	79.37	79.37	0.00	0.00	0.00	0.00	0.00	0.00	45.67	45.67	0.00	0.00	4.28	4.28	0.00	0.00	9.20	9.20	0.00	0.00	53.44	53.44	0.00	0.00	191.97	191.97	100.0		
3/2/2011	0.00	0.00	79.16	79.16	0.00	0.00	0.00	0.00	0.00	0.00	49.77	49.77	0.00	0.00	0.00	0.00	0.00	0.00	62.48	62.48	0.00	0.00	0.00	0.00	0.00	0.00	191.41	191.41	100.0		
3/3/2011	0.00	0.00	75.15	75.15	0.00	0.00	0.00	0.00	0.00	0.00	47.06	47.06	0.00	0.00	0.00	0.00	0.00	0.00	58.96	58.96	0.00	0.00	0.00	0.00	0.00	0.00	181.17	181.17	100.0		
3/4/2011	0.00	0.00	74.10	74.10	0.00	0.02	0.44	0.46	0.00	0.00	51.97	51.97	0.00	0.00	0.00	0.00	0.00	0.00	44.20	44.20	0.00	0.00	0.00	0.00	0.00	0.02	170.71	170.74	100.0		
3/5/2011	0.00	0.00	82.23	82.23	0.00	0.00	0.00	0.00	0.00	0.00	51.53	51.53	0.00	0.00	0.00	0.00	0.00	0.00	64.78	64.78	0.00	0.00	0.00	0.00	0.00	0.00	198.53	198.53	100.0		
3/6/2011	0.00	0.00	81.53	81.53	0.00	0.00	0.00	0.00	0.00	0.00	53.61	53.61	0.00	0.00	0.00	0.00	0.00	0.00	67.08	67.08	0.00	0.00	0.00	0.00	0.00	0.00	202.22	202.22	100.0		
3/7/2011	0.00	0.00	77.24	77.24	0.00	0.00	0.00	0.00	0.00	0.00	54.60	54.60	0.00	0.00	0.00	0.00	0.00	0.00	66.94	66.94	0.00	0.00	0.00	0.00	0.00	0.00	198.78	198.78	100.0		
3/8/2011	0.00	0.00	73.72	73.72	0.00	0.00	3.57	3.57	0.00	0.00	50.46	50.46	0.00	0.00	0.00	0.00	0.00	0.00	68.24	68.24	0.00	0.00	0.00	0.00	0.00	0.00	195.98	195.98	100.0		
3/9/2011	0.00	0.00	0.49	0.50	0.00	0.00	75.77	75.77	0.00	0.00	45.75	45.75	0.00	0.00	0.00	0.00	0.00	0.00	70.81	70.81	0.00	0.00	0.00	0.00	0.00	0.00	192.83	192.83	100.0		
3/10/2011	0.00	0.00	70.61	70.61	0.00	0.00	0.00	0.00	0.00	0.00	47.16	47.16	0.00	0.00	0.00	0.00	0.00	0.00	70.31	70.31	0.00	0.00	0.00	0.00	0.00	0.00	188.07	188.07	100.0		
3/11/2011	0.00	0.00	69.69	69.69	0.00	0.00	0.00	0.00	0.00	0.00	46.67	46.67	0.00	0.00	0.00	0.00	0.00	0.00	69.70	69.70	0.00	0.00	0.00	0.00	0.00	0.00	186.06	186.06	100.0		
3/12/2011	0.00	0.00	70.43	70.43	0.00	0.00	0.00	0.00	0.00	0.00	47.15	47.15	0.00	0.00	0.00	0.00	0.00	0.00	70.61	70.61	0.00	0.00	0.00	0.00	0.00	0.00	188.19	188.19	100.0		
3/13/2011	0.00	0.00	71.18	71.18	0.00	0.00	0.00	0.00	0.00	0.00	48.18	48.18	0.00	0.00	0.00	0.00	0.00	0.00	72.64	72.64	0.00	0.00	0.00	0.00	0.00	0.00	192.01	192.01	100.0		
3/14/2011	0.00	0.00	71.96	71.96	0.00	0.00	0.00	0.00	0.00	0.00	48.63	48.63	0.00	0.00	0.00	0.00	0.00	0.00	74.02	74.02	0.00	0.00	0.00	0.00	0.00	0.00	194.62	194.62	100.0		
3/15/2011	0.00	0.00	76.50	76.50	0.00	0.00	0.00	0.00	0.00	0.00	51.01	51.01	0.00	0.00	0.00	0.00	0.00	0.00	78.34	78.34	0.00	0.00	0.00	0.00	0.00	0.00	205.85	205.85	100.0		
3/16/2011	0.00	0.00	70.06	70.06	0.00	0.00	0.00	0.00	0.00	0.00	46.43	46.43	0.00	0.00	0.00	0.00	0.00	0.00	70.20	70.20	0.00	0.00	0.00	0.00	0.00	0.00	186.69	186.69	100.0		
3/17/2011	0.00	0.00	74.07	74.07	0.00	0.00	0.00	0.00	0.00	0.00	49.66	49.66	0.00	0.00	0.00	0.00	0.00	0.00	76.61	76.61	0.00	0.00	0.00	0.00	0.00	0.00	200.35	200.35	100.0		
3/18/2011	0.00	0.00	54.59	54.59	0.00	0.00	68.04	68.04	0.00	0.08	3.37	3.45	0.00	0.00	0.00	0.00	0.00	0.00	78.08	78.08	0.00	0.00	0.00	0.00	0.00	0.08	204.08	204.16	100.0		
3/19/2011	0.00	0.00	54.46	54.46	0.00	0.00	73.97	73.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	78.60	78.78	0.00	0.23	0.71	0.95	0.01	0.41	207.74	208.17	99.8		
3/20/2011	0.00	0.00	56.04	56.04	0.00	0.00	73.36	73.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.92	79.92	0.00	0.00	0.00	0.00	0.00	0.00	209.31	209.31	100.0		
3/21/2011	0.00	0.00	49.98	49.98	0.00	0.00	78.15	78.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.23	72.23	0.00	0.00	0.00	0.00	0.00	0.00	200.35	200.35	100.0		
3/22/2011	0.00	0.00	15.44	15.44	0.00	0.00	81.35	81.35	0.00	0.00	0.01	0.01	0.00	0.00	32.63	32.63	0.00	0.00	61.21	61.21	0.00	0.00	0.00	0.00	0.00	0.00	190.64	190.64	100.0		
3/23/2011	0.00	0.00	0.00	0.00	0.00	0.00	77.86	77.86	0.00	0.00	0.00	0.00	0.00	0.00	48.09	48.09	0.00	0.00	36.41	36.41	0.00	0.00	20.24	20.24	0.00	0.00	182.60	182.60	100.0		
3/24/2011	0.00	0.00	0.00	0.00	0.00	0.00	77.20	77.20	0.00	0.00	0.00	0.00	0.00	0.00	49.41	49.41	0.00	0.00	0.00	0.00	0.00	0.00	57.10	57.10	0.00	0.00	183.71	183.71	100.0		
3/25/2011	0.00	0.00	0.00	0.00	0.00	0.00	83.40	83.40	0.00	0.00	0.00	0.00	0.00	0.00	52.99	52.99	0.00	0.00	0.00	0.00	0.00	0.01	63.67	63.68	0.00	0.01	200.05	200.07	100.0		
3/26/2011	0.00	0.00	0.00	0.00	0.00	0.00	83.53	83.53	0.00	0.00	0.00	0.00	0.00	0.00	52.92	52.92	0.00	0.00	0.00	0.00	0.00	0.04	63.48	63.53	0.00	0.04	199.92	199.97	100.0		
3/27/2011	0.00	0.00	0.00	0.00	0.00	0.00	82.90	82.90	0.00	0.00	0.00	0.00	0.00	0.00	52.70	52.70	0.00	0.00	0.00	0.00	0.00	0.00	62.88	62.88	0.00	0.00	198.49	198.49	100.0		
3/28/2011	0.00	0.00	0.00	0.00	0.00	0.00	82.67	82.67	0.00	0.00	0.00	0.00	0.00	0.00	52.66	52.66	0.00	0.00	0.00	0.00	0.00	0.00	62.73	62.73	0.00	0.00	198.06	198.06	100.0		
3/29/2011	0.00	0.00	0.00	0.00	0.00	0.00	82.97	82.97	0.00	0.00	13.73	13.73	0.00	0.00	38.38	38.38	0.00	0.00	0.00	0.00	0.00	0.00	63.62	63.62	0.00	0.00	198.71	198.71	100.0		
3/30/2011	0.00	0.00	14.80	14.80	0.00	0.74	6.96	7.70	0.00	0.00	56.26	56.26	0.01	0.00	39.45	39.46	0.00	0.18	13.62	13.81	0.00	0.12	70.38	70.50	0.01	1.04	201.48	202.54	99.5		
3/31/2011	0.00	0.00	72.39	72.39	0.00	0.00	0.00	0.00	0.00	0.00	50.49	50.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.35	62.35	0.00	0.00	185.23	185.23	100.0		

Total [ML]: 0.01 0.00 1515.21 1515.22 0.00 0.77 1032.13 1032.90 0.01 0.08 959.17 959.25 0.01 0.00 423.51 423.52 0.00 0.37 1515.19 1515.56 0.00 0.40 580.63 581.03 0.03 1.61 6025.83 6027.48

Report Created: Tuesday, April 05, 2011

Water Volume [%]:

Untreated 0.0%
Below Dose 0.0%
To Dose 100.0%

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV\2011\03-2011

Notes: 1 UV Comparative Dose: 18.1 mJ/cm2

Submitted By (Print): D.Sulymka

Original Signed By: D.Sulymka

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-100A**
Report Period: **March 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
3/1/2011	NA	18.7	25.0	24.3	76.0	83.0	79.4	80.9	81.1	80.9	92.7	81.0	95.7	118.9	80.8	133.4	5413	1965	3024	4970	4970	4971	4939	4939	4939	100.0	0.00	0.00	79.37	79.37
3/2/2011	92.1	18.3	25.0	24.3	68.6	83.3	79.1	80.6	80.8	80.6	89.9	80.8	87.8	114.4	80.5	124.8	5437	1989	3048	4994	4994	4995	4963	4963	4963	100.0	0.00	0.00	79.16	79.16
3/3/2011	93.1	19.0	25.2	24.4	66.5	83.3	75.2	76.7	76.9	76.8	87.3	76.9	80.6	111.3	76.7	116.3	5461	2013	3072	5018	5018	5019	4987	4987	4987	100.0	0.00	0.00	75.15	75.15
3/4/2011	91.8	18.4	42.1	24.4	26.7	88.6	74.5	76.1	76.6	76.3	86.1	76.3	78.4	107.5	76.0	107.8	5485	2036	3096	5042	5042	5042	5010	5011	5011	100.0	0.00	0.00	74.10	74.10
3/5/2011	NA	18.3	24.9	24.3	73.4	88.4	82.3	83.6	83.7	83.5	84.6	83.7	84.0	98.9	83.6	98.0	5509	2060	3120	5066	5066	5066	5034	5035	5035	100.0	0.00	0.00	82.23	82.23
3/6/2011	NA	18.9	25.1	24.3	76.5	88.5	81.6	82.9	83.0	82.8	83.4	83.0	83.3	94.1	82.9	90.5	5533	2084	3144	5090	5090	5090	5058	5059	5059	100.0	0.00	0.00	81.53	81.53
3/7/2011	NA	19.5	44.1	24.3	25.9	94.0	77.2	78.6	78.8	78.5	79.4	79.0	79.2	92.4	78.6	87.8	5557	2108	3168	5114	5114	5114	5082	5083	5083	100.0	0.00	0.00	77.24	77.24
3/8/2011	91.8	19.1	29.8	24.3	13.0	84.5	77.2	78.5	78.7	78.5	79.2	78.7	78.9	92.4	78.7	88.9	5580	2131	3191	5137	5137	5137	5105	5106	5106	100.0	0.00	0.00	73.72	73.72
3/9/2011	91.4	0.0	37.4	23.6	3.9	71.2	55.5	OL	OL	OL	140.0	109.4	103.6	138.4	88.6	133.2	5580	2131	3191	5137	5137	5137	5105	5106	5106	99.3	0.00	0.00	0.49	0.50
3/10/2011	92.4	20.2	24.4	24.2	68.8	72.9	70.6	OL	OL	OL	177.7	113.5	123.1	141.1	113.3	176.7	0	2131	3191	24	24	25	25	24	24	100.0	0.00	0.00	70.61	70.61
3/11/2011	90.5	21.1	24.6	24.2	67.5	71.6	69.7	OL	OL	OL	170.8	112.0	120.0	134.2	111.9	168.7	0	2131	3191	48	48	49	49	48	48	100.0	0.00	0.00	69.69	69.69
3/12/2011	NA	20.3	24.5	24.2	67.7	73.0	70.4	OL	OL	OL	157.0	113.0	115.1	123.6	113.1	153.7	0	2131	3191	72	72	73	73	72	72	100.0	0.00	0.00	70.43	70.43
3/13/2011	NA	20.3	24.5	24.2	68.8	72.9	71.2	OL	OL	OL	151.8	114.2	114.4	118.8	114.3	146.6	0	2131	3191	95	95	96	96	95	95	100.0	0.00	0.00	71.18	71.18
3/14/2011	NA	19.8	24.5	24.2	70.1	73.8	72.0	OL	OL	OL	142.4	115.5	115.7	115.9	115.6	136.0	0	2131	3191	119	119	120	120	119	119	100.0	0.00	0.00	71.96	71.96
3/15/2011	91.9	20.4	24.5	24.2	71.1	83.0	76.5	OL	OL	OL	139.1	122.6	122.7	123.0	122.5	130.4	0	2131	3191	143	143	144	144	143	143	100.0	0.00	0.00	76.50	76.50
3/16/2011	91.6	19.9	24.7	24.2	59.7	81.4	70.1	OL	OL	OL	128.4	112.5	112.8	113.0	112.7	118.2	0	2131	3191	167	167	168	168	167	167	100.0	0.00	0.00	70.06	70.06
3/17/2011	90.6	19.9	24.5	24.2	71.2	77.0	74.1	OL	OL	OL	120.9	118.8	118.9	119.3	118.9	119.0	0	2131	3191	191	191	192	192	191	191	100.0	0.00	0.00	74.07	74.07
3/18/2011	90.9	20.5	25.0	24.3	40.0	76.7	54.6	OL	OL	OL	116.0	88.3	88.7	91.6	88.5	98.2	0	2131	3191	215	215	216	216	215	215	100.0	0.00	0.00	54.59	54.59
3/19/2011	NA	20.1	33.1	24.3	23.1	59.2	54.5	OL	OL	OL	110.7	88.1	88.3	89.1	88.1	91.5	0	2131	3191	239	239	240	240	239	239	100.0	0.00	0.00	54.46	54.46
3/20/2011	NA	20.4	24.7	24.2	53.3	58.5	56.0	OL	OL	OL	107.7	90.5	90.6	91.0	90.6	90.7	0	2131	3191	263	263	264	264	263	263	100.0	0.00	0.00	56.04	56.04
3/21/2011	NA	20.0	26.1	24.3	34.2	57.4	49.9	OL	OL	OL	107.0	81.0	81.3	85.7	81.0	84.7	0	2131	3191	287	287	288	288	287	287	100.0	0.00	0.00	49.98	49.98
3/22/2011	91.9	0.0	29.5	24.3	3.0	47.7	43.9	OL	OL	OL	107.0	71.3	71.6	82.3	71.3	79.7	0	2131	3191	296	296	296	296	296	295	100.0	0.00	0.00	15.44	15.44
3/23/2011	92.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	0	2131	3191	296	296	296	296	296	295	OL	0.00	0.00	0.00	0.00
3/24/2011	92.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	0	2131	3191	296	296	296	296	296	295	OL	0.00	0.00	0.00	0.00
3/25/2011	92.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	0	2131	3191	296	296	296	296	296	295	OL	0.00	0.00	0.00	0.00
3/26/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	0	2131	3191	296	296	296	296	296	295	OL	0.00	0.00	0.00	0.00
3/27/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	0	2131	3191	296	296	296	296	296	295	OL	0.00	0.00	0.00	0.00
3/28/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	0	2131	3191	296	296	296	296	296	295	OL	0.00	0.00	0.00	0.00
3/29/2011	91.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	0	2131	3191	296	296	296	296	296	295	OL	0.00	0.00	0.00	0.00
3/30/2011	91.3	0.0	25.9	24.0	2.2	88.3	79.5	OL	OL	OL	122.4	120.6	120.2	123.3	121.6	123.8	0	2131	3191	296	296	296	296	296	295	100.0	0.00	0.00	14.80	14.80
3/31/2011	90.2	19.9	24.7	24.2	60.6	87.2	72.4	OL	OL	OL	116.5	116.1	116.0	116.4	116.3	116.4	0	2131	3191	296	296	296	296	296	295	100.0	0.00	0.00	72.39	72.39

Report Created: **Tuesday, April 05, 2011**

Total [ML]: **0.01 0.00 1515.21 1515.22**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-300A**
Report Period: **March 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
3/1/2011	NA	21.2	41.6	23.6	4.7	52.7	49.8	67.8	80.9	55.9	84.5	57.2	51.4	57.5	51.2	51.8	4138	4138	4138	4204	4204	4204	4126	4126	4126	100.0	0.00	0.00	45.67	45.67
3/2/2011	92.1	23.7	28.6	24.6	43.5	53.0	49.8	113.9	127.2	102.7	OL	0.1	OL	116.8	81.8	111.3	4162	4162	4162	4204	4204	4204	4150	4150	4150	100.0	0.00	0.00	49.77	49.77
3/3/2011	93.1	23.7	31.1	24.4	40.6	52.4	47.1	113.2	128.0	100.5	OL	OL	OL	112.6	76.6	103.0	4186	4186	4186	4204	4204	4204	4174	4174	4174	100.0	0.00	0.00	47.06	47.06
3/4/2011	91.8	21.9	29.0	24.3	36.3	78.0	52.0	111.5	123.6	102.8	OL	OL	OL	109.4	84.1	102.1	4210	4210	4210	4204	4204	4204	4198	4198	4198	100.0	0.00	0.00	51.97	51.97
3/5/2011	NA	22.0	25.1	24.3	47.2	54.8	51.5	99.5	113.3	90.3	OL	OL	OL	97.7	83.4	90.4	4234	4234	4234	4204	4204	4204	4222	4222	4222	100.0	0.00	0.00	51.53	51.53
3/6/2011	NA	21.5	25.0	24.3	48.8	58.6	53.6	93.4	106.2	87.4	OL	OL	OL	90.1	86.5	87.1	4258	4258	4258	4204	4204	4204	4246	4246	4246	100.0	0.00	0.00	53.61	53.61
3/7/2011	NA	21.7	32.4	24.3	18.9	82.5	54.6	91.1	103.0	88.5	OL	OL	OL	88.7	88.2	88.3	4282	4282	4282	4204	4204	4204	4270	4270	4270	100.0	0.00	0.00	54.60	54.60
3/8/2011	91.8	21.9	25.4	24.3	35.1	62.0	50.4	89.8	102.6	82.0	OL	OL	OL	83.3	81.6	81.8	4306	4306	4306	4204	4204	4204	4294	4294	4294	100.0	0.00	0.00	50.46	50.46
3/9/2011	91.4	21.8	25.7	24.3	32.4	49.2	45.7	87.5	100.0	76.4	OL	OL	OL	79.0	74.3	75.7	4330	4330	4330	4204	4204	4204	4318	4318	4318	100.0	0.00	0.00	45.75	45.75
3/10/2011	92.4	22.7	25.8	24.4	43.3	50.1	47.2	96.8	111.2	83.9	OL	OL	OL	83.8	76.5	78.9	4354	4354	4354	4204	4204	4204	4342	4342	4342	100.0	0.00	0.00	47.16	47.16
3/11/2011	90.5	22.4	25.3	24.4	43.7	49.8	46.7	93.1	106.6	79.4	OL	OL	OL	77.4	75.8	75.8	4378	4378	4378	4204	4204	4204	4366	4366	4366	100.0	0.00	0.00	46.67	46.67
3/12/2011	NA	21.9	25.1	24.3	43.6	50.7	47.2	85.9	98.6	76.9	OL	OL	OL	76.6	76.4	76.6	4402	4402	4402	4204	4204	4204	4390	4390	4390	100.0	0.00	0.00	47.15	47.15
3/13/2011	NA	21.5	25.2	24.3	45.2	50.5	48.1	83.3	95.0	78.1	OL	OL	OL	78.0	77.8	78.0	4425	4425	4425	4204	4204	4204	4413	4413	4413	100.0	0.00	0.00	48.18	48.18
3/14/2011	NA	21.4	25.0	24.3	45.8	51.0	48.7	79.7	88.7	79.0	OL	OL	OL	78.9	78.7	78.8	4449	4449	4449	4204	4204	4204	4437	4437	4437	100.0	0.00	0.00	48.63	48.63
3/15/2011	91.9	21.1	25.1	24.3	47.8	55.2	51.0	82.7	87.4	82.7	OL	OL	OL	82.6	82.4	82.5	4473	4473	4473	4204	4204	4204	4461	4461	4461	100.0	0.00	0.00	51.01	51.01
3/16/2011	91.6	21.6	25.4	24.3	36.8	54.8	46.5	76.3	82.2	75.4	OL	OL	OL	75.4	75.2	75.3	4497	4497	4497	4204	4204	4204	4485	4485	4485	100.0	0.00	0.00	46.43	46.43
3/17/2011	90.6	21.5	25.1	24.3	46.9	52.4	49.7	80.6	80.5	80.5	OL	OL	OL	80.5	80.3	80.3	4521	4521	4521	4204	4204	4204	4509	4509	4509	100.0	0.00	0.00	49.66	49.66
3/18/2011	90.9	16.2	27.7	24.1	17.1	53.0	48.2	78.2	79.5	76.5	25.8	49.1	29.9	76.5	76.5	5.7	4523	4523	4523	4204	4204	4204	4511	4511	4511	97.8	0.00	0.08	3.37	3.45
3/19/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4523	4523	4523	4204	4204	4204	4511	4511	4511	OL	0.00	0.00	0.00	0.00
3/20/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4523	4523	4523	4204	4204	4204	4511	4511	4511	OL	0.00	0.00	0.00	0.00
3/21/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4523	4523	4523	4204	4204	4204	4511	4511	4511	OL	0.00	0.00	0.00	0.00
3/22/2011	91.9	40.0	40.0	40.0	14.4	14.4	14.4	OL	OL	OL	104.3	91.7	91.3	101.7	86.9	1.0	4523	4523	4523	4204	4204	4204	4511	4511	4511	100.0	0.00	0.00	0.01	0.01
3/23/2011	92.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4523	4523	4523	4204	4204	4204	4511	4511	4511	OL	0.00	0.00	0.00	0.00
3/24/2011	92.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4523	4523	4523	4204	4204	4204	4511	4511	4511	OL	0.00	0.00	0.00	0.00
3/25/2011	92.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4523	4523	4523	4204	4204	4204	4511	4511	4511	OL	0.00	0.00	0.00	0.00
3/26/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4523	4523	4523	4204	4204	4204	4511	4511	4511	OL	0.00	0.00	0.00	0.00
3/27/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4523	4523	4523	4204	4204	4204	4511	4511	4511	OL	0.00	0.00	0.00	0.00
3/28/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4523	4523	4523	4204	4204	4204	4511	4511	4511	OL	0.00	0.00	0.00	0.00
3/29/2011	91.5	21.8	42.3	24.4	3.5	52.0	50.6	OL	OL	OL	139.0	95.5	83.7	125.4	82.3	37.4	4523	4523	4523	4204	4204	4204	4511	4511	4511	100.0	0.00	0.00	13.73	13.73
3/30/2011	91.3	21.2	34.8	24.3	26.8	122.6	61.9	98.3	98.5	93.7	125.0	99.7	99.8	114.1	99.4	93.7	4523	4523	4523	4204	4204	4204	4511	4511	4511	100.0	0.00	0.00	56.26	56.26
3/31/2011	90.2	21.7	28.8	24.3	33.0	60.8	50.5	90.3	85.2	95.4	130.3	81.9	81.8	104.3	81.6	88.3	4523	4523	4523	4204	4204	4204	4511	4511	4511	100.0	0.00	0.00	50.49	50.49

Report Created: **Tuesday, April 05, 2011**

Total [ML]: **0.01 0.08 959.17 959.25**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-400A**
Report Period: **March 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
3/1/2011	NA	22.0	32.6	24.4	8.8	53.2	49.3	117.6	80.3	77.4	OL	OL	OL	111.0	105.3	141.3	1715	3225	3225	3254	3255	1745	2625	2625	2624	100.0	0.00	0.00	4.28	4.28
3/2/2011	92.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/3/2011	93.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/4/2011	91.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/5/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/6/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/7/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/8/2011	91.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/9/2011	91.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/10/2011	92.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/11/2011	90.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/12/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/13/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/14/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/15/2011	91.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/16/2011	91.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/17/2011	90.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/18/2011	90.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/19/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/20/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/21/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1715	3225	3225	3254	3255	1745	2625	2625	2624	OL	0.00	0.00	0.00	0.00
3/22/2011	91.9	19.7	26.9	24.4	39.6	53.0	50.2	69.1	68.8	68.9	59.6	67.1	51.7	93.2	93.6	135.6	1731	3241	3241	3261	3261	1752	2641	2640	2640	100.0	0.00	0.00	32.63	32.63
3/23/2011	92.3	21.4	25.9	24.3	31.6	66.3	48.1	88.3	77.8	77.5	65.8	70.1	63.4	100.0	100.2	132.4	1755	3265	3265	3261	3261	1752	2665	2664	2664	100.0	0.00	0.00	48.09	48.09
3/24/2011	92.0	21.9	25.7	24.3	46.1	53.4	49.4	100.0	80.1	79.8	OL	OL	OL	96.9	96.2	125.7	1779	3289	3289	3261	3261	1752	2689	2688	2688	100.0	0.00	0.00	49.41	49.41
3/25/2011	92.2	23.1	34.4	24.3	50.7	55.3	53.0	104.2	85.2	85.0	60.9	70.0	59.4	98.1	97.9	126.4	1803	3313	3313	3261	3262	1753	2713	2712	2712	100.0	0.00	0.00	52.99	52.99
3/26/2011	NA	23.4	24.8	24.3	51.3	54.4	52.9	102.2	85.6	85.3	OL	OL	OL	96.3	95.1	122.1	1827	3337	3337	3261	3262	1753	2737	2736	2736	100.0	0.00	0.00	52.92	52.92
3/27/2011	NA	22.7	25.6	24.3	51.0	54.3	52.7	98.6	84.4	84.3	55.0	61.5	56.4	94.6	92.9	117.3	1851	3361	3361	3262	3262	1753	2761	2760	2760	100.0	0.00	0.00	52.70	52.70
3/28/2011	NA	23.0	29.0	24.3	49.7	54.5	52.7	101.2	81.8	81.7	54.2	57.2	54.5	96.1	93.5	117.7	1875	3385	3385	3264	3265	1756	2785	2784	2784	100.0	0.00	0.00	52.66	52.66
3/29/2011	91.5	22.4	31.6	24.6	11.2	54.5	52.6	93.6	54.4	54.3	64.7	67.4	59.6	92.3	89.4	107.7	1899	3409	3409	3266	3268	1759	2809	2808	2808	100.0	0.00	0.00	38.38	38.38
3/30/2011	91.3	21.6	31.9	24.3	17.9	86.1	62.7	OL	OL	OL	100.7	100.4	100.2	101.1	100.9	106.5	1923	3433	3433	3268	3271	1762	2833	2832	2832	100.0	0.01	0.00	39.45	39.46
3/31/2011	90.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1947	3457	3457	3270	3274	1765	2857	2856	2856	OL	0.00	0.00	0.00	0.00

Report Created: **Tuesday, April 05, 2011**

Total [ML]: **0.01 0.00 423.51 423.52**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-500A**
Report Period: **March 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
3/1/2011	NA	23.6	48.5	24.7	14.1	64.3	61.7	140.9	103.5	166.8	154.1	120.8	154.4	0.6	0.6	OL	341	802	341	1053	717	2738	1050	3090	1050	100.0	0.00	0.00	9.20	9.20
3/2/2011	92.1	22.4	34.5	24.5	55.5	65.4	62.5	151.1	100.7	164.9	158.0	118.6	160.7	169.1	117.4	152.1	365	826	365	1077	741	2762	1051	3090	1051	100.0	0.00	0.00	62.48	62.48
3/3/2011	93.1	21.7	34.6	24.6	51.5	64.5	59.0	149.7	95.8	161.7	155.9	121.9	160.0	159.4	120.3	110.0	389	850	389	1101	765	2786	1051	3091	1052	100.0	0.00	0.00	58.96	58.96
3/4/2011	91.8	21.9	49.8	24.7	6.4	60.3	56.7	141.7	92.5	157.6	151.0	120.0	164.0	159.5	117.9	107.9	408	869	408	1120	783	2805	1053	3092	1053	100.0	0.00	0.00	44.20	44.20
3/5/2011	NA	21.5	25.0	24.2	58.4	68.9	64.8	130.3	104.5	144.7	139.3	109.0	126.6	OL	OL	OL	432	893	432	1144	807	2829	1053	3092	1053	100.0	0.00	0.00	64.78	64.78
3/6/2011	NA	21.8	24.7	24.2	61.3	72.5	67.1	123.1	108.2	135.7	129.2	108.5	118.8	OL	OL	OL	456	917	456	1168	831	2853	1053	3092	1053	100.0	0.00	0.00	67.08	67.08
3/7/2011	NA	21.8	30.7	24.2	31.1	95.7	67.0	118.2	107.2	129.9	123.5	107.9	115.0	118.6	76.9	72.5	480	941	480	1192	855	2877	1053	3093	1054	100.0	0.00	0.00	66.94	66.94
3/8/2011	91.8	21.4	24.7	24.2	59.4	77.2	68.2	120.1	110.0	126.0	124.2	110.3	116.5	OL	OL	OL	504	965	504	1216	879	2901	1053	3093	1054	100.0	0.00	0.00	68.24	68.24
3/9/2011	91.4	21.2	24.6	24.2	58.3	75.0	70.8	118.0	113.9	120.7	116.9	114.2	116.1	OL	OL	OL	528	989	528	1240	903	2925	1053	3093	1054	100.0	0.00	0.00	70.81	70.81
3/10/2011	92.4	21.4	24.7	24.2	66.4	73.0	70.3	128.0	113.2	131.3	133.5	113.3	119.8	OL	OL	OL	552	1013	552	1264	927	2949	1053	3093	1054	100.0	0.00	0.00	70.31	70.31
3/11/2011	90.5	21.9	24.7	24.2	66.0	72.3	69.7	121.2	112.2	123.8	121.6	112.3	113.3	OL	OL	OL	576	1037	576	1288	951	2973	1053	3093	1054	100.0	0.00	0.00	69.70	69.70
3/12/2011	NA	21.3	24.7	24.2	66.4	75.2	70.6	115.5	113.6	116.8	116.3	113.7	114.6	OL	OL	OL	600	1061	600	1312	975	2997	1053	3093	1054	100.0	0.00	0.00	70.61	70.61
3/13/2011	NA	20.9	24.6	24.2	68.5	75.3	72.6	117.0	116.8	117.1	117.0	116.9	117.1	OL	OL	OL	623	1084	623	1335	998	3020	1053	3093	1054	100.0	0.00	0.00	72.64	72.64
3/14/2011	NA	21.3	24.6	24.2	71.1	77.2	74.0	119.3	118.9	119.5	119.1	119.0	119.1	OL	OL	OL	647	1108	647	1359	1022	3044	1053	3093	1054	100.0	0.00	0.00	74.02	74.02
3/15/2011	91.9	21.5	24.6	24.2	72.4	82.8	78.3	126.2	125.8	126.4	125.8	125.9	125.8	OL	OL	OL	671	1132	671	1383	1046	3068	1053	3093	1054	100.0	0.00	0.00	78.34	78.34
3/16/2011	91.6	21.5	24.8	24.2	59.4	83.0	70.2	113.0	112.8	113.1	113.2	113.0	113.0	OL	OL	OL	695	1156	695	1407	1070	3092	1053	3093	1054	100.0	0.00	0.00	70.20	70.20
3/17/2011	90.6	21.1	24.6	24.2	74.0	79.5	76.6	123.1	122.8	123.2	123.0	123.1	122.9	OL	OL	OL	719	1180	719	1431	1094	3116	1053	3093	1054	100.0	0.00	0.00	76.61	76.61
3/18/2011	90.9	21.4	24.6	24.2	65.0	80.7	78.1	125.4	125.1	125.4	125.3	125.3	125.1	OL	OL	OL	743	1204	743	1455	1118	3140	1053	3093	1054	100.0	0.00	0.00	78.08	78.08
3/19/2011	NA	5.1	24.8	24.2	19.4	82.1	79.6	106.6	105.6	106.6	106.0	106.0	105.8	111.5	81.3	80.7	767	1228	767	1478	1142	3164	1064	3104	1065	99.8	0.00	0.18	78.60	78.78
3/20/2011	NA	21.0	24.8	24.4	77.2	82.8	79.9	81.7	81.4	81.7	81.7	81.8	81.6	144.6	81.5	97.1	791	1252	791	1502	1166	3188	1088	3128	1089	100.0	0.00	0.00	79.92	79.92
3/21/2011	NA	20.9	24.9	24.4	51.0	81.5	72.2	75.3	73.9	74.1	74.1	74.2	73.9	151.1	73.9	113.5	815	1276	815	1526	1190	3212	1112	3152	1113	100.0	0.00	0.00	72.23	72.23
3/22/2011	91.9	21.1	25.4	24.5	52.0	66.4	61.2	69.4	63.0	63.3	63.9	63.4	63.0	149.9	63.0	118.2	839	1300	839	1550	1214	3236	1136	3176	1137	100.0	0.00	0.00	61.21	61.21
3/23/2011	92.3	21.4	30.2	24.6	19.1	61.7	56.9	64.0	58.7	59.0	58.9	59.0	58.6	139.8	58.7	107.0	854	1315	854	1566	1229	3251	1152	3192	1152	100.0	0.00	0.00	36.41	36.41
3/24/2011	92.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	854	1315	854	1566	1229	3251	1152	3192	1152	OL	0.00	0.00	0.00	0.00
3/25/2011	92.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	854	1315	854	1566	1229	3251	1152	3192	1152	OL	0.00	0.00	0.00	0.00
3/26/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	854	1315	854	1566	1229	3251	1152	3192	1152	OL	0.00	0.00	0.00	0.00
3/27/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	854	1315	854	1566	1229	3251	1152	3192	1152	OL	0.00	0.00	0.00	0.00
3/28/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	854	1315	854	1566	1229	3251	1152	3192	1152	OL	0.00	0.00	0.00	0.00
3/29/2011	91.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	854	1315	854	1566	1229	3251	1152	3192	1152	OL	0.00	0.00	0.00	0.00
3/30/2011	91.3	15.7	47.3	24.7	13.9	93.3	46.5	54.4	48.4	50.3	49.2	48.5	47.3	120.2	49.2	91.2	854	1315	854	1566	1229	3251	1152	3192	1152	98.7	0.00	0.18	13.62	13.81
3/31/2011	90.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	854	1315	854	1566	1229	3251	1152	3192	1152	OL	0.00	0.00	0.00	0.00

Report Created: **Tuesday, April 05, 2011**

Total [ML]: **0.00 0.37 1515.19 1515.56**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-600A**
Report Period: **March 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
3/1/2011	NA	19.3	27.0	24.5	43.0	65.4	62.7	133.2	93.8	112.8	122.4	101.5	108.4	64.1	65.7	109.1	2708	2770	2770	3152	3152	3151	961	2926	2926	100.0	0.00	0.00	53.44	53.44
3/2/2011	92.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2708	2770	2770	3152	3152	3151	961	2926	2926	OL	0.00	0.00	0.00	0.00
3/3/2011	93.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2708	2770	2770	3152	3152	3151	961	2926	2926	OL	0.00	0.00	0.00	0.00
3/4/2011	91.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2708	2770	2770	3152	3152	3151	961	2926	2926	OL	0.00	0.00	0.00	0.00
3/5/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2708	2770	2770	3152	3152	3151	961	2926	2926	OL	0.00	0.00	0.00	0.00
3/6/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2708	2770	2770	3152	3152	3151	961	2926	2926	OL	0.00	0.00	0.00	0.00
3/7/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2708	2770	2770	3152	3152	3151	961	2926	2926	OL	0.00	0.00	0.00	0.00
3/8/2011	91.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2708	2770	2770	3152	3152	3151	961	2926	2926	OL	0.00	0.00	0.00	0.00
3/9/2011	91.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2708	2770	2770	3152	3152	3151	961	2926	2926	OL	0.00	0.00	0.00	0.00
3/10/2011	92.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2708	2770	2770	3152	3152	3151	961	2926	2926	OL	0.00	0.00	0.00	0.00
3/11/2011	90.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2708	2770	2770	3152	3152	3151	961	2926	2926	OL	0.00	0.00	0.00	0.00
3/12/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2708	2770	2770	3152	3152	3151	961	2926	2926	OL	0.00	0.00	0.00	0.00
3/13/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2708	2770	2770	3152	3152	3151	961	2926	2926	OL	0.00	0.00	0.00	0.00
3/14/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2708	2770	2770	3152	3152	3151	961	2926	2926	OL	0.00	0.00	0.00	0.00
3/15/2011	91.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2708	2770	2770	3152	3152	3151	961	2926	2926	OL	0.00	0.00	0.00	0.00
3/16/2011	91.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2708	2770	2770	3152	3152	3151	961	2926	2926	OL	0.00	0.00	0.00	0.00
3/17/2011	90.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2708	2770	2770	3152	3152	3151	961	2926	2926	OL	0.00	0.00	0.00	0.00
3/18/2011	90.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2708	2770	2770	3152	3152	3151	961	2926	2926	OL	0.00	0.00	0.00	0.00
3/19/2011	NA	14.2	26.8	19.4	50.1	85.7	76.2	97.8	89.4	100.4	89.3	81.5	79.2	52.1	92.0	106.7	2709	2771	2770	3152	3152	3152	961	2927	2927	75.4	0.00	0.23	0.71	0.95
3/20/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2709	2771	2770	3152	3152	3152	961	2927	2927	OL	0.00	0.00	0.00	0.00
3/21/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2709	2771	2770	3152	3152	3152	961	2927	2927	OL	0.00	0.00	0.00	0.00
3/22/2011	91.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2709	2771	2770	3152	3152	3152	961	2927	2927	OL	0.00	0.00	0.00	0.00
3/23/2011	92.3	19.8	30.5	24.3	37.7	76.2	56.0	144.9	106.3	134.3	116.1	94.6	92.9	86.8	91.9	113.5	2717	2779	2779	3153	3153	3152	970	2935	2935	100.0	0.00	0.00	20.24	20.24
3/24/2011	92.0	19.3	26.8	24.6	51.6	63.3	57.1	126.8	80.1	102.0	106.4	89.1	88.8	58.6	76.2	98.5	2741	2803	2803	3177	3177	3176	994	2959	2959	100.0	0.00	0.00	57.10	57.10
3/25/2011	92.2	17.2	27.0	24.5	60.3	67.5	63.7	147.2	74.9	126.5	107.6	87.4	115.4	65.2	81.9	114.9	2765	2827	2827	3201	3201	3200	1018	2983	2983	100.0	0.00	0.01	63.67	63.68
3/26/2011	NA	17.5	25.2	24.5	61.0	65.4	63.5	155.4	84.2	123.9	121.3	98.6	125.6	65.0	85.5	108.3	2789	2851	2851	3225	3225	3224	1042	3007	3007	99.9	0.00	0.04	63.48	63.53
3/27/2011	NA	23.7	25.3	24.6	60.2	65.0	62.9	147.6	95.1	116.4	118.8	97.8	116.5	64.4	80.1	99.3	2813	2875	2875	3249	3249	3248	1066	3031	3031	100.0	0.00	0.00	62.88	62.88
3/28/2011	NA	24.0	25.2	24.6	56.9	64.9	62.7	147.8	98.1	114.0	119.5	99.2	115.8	64.2	77.1	98.0	2837	2899	2899	3273	3273	3272	1090	3055	3055	100.0	0.00	0.00	62.73	62.73
3/29/2011	91.5	24.0	25.2	24.5	57.6	67.3	63.6	136.0	90.9	101.0	110.6	92.6	103.7	65.1	68.4	85.6	2861	2923	2923	3297	3297	3296	1114	3079	3079	100.0	0.00	0.00	63.62	63.62
3/30/2011	91.3	16.9	48.0	23.2	13.2	95.1	79.3	128.2	110.3	112.4	116.6	110.7	113.1	70.6	82.8	86.3	2885	2947	2947	3321	3321	3320	1138	3103	3103	99.8	0.00	0.12	70.38	70.50
3/31/2011	90.2	19.2	25.1	24.2	45.2	75.3	62.4	117.2	100.3	100.3	101.8	100.2	100.0	OL	OL	OL	2909	2971	2971	3345	3345	3344	1162	3127	3127	100.0	0.00	0.00	62.35	62.35

Report Created: **Tuesday, April 05, 2011**

Total [ML]: **0.00 0.40 580.63 581.03**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: 252.00
Licence Number: PWS-09-412 RR

Report Period: April 2011

Date	UVR-D100A				UVR-D200A				UVR-D300A				UVR-D400A				UVR-D500A				UVR-D600A				Total				% Volume Treated To Dose		
	Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]						
	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total		Untreated	Below
4/1/2011	0.00	0.00	51.39	51.39	0.00	0.00	30.31	30.31	0.00	0.00	56.13	56.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70.66	70.66	0.00	0.00	208.48	208.48	100.0		
4/2/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.02	85.02	0.00	0.00	56.02	56.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.05	71.05	0.00	0.00	212.09	212.09	100.0		
4/3/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.03	85.03	0.00	0.00	55.70	55.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70.33	70.33	0.00	0.00	211.07	211.07	100.0		
4/4/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.03	85.03	0.00	0.00	56.36	56.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.05	71.05	0.00	0.00	212.44	212.44	100.0		
4/5/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.99	84.99	0.00	0.00	56.76	56.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.15	71.15	0.00	0.00	212.89	212.89	100.0		
4/6/2011	0.19	0.03	0.00	0.22	0.00	0.14	26.11	26.25	0.00	0.00	18.48	18.48	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.28	18.66	18.93	0.19	0.44	63.26	63.89	99.0		
4/7/2011	0.00	0.03	37.08	37.12	0.00	0.00	78.71	78.71	0.00	0.04	72.17	72.21	0.00	0.12	0.03	0.15	0.00	0.00	0.35	0.35	0.00	0.02	20.71	20.73	0.01	0.21	209.05	209.27	99.9		
4/8/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.03	85.03	0.00	0.00	63.91	63.91	0.00	0.00	0.00	0.00	0.00	0.00	37.20	37.20	0.00	0.00	26.54	26.54	0.00	0.00	212.67	212.67	100.0		
4/9/2011	0.00	0.01	2.13	2.14	0.00	0.00	82.90	82.90	0.00	0.00	58.32	58.32	0.00	0.00	0.00	0.00	0.00	0.00	73.18	73.18	0.00	0.00	0.00	0.00	0.00	0.01	216.54	216.55	100.0		
4/10/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.02	85.02	0.00	0.00	57.53	57.53	0.00	0.00	0.00	0.00	0.00	0.00	72.29	72.29	0.00	0.00	0.00	0.00	0.00	0.00	214.84	214.84	100.0		
4/11/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.99	84.99	0.00	0.00	34.07	34.07	0.00	0.00	22.16	22.16	0.00	0.00	68.73	68.73	0.00	0.00	0.00	0.00	0.00	0.00	209.94	209.94	100.0		
4/12/2011	0.00	0.44	0.00	0.44	0.00	0.00	80.32	80.32	0.00	0.00	2.83	2.83	0.00	0.00	57.45	57.45	0.00	0.00	43.74	43.74	0.00	0.00	24.28	24.28	0.00	0.44	208.62	209.06	99.8		
4/13/2011	0.00	0.00	26.77	26.78	0.00	0.00	51.46	51.46	0.00	0.00	0.00	0.00	0.00	0.00	49.69	49.69	0.00	0.00	0.00	0.00	0.00	0.00	58.41	58.41	0.00	0.00	186.33	186.34	100.0		
4/14/2011	0.00	0.00	38.13	38.13	0.00	0.00	40.29	40.29	0.00	0.00	0.00	0.00	0.00	0.00	50.17	50.17	0.00	0.00	0.00	0.00	0.00	0.02	59.46	59.48	0.00	0.02	188.06	188.08	100.0		
4/15/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.56	84.56	0.00	0.00	0.00	0.00	0.00	0.00	54.25	54.25	0.00	0.00	0.00	0.00	0.00	0.00	63.85	63.85	0.00	0.00	202.66	202.66	100.0		
4/16/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	0.00	0.00	0.00	0.00	55.20	55.20	0.00	0.00	0.00	0.00	0.00	0.00	64.84	64.84	0.00	0.00	205.05	205.05	100.0		
4/17/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.02	85.02	0.00	0.00	0.00	0.00	0.00	0.00	55.21	55.21	0.00	0.00	0.00	0.00	0.00	0.00	64.81	64.81	0.00	0.00	205.04	205.04	100.0		
4/18/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.93	84.93	0.00	0.00	0.00	0.00	0.00	0.00	53.86	53.86	0.00	0.00	0.00	0.00	0.00	0.00	63.29	63.29	0.00	0.00	202.09	202.09	100.0		
4/19/2011	0.00	0.02	44.00	44.01	0.00	0.22	38.73	38.95	0.00	0.00	27.07	27.07	0.00	0.02	24.18	24.20	0.00	0.00	0.00	0.00	0.00	0.12	63.41	63.53	0.00	0.37	197.40	197.76	99.8		
4/20/2011	0.00	0.00	82.01	82.01	0.00	0.00	0.30	0.30	0.00	0.00	42.49	42.49	0.00	0.00	8.59	8.60	0.00	0.00	0.00	0.00	0.00	0.00	64.66	64.66	0.00	0.00	198.05	198.05	100.0		
4/21/2011	0.00	3.30	68.93	72.23	0.00	0.00	5.59	5.59	0.00	0.00	15.78	15.78	0.00	0.00	44.71	44.71	0.00	0.78	0.16	0.94	0.00	0.02	59.37	59.39	0.00	4.10	194.55	198.65	97.9		
4/22/2011	0.00	0.00	79.91	79.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.20	53.20	0.00	0.00	3.64	3.65	0.00	0.00	59.66	59.66	0.00	0.00	196.42	196.42	100.0		
4/23/2011	0.00	0.00	77.03	77.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.90	49.90	0.00	0.00	58.67	58.67	0.00	0.00	0.00	0.00	0.00	0.00	185.60	185.60	100.0		
4/24/2011	0.00	0.00	72.18	72.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.67	47.67	0.00	0.00	56.06	56.06	0.00	0.00	0.00	0.00	0.00	0.00	175.91	175.91	100.0		
4/25/2011	0.00	0.00	67.82	67.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.02	43.02	0.00	0.00	64.19	64.19	0.00	0.00	0.00	0.00	0.00	0.00	175.03	175.03	100.0		
4/26/2011	0.00	0.00	62.63	62.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.90	50.90	0.00	0.00	61.53	61.53	0.00	0.00	0.00	0.00	0.00	0.00	175.05	175.05	100.0		
4/27/2011	0.00	0.00	63.45	63.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.89	66.89	0.00	0.00	66.58	66.58	0.00	0.00	0.00	0.00	0.00	0.00	196.92	196.92	100.0		
4/28/2011	0.00	0.00	66.64	66.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69.77	69.77	0.00	0.00	70.52	70.52	0.00	0.00	0.00	0.00	0.00	0.00	206.93	206.93	100.0		
4/29/2011	0.00	0.00	60.20	60.20	0.00	0.00	9.42	9.42	0.00	0.00	0.00	0.00	0.00	0.00	69.34	69.34	0.00	0.00	34.46	34.46	0.00	0.00	36.14	36.14	0.00	0.00	209.57	209.57	100.0		
4/30/2011	0.00	0.01	14.58	14.59	0.00	0.23	63.89	64.12	0.00	0.02	13.35	13.37	0.00	0.00	46.68	46.68	0.00	0.00	0.00	0.00	0.00	0.00	67.99	67.99	0.00	0.26	206.49	206.75	99.9		

Total [ML]: 0.21 3.83 914.90 918.94 0.00 0.58 1442.66 1443.24 0.00 0.06 686.96 687.02 0.01 0.13 972.88 973.02 0.00 0.78 711.31 712.10 0.00 0.46 1170.33 1170.79 0.22 5.84 5899.04 5905.11

Report Created: Monday, May 02, 2011

Water Volume [%]:

Untreated 0.0%
Below Dose 0.1%
To Dose 99.9%

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV\2011\04-2011

Notes: 1 UV Comparative Dose: 18.1 mj/cm2

Submitted By (Print): D.Sulymka

Original Signed By: D.Sulymka

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-100A**
Report Period: **April 2011**

Date	Transmittance			UV Dose			Reactor Flow			Average UV Lamp Intensity												UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%			mJ/cm2			MLD			W/m2												Hours										Water Volume [ML]			
	Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	Untreated	Below Dose	To Dose	Total							
4/1/2011	89.2	20.0	27.3	24.1	3.2	84.6	79.7	OL	OL	OL	128.0	127.5	127.5	127.3	127.3	0	2131	3191	340	340	340	340	340	340	340	100.0	0.00	0.00	51.39	51.39					
4/2/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	0	2131	3191	340	340	340	340	340	340	340	OL	0.00	0.00	0.00	0.00					
4/3/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	0	2131	3191	340	340	340	340	340	340	340	OL	0.00	0.00	0.00	0.00					
4/4/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	0	2131	3191	340	340	340	340	340	340	340	OL	0.00	0.00	0.00	0.00					
4/5/2011	92.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	0	2131	3191	340	340	340	340	340	340	340	OL	0.00	0.00	0.00	0.00					
4/6/2011	NA	0.0	16.3	2.6	2.3	85.5	52.2	8.5	17.6	100.9	108.9	78.0	82.5	98.6	70.2	86.6	0	2131	3191	340	340	340	340	340	340	0.0	0.19	0.03	0.00	0.22					
4/7/2011	91.4	0.0	58.7	24.5	1.4	92.1	57.0	58.4	59.0	90.1	88.5	60.7	61.3	71.9	59.9	63.6	15	2147	3207	356	356	356	356	356	356	99.9	0.00	0.03	37.08	37.12					
4/8/2011	92.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	15	2147	3207	356	356	356	356	356	356	OL	0.00	0.00	0.00	0.00					
4/9/2011	NA	17.1	37.6	21.6	16.6	91.5	83.5	68.2	83.3	100.9	93.4	85.6	82.7	87.6	84.2	85.8	16	2148	3208	357	356	357	357	357	356	99.4	0.00	0.01	2.13	2.14					
4/10/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	16	2148	3208	357	356	357	357	357	356	OL	0.00	0.00	0.00	0.00					
4/11/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	16	2148	3208	357	356	357	357	357	356	OL	0.00	0.00	0.00	0.00					
4/12/2011	93.0	6.2	19.7	7.9	4.2	89.2	74.6	16.8	71.6	123.7	79.9	66.6	59.9	71.2	75.8	77.5	16	2148	3208	357	357	357	357	357	356	0.2	0.00	0.44	0.00	0.44					
4/13/2011	92.1	0.0	65.6	24.2	2.5	78.4	74.3	194.6	118.6	147.3	156.3	119.1	119.2	131.3	118.2	149.9	16	2148	3208	365	365	366	366	366	365	100.0	0.00	0.00	26.77	26.78					
4/14/2011	93.8	20.3	30.2	24.2	16.8	84.7	75.8	OL	OL	OL	128.8	121.8	121.9	122.5	121.6	123.3	16	2148	3208	378	377	378	378	378	377	100.0	0.00	0.00	38.13	38.13					
4/15/2011	92.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	16	2148	3208	378	377	378	378	378	377	OL	0.00	0.00	0.00	0.00					
4/16/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	16	2148	3208	378	377	378	378	378	377	OL	0.00	0.00	0.00	0.00					
4/17/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	16	2148	3208	378	377	378	378	378	377	OL	0.00	0.00	0.00	0.00					
4/18/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	16	2148	3208	378	377	378	378	378	377	OL	0.00	0.00	0.00	0.00					
4/19/2011	92.2	15.2	30.5	24.3	6.4	87.1	81.8	189.1	83.3	144.2	83.0	82.9	82.8	83.0	83.0	83.0	29	2161	3221	390	390	391	391	391	390	100.0	0.00	0.02	44.00	44.01					
4/20/2011	92.4	19.3	26.9	24.3	41.0	85.7	82.0	239.6	83.7	100.6	83.6	83.4	83.4	86.3	83.6	84.9	53	2185	3245	414	414	415	415	415	414	100.0	0.00	0.00	82.01	82.01					
4/21/2011	92.2	0.0	55.1	23.3	2.9	86.8	80.7	251.3	89.8	76.5	114.9	111.8	112.6	128.6	111.4	143.8	62	2194	3253	436	436	436	436	436	436	95.4	0.00	3.30	68.93	72.23					
4/22/2011	NA	20.1	35.8	24.2	27.4	98.7	79.9	OL	OL	OL	150.0	128.1	128.1	128.6	127.9	138.2	62	2194	3253	460	460	460	460	460	460	100.0	0.00	0.00	79.91	79.91					
4/23/2011	NA	20.1	24.7	24.1	71.1	84.1	77.0	OL	OL	OL	145.9	123.4	123.5	123.9	123.4	131.7	62	2194	3253	484	484	484	484	484	484	100.0	0.00	0.00	77.03	77.03					
4/24/2011	NA	20.0	33.7	24.2	20.9	96.8	72.2	186.1	89.0	132.6	142.4	115.4	115.6	117.6	114.9	127.3	63	2194	3254	508	508	508	508	508	508	100.0	0.00	0.00	72.18	72.18					
4/25/2011	NA	20.3	24.6	24.2	65.7	69.6	67.8	OL	OL	OL	141.7	109.0	109.1	115.4	109.0	125.2	63	2194	3254	532	532	532	532	532	532	100.0	0.00	0.00	67.82	67.82					
4/26/2011	93.3	19.9	24.9	24.2	53.6	68.8	62.6	OL	OL	OL	141.8	100.8	101.0	116.8	100.9	121.1	63	2194	3254	556	556	556	556	556	556	100.0	0.00	0.00	62.63	62.63					
4/27/2011	NA	20.0	25.0	24.2	53.7	71.8	63.4	OL	OL	OL	139.3	102.1	102.2	116.0	102.1	117.5	63	2194	3254	580	580	580	580	580	580	100.0	0.00	0.00	63.45	63.45					
4/28/2011	94.0	20.1	24.9	24.2	62.5	71.8	66.7	OL	OL	OL	135.1	107.1	107.2	113.2	107.2	110.0	63	2194	3254	604	604	604	604	604	604	100.0	0.00	0.00	66.64	66.64					
4/29/2011	94.3	20.2	33.4	24.2	8.0	74.6	67.9	OL	OL	OL	131.5	109.1	109.1	112.3	109.1	109.6	63	2194	3254	625	625	626	626	625	625	100.0	0.00	0.00	60.20	60.20					
4/30/2011	NA	16.7	29.7	24.3	21.7	88.7	84.9	167.7	85.0	132.1	119.7	87.2	86.8	110.2	86.5	106.2	67	2199	3258	630	629	630	630	630	629	99.9	0.00	0.01	14.58	14.59					

Report Created: **Monday, May 02, 2011**

Total [ML]: **0.21 3.83 914.90 918.94**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.4 %**
To Dose **99.6 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-200A**
Report Period: **April 2011**

Date	Transmittance		UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%		mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
	Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	Untreated	Below Dose		To Dose	Total		
4/1/2011	89.2	21.9	70.7	24.3	7.9	87.2	84.7	199.9	148.5	177.0	170.1	137.7	142.4	169.2	129.5	183.2	298	298	297	34	33	34	314	314	314	100.0	0.00	0.00	30.31	30.31	
4/2/2011	NA	21.6	24.4	24.1	83.1	87.2	85.0	182.4	136.2	182.5	156.3	136.4	137.6	OL	OL	OL	322	322	321	58	57	58	314	314	314	100.0	0.00	0.00	85.02	85.02	
4/3/2011	NA	22.0	24.4	24.1	82.6	87.0	85.0	214.3	136.2	183.7	181.9	136.5	147.8	OL	OL	OL	346	346	345	82	81	82	314	314	314	100.0	0.00	0.00	85.03	85.03	
4/4/2011	NA	21.9	25.2	24.2	82.6	87.3	85.0	219.0	140.8	176.3	179.3	136.7	139.1	OL	OL	OL	370	370	369	106	105	106	314	314	314	100.0	0.00	0.00	85.03	85.03	
4/5/2011	92.1	22.0	25.1	24.1	83.3	87.0	85.0	210.7	138.5	166.8	171.4	136.7	136.5	OL	OL	OL	394	394	393	130	129	130	314	314	314	100.0	0.00	0.00	84.99	84.99	
4/6/2011	NA	0.0	43.1	24.3	2.2	103.5	77.0	195.7	135.3	157.5	167.8	128.6	131.0	77.6	61.9	4.2	402	402	402	138	138	138	316	315	316	99.5	0.00	0.14	26.11	26.25	
4/7/2011	91.4	0.0	67.5	24.7	4.4	100.2	81.7	195.8	130.9	146.0	158.1	97.0	118.0	191.9	84.3	41.9	425	425	425	161	161	162	339	339	339	100.0	0.00	0.00	78.71	78.71	
4/8/2011	92.2	21.5	25.8	24.2	81.4	88.2	85.0	206.8	132.7	148.9	160.6	129.0	133.6	218.0	127.3	127.4	430	430	429	185	185	186	363	363	363	100.0	0.00	0.00	85.03	85.03	
4/9/2011	NA	21.6	66.6	24.1	3.2	91.6	84.9	138.9	130.1	128.0	155.8	136.1	136.2	215.1	135.4	145.6	430	430	430	209	208	209	386	386	387	100.0	0.00	0.00	82.90	82.90	
4/10/2011	NA	21.8	24.6	24.1	81.4	88.2	85.0	OL	OL	OL	152.9	136.5	136.4	216.8	136.3	145.2	430	430	430	233	232	233	410	410	411	100.0	0.00	0.00	85.02	85.02	
4/11/2011	NA	21.6	30.2	24.1	73.9	94.2	85.0	142.9	117.5	141.7	136.2	131.4	131.5	215.8	131.7	140.6	433	432	432	257	256	257	434	434	435	100.0	0.00	0.00	84.99	84.99	
4/12/2011	93.0	21.3	38.4	24.3	3.7	96.0	84.6	181.3	114.9	131.8	86.4	86.0	86.4	212.5	86.8	135.9	455	455	455	280	279	280	457	457	457	100.0	0.00	0.00	80.32	80.32	
4/13/2011	92.1	23.1	39.5	24.4	25.7	87.1	80.1	185.3	116.2	119.6	81.4	81.4	81.4	208.4	81.4	129.9	471	471	470	295	295	295	472	472	473	100.0	0.00	0.00	51.46	51.46	
4/14/2011	93.8	21.2	61.1	24.2	11.9	89.4	80.7	194.4	129.9	130.1	148.9	129.4	129.3	169.8	86.3	139.8	483	483	482	307	307	307	473	473	473	100.0	0.00	0.00	40.29	40.29	
4/15/2011	92.7	21.4	24.4	24.1	80.5	90.2	84.5	194.5	135.6	135.5	140.9	135.4	135.4	OL	OL	OL	507	507	506	331	331	331	473	473	473	100.0	0.00	0.00	84.56	84.56	
4/16/2011	NA	21.3	24.4	24.1	82.5	88.2	85.0	193.3	136.2	136.1	142.0	136.2	136.1	OL	OL	OL	531	531	530	355	355	355	473	473	473	100.0	0.00	0.00	85.01	85.01	
4/17/2011	NA	21.7	24.4	24.1	82.4	88.6	85.0	192.4	136.3	136.1	138.8	136.2	136.1	OL	OL	OL	555	555	554	379	379	379	473	473	473	100.0	0.00	0.00	85.02	85.02	
4/18/2011	NA	21.7	24.4	24.1	81.6	87.3	84.9	193.6	136.1	136.1	136.5	136.0	136.0	OL	OL	OL	579	579	578	403	403	403	473	473	473	100.0	0.00	0.00	84.93	84.93	
4/19/2011	92.2	0.0	30.1	24.0	3.9	106.5	84.5	193.8	135.2	135.2	135.3	134.6	134.8	62.1	28.2	25.3	590	590	589	414	414	414	473	473	473	99.4	0.00	0.22	38.73	38.95	
4/20/2011	92.4	18.9	32.6	21.5	4.4	73.8	57.3	168.3	153.4	138.0	181.2	154.2	100.3	63.3	39.1	51.1	590	590	589	414	414	415	473	473	473	100.0	0.00	0.00	0.30	0.30	
4/21/2011	92.2	23.3	76.3	25.6	18.7	92.6	82.4	178.8	161.4	140.7	206.3	147.7	125.9	230.5	128.1	162.9	590	590	590	416	416	416	475	475	475	100.0	0.00	0.00	5.59	5.59	
4/22/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	590	590	590	416	416	416	475	475	475	OL	0.00	0.00	0.00	0.00	
4/23/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	590	590	590	416	416	416	475	475	475	OL	0.00	0.00	0.00	0.00	
4/24/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	590	590	590	416	416	416	475	475	475	OL	0.00	0.00	0.00	0.00	
4/25/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	590	590	590	416	416	416	475	475	475	OL	0.00	0.00	0.00	0.00	
4/26/2011	93.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	590	590	590	416	416	416	475	475	475	OL	0.00	0.00	0.00	0.00	
4/27/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	590	590	590	416	416	416	475	475	475	OL	0.00	0.00	0.00	0.00	
4/28/2011	94.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	590	590	590	416	416	416	475	475	475	OL	0.00	0.00	0.00	0.00	
4/29/2011	94.3	22.4	63.5	24.4	7.2	90.3	82.6	160.0	141.9	122.5	140.0	132.4	129.8	206.3	130.1	134.7	591	590	590	419	418	419	478	477	478	100.0	0.00	0.00	9.42	9.42	
4/30/2011	NA	5.4	24.5	24.1	29.3	88.3	84.9	OL	OL	OL	136.6	136.1	136.1	212.8	136.7	136.9	591	590	590	437	437	437	496	496	496	99.6	0.00	0.23	63.89	64.12	

Report Created: **Monday, May 02, 2011**

Total [ML]: **0.00 0.58 1442.66 1443.24**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.2 %**
To Dose **99.8 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-300A**
Report Period: **April 2011**

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals				
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]				
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total	
4/1/2011	89.2	21.5	24.9	24.3	43.8	59.1	56.1	OL	OL	OL	129.7	90.6	90.6	99.1	90.4	90.5	4524	4524	4523	4281	4281	4280	4587	4587	4587	100.0	0.00	0.00	56.13	56.13	
4/2/2011	NA	21.6	24.7	24.3	53.0	59.7	56.0	OL	OL	OL	128.3	90.3	90.5	93.5	90.3	90.4	4524	4524	4523	4305	4305	4304	4611	4611	4611	100.0	0.00	0.00	56.02	56.02	
4/3/2011	NA	21.8	24.8	24.3	53.8	57.8	55.7	OL	OL	OL	125.1	89.9	89.9	90.1	89.8	89.8	4524	4524	4523	4329	4329	4328	4635	4635	4635	100.0	0.00	0.00	55.70	55.70	
4/4/2011	NA	21.6	24.8	24.3	53.5	58.6	56.3	OL	OL	OL	121.2	90.9	90.9	90.9	90.9	90.9	4524	4524	4523	4353	4353	4352	4659	4659	4659	100.0	0.00	0.00	56.36	56.36	
4/5/2011	92.1	21.9	24.9	24.3	51.4	60.4	56.7	OL	OL	OL	117.0	91.5	91.5	91.5	91.5	91.5	4524	4524	4523	4377	4377	4376	4683	4683	4683	100.0	0.00	0.00	56.76	56.76	
4/6/2011	NA	19.0	45.9	24.5	3.9	117.2	50.6	74.6	86.5	108.6	113.6	84.0	80.9	83.6	80.3	25.2	4526	4526	4526	4386	4386	4385	4385	4691	4690	4690	100.0	0.00	0.00	18.48	18.48
4/7/2011	91.4	17.9	35.6	24.3	37.4	108.2	72.2	88.1	106.8	104.6	114.0	90.7	88.1	75.3	72.6	49.9	4550	4550	4550	4410	4409	4409	4707	4707	4707	99.9	0.00	0.04	72.17	72.21	
4/8/2011	92.2	21.3	26.3	24.4	53.5	79.1	63.9	77.1	113.2	101.6	118.6	81.5	72.5	67.8	67.3	53.6	4574	4574	4574	4434	4433	4433	4726	4726	4726	100.0	0.00	0.00	63.91	63.91	
4/9/2011	NA	21.7	25.0	24.2	53.8	63.6	58.3	94.1	108.5	97.7	117.9	94.0	94.0	OL	OL	OL	4598	4598	4598	4458	4457	4457	4726	4726	4726	100.0	0.00	0.00	58.32	58.32	
4/10/2011	NA	21.7	25.0	24.2	52.8	63.2	57.5	96.8	105.3	93.8	116.9	92.7	92.7	OL	OL	OL	4622	4622	4622	4482	4481	4481	4726	4726	4726	100.0	0.00	0.00	57.53	57.53	
4/11/2011	NA	21.6	27.6	24.3	2.4	57.8	55.3	98.1	102.7	90.1	116.9	89.3	89.2	OL	OL	OL	4637	4637	4636	4496	4496	4496	4726	4726	4726	100.0	0.00	0.00	34.07	34.07	
4/12/2011	93.0	21.6	37.9	24.9	11.9	62.4	57.7	94.6	99.2	83.8	95.7	75.2	61.3	75.2	58.9	3.4	4638	4638	4638	4498	4497	4497	4727	4727	4727	100.0	0.00	0.00	2.83	2.83	
4/13/2011	92.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4638	4638	4638	4498	4497	4497	4727	4727	4727	OL	0.00	0.00	0.00	0.00	
4/14/2011	93.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4638	4638	4638	4498	4497	4497	4727	4727	4727	OL	0.00	0.00	0.00	0.00	
4/15/2011	92.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4638	4638	4638	4498	4497	4497	4727	4727	4727	OL	0.00	0.00	0.00	0.00	
4/16/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4638	4638	4638	4498	4497	4497	4727	4727	4727	OL	0.00	0.00	0.00	0.00	
4/17/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4638	4638	4638	4498	4497	4497	4727	4727	4727	OL	0.00	0.00	0.00	0.00	
4/18/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4638	4638	4638	4498	4497	4497	4727	4727	4727	OL	0.00	0.00	0.00	0.00	
4/19/2011	92.2	19.2	33.1	24.3	20.1	53.1	50.7	90.9	81.8	80.8	109.6	78.9	78.8	68.3	51.8	3.3	4651	4651	4650	4511	4510	4510	4729	4729	4728	100.0	0.00	0.00	27.07	27.07	
4/20/2011	92.4	21.7	27.3	24.3	2.8	53.3	50.6	99.1	86.7	83.0	120.9	82.2	81.9	OL	OL	OL	4671	4671	4671	4531	4530	4530	4729	4729	4728	100.0	0.00	0.00	42.49	42.49	
4/21/2011	92.2	21.4	45.2	25.0	0.2	62.9	30.0	103.6	90.1	84.2	119.7	81.4	50.3	82.7	60.9	2.7	4684	4684	4683	4543	4543	4543	4729	4729	4729	100.0	0.00	0.00	15.78	15.78	
4/22/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4684	4684	4683	4543	4543	4543	4729	4729	4729	OL	0.00	0.00	0.00	0.00	
4/23/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4684	4684	4683	4543	4543	4543	4729	4729	4729	OL	0.00	0.00	0.00	0.00	
4/24/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4684	4684	4683	4543	4543	4543	4729	4729	4729	OL	0.00	0.00	0.00	0.00	
4/25/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4684	4684	4683	4543	4543	4543	4729	4729	4729	OL	0.00	0.00	0.00	0.00	
4/26/2011	93.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4684	4684	4683	4543	4543	4543	4729	4729	4729	OL	0.00	0.00	0.00	0.00	
4/27/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4684	4684	4683	4543	4543	4543	4729	4729	4729	OL	0.00	0.00	0.00	0.00	
4/28/2011	94.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4684	4684	4683	4543	4543	4543	4729	4729	4729	OL	0.00	0.00	0.00	0.00	
4/29/2011	94.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4684	4684	4683	4543	4543	4543	4729	4729	4729	OL	0.00	0.00	0.00	0.00	
4/30/2011	NA	17.9	33.7	24.4	8.2	60.7	54.3	76.2	76.4	77.7	88.6	75.1	75.0	66.7	57.9	7.1	4690	4690	4689	4549	4549	4549	4732	4732	4731	99.9	0.00	0.02	13.35	13.37	

Report Created: **Monday, May 02, 2011**

Total [ML]: **0.00 0.06 686.96 687.02**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.2 %**
To Dose **99.8 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-400A**
Report Period: **April 2011**

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
4/1/2011	89.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1891	3400	3400	3297	3298	1788	2817	2817	2817	OL	0.00	0.00	0.00	0.00	
4/2/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1891	3400	3400	3297	3298	1788	2817	2817	2817	OL	0.00	0.00	0.00	0.00	
4/3/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1891	3400	3400	3297	3298	1788	2817	2817	2817	OL	0.00	0.00	0.00	0.00	
4/4/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1891	3400	3400	3297	3298	1788	2817	2817	2817	OL	0.00	0.00	0.00	0.00	
4/5/2011	92.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1891	3400	3400	3297	3298	1788	2817	2817	2817	OL	0.00	0.00	0.00	0.00	
4/6/2011	NA	21.9	23.3	22.6	9.9	10.8	10.4	71.9	47.0	17.4	53.9	57.7	50.1	74.0	79.0	93.3	1891	3400	3400	3297	3298	1789	2817	2817	2817	100.0	0.00	0.00	0.01	0.01
4/7/2011	91.4	12.2	21.5	15.2	21.8	70.2	57.0	67.3	56.2	22.7	55.3	59.8	54.7	68.9	70.9	96.8	1891	3401	3400	3297	3298	1789	2818	2817	2817	19.9	0.00	0.12	0.03	0.15
4/8/2011	92.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1891	3401	3400	3297	3298	1789	2818	2817	2817	OL	0.00	0.00	0.00	0.00
4/9/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1891	3401	3400	3297	3298	1789	2818	2817	2817	OL	0.00	0.00	0.00	0.00
4/10/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1891	3401	3400	3297	3298	1789	2818	2817	2817	OL	0.00	0.00	0.00	0.00
4/11/2011	NA	21.9	33.1	24.6	13.1	64.7	57.4	135.3	60.6	58.7	128.0	88.3	82.0	105.8	105.4	132.6	1900	3410	3410	3307	3307	1798	2827	2827	2826	100.0	0.00	0.00	22.16	22.16
4/12/2011	93.0	21.5	27.4	24.4	26.9	68.3	57.4	110.2	59.5	58.9	95.6	83.5	80.3	94.7	93.8	116.6	1909	3419	3418	3331	3331	1822	2851	2851	2850	100.0	0.00	0.00	57.45	57.45
4/13/2011	92.1	21.7	26.4	24.3	35.0	57.4	49.7	OL	OL	OL	80.8	80.4	80.3	85.0	86.4	113.4	1909	3419	3418	3355	3355	1846	2875	2875	2874	100.0	0.00	0.00	49.69	49.69
4/14/2011	93.8	23.2	28.5	24.3	24.5	58.2	50.2	OL	OL	OL	85.1	81.5	81.2	95.8	99.6	143.6	1909	3419	3418	3379	3379	1870	2899	2899	2898	100.0	0.00	0.00	50.17	50.17
4/15/2011	92.7	23.7	27.7	24.3	49.7	57.5	54.2	OL	OL	OL	93.2	87.6	87.6	104.8	105.9	135.3	1909	3419	3418	3403	3403	1894	2923	2923	2922	100.0	0.00	0.00	54.25	54.25
4/16/2011	NA	23.4	26.8	24.3	53.0	56.9	55.2	OL	OL	OL	106.2	89.1	89.1	103.4	102.1	132.1	1909	3419	3418	3427	3427	1918	2947	2947	2946	100.0	0.00	0.00	55.20	55.20
4/17/2011	NA	23.1	25.9	24.3	53.2	57.3	55.2	OL	OL	OL	106.2	89.1	89.1	100.7	100.7	131.6	1909	3419	3418	3451	3451	1942	2971	2971	2970	100.0	0.00	0.00	55.21	55.21
4/18/2011	NA	23.2	27.4	24.3	50.9	57.2	53.8	OL	OL	OL	103.7	87.0	87.0	99.9	99.6	130.3	1909	3419	3418	3475	3475	1966	2995	2995	2994	100.0	0.00	0.00	53.86	53.86
4/19/2011	92.2	0.0	32.9	24.3	3.5	66.9	52.5	39.4	23.2	39.9	101.4	84.7	84.6	98.8	99.3	127.4	1909	3419	3418	3486	3486	1977	3006	3006	3005	99.9	0.00	0.02	24.18	24.20
4/20/2011	92.4	0.0	48.6	24.4	9.2	54.8	52.1	156.0	82.5	81.6	143.6	117.0	98.3	101.5	107.9	130.6	1913	3423	3422	3490	3490	1981	3006	3006	3006	99.9	0.00	0.00	8.59	8.60
4/21/2011	92.2	22.0	33.5	24.5	30.9	75.2	44.7	148.8	73.1	67.5	136.4	107.4	90.1	99.0	105.0	121.9	1937	3447	3446	3514	3514	2005	3010	3010	3010	100.0	0.00	0.00	44.71	44.71
4/22/2011	NA	20.3	41.7	24.4	19.5	71.8	53.2	145.4	83.8	82.9	125.9	99.8	87.9	91.5	96.9	100.7	1961	3471	3470	3538	3538	2029	3012	3012	3012	100.0	0.00	0.00	53.20	53.20
4/23/2011	NA	21.7	25.6	24.3	46.6	54.6	49.9	147.2	80.8	80.6	123.9	98.3	83.0	OL	OL	OL	1985	3495	3494	3562	3562	2053	3012	3012	3012	100.0	0.00	0.00	49.90	49.90
4/24/2011	NA	21.1	36.4	24.4	18.1	67.9	47.7	143.9	77.8	76.5	118.6	92.2	78.2	83.9	86.6	89.6	2009	3519	3518	3586	3586	2077	3013	3013	3013	100.0	0.00	0.00	47.67	47.67
4/25/2011	NA	21.9	26.2	24.4	40.5	45.3	43.0	145.6	75.5	69.8	117.9	89.6	74.9	OL	OL	OL	2033	3543	3542	3610	3610	2101	3013	3013	3013	100.0	0.00	0.00	43.02	43.02
4/26/2011	93.3	21.7	29.2	24.5	40.7	62.0	50.9	145.4	72.8	66.5	115.5	85.5	72.6	104.1	102.3	125.2	2057	3567	3566	3634	3634	2125	3024	3023	3023	100.0	0.00	0.00	50.90	50.90
4/27/2011	NA	21.2	26.0	24.5	58.1	73.2	66.9	142.1	70.6	68.4	110.7	81.8	71.2	110.7	105.0	147.3	2081	3591	3590	3658	3658	2149	3048	3047	3047	100.0	0.00	0.00	66.89	66.89
4/28/2011	94.0	21.2	25.2	24.4	66.9	72.9	69.8	135.9	71.4	71.2	105.4	76.7	71.4	107.5	103.3	141.2	2105	3615	3614	3682	3682	2173	3072	3071	3071	100.0	0.00	0.00	69.77	69.77
4/29/2011	94.3	21.1	28.0	24.4	35.1	74.6	69.3	133.6	73.9	73.7	101.7	75.2	74.0	103.8	102.4	136.4	2129	3639	3638	3706	3706	2197	3094	3093	3093	100.0	0.00	0.00	69.34	69.34
4/30/2011	NA	21.3	38.7	24.6	24.0	66.3	56.3	132.1	59.1	58.8	98.3	70.9	59.2	101.7	102.9	129.2	2149	3659	3658	3726	3726	2217	3113	3113	3112	100.0	0.00	0.00	46.68	46.68

Report Created: **Monday, May 02, 2011**

Total [ML]: **0.01 0.13 972.88 973.02**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-500A**
Report Period: **April 2011**

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
4/1/2011	89.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	862	1322	861	1573	1237	3258	1159	3199	1159	OL	0.00	0.00	0.00	0.00	
4/2/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	862	1322	861	1573	1237	3258	1159	3199	1159	OL	0.00	0.00	0.00	0.00	
4/3/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	862	1322	861	1573	1237	3258	1159	3199	1159	OL	0.00	0.00	0.00	0.00	
4/4/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	862	1322	861	1573	1237	3258	1159	3199	1159	OL	0.00	0.00	0.00	0.00	
4/5/2011	92.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	862	1322	861	1573	1237	3258	1159	3199	1159	OL	0.00	0.00	0.00	0.00	
4/6/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	862	1322	861	1573	1237	3258	1159	3199	1159	OL	0.00	0.00	0.00	0.00	
4/7/2011	91.4	0.0	49.7	33.6	4.3	76.2	41.3	OL	OL	OL	135.0	118.5	186.3	162.2	115.9	145.5	862	1322	861	1573	1237	3259	1159	3199	1160	99.5	0.00	0.00	0.35	0.35
4/8/2011	92.2	21.5	78.6	24.4	28.3	75.6	71.8	123.5	115.5	173.0	160.3	125.4	237.5	210.4	115.8	163.4	874	1335	874	1573	1237	3259	1172	3211	1172	100.0	0.00	0.00	37.20	37.20
4/9/2011	NA	21.5	24.6	24.2	68.3	78.6	73.2	117.7	117.5	123.1	OL	OL	OL	174.2	117.7	126.6	898	1359	898	1573	1237	3259	1196	3235	1196	100.0	0.00	0.00	73.18	73.18
4/10/2011	NA	21.5	24.6	24.2	66.6	78.2	72.3	116.2	116.1	120.8	OL	OL	OL	169.0	116.4	125.8	922	1383	922	1573	1237	3259	1220	3259	1220	100.0	0.00	0.00	72.29	72.29
4/11/2011	NA	21.5	24.7	24.2	56.5	75.5	68.7	110.6	110.5	148.2	OL	OL	OL	181.8	110.6	146.3	946	1407	946	1573	1237	3259	1244	3283	1244	100.0	0.00	0.00	68.73	68.73
4/12/2011	93.0	21.7	41.3	24.3	8.5	92.1	68.1	112.4	110.1	166.3	OL	OL	OL	211.2	110.6	156.9	962	1422	961	1573	1237	3259	1259	3299	1260	100.0	0.00	0.00	43.74	43.74
4/13/2011	92.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	962	1422	961	1573	1237	3259	1259	3299	1260	OL	0.00	0.00	0.00	0.00	
4/14/2011	93.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	962	1422	961	1573	1237	3259	1259	3299	1260	OL	0.00	0.00	0.00	0.00	
4/15/2011	92.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	962	1422	961	1573	1237	3259	1259	3299	1260	OL	0.00	0.00	0.00	0.00	
4/16/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	962	1422	961	1573	1237	3259	1259	3299	1260	OL	0.00	0.00	0.00	0.00	
4/17/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	962	1422	961	1573	1237	3259	1259	3299	1260	OL	0.00	0.00	0.00	0.00	
4/18/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	962	1422	961	1573	1237	3259	1259	3299	1260	OL	0.00	0.00	0.00	0.00	
4/19/2011	92.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	962	1422	961	1573	1237	3259	1259	3299	1260	OL	0.00	0.00	0.00	0.00	
4/20/2011	92.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	962	1422	961	1573	1237	3259	1259	3299	1260	OL	0.00	0.00	0.00	0.00	
4/21/2011	92.2	2.1	35.6	9.9	7.7	91.5	49.3	79.1	73.0	118.8	20.7	17.5	26.7	136.3	85.7	106.1	962	1423	962	1574	1238	3259	1260	3300	1260	17.3	0.00	0.78	0.16	0.94
4/22/2011	NA	0.0	64.0	25.5	3.0	62.7	60.4	140.2	101.0	223.2	131.3	112.9	170.0	193.4	112.2	141.6	964	1424	963	1576	1238	3261	1260	3300	1261	100.0	0.00	0.00	3.64	3.65
4/23/2011	NA	21.2	25.0	24.3	55.2	64.4	58.7	120.7	94.8	181.0	114.6	95.1	113.4	OL	OL	OL	988	1448	987	1600	25	3285	1260	3300	1261	100.0	0.00	0.00	58.67	58.67
4/24/2011	NA	23.0	35.6	24.4	25.4	86.7	56.0	105.8	89.8	174.1	107.3	90.8	113.4	86.8	74.4	63.5	1012	1472	1011	1624	49	3309	1261	3301	1261	100.0	0.00	0.00	56.06	56.06
4/25/2011	NA	20.4	29.3	24.5	61.9	66.2	64.2	142.6	101.1	215.4	140.0	102.8	145.7	139.5	82.0	65.1	1036	1496	1035	1648	73	3333	1263	3303	1264	100.0	0.00	0.00	64.19	64.19
4/26/2011	93.3	21.0	35.2	25.4	50.4	66.3	61.5	147.4	100.5	211.6	138.9	99.8	139.5	152.5	85.0	65.2	1060	1520	1059	1672	97	3357	1268	3307	1268	100.0	0.00	0.00	61.53	61.53
4/27/2011	NA	21.2	25.2	24.3	56.4	72.4	66.6	139.4	107.9	202.8	133.5	107.5	131.4	OL	OL	OL	1084	1544	1083	1696	121	3381	1268	3307	1268	100.0	0.00	0.00	66.58	66.58
4/28/2011	94.0	21.0	24.7	24.2	67.0	73.7	70.5	128.2	113.4	191.7	126.3	113.5	122.7	OL	OL	OL	1108	1568	1107	1720	145	3405	1268	3307	1268	100.0	0.00	0.00	70.52	70.52
4/29/2011	94.3	21.1	41.6	24.2	9.8	73.8	71.6	122.6	115.5	186.0	124.2	115.6	120.2	OL	OL	OL	1119	1580	1119	1731	157	3416	1268	3307	1268	100.0	0.00	0.00	34.46	34.46
4/30/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1119	1580	1119	1731	157	3416	1268	3307	1268	OL	0.00	0.00	0.00	0.00	

Report Created: **Monday, May 02, 2011**

Total [ML]: **0.00 0.78 711.31 712.10**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-600A**
Report Period: **April 2011**

Date	Transmittance			UV Dose			Reactor Flow			Average UV Lamp Intensity												UV Lamp Status												% Volume Treated to Validated Conditions	Daily Totals			
	%			mJ/cm2			MLD			W/m2												Hours													Water Volume [ML]			
	Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	Untreated	Below Dose	To Dose	Total										
4/1/2011	89.2	19.2	24.8	24.1	58.8	73.8	70.6	116.3	113.2	113.2	113.2	113.2	113.1	OL	OL	OL	2931	2993	2993	3366	3366	3366	1122	3088	3088	100.0	0.00	0.00	70.66	70.66								
4/2/2011	NA	19.5	24.8	24.1	67.9	75.2	71.0	116.2	113.8	113.7	113.8	113.8	113.6	OL	OL	OL	2955	3017	3017	3390	3390	3390	1122	3088	3088	100.0	0.00	0.00	71.05	71.05								
4/3/2011	NA	19.5	24.6	24.1	67.9	72.6	70.3	114.7	112.7	112.7	112.7	112.7	112.6	OL	OL	OL	2979	3041	3041	3414	3414	3414	1122	3088	3088	100.0	0.00	0.00	70.33	70.33								
4/4/2011	NA	19.6	24.7	24.1	68.2	73.5	71.0	114.1	113.8	113.7	113.9	113.8	113.7	OL	OL	OL	3003	3065	3065	3438	3438	3438	1122	3088	3088	100.0	0.00	0.00	71.05	71.05								
4/5/2011	92.1	19.0	24.8	24.1	65.1	74.7	71.1	114.6	114.0	113.9	114.0	114.0	113.8	OL	OL	OL	3027	3089	3089	3462	3462	3462	1122	3088	3088	100.0	0.00	0.00	71.15	71.15								
4/6/2011	NA	10.8	35.4	23.9	2.5	111.9	64.8	109.0	102.0	101.2	104.9	102.7	101.0	44.3	61.4	56.6	3034	3096	3096	3469	3469	3469	1123	3089	3089	98.5	0.00	0.28	18.66	18.93								
4/7/2011	91.4	17.5	39.6	24.3	2.7	76.7	54.5	144.7	99.4	115.2	116.4	96.8	90.9	83.9	88.6	116.3	3043	3105	3105	3470	3470	3470	1132	3098	3098	99.9	0.00	0.02	20.71	20.73								
4/8/2011	92.2	20.6	34.7	24.2	21.4	58.0	55.0	127.8	88.6	91.8	OL	OL	OL	88.5	88.6	100.4	3055	3117	3116	3470	3470	3470	1144	3110	3110	100.0	0.00	0.00	26.54	26.54								
4/9/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3055	3117	3116	3470	3470	3470	1144	3110	3110	OL	0.00	0.00	0.00	0.00								
4/10/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3055	3117	3116	3470	3470	3470	1144	3110	3110	OL	0.00	0.00	0.00	0.00								
4/11/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3055	3117	3116	3470	3470	3470	1144	3110	3110	OL	0.00	0.00	0.00	0.00								
4/12/2011	93.0	19.3	27.2	24.4	27.1	70.4	67.4	102.1	70.0	73.7	93.8	78.9	69.0	69.1	74.2	92.6	3063	3125	3125	3479	3479	3478	1153	3119	3118	100.0	0.00	0.00	24.28	24.28								
4/13/2011	92.1	19.0	34.5	24.4	45.6	66.9	58.4	102.8	69.0	69.6	84.5	73.4	60.5	68.8	68.9	83.2	3087	3149	3149	3496	3496	3496	1177	3143	3142	100.0	0.00	0.00	58.41	58.41								
4/14/2011	93.8	18.0	35.3	24.4	29.0	72.1	59.5	123.8	79.9	87.8	84.3	74.8	62.4	78.0	87.0	112.7	3111	3173	3173	3508	3508	3508	1201	3167	3166	100.0	0.00	0.02	59.46	59.48								
4/15/2011	92.7	18.6	25.0	24.5	58.8	67.2	63.8	150.1	66.9	101.2	87.1	73.5	65.3	65.3	84.6	110.9	3135	3197	3197	3532	3532	3532	1225	3191	3190	100.0	0.00	0.00	63.85	63.85								
4/16/2011	NA	18.8	25.1	24.5	62.6	67.3	64.8	149.1	73.5	97.2	108.9	86.0	91.2	66.3	79.9	105.4	3159	3221	3221	3556	3556	3556	1249	3215	3214	100.0	0.00	0.00	64.84	64.84								
4/17/2011	NA	19.5	25.1	24.5	62.2	67.2	64.8	145.4	73.9	92.3	123.0	99.6	117.0	66.3	76.3	102.6	3183	3245	3245	3580	3580	3580	1273	3239	3238	100.0	0.00	0.00	64.81	64.81								
4/18/2011	NA	19.6	25.1	24.5	59.4	66.8	63.3	147.3	64.8	90.5	122.9	100.1	117.5	64.7	74.2	99.2	3207	3269	3269	3604	3604	3604	1297	3263	3262	100.0	0.00	0.00	63.29	63.29								
4/19/2011	92.2	14.6	49.2	24.5	3.0	144.4	63.5	147.5	65.2	90.7	123.2	100.4	115.4	64.9	73.4	97.6	3231	3293	3293	3628	3628	3628	1321	3287	3286	99.8	0.00	0.12	63.41	63.53								
4/20/2011	92.4	19.3	25.8	24.5	50.7	67.2	64.6	147.1	66.1	92.8	122.4	101.2	112.6	66.1	71.6	94.8	3255	3317	3317	3652	3652	3652	1345	3311	3310	100.0	0.00	0.00	64.66	64.66								
4/21/2011	92.2	15.6	36.3	24.4	8.3	89.2	59.9	144.6	61.4	68.5	121.4	101.7	108.3	60.9	70.4	92.4	3279	3341	3341	3676	3676	3676	1368	3334	3334	100.0	0.00	0.02	59.37	59.39								
4/22/2011	NA	18.6	41.0	24.2	14.3	86.1	63.4	135.4	63.8	64.8	114.9	96.5	99.8	64.8	65.2	84.3	3302	3364	3364	3699	3699	3698	1391	3357	3357	100.0	0.00	0.00	59.66	59.66								
4/23/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3302	3364	3364	3699	3699	3698	1391	3357	3357	OL	0.00	0.00	0.00	0.00								
4/24/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3302	3364	3364	3699	3699	3698	1391	3357	3357	OL	0.00	0.00	0.00	0.00								
4/25/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3302	3364	3364	3699	3699	3698	1391	3357	3357	OL	0.00	0.00	0.00	0.00								
4/26/2011	93.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3302	3364	3364	3699	3699	3698	1391	3357	3357	OL	0.00	0.00	0.00	0.00								
4/27/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3302	3364	3364	3699	3699	3698	1391	3357	3357	OL	0.00	0.00	0.00	0.00								
4/28/2011	94.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3302	3364	3364	3699	3699	3698	1391	3357	3357	OL	0.00	0.00	0.00	0.00								
4/29/2011	94.3	19.8	35.0	24.5	11.4	74.5	69.4	157.4	93.0	97.1	124.7	102.5	118.3	70.7	84.4	101.2	3314	3376	3376	3711	3711	3711	1404	3369	3369	100.0	0.00	0.00	36.14	36.14								
4/30/2011	NA	18.4	25.4	24.4	52.7	90.0	68.0	108.4	69.5	69.9	95.1	76.1	73.8	69.4	69.5	69.7	3338	3400	3400	3735	3735	3735	1428	3393	3393	100.0	0.00	0.00	67.99	67.99								

Report Created: **Monday, May 02, 2011**

Total [ML]: **0.00 0.46 1170.33 1170.79**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: 252.00
Licence Number: PWS-09-412 RR

Report Period: May 2011

Date	UVR-D100A				UVR-D200A				UVR-D300A				UVR-D400A				UVR-D500A				UVR-D600A				Total				% Volume Treated To Dose		
	Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]						
	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total		Untreated	Below
5/1/2011	0.00	0.00	80.03	80.03	0.00	0.00	0.00	0.00	0.00	0.00	50.31	50.31	0.00	0.00	0.00	0.00	0.00	0.00	57.84	57.84	0.00	0.00	6.00	6.00	0.00	0.00	194.19	194.19	100.0		
5/2/2011	0.00	0.00	79.84	79.84	0.00	0.00	0.00	0.00	0.00	0.00	50.13	50.13	0.00	0.00	0.00	0.00	0.00	0.00	63.50	63.50	0.00	0.00	0.00	0.00	0.00	0.00	193.47	193.47	100.0		
5/3/2011	0.00	0.00	83.05	83.05	0.00	0.00	0.00	0.00	0.00	0.00	51.84	51.84	0.00	0.00	0.00	0.00	0.00	0.00	65.81	65.81	0.00	0.00	0.00	0.00	0.00	0.00	200.70	200.70	100.0		
5/4/2011	0.00	0.00	85.02	85.02	0.00	0.00	0.00	0.00	0.00	0.00	52.82	52.82	0.00	0.00	0.00	0.00	0.00	0.00	67.15	67.15	0.00	0.00	0.00	0.00	0.00	0.00	205.00	205.00	100.0		
5/5/2011	0.00	0.00	84.99	84.99	0.00	0.00	0.00	0.00	0.00	0.00	52.81	52.81	0.00	0.00	0.00	0.00	0.00	0.00	67.21	67.21	0.00	0.00	0.00	0.00	0.00	0.00	205.01	205.01	100.0		
5/6/2011	0.00	0.00	82.47	82.47	0.00	0.00	0.00	0.00	0.00	0.00	51.95	51.95	0.00	0.00	0.00	0.00	0.00	0.00	69.82	69.82	0.00	0.00	0.00	0.00	0.00	0.00	204.23	204.23	100.0		
5/7/2011	0.00	0.00	75.53	75.53	0.00	0.00	0.00	0.00	0.00	0.00	50.19	50.19	0.00	0.00	0.00	0.00	0.00	0.00	79.26	79.26	0.00	0.00	0.00	0.00	0.00	0.00	204.98	204.98	100.0		
5/8/2011	0.00	0.00	75.60	75.60	0.00	0.00	0.00	0.00	0.00	0.00	50.09	50.09	0.00	0.00	0.00	0.00	0.00	0.00	79.32	79.32	0.00	0.00	0.00	0.00	0.00	0.00	205.01	205.01	100.0		
5/9/2011	0.00	0.00	72.83	72.83	0.00	0.00	0.00	0.00	0.00	0.00	20.54	20.54	0.00	0.00	27.30	27.30	0.00	0.00	74.69	74.69	0.00	0.00	0.00	0.00	0.00	0.00	195.36	195.36	100.0		
5/10/2011	0.00	0.00	76.41	76.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.05	50.05	0.00	0.00	34.63	34.63	0.00	0.00	24.88	24.88	0.00	0.00	185.97	185.97	100.0		
5/11/2011	0.00	0.00	79.08	79.08	0.00	0.06	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	51.32	51.32	0.00	0.00	61.27	61.27	0.00	0.00	0.00	0.00	0.00	0.06	191.67	191.73	100.0		
5/12/2011	0.00	0.00	82.78	82.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.96	53.96	0.00	0.00	0.00	0.00	0.00	0.00	64.46	64.46	0.00	0.00	201.21	201.21	100.0		
5/13/2011	0.00	0.00	84.92	84.92	0.00	0.00	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	57.71	57.71	0.00	0.00	68.64	68.64	0.00	0.00	68.64	68.64	0.00	0.00	211.35	211.35	100.0		
5/14/2011	0.00	0.00	85.02	85.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	59.55	59.55	0.00	0.00	0.00	0.00	0.00	0.00	70.50	70.50	0.00	0.00	215.07	215.07	100.0		
5/15/2011	0.00	0.39	76.80	77.20	0.00	0.00	7.78	7.78	0.00	0.00	0.00	0.00	0.00	0.00	58.93	58.93	0.00	0.00	0.00	0.00	0.00	0.00	70.04	70.04	0.00	0.39	213.55	213.95	99.8		
5/16/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.94	84.94	0.00	0.00	0.00	0.00	0.00	0.00	58.99	58.99	0.00	0.00	0.00	0.00	0.00	0.00	70.89	70.89	0.00	0.00	214.83	214.83	100.0		
5/17/2011	0.00	0.00	42.57	42.57	0.00	0.00	42.44	42.44	0.00	0.00	30.36	30.36	0.00	0.00	30.63	30.63	0.00	0.03	37.92	37.95	0.00	0.00	36.75	36.75	0.00	0.03	220.67	220.69	100.0		
5/18/2011	0.00	0.00	84.99	84.99	0.00	0.00	0.00	0.00	0.00	0.00	64.19	64.19	0.00	0.05	10.26	10.31	0.00	0.05	28.75	28.80	0.00	0.00	42.99	42.99	0.00	0.10	231.18	231.28	100.0		
5/19/2011	0.00	0.00	20.38	20.38	0.00	0.00	59.42	59.42	0.00	0.05	22.62	22.66	0.00	0.00	72.40	72.40	0.00	0.00	0.00	0.00	0.00	0.00	58.55	58.55	0.00	0.05	233.37	233.42	100.0		
5/20/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.89	84.89	0.00	0.00	0.00	0.00	0.00	0.00	66.81	66.81	0.00	0.00	0.06	0.06	0.00	0.00	78.24	78.24	0.00	0.00	230.00	230.00	100.0		
5/21/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	0.00	0.00	0.00	0.00	58.81	58.81	0.00	0.00	0.00	0.00	0.00	0.00	69.74	69.74	0.00	0.00	213.56	213.56	100.0		
5/22/2011	0.00	0.00	0.00	0.00	0.00	0.00	83.11	83.11	0.00	0.00	0.00	0.00	0.00	0.00	51.30	51.30	0.00	0.00	0.00	0.00	0.00	0.00	61.55	61.55	0.00	0.00	195.96	195.96	100.0		
5/23/2011	0.00	0.00	0.00	0.00	0.00	0.00	80.62	80.62	0.00	0.00	0.00	0.00	0.00	0.00	50.25	50.25	0.00	0.00	0.00	0.00	0.00	0.00	60.17	60.17	0.00	0.00	191.04	191.04	100.0		
5/24/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.97	84.97	0.00	0.00	0.00	0.00	0.00	0.00	61.11	61.11	0.00	0.00	0.00	0.00	0.00	0.00	72.35	72.35	0.00	0.00	218.43	218.43	100.0		
5/25/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.99	84.99	0.00	0.00	0.00	0.00	0.00	0.00	54.48	54.48	0.00	0.00	0.00	0.00	0.00	0.00	65.26	65.26	0.00	0.00	204.73	204.73	100.0		
5/26/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.19	84.19	0.00	0.00	0.00	0.00	0.00	0.00	52.19	52.19	0.00	0.00	0.00	0.00	0.00	0.00	62.71	62.71	0.00	0.00	199.08	199.08	100.0		
5/27/2011	0.00	0.04	0.03	0.07	0.00	0.00	84.04	84.04	0.00	0.00	33.55	33.55	0.00	0.00	16.29	16.29	0.00	0.04	0.03	0.06	0.00	0.01	63.34	63.35	0.00	0.09	197.27	197.36	100.0		
5/28/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.00	84.00	0.00	0.00	48.77	48.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.91	63.91	0.00	0.00	196.67	196.67	100.0		
5/29/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.98	84.98	0.00	0.00	49.72	49.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	65.28	65.28	0.00	0.00	199.98	199.98	100.0		
5/30/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.96	84.96	0.00	0.00	50.22	50.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	65.98	65.98	0.00	0.00	201.16	201.16	100.0		
5/31/2011	0.15	0.00	0.03	0.17	0.00	0.79	74.50	75.29	0.49	0.02	37.75	38.26	0.00	0.31	2.13	2.44	0.00	0.28	0.70	0.99	0.00	0.06	61.92	61.97	0.64	1.46	177.02	179.13	98.8		

Total [ML]: 0.15 0.43 1352.35 1352.93 0.01 0.85 1194.94 1195.79 0.49 0.06 767.85 768.41 0.00 0.36 944.48 944.84 0.00 0.40 726.68 727.09 0.00 0.07 1365.42 1365.49 0.65 2.17 6351.73 6354.55

Report Created: Wednesday, June 01, 2011

Water Volume [%]:

Untreated 0.0%
Below Dose 0.0%
To Dose 100.0%

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV\2011\05-2011

Notes: 1 UV Comparative Dose: 18.1 mj/cm2

Submitted By (Print): D.Sulymka

Original Signed By: D.Sulymka

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-100A**
Report Period: **May 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]								
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total					
5/1/2011	NA	19.2	25.1	24.4	75.1	87.9	80.0	235.7	81.5	120.4	128.4	85.7	81.8	110.6	81.9	110.8	91	2223	3282	654	653	654	654	654	653	100.0	0.00	0.00	80.03	80.03					
5/2/2011	NA	19.8	25.0	24.3	75.6	84.4	79.8	238.4	80.7	108.2	129.5	108.3	106.5	120.3	106.6	120.4	102	2234	3294	678	677	678	678	678	677	100.0	0.00	0.00	79.84	79.84					
5/3/2011	94.0	20.1	24.6	24.1	77.9	88.6	83.1	OL	OL	OL	133.5	133.0	132.8	133.4	133.0	133.1	102	2234	3294	702	701	702	702	702	701	100.0	0.00	0.00	83.05	83.05					
5/4/2011	93.9	20.1	24.7	24.1	81.4	88.1	85.0	OL	OL	OL	136.4	136.1	135.8	136.6	136.2	136.2	102	2234	3294	726	725	726	726	726	725	100.0	0.00	0.00	85.02	85.02					
5/5/2011	93.2	19.9	24.6	24.1	81.2	88.3	85.0	OL	OL	OL	136.3	136.1	135.7	136.4	136.1	136.2	102	2234	3294	750	749	750	750	750	749	100.0	0.00	0.00	84.99	84.99					
5/6/2011	93.0	20.6	48.2	24.2	15.8	91.3	82.4	OL	OL	OL	132.9	132.3	131.8	132.5	132.1	132.3	102	2234	3294	774	773	774	774	774	773	100.0	0.00	0.00	82.47	82.47					
5/7/2011	NA	20.5	24.6	24.2	72.3	77.8	75.5	OL	OL	OL	122.0	121.2	121.1	121.6	121.3	121.2	102	2234	3294	798	797	798	798	798	797	100.0	0.00	0.00	75.53	75.53					
5/8/2011	NA	20.2	24.5	24.1	72.8	77.4	75.6	OL	OL	OL	122.2	121.4	121.1	121.6	121.2	121.5	102	2234	3294	822	821	822	822	822	821	100.0	0.00	0.00	75.60	75.60					
5/9/2011	93.4	20.1	24.5	24.2	69.3	78.8	72.8	OL	OL	OL	118.9	116.9	116.7	117.3	116.9	117.0	102	2234	3294	846	845	846	846	846	845	100.0	0.00	0.00	72.83	72.83					
5/10/2011	NA	19.8	25.0	24.2	60.0	81.5	76.4	OL	OL	OL	132.2	122.6	122.7	123.1	122.7	122.8	102	2234	3294	870	869	870	870	870	869	100.0	0.00	0.00	76.41	76.41					
5/11/2011	93.9	20.3	32.3	24.2	15.2	85.3	79.1	OL	OL	OL	133.3	126.7	126.7	127.3	126.8	127.1	102	2234	3294	894	893	894	894	894	893	100.0	0.00	0.00	79.08	79.08					
5/12/2011	94.2	20.2	24.6	24.1	77.5	88.2	82.9	OL	OL	OL	133.0	132.7	132.4	133.1	132.7	132.7	102	2234	3294	918	917	918	918	918	917	100.0	0.00	0.00	82.78	82.78					
5/13/2011	94.7	20.3	25.3	24.1	40.3	89.0	84.9	OL	OL	OL	136.2	135.8	135.5	136.3	135.9	136.0	102	2234	3294	942	941	942	942	942	941	100.0	0.00	0.00	84.92	84.92					
5/14/2011	NA	20.4	24.7	24.1	81.2	89.2	85.0	OL	OL	OL	136.5	136.2	135.7	136.4	136.1	136.2	102	2234	3294	966	965	966	966	966	965	100.0	0.00	0.00	85.02	85.02					
5/15/2011	NA	0.5	24.7	24.0	17.3	88.7	85.0	72.7	1.5	108.4	136.3	135.7	135.1	136.3	135.7	135.9	102	2234	3294	987	987	988	988	988	987	99.5	0.00	0.39	76.80	77.20					
5/16/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	102	2234	3294	987	987	988	988	987	987	OL	0.00	0.00	0.00	0.00					
5/17/2011	95.3	20.1	106.6	24.4	3.1	94.1	84.7	154.3	136.1	137.9	164.8	135.1	137.8	142.2	135.1	157.9	103	2235	3294	999	999	1000	1000	1000	999	100.0	0.00	0.00	42.57	42.57					
5/18/2011	93.7	20.0	24.5	24.1	79.8	90.3	85.0	OL	OL	0.2	136.9	136.2	136.9	136.4	136.1	137.9	103	2235	3294	1023	1023	1024	1024	1024	1023	100.0	0.00	0.00	84.99	84.99					
5/19/2011	94.9	0.0	27.2	24.1	5.1	90.3	84.5	OL	OL	0.2	140.6	135.7	138.5	135.3	134.9	174.8	103	2235	3294	1029	1029	1029	1030	1029	1029	100.0	0.00	0.00	20.38	20.38					
5/20/2011	94.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	103	2235	3294	1029	1029	1029	1030	1029	1029	OL	0.00	0.00	0.00	0.00					
5/21/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	103	2235	3294	1029	1029	1029	1030	1029	1029	OL	0.00	0.00	0.00	0.00					
5/22/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	103	2235	3294	1029	1029	1029	1030	1029	1029	OL	0.00	0.00	0.00	0.00					
5/23/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	103	2235	3294	1029	1029	1029	1030	1029	1029	OL	0.00	0.00	0.00	0.00					
5/24/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	103	2235	3294	1029	1029	1029	1030	1029	1029	OL	0.00	0.00	0.00	0.00					
5/25/2011	96.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	103	2235	3294	1029	1029	1029	1030	1029	1029	OL	0.00	0.00	0.00	0.00					
5/26/2011	94.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	103	2235	3294	1029	1029	1029	1030	1029	1029	OL	0.00	0.00	0.00	0.00					
5/27/2011	94.3	0.0	26.6	14.2	0.3	79.4	23.4	21.7	21.3	43.1	42.5	39.9	60.3	73.9	66.8	104.8	103	2235	3294	1029	1029	1030	1030	1029	1029	44.7	0.00	0.04	0.03	0.07					
5/28/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	103	2235	3294	1029	1029	1030	1030	1029	1029	OL	0.00	0.00	0.00	0.00					
5/29/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	103	2235	3294	1029	1029	1030	1030	1029	1029	OL	0.00	0.00	0.00	0.00					
5/30/2011	94.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	103	2235	3294	1029	1029	1030	1030	1029	1029	OL	0.00	0.00	0.00	0.00					
5/31/2011	94.7	0.0	27.2	6.8	10.1	72.5	41.9	33.1	27.8	27.3	78.3	33.6	88.6	112.8	56.8	92.4	103	2235	3294	1029	1029	1030	1030	1029	1029	15.5	0.15	0.00	0.03	0.17					

Report Created: **Wednesday, June 01, 2011**

Total [ML]: **0.15 0.43 1352.35 1352.93**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: 252.00
Licence Number: PWS-09-412 RR

Reactor: UVR-200A
Report Period: May 2011

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
5/1/2011	NA	OL	OL	OL	OL	OL	OL	3.8	3.6	2.2	OL	1.3	0.7	4.1	1.7	1.0	591	590	590	437	437	437	496	496	496	OL	0.00	0.00	0.00	0.00
5/2/2011	NA	OL	OL	OL	OL	OL	OL	0.2	0.1	OL	OL	OL	OL	0.4	0.1	OL	591	590	590	437	437	437	496	496	496	OL	0.00	0.00	0.00	0.00
5/3/2011	94.0	OL	OL	OL	OL	OL	OL	1.2	0.9	0.3	0.4	0.2	0.1	1.9	0.3	0.1	591	590	590	437	437	437	496	496	496	OL	0.00	0.00	0.00	0.00
5/4/2011	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	591	590	590	437	437	437	496	496	496	OL	0.00	0.00	0.00	0.00
5/5/2011	93.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	591	590	590	437	437	437	496	496	496	OL	0.00	0.00	0.00	0.00
5/6/2011	93.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	591	590	590	437	437	437	496	496	496	OL	0.00	0.00	0.00	0.00
5/7/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	591	590	590	437	437	437	496	496	496	OL	0.00	0.00	0.00	0.00
5/8/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	591	590	590	437	437	437	496	496	496	OL	0.00	0.00	0.00	0.00
5/9/2011	93.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	591	590	590	437	437	437	496	496	496	OL	0.00	0.00	0.00	0.00
5/10/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	591	590	590	437	437	437	496	496	496	OL	0.00	0.00	0.00	0.00
5/11/2011	93.9	7.5	17.2	12.4	17.6	70.8	44.2	51.7	34.0	39.8	29.1	13.6	35.6	141.0	48.9	56.9	591	591	590	437	437	437	496	496	496	OL	0.00	0.06	0.00	0.06
5/12/2011	94.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	591	591	590	437	437	437	496	496	496	OL	0.00	0.00	0.00	0.00
5/13/2011	94.7	31.0	77.9	58.0	17.3	85.2	42.6	162.7	153.4	132.9	214.8	199.2	150.4	199.8	123.7	152.9	591	591	590	437	437	437	496	496	496	100.0	0.00	0.00	0.09	0.09
5/14/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	591	591	590	437	437	437	496	496	496	OL	0.00	0.00	0.00	0.00
5/15/2011	NA	20.1	58.9	24.7	36.6	91.8	84.6	172.7	155.5	21.8	205.3	145.7	164.0	221.1	132.9	137.6	591	591	591	439	439	440	498	498	499	100.0	0.00	0.00	7.78	7.78
5/16/2011	NA	21.9	24.5	24.1	53.4	91.6	84.9	OL	OL	0.3	147.7	136.1	137.1	230.7	136.2	136.6	591	591	591	463	463	464	522	522	523	100.0	0.00	0.00	84.94	84.94
5/17/2011	95.3	0.0	25.3	24.1	3.0	88.6	84.9	OL	OL	0.4	163.2	136.1	145.7	228.3	136.5	137.2	591	591	591	475	475	476	534	534	535	100.0	0.00	0.00	42.44	42.44
5/18/2011	93.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	591	591	591	475	475	476	534	534	535	OL	0.00	0.00	0.00	0.00
5/19/2011	94.9	0.0	64.8	24.2	4.5	101.1	84.7	117.5	109.0	9.6	205.4	134.9	162.6	249.9	134.2	136.9	592	592	591	492	492	492	551	551	551	100.0	0.00	0.00	59.42	59.42
5/20/2011	94.9	22.2	24.6	24.1	81.2	87.3	84.9	OL	OL	0.2	218.0	136.4	166.4	263.1	136.4	136.8	592	592	591	516	516	516	575	575	575	100.0	0.00	0.00	84.89	84.89
5/21/2011	NA	22.0	24.6	24.1	81.5	88.2	85.0	OL	OL	0.2	215.9	136.6	160.7	259.3	136.5	136.7	592	592	591	540	540	540	599	599	599	100.0	0.00	0.00	85.01	85.01
5/22/2011	NA	22.1	24.6	24.1	78.9	87.5	83.1	OL	OL	0.2	208.4	133.5	152.3	256.4	133.7	134.0	592	592	591	564	564	564	623	623	623	100.0	0.00	0.00	83.11	83.11
5/23/2011	NA	22.3	24.6	24.1	64.7	110.3	80.6	OL	OL	0.2	201.0	129.6	145.4	254.2	129.7	129.9	592	592	591	588	588	588	647	647	647	100.0	0.00	0.00	80.62	80.62
5/24/2011	NA	22.2	24.5	24.1	57.0	91.0	85.0	OL	OL	0.1	189.0	136.1	137.8	248.9	136.3	136.7	592	592	591	612	612	612	671	671	671	100.0	0.00	0.00	84.97	84.97
5/25/2011	96.1	21.8	24.5	24.1	80.3	88.2	85.0	OL	OL	0.1	179.9	136.1	136.1	240.7	136.4	136.7	592	592	591	636	636	636	695	695	695	100.0	0.00	0.00	84.99	84.99
5/26/2011	94.6	21.7	24.5	24.1	80.4	87.4	84.2	OL	OL	0.1	171.2	134.8	134.9	236.9	135.1	135.4	592	592	591	660	660	660	719	719	719	100.0	0.00	0.00	84.19	84.19
5/27/2011	94.3	22.0	33.0	24.1	9.6	88.1	84.0	OL	OL	0.2	162.9	134.5	134.8	234.3	135.1	135.2	592	592	591	684	684	684	743	743	743	100.0	0.00	0.00	84.04	84.04
5/28/2011	NA	21.9	24.6	24.1	80.5	87.7	84.0	OL	OL	0.2	150.0	134.4	134.6	229.0	134.8	134.9	592	592	591	708	708	708	767	767	767	100.0	0.00	0.00	84.00	84.00
5/29/2011	NA	22.5	24.9	24.1	81.7	88.1	85.0	OL	OL	0.2	140.9	136.0	136.2	226.2	136.4	136.6	592	592	591	732	732	732	791	791	791	100.0	0.00	0.00	84.98	84.98
5/30/2011	94.6	21.7	24.5	24.1	82.0	88.0	85.0	OL	OL	0.2	136.6	135.9	136.1	222.1	136.4	136.3	592	592	591	756	756	756	815	815	815	100.0	0.00	0.00	84.96	84.96
5/31/2011	94.7	7.9	28.8	24.0	4.0	87.3	79.6	53.7	21.8	99.5	127.7	125.9	126.6	210.1	126.9	126.6	592	592	592	779	779	779	838	838	838	98.9	0.00	0.79	74.50	75.29

Report Created: Wednesday, June 01, 2011

Total [ML]: 0.01 0.85 1194.94 1195.79

Water Volume [%]:

Untreated 0.0 %
Below Dose 0.1 %
To Dose 99.9 %

- Notes:
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-300A**
Report Period: **May 2011**

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
5/1/2011	NA	21.8	25.0	24.3	47.5	55.2	50.3	89.8	81.6	81.6	118.1	81.4	81.3	0.1	OL	0.1	4714	4714	4713	4573	4573	4573	4732	4732	4731	100.0	0.00	0.00	50.31	50.31
5/2/2011	NA	21.7	24.9	24.3	47.6	53.0	50.1	94.6	83.3	81.4	123.0	81.2	81.1	0.1	OL	0.1	4738	4738	4737	4597	4597	4597	4732	4732	4731	100.0	0.00	0.00	50.13	50.13
5/3/2011	94.0	21.8	24.9	24.3	47.6	55.5	51.8	95.8	86.9	84.0	123.6	83.9	83.8	OL	OL	0.1	4762	4762	4761	4621	4621	4621	4732	4732	4731	100.0	0.00	0.00	51.84	51.84
5/4/2011	93.9	21.8	25.2	24.3	50.3	55.2	52.8	95.5	89.2	85.6	121.4	85.4	85.3	OL	OL	0.1	4786	4786	4785	4645	4645	4645	4732	4732	4731	100.0	0.00	0.00	52.82	52.82
5/5/2011	93.2	21.7	24.9	24.3	50.1	55.2	52.8	95.5	91.2	85.6	120.9	85.4	85.3	OL	OL	0.1	4810	4810	4809	4669	4669	4669	4732	4732	4731	100.0	0.00	0.00	52.81	52.81
5/6/2011	93.0	21.4	29.6	24.3	3.2	60.2	51.9	95.3	91.9	84.3	119.5	84.3	83.9	OL	OL	0.1	4834	4834	4833	4693	4693	4693	4732	4732	4731	100.0	0.00	0.00	51.95	51.95
5/7/2011	NA	21.9	25.1	24.3	47.5	52.7	50.2	95.5	94.2	81.4	118.3	81.3	81.2	OL	OL	OL	4858	4858	4857	4717	4717	4717	4732	4732	4731	100.0	0.00	0.00	50.19	50.19
5/8/2011	NA	21.7	25.2	24.3	47.6	52.8	50.1	94.2	94.8	81.5	114.6	81.1	81.0	OL	OL	OL	4882	4882	4881	4741	4741	4741	4732	4732	4731	100.0	0.00	0.00	50.09	50.09
5/9/2011	93.4	21.5	26.0	24.3	40.4	52.4	49.6	92.7	95.0	81.0	111.5	80.1	79.9	OL	OL	OL	4892	4892	4891	4751	4751	4751	4732	4732	4731	100.0	0.00	0.00	20.54	20.54
5/10/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4892	4892	4891	4751	4751	4751	4732	4732	4731	OL	0.00	0.00	0.00	0.00
5/11/2011	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4892	4892	4891	4751	4751	4751	4732	4732	4731	OL	0.00	0.00	0.00	0.00
5/12/2011	94.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4892	4892	4891	4751	4751	4751	4732	4732	4731	OL	0.00	0.00	0.00	0.00
5/13/2011	94.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4892	4892	4891	4751	4751	4751	4732	4732	4731	OL	0.00	0.00	0.00	0.00
5/14/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4892	4892	4891	4751	4751	4751	4732	4732	4731	OL	0.00	0.00	0.00	0.00
5/15/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4892	4892	4891	4751	4751	4751	4732	4732	4731	OL	0.00	0.00	0.00	0.00
5/16/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4892	4892	4891	4751	4751	4751	4732	4732	4731	OL	0.00	0.00	0.00	0.00
5/17/2011	95.3	19.5	25.2	24.3	34.7	65.1	61.4	72.7	70.4	74.9	118.3	95.2	94.8	96.3	94.4	94.3	4893	4893	4893	4763	4763	4763	4744	4743	4743	100.0	0.00	0.00	30.36	30.36
5/18/2011	93.7	21.8	24.9	24.2	52.6	70.5	64.2	OL	OL	0.2	124.7	103.3	103.2	103.3	103.2	103.2	4893	4893	4893	4787	4787	4787	4768	4767	4767	100.0	0.00	0.00	64.19	64.19
5/19/2011	94.9	18.0	26.8	24.3	1.6	79.3	70.4	81.2	75.9	98.3	124.2	84.9	84.3	92.9	85.1	85.2	4898	4898	4898	4795	4795	4794	4775	4775	4775	99.8	0.00	0.05	22.62	22.66
5/20/2011	94.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4898	4898	4898	4795	4795	4794	4775	4775	4775	OL	0.00	0.00	0.00	0.00
5/21/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4898	4898	4898	4795	4795	4794	4775	4775	4775	OL	0.00	0.00	0.00	0.00
5/22/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4898	4898	4898	4795	4795	4794	4775	4775	4775	OL	0.00	0.00	0.00	0.00
5/23/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4898	4898	4898	4795	4795	4794	4775	4775	4775	OL	0.00	0.00	0.00	0.00
5/24/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4898	4898	4898	4795	4795	4794	4775	4775	4775	OL	0.00	0.00	0.00	0.00
5/25/2011	96.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4898	4898	4898	4795	4795	4794	4775	4775	4775	OL	0.00	0.00	0.00	0.00
5/26/2011	94.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4898	4898	4898	4795	4795	4794	4775	4775	4775	OL	0.00	0.00	0.00	0.00
5/27/2011	94.3	22.0	41.0	24.3	3.4	52.4	48.7	79.5	70.7	73.7	119.5	78.9	78.5	85.5	78.2	78.6	4899	4898	4898	4812	4811	4811	4792	4792	4792	100.0	0.00	0.00	33.55	33.55
5/28/2011	NA	21.9	24.9	24.3	45.9	51.7	48.8	OL	OL	0.3	123.3	79.1	78.9	84.1	79.0	79.0	4899	4898	4898	4836	4835	4835	4816	4816	4816	100.0	0.00	0.00	48.77	48.77
5/29/2011	NA	21.8	24.9	24.3	47.7	51.9	49.7	OL	OL	0.3	122.6	80.6	80.4	82.1	80.6	80.6	4899	4898	4898	4860	4859	4859	4840	4840	4840	100.0	0.00	0.00	49.72	49.72
5/30/2011	94.6	21.8	24.8	24.3	47.6	52.6	50.2	OL	OL	0.2	120.6	81.4	81.2	81.7	81.3	81.4	4899	4898	4898	4884	4883	4883	4864	4864	4864	100.0	0.00	0.00	50.22	50.22
5/31/2011	94.7	0.0	28.4	23.0	4.4	71.4	44.5	49.0	47.8	67.4	112.3	73.8	73.1	76.2	73.8	74.0	4900	4900	4900	4903	4903	4903	4884	4883	4883	98.7	0.49	0.02	37.75	38.26

Report Created: **Wednesday, June 01, 2011**

Total [ML]: **0.49 0.06 767.85 768.41**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-400A**
Report Period: **May 2011**

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
5/1/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2149	3659	3658	3726	3726	2217	3113	3113	3112	OL	0.00	0.00	0.00	0.00	
5/2/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2149	3659	3658	3726	3726	2217	3113	3113	3112	OL	0.00	0.00	0.00	0.00	
5/3/2011	94.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2149	3659	3658	3726	3726	2217	3113	3113	3112	OL	0.00	0.00	0.00	0.00	
5/4/2011	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2149	3659	3658	3726	3726	2217	3113	3113	3112	OL	0.00	0.00	0.00	0.00	
5/5/2011	93.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2149	3659	3658	3726	3726	2217	3113	3113	3112	OL	0.00	0.00	0.00	0.00	
5/6/2011	93.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2149	3659	3658	3726	3726	2217	3113	3113	3112	OL	0.00	0.00	0.00	0.00	
5/7/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2149	3659	3658	3726	3726	2217	3113	3113	3112	OL	0.00	0.00	0.00	0.00	
5/8/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2149	3659	3658	3726	3726	2217	3113	3113	3112	OL	0.00	0.00	0.00	0.00	
5/9/2011	93.4	18.9	27.7	24.5	8.6	48.8	46.6	69.6	66.5	66.4	34.0	90.9	61.7	91.6	102.3	127.1	2163	3673	3672	3730	3731	2222	3127	3127	3127	100.0	0.00	0.00	27.30	27.30
5/10/2011	NA	21.9	27.6	24.3	31.2	52.9	50.1	117.6	80.7	80.4	4.1	87.6	68.9	105.2	111.2	143.6	2187	3697	3696	3731	3731	2222	3151	3151	3151	100.0	0.00	0.00	50.05	50.05
5/11/2011	93.9	22.1	26.2	24.3	48.2	55.3	51.3	132.5	83.1	82.9	0.1	OL	OL	104.0	108.5	140.4	2211	3721	3720	3731	3731	2222	3175	3175	3175	100.0	0.00	0.00	51.32	51.32
5/12/2011	94.2	22.1	26.2	24.4	50.3	57.9	54.0	132.9	75.1	74.6	113.6	99.4	72.5	102.7	107.2	135.7	2235	3745	3744	3740	3740	2231	3199	3199	3199	100.0	0.00	0.00	53.96	53.96
5/13/2011	94.7	21.0	30.1	24.6	43.1	62.9	57.7	136.4	59.6	59.2	122.3	102.7	73.5	106.3	107.4	136.0	2259	3769	3768	3764	3764	2255	3223	3223	3223	100.0	0.00	0.00	57.71	57.71
5/14/2011	NA	21.0	28.9	24.6	56.3	62.2	59.5	138.4	61.3	61.1	123.5	102.3	72.8	104.4	105.4	131.7	2283	3793	3792	3788	3788	2279	3247	3247	3247	100.0	0.00	0.00	59.55	59.55
5/15/2011	NA	20.9	27.7	24.6	56.4	61.8	58.9	134.3	60.6	60.4	120.7	100.5	70.6	101.9	103.0	126.6	2307	3817	3816	3812	3812	2303	3271	3271	3271	100.0	0.00	0.00	58.93	58.93
5/16/2011	NA	21.1	27.9	24.6	32.2	86.5	59.0	134.4	60.6	60.6	121.4	102.2	71.2	103.3	103.9	126.9	2331	3841	3840	3836	3836	2327	3295	3295	3295	100.0	0.00	0.00	58.99	58.99
5/17/2011	95.3	21.5	36.3	24.6	29.7	66.4	60.5	133.6	62.0	62.0	122.2	103.1	70.9	103.6	104.8	127.2	2343	3853	3853	3848	3849	2339	3307	3307	3307	100.0	0.00	0.00	30.63	30.63
5/18/2011	93.7	16.3	24.9	24.3	44.4	88.9	84.8	121.5	84.0	84.2	116.5	103.0	86.6	100.6	104.7	124.2	2346	3856	3856	3851	3852	2342	3310	3310	3310	99.5	0.00	0.05	10.26	10.31
5/19/2011	94.9	21.8	26.4	24.5	60.6	95.0	72.4	99.8	73.9	73.9	119.5	101.9	75.6	88.9	93.8	116.0	2370	3880	3880	3875	3876	2366	3334	3334	3334	100.0	0.00	0.00	72.40	72.40
5/20/2011	94.9	21.7	25.9	24.5	55.7	69.6	66.8	97.8	68.3	68.3	115.5	97.8	69.6	95.9	97.4	116.2	2394	3904	3904	3899	3900	2390	3358	3358	3358	100.0	0.00	0.00	66.81	66.81
5/21/2011	NA	21.7	28.9	24.6	51.6	69.8	58.8	113.8	60.4	60.4	114.0	96.0	67.2	93.7	93.0	110.0	2418	3928	3928	3923	3924	2414	3382	3382	3382	100.0	0.00	0.00	58.81	58.81
5/22/2011	NA	24.1	30.4	24.7	48.2	55.4	51.3	117.8	53.0	52.9	113.2	94.5	65.6	90.2	89.5	104.2	2442	3952	3952	3947	3948	2438	3406	3406	3406	100.0	0.00	0.00	51.30	51.30
5/23/2011	NA	22.6	28.4	24.7	42.1	67.3	50.2	117.4	51.9	51.9	106.5	91.8	62.4	88.5	86.8	100.7	2466	3976	3976	3971	3972	2462	3430	3430	3430	100.0	0.00	0.00	50.25	50.25
5/24/2011	NA	23.4	30.6	24.5	37.1	66.5	61.1	115.9	62.6	62.6	108.4	90.3	64.4	86.4	83.1	96.6	2490	4000	4000	3995	3996	2486	3454	3454	3454	100.0	0.00	0.00	61.11	61.11
5/25/2011	96.1	24.1	25.2	24.6	50.0	57.7	54.5	112.2	56.1	56.1	102.6	84.6	57.6	83.4	79.1	91.2	2514	4024	4024	4019	4020	2510	3478	3478	3478	100.0	0.00	0.00	54.48	54.48
5/26/2011	94.6	24.0	25.3	24.7	48.8	58.6	52.2	108.7	53.9	53.8	98.4	80.2	54.9	81.0	76.3	87.6	2538	4048	4048	4043	4044	2534	3502	3502	3502	100.0	0.00	0.00	52.19	52.19
5/27/2011	94.3	24.1	31.2	24.7	10.4	54.2	52.2	107.0	53.7	53.7	97.2	78.5	55.1	79.6	74.4	85.7	2546	4055	4055	4050	4051	2542	3510	3509	3509	100.0	0.00	0.00	16.29	16.29
5/28/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2546	4055	4055	4050	4051	2542	3510	3509	3509	OL	0.00	0.00	0.00	0.00
5/29/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2546	4055	4055	4050	4051	2542	3510	3509	3509	OL	0.00	0.00	0.00	0.00
5/30/2011	94.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2546	4055	4055	4050	4051	2542	3510	3509	3509	OL	0.00	0.00	0.00	0.00
5/31/2011	94.7	15.0	27.9	22.9	14.1	81.3	47.2	71.6	47.0	41.9	80.1	75.8	60.4	66.4	66.9	75.8	2547	4057	4056	4052	4052	2543	3511	3511	3510	87.4	0.00	0.31	2.13	2.44

Report Created: **Wednesday, June 01, 2011**

Total [ML]: **0.00 0.36 944.48 944.84**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-500A**
Report Period: **May 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2												UV Lamp Status Hours												% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	W/m2												Hours													Untreated	Below Dose	To Dose	Total
								1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3											
5/1/2011	NA	21.1	63.0	25.9	11.6	69.8	63.4	105.6	91.8	171.6	128.4	88.4	111.4	172.0	80.5	56.0	1141	1602	1141	1753	179	3438	1280	3319	1280	100.0	0.00	0.00	57.84	57.84						
5/2/2011	NA	21.2	24.6	24.2	60.4	66.1	63.5	105.7	102.4	162.6	119.1	102.5	107.4	OL	OL	OL	1165	1626	1165	1777	203	3462	1280	3319	1280	100.0	0.00	0.00	63.50	63.50						
5/3/2011	94.0	21.1	24.7	24.2	61.5	69.1	65.8	106.8	106.1	150.0	113.7	106.3	107.5	OL	OL	OL	1189	1650	1189	1801	227	3486	1280	3319	1280	100.0	0.00	0.00	65.81	65.81						
5/4/2011	93.9	20.6	24.7	24.2	64.9	69.0	67.1	108.4	108.2	144.3	109.4	108.2	109.0	OL	OL	OL	1213	1674	1213	1825	251	3510	1280	3319	1280	100.0	0.00	0.00	67.15	67.15						
5/5/2011	93.2	20.7	24.6	24.2	64.7	69.8	67.2	108.6	108.3	142.3	108.5	108.4	109.0	OL	OL	OL	1237	1698	1237	1849	275	3534	1280	3319	1280	100.0	0.00	0.00	67.21	67.21						
5/6/2011	93.0	20.9	44.3	24.2	5.9	91.9	69.8	113.1	112.5	142.3	112.6	112.6	113.5	OL	OL	OL	1261	1722	1261	1873	299	3558	1280	3319	1280	100.0	0.00	0.00	69.82	69.82						
5/7/2011	NA	21.0	24.6	24.2	76.8	81.3	79.3	127.5	127.3	150.5	127.2	127.3	127.9	OL	OL	OL	1285	1746	1285	1897	323	3582	1280	3319	1280	100.0	0.00	0.00	79.26	79.26						
5/8/2011	NA	20.5	24.6	24.1	76.7	81.5	79.3	127.7	127.3	150.4	127.2	127.4	127.8	OL	OL	OL	1309	1770	1309	1921	347	3606	1280	3319	1280	100.0	0.00	0.00	79.32	79.32						
5/9/2011	93.4	21.1	24.7	24.2	69.6	81.8	74.7	120.4	120.2	147.4	120.1	120.1	120.7	OL	OL	OL	1333	1794	1333	1945	371	3630	1280	3319	1280	100.0	0.00	0.00	74.69	74.69						
5/10/2011	NA	20.6	40.6	24.3	7.3	73.7	59.6	116.6	96.0	156.3	96.3	96.1	109.4	OL	OL	OL	1347	1808	1347	1959	385	3644	1280	3319	1280	100.0	0.00	0.00	34.63	34.63						
5/11/2011	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1347	1808	1347	1959	385	3644	1280	3319	1280	OL	0.00	0.00	0.00	0.00						
5/12/2011	94.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1347	1808	1347	1959	385	3644	1280	3319	1280	OL	0.00	0.00	0.00	0.00						
5/13/2011	94.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1347	1808	1347	1959	385	3644	1280	3319	1280	OL	0.00	0.00	0.00	0.00						
5/14/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1347	1808	1347	1959	385	3644	1280	3319	1280	OL	0.00	0.00	0.00	0.00						
5/15/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1347	1808	1347	1959	385	3644	1280	3319	1280	OL	0.00	0.00	0.00	0.00						
5/16/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1347	1808	1347	1959	385	3644	1280	3319	1280	OL	0.00	0.00	0.00	0.00						
5/17/2011	95.3	15.4	25.5	24.3	45.5	80.8	77.5	83.6	83.3	137.0	78.5	80.6	102.7	215.4	88.5	18.5	1359	1820	1358	1971	396	3656	1291	3331	1292	99.9	0.00	0.03	37.92	37.95						
5/18/2011	93.7	17.9	31.9	23.1	6.5	87.1	81.3	95.4	87.9	153.1	76.7	84.3	108.6	262.4	101.5	79.7	1367	1828	1367	1979	405	3665	1300	3340	1300	99.8	0.00	0.05	28.75	28.80						
5/19/2011	94.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1367	1828	1367	1979	405	3665	1300	3340	1300	OL	0.00	0.00	0.00	0.00						
5/20/2011	94.9	24.2	26.1	25.0	20.0	33.3	28.5	178.8	137.0	213.1	37.5	151.9	277.1	207.4	167.3	174.6	1368	1828	1367	1980	405	3665	1300	3340	1300	100.0	0.00	0.00	0.06	0.06						
5/21/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1368	1828	1367	1980	405	3665	1300	3340	1300	OL	0.00	0.00	0.00	0.00						
5/22/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1368	1828	1367	1980	405	3665	1300	3340	1300	OL	0.00	0.00	0.00	0.00						
5/23/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1368	1828	1367	1980	405	3665	1300	3340	1300	OL	0.00	0.00	0.00	0.00						
5/24/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1368	1828	1367	1980	405	3665	1300	3340	1300	OL	0.00	0.00	0.00	0.00						
5/25/2011	96.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1368	1828	1367	1980	405	3665	1300	3340	1300	OL	0.00	0.00	0.00	0.00						
5/26/2011	94.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1368	1828	1367	1980	405	3665	1300	3340	1300	OL	0.00	0.00	0.00	0.00						
5/27/2011	94.3	14.0	31.3	22.8	11.1	64.9	29.5	134.5	107.0	160.1	26.5	120.7	179.9	176.0	152.6	155.6	1368	1828	1367	1980	405	3665	1300	3340	1301	44.2	0.00	0.04	0.03	0.06						
5/28/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1368	1828	1367	1980	405	3665	1300	3340	1301	OL	0.00	0.00	0.00	0.00						
5/29/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1368	1828	1367	1980	405	3665	1300	3340	1301	OL	0.00	0.00	0.00	0.00						
5/30/2011	94.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1368	1828	1367	1980	405	3665	1300	3340	1301	OL	0.00	0.00	0.00	0.00						
5/31/2011	94.7	4.7	25.0	20.7	5.7	82.3	41.6	60.0	57.8	91.9	16.3	88.1	109.8	136.2	115.5	131.0	1368	1829	1368	1980	406	3665	1301	3340	1301	70.8	0.00	0.28	0.70	0.99						

Report Created: **Wednesday, June 01, 2011**

Total [ML]: **0.00 0.40 726.68 727.09**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-600A**
Report Period: **May 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
5/1/2011	NA	23.5	26.4	24.5	58.0	69.8	67.9	88.6	68.9	68.6	88.4	70.0	68.9	68.4	68.8	68.9	3341	3402	3402	3737	3737	3737	1430	3396	3395	100.0	0.00	0.00	6.00	6.00
5/2/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3341	3402	3402	3737	3737	3737	1430	3396	3395	OL	0.00	0.00	0.00	0.00
5/3/2011	94.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3341	3402	3402	3737	3737	3737	1430	3396	3395	OL	0.00	0.00	0.00	0.00
5/4/2011	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3341	3402	3402	3737	3737	3737	1430	3396	3395	OL	0.00	0.00	0.00	0.00
5/5/2011	93.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3341	3402	3402	3737	3737	3737	1430	3396	3395	OL	0.00	0.00	0.00	0.00
5/6/2011	93.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3341	3402	3402	3737	3737	3737	1430	3396	3395	OL	0.00	0.00	0.00	0.00
5/7/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3341	3402	3402	3737	3737	3737	1430	3396	3395	OL	0.00	0.00	0.00	0.00
5/8/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3341	3402	3402	3737	3737	3737	1430	3396	3395	OL	0.00	0.00	0.00	0.00
5/9/2011	93.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3341	3402	3402	3737	3737	3737	1430	3396	3395	OL	0.00	0.00	0.00	0.00
5/10/2011	NA	18.3	25.0	24.3	54.9	61.0	59.3	83.5	77.5	77.7	48.6	37.3	61.3	77.7	84.4	97.3	3351	3413	3412	3743	3743	3742	1440	3406	3405	100.0	0.00	0.00	24.88	24.88
5/11/2011	93.9	19.1	25.2	24.3	57.4	65.7	61.3	151.8	91.3	94.3	94.4	59.8	64.7	83.2	104.2	131.6	3375	3437	3436	3753	3753	3752	1464	3430	3429	100.0	0.00	0.00	61.27	61.27
5/12/2011	94.2	18.8	27.1	24.5	60.2	69.7	64.5	181.7	96.6	92.3	124.8	101.4	105.0	66.0	101.0	121.9	3399	3461	3460	3777	3777	3776	1488	3454	3453	100.0	0.00	0.00	64.46	64.46
5/13/2011	94.7	18.4	27.4	24.5	56.7	74.3	68.6	178.3	99.6	86.5	134.9	111.0	127.5	70.0	99.7	121.4	3423	3485	3484	3801	3801	3800	1512	3478	3477	100.0	0.00	0.00	68.64	68.64
5/14/2011	NA	18.5	26.9	24.5	66.9	73.6	70.5	171.6	95.6	81.1	131.4	109.7	121.7	71.7	97.4	114.4	3447	3509	3508	3825	3825	3824	1536	3502	3501	100.0	0.00	0.00	70.50	70.50
5/15/2011	NA	18.5	26.5	24.5	66.6	73.4	70.0	167.0	89.0	76.4	126.9	105.9	113.2	71.3	94.3	105.9	3471	3533	3532	3849	3849	3848	1560	3526	3525	100.0	0.00	0.00	70.04	70.04
5/16/2011	NA	18.5	27.6	24.4	43.8	95.1	70.9	162.8	88.4	74.0	126.9	106.1	111.0	72.1	94.7	105.1	3495	3557	3556	3873	3873	3872	1584	3550	3549	100.0	0.00	0.00	70.89	70.89
5/17/2011	95.3	19.4	36.7	24.4	14.5	78.8	71.8	163.0	87.6	73.2	126.2	106.4	109.2	73.0	95.2	104.9	3507	3569	3569	3885	3885	3885	1596	3562	3562	100.0	0.00	0.00	36.75	36.75
5/18/2011	93.7	19.0	32.2	24.3	6.2	87.2	81.3	152.3	87.8	83.0	124.5	104.5	110.9	81.8	93.3	101.7	3520	3582	3581	3898	3898	3898	1609	3575	3574	100.0	0.00	0.00	42.99	42.99
5/19/2011	94.9	18.9	31.9	24.4	19.4	102.3	79.0	154.3	91.0	80.7	124.5	105.9	112.9	79.8	94.1	103.9	3538	3599	3599	3916	3916	3915	1627	3593	3592	100.0	0.00	0.00	58.55	58.55
5/20/2011	94.9	18.5	25.2	24.4	60.0	81.9	78.2	157.6	92.4	79.6	120.7	103.6	109.9	79.2	91.4	103.9	3562	3623	3623	3940	3940	3939	1651	3617	3616	100.0	0.00	0.00	78.24	78.24
5/21/2011	NA	18.2	25.0	24.4	62.0	80.4	69.7	156.4	91.5	71.2	118.7	101.6	105.4	71.1	89.3	102.4	3586	3647	3647	3964	3964	3963	1675	3641	3640	100.0	0.00	0.00	69.74	69.74
5/22/2011	NA	18.5	25.1	24.5	58.0	66.6	61.5	156.1	93.6	63.0	116.6	101.2	100.6	63.1	88.6	101.7	3610	3671	3671	3988	3988	3987	1699	3665	3664	100.0	0.00	0.00	61.55	61.55
5/23/2011	NA	18.8	25.9	24.5	52.5	80.1	60.2	158.0	96.7	61.7	116.4	100.8	98.4	61.7	88.1	101.7	3634	3695	3695	4012	4012	4011	1723	3689	3688	100.0	0.00	0.00	60.17	60.17
5/24/2011	NA	18.7	26.9	24.4	48.7	77.5	72.3	153.4	95.2	73.8	114.0	98.9	95.2	73.5	86.5	98.3	3658	3719	3719	4036	4036	4035	1747	3713	3712	100.0	0.00	0.00	72.35	72.35
5/25/2011	96.1	18.9	25.0	24.5	60.5	69.2	65.3	146.9	91.0	66.7	110.7	95.8	89.8	66.7	84.2	92.3	3682	3743	3743	4060	4060	4059	1771	3737	3736	100.0	0.00	0.00	65.26	65.26
5/26/2011	94.6	18.4	25.1	24.5	58.7	69.3	62.7	145.5	89.7	64.2	108.5	94.8	86.1	64.1	82.8	91.0	3706	3767	3767	4084	4084	4083	1795	3761	3760	100.0	0.00	0.00	62.71	62.71
5/27/2011	94.3	17.4	26.1	24.5	55.4	67.2	63.4	144.3	89.0	64.9	107.1	93.4	83.6	64.9	81.8	90.0	3730	3791	3791	4108	4108	4107	1819	3785	3784	100.0	0.00	0.01	63.34	63.35
5/28/2011	NA	18.5	25.1	24.5	60.3	67.4	63.9	138.8	85.4	65.5	104.4	91.3	79.4	65.3	80.1	86.7	3754	3815	3815	4132	4132	4131	1843	3809	3808	100.0	0.00	0.00	63.91	63.91
5/29/2011	NA	18.5	25.3	24.4	63.2	67.9	65.3	136.4	83.7	66.8	102.1	90.2	75.9	66.7	79.0	84.0	3778	3839	3839	4156	4156	4155	1867	3833	3832	100.0	0.00	0.00	65.28	65.28
5/30/2011	94.6	19.0	25.0	24.5	63.2	68.4	66.0	133.4	83.7	67.4	99.8	88.3	73.1	67.5	77.4	82.5	3802	3863	3863	4180	4180	4179	1891	3857	3856	100.0	0.00	0.00	65.98	65.98
5/31/2011	94.7	16.1	44.7	24.3	3.0	82.8	62.8	126.8	80.5	64.6	95.0	84.7	68.9	63.5	74.6	77.8	3825	3887	3887	4203	4203	4203	1914	3880	3880	99.9	0.00	0.06	61.92	61.97

Report Created: **Wednesday, June 01, 2011**

Total [ML]: **0.00 0.07 1365.42 1365.49**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: 252.00
Licence Number: PWS-09-412 RR

Report Period: June 2011

Date	UVR-D100A				UVR-D200A				UVR-D300A				UVR-D400A				UVR-D500A				UVR-D600A				Total				% Volume Treated To Dose		
	Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]						
	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total		Untreated	Below
6/1/2011	0.00	0.01	60.78	60.79	0.00	0.00	0.00	0.00	0.00	0.00	50.60	50.60	0.00	0.00	30.89	30.89	0.00	0.30	10.39	10.69	0.00	0.09	45.09	45.19	0.00	0.40	197.75	198.15	99.8		
6/2/2011	0.00	0.00	36.08	36.08	0.00	0.00	48.98	48.98	0.00	0.00	65.62	65.62	0.00	0.00	0.00	0.00	0.24	0.30	2.39	2.94	0.00	0.27	68.10	68.37	0.24	0.57	221.18	221.99	99.6		
6/3/2011	0.05	0.00	26.77	26.82	0.00	0.00	71.71	71.71	0.00	0.05	48.43	48.48	0.00	0.03	26.49	26.52	0.01	0.13	2.19	2.33	0.10	0.00	61.63	61.74	0.16	0.20	237.23	237.59	99.8		
6/4/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.03	85.03	0.00	0.00	0.00	0.00	0.00	0.00	76.54	76.54	0.00	0.00	0.00	0.00	0.00	0.00	85.03	85.03	0.00	0.00	246.60	246.60	100.0		
6/5/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	0.00	0.00	0.00	0.00	72.25	72.25	0.00	0.00	0.00	0.00	0.00	0.00	83.76	83.76	0.00	0.00	241.01	241.01	100.0		
6/6/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	0.00	0.00	0.00	0.00	62.24	62.24	0.00	0.00	0.00	0.00	0.00	0.00	73.63	73.63	0.00	0.00	220.87	220.87	100.0		
6/7/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	0.00	0.00	0.00	0.00	57.97	57.97	0.00	0.00	0.00	0.00	0.00	0.00	69.05	69.05	0.00	0.00	212.03	212.03	100.0		
6/8/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	0.00	0.00	0.00	0.00	55.63	55.63	0.00	0.00	0.00	0.00	0.00	0.00	66.29	66.29	0.00	0.00	206.93	206.93	100.0		
6/9/2011	0.00	0.06	7.74	7.79	0.00	0.00	76.16	76.16	0.00	0.00	34.27	34.27	0.00	0.00	63.12	63.12	0.00	0.00	0.00	0.00	0.00	0.00	20.16	20.16	0.00	0.06	201.44	201.50	100.0		
6/10/2011	0.00	0.00	84.36	84.36	0.00	0.00	0.00	0.00	0.00	0.00	55.96	55.96	0.00	0.00	78.24	78.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	218.56	218.56	100.0		
6/11/2011	0.00	0.00	84.96	84.96	0.00	0.00	0.00	0.00	0.00	0.00	60.48	60.48	0.00	0.00	80.66	80.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	226.11	226.11	100.0		
6/12/2011	0.00	0.00	84.96	84.96	0.00	0.00	0.00	0.00	0.00	0.00	58.34	58.34	0.00	0.00	78.37	78.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	221.68	221.68	100.0		
6/13/2011	0.00	0.00	84.97	84.97	0.00	0.00	0.00	0.00	0.00	0.00	52.61	52.61	0.00	0.00	71.65	71.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	209.22	209.22	100.0		
6/14/2011	0.00	0.00	85.03	85.03	0.00	0.00	0.00	0.00	0.00	0.00	50.21	50.21	0.00	0.00	68.97	68.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	204.21	204.21	100.0		
6/15/2011	0.00	0.00	85.01	85.01	0.00	0.00	0.00	0.00	0.00	0.00	51.85	51.85	0.00	0.00	71.00	71.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	207.87	207.87	100.0		
6/16/2011	0.00	0.00	84.45	84.45	0.00	0.00	0.00	0.00	0.00	0.00	30.53	30.53	0.00	0.00	63.30	63.30	0.00	0.00	0.00	0.00	0.00	0.00	37.40	37.40	0.00	0.00	215.68	215.68	100.0		
6/17/2011	0.00	0.00	84.97	84.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.04	62.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.46	72.46	0.00	0.00	219.46	219.46	100.0	
6/18/2011	0.00	0.00	84.91	84.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	59.51	59.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70.18	70.18	0.00	0.00	214.60	214.60	100.0	
6/19/2011	0.00	0.00	84.97	84.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.60	58.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69.36	69.36	0.00	0.00	212.93	212.93	100.0	
6/20/2011	0.00	0.00	84.73	84.73	0.01	0.07	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.08	37.37	37.45	0.00	0.00	16.36	16.36	0.00	0.00	74.36	74.36	0.01	0.15	212.82	212.98	99.9		
6/21/2011	0.00	0.37	73.94	74.31	0.00	0.00	0.00	0.00	0.02	0.00	26.85	26.87	0.00	0.00	0.00	0.00	0.00	0.00	55.15	55.15	0.00	0.00	59.24	59.24	0.02	0.37	215.18	215.58	99.8		
6/22/2011	0.01	0.26	53.49	53.77	0.07	0.50	0.00	0.57	0.00	0.00	62.15	62.15	0.00	0.07	0.00	0.07	0.00	0.86	15.54	16.40	0.00	0.00	82.88	82.88	0.08	1.69	214.07	215.85	99.2		
6/23/2011	0.00	0.00	56.51	56.52	0.08	0.00	24.46	24.54	0.00	0.05	53.87	53.92	0.00	0.00	0.00	0.00	0.00	0.00	80.94	80.94	0.00	0.00	80.94	80.94	0.08	0.05	215.78	215.92	99.9		
6/24/2011	0.00	0.00	40.43	40.43	0.00	0.00	43.89	43.89	0.00	0.00	37.32	37.32	0.00	0.00	38.57	38.57	0.00	0.00	0.00	0.00	0.00	0.22	62.22	62.43	0.00	0.22	222.42	222.64	99.9		
6/25/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.95	84.95	0.00	0.00	1.70	1.70	0.00	0.00	61.96	61.96	0.00	0.00	0.00	0.00	0.05	0.00	70.28	70.33	0.05	0.00	218.89	218.94	100.0		
6/26/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	0.00	0.00	0.00	0.00	60.93	60.93	0.00	0.00	0.00	0.00	0.00	0.00	72.12	72.12	0.00	0.00	218.05	218.05	100.0		
6/27/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.11	84.11	0.00	0.00	0.00	0.00	0.00	0.00	56.73	56.73	0.00	0.00	0.00	0.00	0.00	0.00	67.58	67.58	0.00	0.00	208.42	208.42	100.0		
6/28/2011	0.00	0.00	0.00	0.00	0.00	0.00	81.14	81.14	0.00	0.00	0.00	0.00	0.00	0.00	51.83	51.83	0.00	0.00	0.00	0.00	0.00	0.00	61.99	61.99	0.00	0.00	194.96	194.96	100.0		
6/29/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.04	85.04	0.00	0.00	0.00	0.00	0.00	0.00	63.63	63.63	0.00	0.00	0.00	0.00	0.00	0.00	74.88	74.88	0.00	0.00	223.55	223.55	100.0		
6/30/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.02	85.02	0.00	0.00	0.00	0.00	0.00	0.00	64.25	64.25	0.00	0.00	0.00	0.00	0.00	0.00	75.47	75.47	0.00	0.00	224.73	224.73	100.0		

Total [ML]: 0.06 0.71 1289.05 1289.82 0.16 0.57 1195.55 1196.28 0.02 0.10 740.81 740.93 0.00 0.18 1572.71 1572.89 0.25 1.58 102.02 103.86 0.16 0.58 1604.10 1604.84 0.65 3.72 6504.25 6508.61

Report Created: Monday, July 04, 2011

Water Volume [%]:

Untreated 0.0%
Below Dose 0.1%
To Dose 99.9%

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV\2011\06-2011

Notes: 1 UV Comparative Dose: 18.1 mj/cm2

Submitted By (Print): D.Sulymka

Original Signed By: D.Sulymka

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-100A**
Report Period: **June 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
6/1/2011	NA	17.7	54.9	24.2	5.3	95.8	81.5	137.1	120.6	135.6	138.8	130.4	130.4	145.2	130.0	140.1	103	2235	3295	1047	1047	1048	1048	1047	1047	100.0	0.00	0.01	60.78	60.79
6/2/2011	94.2	20.3	25.5	24.1	40.2	93.6	84.7	OL	OL	0.2	136.8	135.6	136.0	138.2	135.2	135.6	103	2235	3295	1058	1057	1058	1058	1058	1057	100.0	0.00	0.00	36.08	36.08
6/3/2011	94.6	0.0	105.7	24.9	2.9	122.7	72.4	121.1	97.1	118.6	153.7	119.4	122.6	168.8	114.2	164.7	104	2236	3295	1067	1066	1067	1067	1067	1066	99.8	0.05	0.00	26.77	26.82
6/4/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	104	2236	3295	1067	1066	1067	1067	1067	1066	OL	0.00	0.00	0.00	0.00
6/5/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	104	2236	3295	1067	1066	1067	1067	1067	1066	OL	0.00	0.00	0.00	0.00
6/6/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	104	2236	3295	1067	1066	1067	1067	1067	1066	OL	0.00	0.00	0.00	0.00
6/7/2011	91.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	104	2236	3295	1067	1066	1067	1067	1067	1066	OL	0.00	0.00	0.00	0.00
6/8/2011	93.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	104	2236	3295	1067	1066	1067	1067	1067	1066	OL	0.00	0.00	0.00	0.00
6/9/2011	93.3	15.4	25.3	24.1	43.3	87.4	75.6	75.1	75.9	77.6	113.5	86.3	90.7	148.6	80.6	153.2	106	2238	3298	1069	1069	1069	1069	1069	1069	99.3	0.00	0.06	7.74	7.79
6/10/2011	94.8	19.8	25.3	24.2	61.3	106.9	84.3	84.9	91.5	113.8	160.7	127.1	126.2	159.7	119.8	169.8	114	2246	3306	1093	1093	1093	1093	1093	1093	100.0	0.00	0.00	84.36	84.36
6/11/2011	NA	20.4	24.8	24.1	70.7	92.5	85.0	OL	OL	OL	153.6	136.0	136.2	160.2	136.1	161.4	114	2246	3306	1117	1117	1117	1117	1117	1117	100.0	0.00	0.00	84.96	84.96
6/12/2011	NA	20.4	24.7	24.1	80.4	90.0	85.0	OL	OL	OL	149.3	136.1	136.2	155.1	136.1	156.9	114	2246	3306	1141	1141	1141	1141	1141	1141	100.0	0.00	0.00	84.96	84.96
6/13/2011	94.7	20.8	24.7	24.1	80.8	89.1	85.0	OL	OL	OL	145.6	136.2	136.1	152.2	136.1	152.9	114	2246	3306	1165	1165	1165	1165	1165	1165	100.0	0.00	0.00	84.97	84.97
6/14/2011	NA	20.2	24.6	24.1	81.8	88.3	85.0	OL	OL	OL	143.4	136.1	136.2	151.5	136.1	149.7	114	2246	3306	1189	1189	1189	1189	1189	1189	100.0	0.00	0.00	85.03	85.03
6/15/2011	94.4	20.2	24.6	24.1	81.6	88.6	85.0	OL	OL	OL	138.8	136.0	136.1	148.9	136.1	142.2	114	2246	3306	1213	1213	1213	1213	1213	1213	100.0	0.00	0.00	85.01	85.01
6/16/2011	92.4	20.0	24.6	24.1	69.6	93.5	84.5	OL	OL	OL	136.1	135.2	135.3	145.0	135.2	136.0	114	2246	3306	1237	1237	1237	1237	1237	1237	100.0	0.00	0.00	84.45	84.45
6/17/2011	95.2	20.6	24.6	24.1	81.5	88.6	85.0	OL	OL	OL	136.7	136.3	136.1	140.7	136.1	136.4	114	2246	3306	1261	1261	1261	1261	1261	1261	100.0	0.00	0.00	84.97	84.97
6/18/2011	NA	20.5	25.5	24.1	81.3	88.5	85.0	OL	OL	OL	136.6	136.2	136.2	141.0	136.0	136.3	114	2246	3306	1285	1285	1285	1285	1285	1285	100.0	0.00	0.00	84.91	84.91
6/19/2011	NA	19.9	24.6	24.1	81.4	88.4	85.0	OL	OL	OL	136.5	136.2	136.1	139.5	136.1	136.4	114	2246	3306	1309	1309	1309	1309	1309	1309	100.0	0.00	0.00	84.97	84.97
6/20/2011	95.2	20.0	24.9	24.1	49.8	108.4	84.8	OL	OL	OL	136.2	135.6	135.6	138.3	135.7	135.9	114	2246	3306	1333	1333	1333	1333	1333	1333	100.0	0.00	0.00	84.73	84.73
6/21/2011	NA	1.4	24.7	24.0	9.3	95.7	84.7	13.3	3.8	107.5	136.2	135.6	135.1	136.9	135.0	135.6	114	2246	3306	1354	1354	1354	1354	1354	1354	99.5	0.00	0.37	73.94	74.31
6/22/2011	96.6	0.0	29.4	24.0	1.8	86.5	79.1	20.3	5.4	9.6	128.2	126.3	126.0	134.8	126.0	127.4	115	2246	3306	1371	1370	1371	1371	1371	1370	99.5	0.01	0.26	53.49	53.77
6/23/2011	95.5	0.0	51.1	24.1	7.7	85.6	78.8	105.1	142.8	50.7	129.7	126.4	125.9	129.8	125.3	130.8	115	2247	3306	1388	1388	1388	1388	1388	1387	100.0	0.00	0.00	56.51	56.52
6/24/2011	95.9	20.4	31.1	24.2	27.8	87.8	78.7	OL	OL	OL	134.3	127.0	128.4	131.6	126.0	137.1	115	2247	3306	1400	1400	1400	1400	1400	1400	100.0	0.00	0.00	40.43	40.43
6/25/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1400	1400	1400	OL	0.00	0.00	0.00	0.00
6/26/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1400	1400	1400	OL	0.00	0.00	0.00	0.00
6/27/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1400	1400	1400	OL	0.00	0.00	0.00	0.00
6/28/2011	94.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1400	1400	1400	OL	0.00	0.00	0.00	0.00
6/29/2011	95.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1400	1400	1400	OL	0.00	0.00	0.00	0.00
6/30/2011	95.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1400	1400	1400	OL	0.00	0.00	0.00	0.00

Report Created: **Monday, July 04, 2011**

Total [ML]: **0.06 0.71 1289.05 1289.82**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-300A**
Report Period: **June 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]								
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total					
6/1/2011	NA	21.2	32.1	24.7	24.5	86.9	50.6	53.4	53.1	72.1	108.8	60.1	52.3	72.7	53.4	56.0	4924	4924	4924	4927	4926	4926	4908	4907	4907	100.0	0.00	0.00	50.60	50.60					
6/2/2011	94.2	18.8	34.6	24.3	39.0	79.9	65.6	100.8	100.8	103.3	115.9	60.2	57.9	103.6	100.7	100.8	4948	4948	4948	4930	4930	4930	4932	4931	4931	100.0	0.00	0.00	65.62	65.62					
6/3/2011	94.6	17.1	37.4	24.3	15.8	119.0	75.4	100.7	107.7	100.4	104.5	78.0	77.1	98.4	96.8	97.1	4963	4963	4963	4939	4938	4938	4947	4947	4947	99.9	0.00	0.05	48.43	48.48					
6/4/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4963	4963	4963	4939	4938	4938	4947	4947	4947	OL	0.00	0.00	0.00	0.00					
6/5/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4963	4963	4963	4939	4938	4938	4947	4947	4947	OL	0.00	0.00	0.00	0.00					
6/6/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4963	4963	4963	4939	4938	4938	4947	4947	4947	OL	0.00	0.00	0.00	0.00					
6/7/2011	91.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4963	4963	4963	4939	4938	4938	4947	4947	4947	OL	0.00	0.00	0.00	0.00					
6/8/2011	93.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4963	4963	4963	4939	4938	4938	4947	4947	4947	OL	0.00	0.00	0.00	0.00					
6/9/2011	93.3	21.8	31.2	24.3	14.8	58.8	50.4	72.2	76.8	78.4	101.1	80.9	80.4	81.6	80.5	81.0	4964	4964	4964	4955	4955	4954	4963	4963	4963	100.0	0.00	0.00	34.27	34.27					
6/10/2011	94.8	19.2	29.5	24.4	22.4	78.7	56.0	79.3	89.5	76.1	109.3	77.9	77.5	81.6	77.6	77.7	4973	4973	4973	4979	4979	4978	4987	4987	4987	100.0	0.00	0.00	55.96	55.96					
6/11/2011	NA	21.4	33.6	24.5	30.0	89.7	60.4	82.0	92.5	69.6	107.7	62.3	62.0	69.6	62.2	62.2	4997	4997	4997	5003	5003	5002	5011	5011	5011	100.0	0.00	0.00	60.48	60.48					
6/12/2011	NA	21.4	25.6	24.5	52.7	65.6	58.4	87.8	96.2	65.4	106.4	60.2	59.9	68.0	60.1	60.1	5021	5021	5021	5027	5027	5026	5035	5035	5035	100.0	0.00	0.00	58.34	58.34					
6/13/2011	94.7	21.9	25.8	24.6	47.1	60.1	52.6	92.9	95.9	60.5	104.4	54.7	54.2	65.8	54.4	54.4	5045	5045	5045	5051	5051	5050	5059	5059	5059	100.0	0.00	0.00	52.61	52.61					
6/14/2011	NA	21.2	25.8	24.7	46.5	53.7	50.2	97.1	97.0	59.7	103.7	52.7	51.9	65.4	52.0	52.1	5069	5069	5069	5075	5075	5074	5083	5083	5083	100.0	0.00	0.00	50.21	50.21					
6/15/2011	94.4	20.9	25.7	24.6	47.7	55.4	51.9	97.4	94.2	56.5	102.2	53.8	53.5	63.4	53.6	53.6	5093	5093	5093	5099	5099	5098	5107	5107	5107	100.0	0.00	0.00	51.85	51.85					
6/16/2011	92.4	20.1	29.0	24.5	3.0	58.0	50.3	95.4	92.3	55.0	99.3	56.7	56.4	61.9	56.4	56.5	5105	5104	5104	5114	5113	5113	5122	5122	5122	100.0	0.00	0.00	30.53	30.53					
6/17/2011	95.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	5105	5104	5104	5114	5113	5113	5122	5122	5122	OL	0.00	0.00	0.00	0.00					
6/18/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	5105	5104	5104	5114	5113	5113	5122	5122	5122	OL	0.00	0.00	0.00	0.00					
6/19/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	5105	5104	5104	5114	5113	5113	5122	5122	5122	OL	0.00	0.00	0.00	0.00					
6/20/2011	95.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	5105	5105	5104	5114	5113	5113	5122	5122	5122	OL	0.00	0.00	0.00	0.00					
6/21/2011	NA	22.4	32.1	24.3	2.5	81.8	62.6	121.9	107.4	107.8	166.7	87.2	87.3	97.5	86.7	86.9	5105	5105	5104	5114	5113	5113	5122	5122	5122	99.9	0.02	0.00	26.85	26.87					
6/22/2011	96.6	20.1	31.8	24.4	24.3	95.9	62.1	94.6	102.3	105.8	166.3	73.2	78.4	89.2	84.7	85.1	27	27	27	19	19	19	34	34	34	100.0	0.00	0.00	62.15	62.15					
6/23/2011	95.5	17.8	48.4	24.3	28.6	97.1	53.9	96.5	110.8	90.8	98.5	66.1	59.3	87.8	86.4	87.0	51	51	51	19	20	20	58	58	58	99.9	0.00	0.05	53.87	53.92					
6/24/2011	95.9	20.6	28.1	24.4	15.3	64.1	55.7	115.1	121.1	86.2	139.9	66.2	57.2	90.7	77.8	81.0	67	67	68	25	26	26	74	74	74	100.0	0.00	0.00	37.32	37.32					
6/25/2011	NA	20.5	39.7	25.1	21.3	72.5	53.0	119.3	119.2	79.2	165.4	73.4	62.6	87.3	58.9	68.1	68	68	68	26	27	27	75	75	75	100.0	0.00	0.00	1.70	1.70					
6/26/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	68	68	68	26	27	27	75	75	75	OL	0.00	0.00	0.00	0.00					
6/27/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	68	68	68	26	27	27	75	75	75	OL	0.00	0.00	0.00	0.00					
6/28/2011	94.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	68	68	68	26	27	27	75	75	75	OL	0.00	0.00	0.00	0.00					
6/29/2011	95.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	68	68	68	26	27	27	75	75	75	OL	0.00	0.00	0.00	0.00					
6/30/2011	95.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	68	68	68	26	27	27	75	75	75	OL	0.00	0.00	0.00	0.00					

Report Created: **Monday, July 04, 2011**

Total [ML]: **0.02 0.10 740.81 740.93**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-400A**
Report Period: **June 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
6/1/2011	NA	20.5	31.1	24.5	3.0	75.0	54.1	87.4	55.5	54.8	93.2	80.7	58.3	68.9	66.8	78.7	2561	4071	4070	4066	4066	2557	3525	3525	3524	100.0	0.00	0.00	30.89	30.89
6/2/2011	94.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2561	4071	4070	4066	4066	2557	3525	3525	3524	OL	0.00	0.00	0.00	0.00
6/3/2011	94.6	14.9	42.6	24.8	12.0	87.5	73.1	150.8	94.7	55.5	135.7	123.8	119.2	121.6	123.7	141.6	2562	4072	4071	4074	4075	2566	3534	3533	3533	99.9	0.00	0.03	26.49	26.52
6/4/2011	NA	21.9	24.6	24.2	71.4	82.1	76.5	OL	OL	OL	141.3	122.9	122.7	122.7	122.7	158.1	2562	4072	4071	4098	4099	2590	3558	3557	3557	100.0	0.00	0.00	76.54	76.54
6/5/2011	NA	21.8	24.6	24.2	66.0	78.8	72.2	OL	OL	OL	138.3	116.7	116.0	116.2	116.1	145.1	2562	4072	4071	4122	4123	2614	3582	3581	3581	100.0	0.00	0.00	72.25	72.25
6/6/2011	NA	22.0	25.4	24.2	55.6	69.8	62.2	OL	OL	OL	127.9	105.7	100.2	104.8	102.1	129.5	2562	4072	4071	4146	4147	2638	3606	3605	3605	100.0	0.00	0.00	62.24	62.24
6/7/2011	91.2	21.9	24.6	24.2	55.9	60.2	58.0	OL	OL	OL	113.0	95.7	93.5	95.1	93.6	113.4	2562	4072	4071	4170	4171	2662	3630	3629	3629	100.0	0.00	0.00	57.97	57.97
6/8/2011	93.0	21.9	24.6	24.3	50.7	60.4	55.6	OL	OL	OL	116.9	95.6	89.8	92.7	89.8	113.2	2562	4072	4071	4194	4195	2686	3654	3653	3653	100.0	0.00	0.00	55.63	55.63
6/9/2011	93.3	22.0	24.8	24.2	48.8	76.5	63.1	OL	OL	OL	115.1	103.6	101.7	102.5	101.5	109.1	2562	4072	4071	4218	4219	2710	3678	3677	3677	100.0	0.00	0.00	63.12	63.12
6/10/2011	94.8	21.9	25.7	24.2	48.5	106.2	78.2	OL	OL	OL	129.3	125.6	125.4	125.3	125.2	125.8	2562	4072	4071	4242	4243	2734	3702	3701	3701	100.0	0.00	0.00	78.24	78.24
6/11/2011	NA	21.6	25.1	24.2	57.6	97.1	80.6	OL	OL	OL	129.3	129.2	129.2	129.1	129.1	129.3	2562	4072	4071	4266	4267	2758	3726	3725	3725	100.0	0.00	0.00	80.66	80.66
6/12/2011	NA	21.9	24.6	24.2	72.7	85.9	78.3	OL	OL	OL	125.7	125.6	125.6	125.5	125.5	125.7	2562	4072	4071	4290	4291	2782	3750	3749	3749	100.0	0.00	0.00	78.37	78.37
6/13/2011	94.7	21.8	24.7	24.2	66.3	80.3	71.6	OL	OL	OL	116.8	115.0	115.0	114.9	114.9	115.1	2562	4072	4071	4314	4315	2806	3774	3773	3773	100.0	0.00	0.00	71.65	71.65
6/14/2011	NA	21.6	24.6	24.2	66.0	72.3	68.9	OL	OL	OL	115.0	110.8	110.8	110.7	110.7	110.9	2562	4072	4071	4338	4339	2830	3798	3797	3797	100.0	0.00	0.00	68.97	68.97
6/15/2011	94.4	22.0	24.7	24.2	67.1	75.4	71.0	OL	OL	OL	115.2	114.0	114.0	113.9	113.9	114.1	2562	4072	4071	4362	4363	2854	3822	3821	3821	100.0	0.00	0.00	71.00	71.00
6/16/2011	92.4	21.7	26.0	24.2	40.4	77.8	63.3	OL	OL	OL	112.4	102.3	101.9	101.9	101.9	102.2	2562	4072	4071	4386	4387	2878	3846	3845	3845	100.0	0.00	0.00	63.30	63.30
6/17/2011	95.2	22.0	24.9	24.2	58.6	65.7	62.0	OL	OL	OL	106.9	99.9	100.0	99.9	99.9	100.1	2562	4072	4071	4410	4411	2902	3870	3869	3869	100.0	0.00	0.00	62.04	62.04
6/18/2011	NA	21.8	24.7	24.2	56.4	65.7	59.5	OL	OL	OL	107.0	95.9	96.0	95.9	95.9	96.0	2562	4072	4071	4434	4435	2926	3894	3893	3893	100.0	0.00	0.00	59.51	59.51
6/19/2011	NA	22.0	24.9	24.2	55.4	61.1	58.6	OL	OL	OL	105.8	94.5	94.5	94.5	94.5	94.6	2562	4072	4071	4458	4459	2950	3918	3917	3917	100.0	0.00	0.00	58.60	58.60
6/20/2011	95.2	0.9	29.3	24.2	9.7	81.1	58.1	4.7	1.2	46.2	104.5	93.7	93.4	93.5	93.4	93.5	2562	4072	4071	4474	4475	2965	3933	3933	3933	99.8	0.00	0.08	37.37	37.45
6/21/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2562	4072	4071	4474	4475	2965	3933	3933	3933	OL	0.00	0.00	0.00	0.00
6/22/2011	96.6	1.6	2.0	1.8	4.5	30.0	20.7	5.2	1.5	30.8	99.3	91.9	74.1	79.1	68.6	95.3	2562	4072	4071	4474	4475	2965	3933	3933	3933	0.0	0.00	0.07	0.00	0.07
6/23/2011	95.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2562	4072	4071	4474	4475	2965	3933	3933	3933	OL	0.00	0.00	0.00	0.00
6/24/2011	95.9	21.0	36.5	24.6	31.2	86.8	66.1	140.9	96.8	69.7	103.1	91.7	84.6	107.5	103.4	139.9	2576	4086	4086	4487	4488	2978	3947	3947	3947	100.0	0.00	0.00	38.57	38.57
6/25/2011	NA	22.6	54.7	24.6	19.0	90.0	61.9	96.1	83.3	63.5	85.1	86.2	71.1	101.3	100.9	143.5	2600	4110	4110	4511	4512	3002	3971	3971	3971	100.0	0.00	0.00	61.96	61.96
6/26/2011	NA	24.0	32.6	24.6	56.5	64.9	60.9	111.0	94.2	62.4	107.9	99.3	89.6	115.9	111.2	159.2	2624	4134	4134	4535	4536	3026	3995	3995	3995	100.0	0.00	0.00	60.93	60.93
6/27/2011	NA	22.0	25.9	24.5	47.8	64.7	56.7	132.2	94.4	68.0	77.1	98.1	85.1	111.0	106.0	151.2	2648	4158	4158	4551	4552	3042	4019	4019	4019	100.0	0.00	0.00	56.73	56.73
6/28/2011	94.9	22.0	30.5	24.4	42.0	67.1	51.8	148.7	91.4	75.0	29.6	85.5	78.2	104.2	99.8	142.4	2672	4182	4182	4557	4558	3048	4043	4043	4043	100.0	0.00	0.00	51.83	51.83
6/29/2011	95.4	24.0	28.0	24.6	59.3	67.4	63.6	106.1	88.9	65.2	113.8	83.9	76.4	103.9	98.9	137.6	2696	4206	4206	4581	4582	3072	4067	4067	4067	100.0	0.00	0.00	63.63	63.63
6/30/2011	95.6	24.1	27.5	24.5	60.2	67.5	64.2	112.4	86.1	65.7	112.1	83.1	74.7	99.0	95.6	130.3	2720	4230	4230	4605	4606	3096	4091	4091	4091	100.0	0.00	0.00	64.25	64.25

Report Created: **Monday, July 04, 2011**

Total [ML]: **0.00 0.18 1572.71 1572.89**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-500A**
Report Period: **June 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
6/1/2011	NA	16.4	39.0	24.4	0.9	72.9	39.2	71.5	71.2	102.7	34.7	125.8	235.1	179.8	90.0	164.0	1375	1836	1374	1980	406	3666	1307	3347	1308	97.2	0.00	0.30	10.39	10.69
6/2/2011	94.2	0.0	77.3	36.2	6.4	82.4	73.6	210.2	174.4	271.5	216.5	194.6	326.6	267.1	221.1	222.3	1376	1837	1375	1981	407	3667	1308	3348	1309	81.5	0.24	0.30	2.39	2.94
6/3/2011	94.6	5.2	86.9	36.3	10.8	88.1	68.6	148.9	139.2	225.4	345.2	150.3	282.0	213.1	158.9	177.3	1377	1838	1376	1982	408	3667	1310	3349	1310	94.3	0.01	0.13	2.19	2.33
6/4/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1377	1838	1376	1982	408	3667	1310	3349	1310	OL	0.00	0.00	0.00	0.00
6/5/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1377	1838	1376	1982	408	3667	1310	3349	1310	OL	0.00	0.00	0.00	0.00
6/6/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1377	1838	1376	1982	408	3667	1310	3349	1310	OL	0.00	0.00	0.00	0.00
6/7/2011	91.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1377	1838	1376	1982	408	3667	1310	3349	1310	OL	0.00	0.00	0.00	0.00
6/8/2011	93.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1377	1838	1376	1982	408	3667	1310	3349	1310	OL	0.00	0.00	0.00	0.00
6/9/2011	93.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1377	1838	1376	1982	408	3667	1310	3349	1310	OL	0.00	0.00	0.00	0.00
6/10/2011	94.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1377	1838	1376	1982	408	3667	1310	3349	1310	OL	0.00	0.00	0.00	0.00
6/11/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1377	1838	1376	1982	408	3667	1310	3349	1310	OL	0.00	0.00	0.00	0.00
6/12/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1377	1838	1376	1982	408	3667	1310	3349	1310	OL	0.00	0.00	0.00	0.00
6/13/2011	94.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1377	1838	1376	1982	408	3667	1310	3349	1310	OL	0.00	0.00	0.00	0.00
6/14/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1377	1838	1376	1982	408	3667	1310	3349	1310	OL	0.00	0.00	0.00	0.00
6/15/2011	94.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1377	1838	1376	1982	408	3667	1310	3349	1310	OL	0.00	0.00	0.00	0.00
6/16/2011	92.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1377	1838	1376	1982	408	3667	1310	3349	1310	OL	0.00	0.00	0.00	0.00
6/17/2011	95.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1377	1838	1376	1982	408	3667	1310	3349	1310	OL	0.00	0.00	0.00	0.00
6/18/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1377	1838	1376	1982	408	3667	1310	3349	1310	OL	0.00	0.00	0.00	0.00
6/19/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1377	1838	1376	1982	408	3667	1310	3349	1310	OL	0.00	0.00	0.00	0.00
6/20/2011	95.2	22.2	39.4	24.4	3.6	54.2	46.4	74.8	76.4	120.1	423.9	99.0	128.9	227.5	109.1	187.7	1385	1846	1385	1982	408	3668	1318	3358	1318	100.0	0.00	0.00	16.36	16.36
6/21/2011	NA	21.4	31.7	24.4	31.2	94.0	55.2	92.5	89.5	160.7	470.3	54.7	77.6	284.8	118.1	232.8	1409	1870	1409	1985	411	3671	1342	3382	1342	100.0	0.00	0.00	55.15	55.15
6/22/2011	96.6	12.1	34.5	23.9	33.0	59.0	52.1	112.0	83.1	203.0	215.9	56.1	92.3	291.9	125.8	229.8	1417	1878	1417	1993	419	3678	1350	3389	1350	94.8	0.00	0.86	15.54	16.40
6/23/2011	95.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1417	1878	1417	1993	419	3678	1350	3389	1350	OL	0.00	0.00	0.00	0.00
6/24/2011	95.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1417	1878	1417	1993	419	3678	1350	3389	1350	OL	0.00	0.00	0.00	0.00
6/25/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1417	1878	1417	1993	419	3678	1350	3389	1350	OL	0.00	0.00	0.00	0.00
6/26/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1417	1878	1417	1993	419	3678	1350	3389	1350	OL	0.00	0.00	0.00	0.00
6/27/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1417	1878	1417	1993	419	3678	1350	3389	1350	OL	0.00	0.00	0.00	0.00
6/28/2011	94.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1417	1878	1417	1993	419	3678	1350	3389	1350	OL	0.00	0.00	0.00	0.00
6/29/2011	95.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1417	1878	1417	1993	419	3678	1350	3389	1350	OL	0.00	0.00	0.00	0.00
6/30/2011	95.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1417	1878	1417	1993	419	3678	1350	3389	1350	OL	0.00	0.00	0.00	0.00

Report Created: **Monday, July 04, 2011**

Total [ML]: **0.25 1.58 102.02 103.86**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-600A**
Report Period: **June 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2						UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]								
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3		3-1	3-2	3-3	Untreated	Below Dose	To Dose	Total		
6/1/2011	NA	17.7	37.1	24.2	4.8	75.2	65.6	113.6	78.4	67.2	91.4	78.6	68.0	65.7	70.6	72.2	3842	3904	3904	4220	4220	4220	1931	3897	3896	99.8	0.00	0.09	45.09	45.19		
6/2/2011	94.2	15.1	30.4	23.9	5.3	85.2	70.9	120.4	80.4	72.1	96.0	82.8	72.5	69.8	74.0	75.3	3865	3927	3927	4243	4243	4243	1954	3920	3920	99.6	0.00	0.27	68.10	68.37		
6/3/2011	94.6	0.0	37.1	24.4	27.7	150.0	76.6	148.2	97.7	105.8	115.8	103.7	109.9	77.5	88.3	109.0	3885	3946	3946	4263	4263	4263	1973	3939	3939	99.8	0.10	0.00	61.63	61.74		
6/4/2011	NA	18.5	27.4	24.4	81.9	89.3	85.0	193.2	117.6	126.4	130.9	121.3	155.3	85.8	106.3	142.4	3909	3970	3970	4287	4287	4286	1997	3963	3963	100.0	0.00	0.00	85.03	85.03		
6/5/2011	NA	18.5	27.2	24.4	77.1	88.7	83.8	181.7	112.1	99.4	125.2	117.4	149.6	84.6	101.9	129.1	3933	3994	3994	4311	4311	4310	2021	3987	3987	100.0	0.00	0.00	83.76	83.76		
6/6/2011	NA	18.9	26.8	24.5	66.4	83.1	73.6	174.4	104.9	88.3	117.3	110.0	137.9	74.9	95.0	119.1	3957	4018	4018	4335	4335	4334	2045	4011	4011	100.0	0.00	0.00	73.63	73.63		
6/7/2011	91.2	18.4	26.8	24.5	66.5	71.6	69.0	156.4	93.9	79.1	105.0	97.9	123.6	70.4	84.6	105.2	3981	4042	4042	4359	4359	4358	2069	4035	4035	100.0	0.00	0.00	69.05	69.05		
6/8/2011	93.0	23.8	26.9	24.6	60.9	71.3	66.3	163.6	100.7	80.2	107.9	100.8	126.1	67.8	87.2	108.9	4005	4066	4066	4383	4383	4382	2093	4059	4059	100.0	0.00	0.00	66.29	66.29		
6/9/2011	93.3	18.8	26.7	24.5	57.1	68.0	62.8	156.3	96.2	75.1	103.9	96.5	120.4	64.1	83.1	103.5	4012	4074	4074	4390	4390	4390	2101	4067	4067	100.0	0.00	0.00	20.16	20.16		
6/10/2011	94.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4012	4074	4074	4390	4390	4390	2101	4067	4067	OL	0.00	0.00	0.00	0.00		
6/11/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4012	4074	4074	4390	4390	4390	2101	4067	4067	OL	0.00	0.00	0.00	0.00		
6/12/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4012	4074	4074	4390	4390	4390	2101	4067	4067	OL	0.00	0.00	0.00	0.00		
6/13/2011	94.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4012	4074	4074	4390	4390	4390	2101	4067	4067	OL	0.00	0.00	0.00	0.00		
6/14/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4012	4074	4074	4390	4390	4390	2101	4067	4067	OL	0.00	0.00	0.00	0.00		
6/15/2011	94.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4012	4074	4074	4390	4390	4390	2101	4067	4067	OL	0.00	0.00	0.00	0.00		
6/16/2011	92.4	18.5	26.8	24.5	58.8	83.8	70.4	155.1	105.9	100.5	117.2	111.4	124.9	71.6	94.9	113.6	4025	4087	4087	4403	4403	4403	2114	4080	4080	100.0	0.00	0.00	37.40	37.40		
6/17/2011	95.2	19.6	27.3	24.5	69.0	77.8	72.5	156.2	94.2	91.1	110.8	108.8	122.6	73.8	92.5	106.6	4049	4111	4111	4427	4427	4427	2138	4104	4104	100.0	0.00	0.00	72.46	72.46		
6/18/2011	NA	19.3	27.0	24.5	67.2	77.5	70.2	153.8	91.0	81.7	107.7	107.4	117.7	71.6	92.4	106.9	4073	4135	4135	4451	4451	4451	2162	4128	4128	100.0	0.00	0.00	70.18	70.18		
6/19/2011	NA	18.7	25.7	24.5	66.9	72.0	69.4	150.2	88.8	72.2	104.9	105.6	114.1	70.8	91.5	106.0	4097	4159	4159	4475	4475	4475	2186	4152	4152	100.0	0.00	0.00	69.36	69.36		
6/20/2011	95.2	18.7	29.4	24.4	41.9	100.8	74.3	148.6	88.9	75.9	103.3	103.4	113.6	75.6	90.0	103.8	4121	4183	4183	4499	4499	4499	2210	4176	4176	100.0	0.00	0.00	74.36	74.36		
6/21/2011	NA	18.5	30.2	24.3	4.2	90.6	84.6	132.9	87.3	85.9	101.8	101.4	109.9	85.0	88.8	98.3	4138	4200	4200	4516	4516	4516	2227	4193	4192	100.0	0.00	0.00	59.24	59.24		
6/22/2011	96.6	18.4	25.7	24.3	40.8	110.4	82.6	133.9	84.6	83.9	100.9	98.8	108.8	83.4	87.1	93.5	4162	4224	4224	4540	4540	4540	2251	4217	4216	100.0	0.00	0.00	82.88	82.88		
6/23/2011	95.5	19.0	60.3	24.3	22.5	110.8	80.6	130.5	82.6	81.9	97.2	95.9	102.6	81.1	85.0	89.5	4186	4248	4248	4564	4564	4564	2275	4241	4240	100.0	0.00	0.00	80.94	80.94		
6/24/2011	95.9	15.6	44.8	23.4	18.3	90.3	82.6	129.3	84.1	80.2	96.2	95.2	101.4	81.8	85.2	90.9	4204	4266	4266	4582	4582	4582	2293	4259	4258	99.7	0.00	0.22	62.22	62.43		
6/25/2011	NA	18.9	34.6	24.4	7.1	77.4	72.5	143.2	94.8	98.4	113.5	110.7	113.8	73.6	97.4	107.1	4227	4289	4289	4605	4605	4605	2316	4282	4282	99.9	0.05	0.00	70.28	70.33		
6/26/2011	NA	18.8	27.5	24.4	67.9	76.7	72.1	163.2	89.1	94.1	117.3	111.6	140.3	73.3	96.7	120.4	4251	4313	4313	4629	4629	4629	2340	4306	4306	100.0	0.00	0.00	72.12	72.12		
6/27/2011	NA	19.6	26.9	24.5	57.6	76.6	67.6	160.6	95.9	71.3	124.5	118.1	142.6	69.1	100.1	119.7	4275	4337	4337	4653	4653	4653	2364	4330	4330	100.0	0.00	0.00	67.58	67.58		
6/28/2011	94.9	18.5	33.2	24.4	51.3	79.5	62.0	161.6	97.4	69.2	111.1	96.0	123.3	69.1	97.5	115.8	4299	4361	4361	4673	4673	4673	2388	4354	4354	100.0	0.00	0.00	61.99	61.99		
6/29/2011	95.4	18.9	25.0	24.4	69.8	79.3	74.9	149.3	97.9	76.3	120.7	116.6	132.6	76.0	97.7	114.2	4323	4385	4385	4697	4697	4697	2412	4378	4378	100.0	0.00	0.00	74.88	74.88		
6/30/2011	95.6	18.6	25.0	24.4	70.8	79.4	75.4	144.5	95.9	76.9	117.6	113.7	128.4	76.6	95.3	111.1	4347	4409	4409	4721	4721	4721	2436	4402	4402	100.0	0.00	0.00	75.47	75.47		

Report Created: **Monday, July 04, 2011**

Total [ML]: **0.16 0.58 1604.10 1604.84**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: 252.00
Licence Number: PWS-09-412 RR

Report Period: July 2011

Date	UVR-D100A				UVR-D200A				UVR-D300A				UVR-D400A				UVR-D500A				UVR-D600A				Total				% Volume Treated To Dose		
	Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]						
	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total		Untreated	Below
7/1/2011	0.00	0.00	0.00	0.00	0.00	0.00	83.36	83.36	0.00	0.00	0.00	0.00	0.00	0.00	69.25	69.25	0.00	0.00	0.00	0.00	0.00	0.00	77.62	77.62	0.00	0.00	230.23	230.23	100.0		
7/2/2011	0.00	0.00	0.00	0.00	0.00	0.00	83.30	83.30	0.00	0.00	0.00	0.00	0.00	0.00	70.31	70.31	0.00	0.00	0.00	0.00	0.00	0.00	78.56	78.56	0.00	0.00	232.17	232.17	100.0		
7/3/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	0.00	0.00	0.00	0.00	67.10	67.10	0.00	0.00	0.00	0.00	0.00	0.00	78.93	78.93	0.00	0.00	231.05	231.05	100.0		
7/4/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.03	85.03	0.00	0.00	41.99	41.99	0.00	0.00	24.82	24.82	0.00	0.00	0.00	0.00	0.00	0.00	82.45	82.45	0.00	0.00	234.29	234.29	100.0		
7/5/2011	0.00	0.00	0.00	0.00	0.36	0.00	59.38	59.74	0.00	0.00	76.85	76.85	0.00	0.02	23.93	23.95	0.00	0.00	0.00	0.00	0.00	0.05	73.59	73.64	0.36	0.07	233.75	234.18	99.8		
7/6/2011	0.00	0.32	0.00	0.32	0.56	0.03	43.29	43.88	0.00	0.00	75.79	75.79	0.00	0.04	41.17	41.22	0.00	0.36	26.48	26.85	0.06	0.03	53.02	53.11	0.62	0.78	239.76	241.17	99.4		
7/7/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.03	85.03	0.00	0.00	75.00	75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	245.04	245.04	100.0		
7/8/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.04	85.04	0.00	0.00	74.02	74.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	244.07	244.07	100.0		
7/9/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	67.60	67.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83.18	83.18	0.00	0.00	235.79	235.79	100.0		
7/10/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.00	85.00	0.00	0.00	61.68	61.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.30	80.30	0.00	0.00	226.99	226.99	100.0		
7/11/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	24.62	24.62	0.00	0.02	41.85	41.87	0.00	0.00	0.00	0.00	0.00	0.00	81.34	81.34	0.00	0.02	232.82	232.84	100.0		
7/12/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.03	85.03	0.00	0.00	0.00	0.00	0.00	0.00	68.92	68.92	0.00	0.00	0.00	0.00	0.00	0.00	81.12	81.12	0.00	0.00	235.06	235.06	100.0		
7/13/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	0.00	0.00	0.00	0.00	72.64	72.64	0.00	0.95	58.04	58.99	0.00	0.00	23.93	23.93	0.00	0.95	239.63	240.58	99.6		
7/14/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.03	85.03	0.00	0.00	0.00	0.00	0.00	0.00	79.62	79.62	0.00	0.00	85.01	85.01	0.00	0.00	0.00	0.00	0.00	0.00	249.66	249.66	100.0		
7/15/2011	0.00	0.02	31.89	31.91	0.00	0.00	84.87	84.87	0.00	0.00	0.00	0.00	0.00	0.02	63.52	63.54	0.00	0.02	74.10	74.13	0.00	0.00	0.00	0.00	0.00	0.06	254.38	254.44	100.0		
7/16/2011	0.00	0.00	60.58	60.59	0.00	0.14	56.77	56.91	0.00	0.00	0.00	0.00	0.01	0.00	54.84	54.85	0.09	0.00	63.52	63.61	0.17	0.00	0.50	0.66	0.27	0.14	236.21	236.62	99.8		
7/17/2011	0.00	0.00	84.86	84.86	0.00	0.00	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00	64.57	64.57	0.00	0.00	40.51	40.51	0.00	0.00	63.77	63.77	0.00	0.00	253.84	253.84	100.0		
7/18/2011	0.00	0.00	83.84	83.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.87	76.87	0.00	0.00	43.34	43.34	0.00	0.00	74.42	74.42	0.00	0.00	278.48	278.48	100.0		
7/19/2011	0.00	0.00	84.98	84.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	85.05	85.05	0.00	0.00	52.91	52.91	0.00	0.18	84.81	84.99	0.00	0.18	307.75	307.93	99.9		
7/20/2011	0.00	0.00	83.46	83.46	0.00	0.00	14.07	14.07	0.00	0.00	0.00	0.00	0.00	0.00	79.48	79.48	0.00	0.00	45.20	45.20	0.00	0.17	77.25	77.42	0.00	0.17	299.46	299.63	99.9		
7/21/2011	0.00	0.00	72.49	72.49	0.00	0.00	83.80	83.80	0.00	0.04	37.46	37.50	0.00	0.00	73.58	73.58	0.00	0.06	13.30	13.35	0.00	0.00	37.96	37.97	0.00	0.10	318.59	318.68	100.0		
7/22/2011	0.00	0.00	71.28	71.28	0.00	0.00	85.02	85.02	0.00	0.00	76.64	76.64	0.00	0.00	75.71	75.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	308.66	308.66	100.0		
7/23/2011	0.00	0.00	71.33	71.33	0.00	0.00	31.71	31.71	0.00	0.00	79.34	79.34	0.00	0.00	8.85	8.85	0.00	4.35	46.75	51.10	0.00	0.00	0.00	0.00	0.00	4.35	237.98	242.33	98.2		
7/24/2011	0.00	0.00	76.95	76.95	0.00	0.00	0.00	0.00	0.00	0.00	61.31	61.31	0.00	0.00	0.00	0.00	0.00	0.40	72.18	72.58	0.00	0.00	0.00	0.00	0.00	0.40	210.44	210.84	99.8		
7/25/2011	0.00	0.00	76.32	76.32	0.00	0.40	0.15	0.56	0.00	0.00	65.85	65.85	0.00	0.00	0.18	0.18	0.00	0.03	61.75	61.78	0.00	0.01	17.37	17.38	0.00	0.44	221.63	222.07	99.8		
7/26/2011	0.00	0.16	23.15	23.31	0.00	0.01	21.02	21.02	0.00	0.00	30.94	30.94	0.00	0.00	15.76	15.76	0.00	0.24	14.84	15.07	0.00	0.00	36.18	36.18	0.00	0.40	141.89	142.29	99.7		
7/27/2011	0.00	0.00	0.00	0.00	0.00	0.00	81.47	81.47	0.00	0.00	41.06	41.06	0.00	0.00	55.92	55.92	0.00	0.00	0.00	0.00	0.00	0.00	74.22	74.22	0.00	0.00	252.67	252.67	100.0		
7/28/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.03	85.03	0.00	0.00	72.00	72.00	0.00	0.00	68.02	68.02	0.00	0.00	0.00	0.00	0.00	0.00	84.99	84.99	0.00	0.00	310.04	310.04	100.0		
7/29/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.02	85.02	0.00	0.00	72.70	72.70	0.00	0.00	67.33	67.33	0.00	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	310.05	310.05	100.0		
7/30/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.06	85.06	0.04	0.00	58.45	58.49	0.00	0.00	55.31	55.31	0.00	0.00	0.00	0.00	0.00	0.03	82.63	82.65	0.04	0.03	281.45	281.51	100.0		
7/31/2011	0.00	0.09	6.16	6.25	0.00	0.00	84.01	84.01	0.00	0.08	31.92	32.01	0.00	0.00	40.56	40.57	0.00	0.00	2.94	2.94	0.00	0.00	73.72	73.72	0.01	0.17	239.32	239.50	99.9		

Total [ML]: 0.01 0.58 827.29 827.88 0.92 0.58 1917.65 1919.15 0.04 0.12 1125.24 1125.40 0.01 0.10 1445.16 1445.27 0.09 6.41 700.88 707.38 0.23 0.47 1756.92 1757.61 1.30 8.27 7773.13 7782.69

Report Created: Tuesday, August 02, 2011

Water Volume [%]:

Untreated 0.0%
Below Dose 0.1%
To Dose 99.9%

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV\2011\07-2011

Notes: 1 UV Comparative Dose: 18.1 mJ/cm2

Submitted By (Print): D.Sulymka

Original Signed By: D.Sulymka

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-100A**
Report Period: **July 2011**

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
7/1/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1400	1400	1400	OL	0.00	0.00	0.00	0.00	
7/2/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1400	1400	1400	OL	0.00	0.00	0.00	0.00	
7/3/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1400	1400	1400	OL	0.00	0.00	0.00	0.00	
7/4/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1400	1400	1400	OL	0.00	0.00	0.00	0.00	
7/5/2011	94.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1400	1400	1400	OL	0.00	0.00	0.00	0.00	
7/6/2011	92.6	0.0	23.6	7.8	3.2	104.5	67.0	19.1	35.5	62.3	47.1	45.6	62.2	76.2	62.8	77.9	115	2247	3306	1400	1400	1400	1401	1400	1400	0.3	0.00	0.32	0.00	0.32
7/7/2011	94.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1401	1400	1400	OL	0.00	0.00	0.00	0.00	
7/8/2011	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1401	1400	1400	OL	0.00	0.00	0.00	0.00	
7/9/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1401	1400	1400	OL	0.00	0.00	0.00	0.00	
7/10/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1401	1400	1400	OL	0.00	0.00	0.00	0.00	
7/11/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1401	1400	1400	OL	0.00	0.00	0.00	0.00	
7/12/2011	94.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1401	1400	1400	OL	0.00	0.00	0.00	0.00	
7/13/2011	94.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1401	1400	1400	OL	0.00	0.00	0.00	0.00	
7/14/2011	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	115	2247	3306	1400	1400	1400	1401	1400	1400	OL	0.00	0.00	0.00	0.00	
7/15/2011	93.0	17.8	33.8	24.2	32.7	80.1	58.2	82.4	88.9	148.6	136.4	93.6	100.0	146.2	93.5	141.2	115	2247	3307	1413	1413	1414	1414	1413	1413	99.9	0.00	0.02	31.89	31.91
7/16/2011	NA	0.0	39.1	24.3	1.6	100.8	62.0	55.6	46.9	154.4	142.7	100.9	107.3	151.0	100.2	169.7	116	2247	3307	1437	1437	1437	1437	1437	1437	100.0	0.00	0.00	60.58	60.59
7/17/2011	NA	20.2	26.2	24.1	36.2	113.8	84.9	OL	OL	OL	149.6	136.0	136.0	154.0	135.9	166.7	116	2247	3307	1461	1461	1461	1461	1461	1461	100.0	0.00	0.00	84.86	84.86
7/18/2011	NA	20.3	25.5	24.1	55.4	99.7	83.8	OL	OL	OL	147.7	134.4	134.5	153.6	134.4	156.7	116	2247	3307	1485	1485	1485	1485	1485	1485	100.0	0.00	0.00	83.84	83.84
7/19/2011	94.1	20.2	25.9	24.1	71.6	99.3	85.0	OL	OL	OL	141.1	136.2	136.3	146.0	136.3	146.4	116	2247	3307	1509	1509	1509	1509	1509	1509	100.0	0.00	0.00	84.98	84.98
7/20/2011	95.2	19.7	26.0	24.1	60.8	126.5	83.5	OL	OL	OL	139.8	134.8	134.9	144.6	134.9	145.9	116	2247	3307	1533	1533	1533	1533	1533	1533	100.0	0.00	0.00	83.46	83.46
7/21/2011	94.8	20.3	24.9	24.2	52.3	81.0	72.5	OL	OL	OL	129.2	116.5	116.9	143.2	116.4	140.5	116	2247	3307	1557	1557	1557	1557	1557	1557	100.0	0.00	0.00	72.49	72.49
7/22/2011	94.1	20.3	24.7	24.2	56.7	80.1	71.3	OL	OL	OL	125.9	114.4	114.5	138.2	114.4	129.2	116	2247	3307	1581	1581	1581	1581	1581	1581	100.0	0.00	0.00	71.28	71.28
7/23/2011	NA	20.0	24.8	24.2	47.8	85.1	71.3	OL	OL	OL	128.8	114.5	114.6	138.8	114.6	127.2	116	2247	3307	1605	1605	1605	1605	1605	1605	100.0	0.00	0.00	71.33	71.33
7/24/2011	NA	20.1	25.1	24.2	50.6	97.0	76.9	OL	OL	OL	133.3	123.5	123.6	140.7	123.5	132.5	116	2247	3307	1629	1629	1629	1629	1629	1629	100.0	0.00	0.00	76.95	76.95
7/25/2011	NA	19.8	25.4	24.2	40.0	101.9	76.3	OL	OL	OL	131.5	122.5	122.6	139.5	122.3	131.3	116	2247	3307	1653	1653	1653	1653	1653	1653	100.0	0.00	0.00	76.32	76.32
7/26/2011	NS	1.7	30.8	23.8	4.1	83.2	75.5	3.6	2.1	131.3	126.9	121.1	121.4	131.4	120.3	125.0	116	2248	3307	1660	1660	1661	1661	1661	1660	99.3	0.00	0.16	23.15	23.31
7/27/2011	95.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	116	2248	3307	1660	1660	1661	1661	1661	1660	OL	0.00	0.00	0.00	0.00
7/28/2011	94.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	116	2248	3307	1660	1660	1661	1661	1661	1660	OL	0.00	0.00	0.00	0.00
7/29/2011	94.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	116	2248	3307	1660	1660	1661	1661	1661	1660	OL	0.00	0.00	0.00	0.00
7/30/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	116	2248	3307	1660	1660	1661	1661	1661	1660	OL	0.00	0.00	0.00	0.00
7/31/2011	NA	6.6	24.9	23.9	15.7	78.3	71.7	11.3	14.4	114.2	114.6	112.8	113.0	124.9	112.9	115.3	116	2248	3307	1663	1662	1663	1663	1663	1662	98.5	0.00	0.09	6.16	6.25

Report Created: **Tuesday, August 02, 2011**

Total [ML]: **0.01 0.58 827.29 827.88**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No Sample Taken due to Plant Shutdown

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-200A**
Report Period: **July 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]				
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total	
																															OL
7/1/2011	NA	21.6	24.5	24.1	64.7	95.2	83.3	259.2	153.6	133.6	OL	OL	OL	252.2	133.7	134.0	956	956	955	956	955	956	1028	1028	1028	100.0	0.00	0.00	83.36	83.36	
7/2/2011	NA	21.4	24.8	24.1	59.5	96.4	83.3	256.1	150.4	133.5	OL	OL	OL	245.3	133.6	133.9	980	980	979	956	955	956	1052	1052	1052	100.0	0.00	0.00	83.30	83.30	
7/3/2011	NA	21.6	24.5	24.1	82.3	87.8	85.0	251.5	149.9	136.2	OL	OL	OL	239.7	136.2	136.5	1004	1004	1003	956	955	956	1076	1076	1076	100.0	0.00	0.00	85.01	85.01	
7/4/2011	NA	21.8	24.5	24.1	82.1	88.1	85.0	245.8	145.5	136.2	OL	OL	OL	236.7	136.3	136.5	1028	1028	1027	956	955	956	1100	1100	1100	100.0	0.00	0.00	85.03	85.03	
7/5/2011	94.3	0.1	24.6	24.0	7.7	93.9	83.1	239.3	142.3	132.9	16.8	3.6	0.4	228.7	133.1	133.4	1045	1045	1045	956	955	956	1117	1117	1117	99.4	0.36	0.00	59.38	59.74	
7/6/2011	92.6	0.1	41.3	23.9	12.5	111.0	85.2	253.7	168.1	160.6	418.6	134.1	164.7	76.1	106.0	147.4	1058	1057	1057	968	968	968	1117	1117	1118	98.7	0.56	0.03	43.29	43.88	
7/7/2011	94.2	23.3	28.1	24.2	82.1	88.3	85.0	260.6	169.0	158.8	427.3	136.5	181.1	OL	OL	OL	1082	1081	1081	992	992	992	1117	1117	1118	100.0	0.00	0.00	85.03	85.03	
7/8/2011	93.9	22.4	26.3	24.2	82.0	88.1	85.0	260.5	162.7	151.8	427.2	136.3	165.2	OL	OL	OL	1106	1105	1105	1016	1016	1016	1117	1117	1118	100.0	0.00	0.00	85.04	85.04	
7/9/2011	NA	22.1	26.3	24.2	82.1	88.2	85.0	259.1	156.0	144.5	405.6	136.3	150.5	OL	OL	OL	1130	1129	1129	1040	1040	1040	1117	1117	1118	100.0	0.00	0.00	85.01	85.01	
7/10/2011	NA	22.2	25.5	24.2	77.9	95.2	85.0	256.7	154.0	142.2	387.4	136.3	143.2	OL	OL	OL	1154	1153	1153	1064	1064	1064	1117	1117	1118	100.0	0.00	0.00	85.00	85.00	
7/11/2011	NA	21.9	25.5	24.1	81.6	88.6	85.0	257.6	151.4	138.9	369.9	136.2	137.9	OL	OL	OL	1178	1177	1177	1088	1088	1088	1117	1117	1118	100.0	0.00	0.00	85.01	85.01	
7/12/2011	94.3	22.0	24.4	24.1	82.1	88.0	85.0	251.7	149.5	136.6	353.2	136.2	136.2	OL	OL	OL	1202	1201	1201	1112	1112	1112	1117	1117	1118	100.0	0.00	0.00	85.03	85.03	
7/13/2011	94.6	22.2	25.3	24.1	70.6	102.0	85.0	242.6	140.4	136.2	326.4	136.1	136.1	OL	OL	OL	1226	1225	1225	1136	1136	1136	1117	1117	1118	100.0	0.00	0.00	85.01	85.01	
7/14/2011	93.9	21.3	24.5	24.1	82.5	88.2	85.0	236.8	136.6	136.2	306.3	136.1	136.1	OL	OL	OL	1250	1249	1249	1160	1160	1160	1117	1117	1118	100.0	0.00	0.00	85.03	85.03	
7/15/2011	93.0	21.8	24.7	24.1	54.5	90.9	84.8	223.2	136.2	135.9	286.5	135.8	135.8	OL	OL	OL	1274	1273	1273	1184	1184	1184	1117	1117	1118	100.0	0.00	0.00	84.87	84.87	
7/16/2011	NA	7.0	24.5	24.0	0.5	89.0	84.2	220.6	135.9	135.4	276.9	135.9	136.6	12.1	7.7	OL	1290	1290	1289	1200	1200	1201	1118	1117	1118	99.8	0.00	0.14	56.77	56.91	
7/17/2011	NA	0.0	68.9	33.3	3.1	100.2	51.9	163.3	153.3	121.8	242.9	153.7	149.2	97.1	109.9	129.2	1290	1290	1289	1201	1200	1201	1118	1118	1118	98.7	0.00	0.00	0.13	0.13	
7/18/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1290	1290	1289	1201	1200	1201	1118	1118	1118	OL	0.00	0.00	0.00	0.00	0.00
7/19/2011	94.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1290	1290	1289	1201	1200	1201	1118	1118	1118	OL	0.00	0.00	0.00	0.00	0.00
7/20/2011	95.2	23.7	85.2	24.5	2.7	101.6	84.7	179.7	142.4	114.3	345.5	137.3	145.3	211.0	134.3	136.0	1290	1290	1290	1205	1204	1205	1122	1122	1122	100.0	0.00	0.00	14.07	14.07	
7/21/2011	94.8	21.8	24.7	24.1	73.2	89.7	83.8	OL	OL	OL	301.5	134.3	134.3	229.9	134.3	134.4	1290	1290	1290	1229	1228	1229	1146	1146	1146	100.0	0.00	0.00	83.80	83.80	
7/22/2011	94.1	21.6	24.7	24.1	80.8	89.6	85.0	OL	OL	OL	328.5	136.1	139.2	249.7	136.2	136.5	1290	1290	1290	1253	1252	1253	1170	1170	1170	100.0	0.00	0.00	85.02	85.02	
7/23/2011	NA	21.8	39.0	24.1	13.2	91.5	84.4	OL	OL	OL	323.0	135.7	136.5	265.8	135.6	136.0	1290	1290	1290	1262	1261	1262	1179	1179	1179	100.0	0.00	0.00	31.71	31.71	
7/24/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1290	1290	1290	1262	1261	1262	1179	1179	1179	OL	0.00	0.00	0.00	0.00	0.00
7/25/2011	NA	0.0	38.8	18.1	2.0	66.1	53.5	53.0	34.9	106.1	226.1	112.5	130.8	196.1	99.8	111.3	1291	1290	1290	1262	1262	1262	1179	1179	1179	27.4	0.00	0.40	0.15	0.56	
7/26/2011	NS	18.0	63.1	24.2	13.8	109.1	85.4	122.9	109.7	30.6	320.4	134.9	137.9	239.2	133.3	134.6	1291	1291	1290	1268	1268	1268	1185	1185	1185	100.0	0.00	0.01	21.02	21.02	
7/27/2011	95.7	21.4	24.7	24.2	42.3	91.5	81.4	OL	OL	OL	305.7	130.5	131.2	239.4	131.6	130.6	1291	1291	1290	1292	1292	1292	1209	1209	1209	100.0	0.00	0.00	81.47	81.47	
7/28/2011	94.0	22.3	24.7	24.1	75.0	94.1	85.0	OL	OL	OL	316.7	136.3	140.4	241.6	136.2	136.4	1291	1291	1290	1316	1316	1316	1233	1233	1233	100.0	0.00	0.00	85.03	85.03	
7/29/2011	94.7	21.6	24.6	24.1	75.3	94.8	85.0	OL	OL	OL	317.6	136.1	136.3	242.8	136.2	136.3	1291	1291	1290	1340	1340	1340	1257	1257	1257	100.0	0.00	0.00	85.02	85.02	
7/30/2011	NA	21.6	24.6	24.1	68.3	97.1	85.0	OL	OL	OL	267.6	136.0	136.1	241.9	136.3	136.4	1291	1291	1290	1364	1364	1364	1281	1281	1281	100.0	0.00	0.00	85.06	85.06	
7/31/2011	NA	21.8	26.3	24.1	41.0	95.7	84.0	OL	OL	OL	270.2	134.3	134.6	245.6	134.7	134.7	1291	1291	1290	1388	1388	1388	1305	1305	1305	100.0	0.00	0.00	84.01	84.01	

Report Created: **Tuesday, August 02, 2011**

Total [ML]: **0.92 0.58 1917.65 1919.15**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No Sample Taken due to Plant Shutdown

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-300A**
Report Period: **July 2011**

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
7/1/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	68	68	68	26	27	27	75	75	75	OL	0.00	0.00	0.00	0.00	
7/2/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	68	68	68	26	27	27	75	75	75	OL	0.00	0.00	0.00	0.00	
7/3/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	68	68	68	26	27	27	75	75	75	OL	0.00	0.00	0.00	0.00	
7/4/2011	NA	21.6	38.8	24.2	14.3	70.6	66.8	125.1	115.4	106.2	160.6	106.0	105.9	80.7	66.4	68.4	83	83	83	41	42	42	76	75	75	100.0	0.00	0.00	41.99	41.99
7/5/2011	94.3	21.8	34.3	24.2	33.3	101.0	76.8	137.1	125.3	111.5	162.6	109.9	110.0	86.0	82.0	82.0	107	107	107	65	66	66	82	82	82	100.0	0.00	0.00	76.85	76.85
7/6/2011	92.6	21.4	32.7	24.3	35.1	120.7	75.8	131.8	116.2	92.4	159.9	89.1	89.0	82.0	78.4	78.5	131	131	131	89	90	90	100	100	100	100.0	0.00	0.00	75.79	75.79
7/7/2011	94.2	21.5	25.0	24.4	70.8	78.5	75.0	122.7	107.6	76.8	152.3	76.6	76.6	80.4	76.5	76.6	155	155	155	113	114	114	124	124	124	100.0	0.00	0.00	75.00	75.00
7/8/2011	93.9	21.4	25.0	24.4	69.8	77.7	74.0	118.4	104.5	75.7	147.7	75.6	75.6	77.0	75.6	75.6	179	179	179	137	138	138	148	148	148	100.0	0.00	0.00	74.02	74.02
7/9/2011	NA	20.6	25.4	24.4	58.7	77.2	67.6	110.6	101.5	80.3	143.7	80.3	80.2	73.6	71.9	72.0	203	203	203	161	162	162	165	165	164	100.0	0.00	0.00	67.60	67.60
7/10/2011	NA	21.6	25.1	24.2	46.0	67.9	61.7	108.4	101.4	99.3	145.1	99.3	99.2	OL	OL	OL	227	227	227	185	186	186	165	165	164	100.0	0.00	0.00	61.68	61.68
7/11/2011	NA	21.9	29.6	24.2	13.5	68.6	62.7	107.6	102.2	100.7	145.6	100.7	100.7	OL	OL	OL	236	236	237	195	195	195	165	165	164	100.0	0.00	0.00	24.62	24.62
7/12/2011	94.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	236	236	237	195	195	195	165	165	164	OL	0.00	0.00	0.00	0.00
7/13/2011	94.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	236	236	237	195	195	195	165	165	164	OL	0.00	0.00	0.00	0.00
7/14/2011	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	236	236	237	195	195	195	165	165	164	OL	0.00	0.00	0.00	0.00
7/15/2011	93.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	236	236	237	195	195	195	165	165	164	OL	0.00	0.00	0.00	0.00
7/16/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	236	236	237	195	196	195	165	165	164	OL	0.00	0.00	0.00	0.00
7/17/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	236	236	237	195	196	195	165	165	164	OL	0.00	0.00	0.00	0.00
7/18/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	236	236	237	195	196	195	165	165	164	OL	0.00	0.00	0.00	0.00
7/19/2011	94.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	236	236	237	195	196	195	165	165	164	OL	0.00	0.00	0.00	0.00
7/20/2011	95.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	236	236	237	195	196	195	165	165	164	OL	0.00	0.00	0.00	0.00
7/21/2011	94.8	16.6	34.3	24.4	23.6	87.0	71.9	80.7	82.9	74.6	124.1	77.1	76.9	79.4	77.0	77.1	248	248	248	207	208	208	177	177	177	99.9	0.00	0.04	37.46	37.50
7/22/2011	94.1	21.3	25.7	24.4	62.1	85.2	76.6	83.2	90.6	78.1	133.8	78.2	78.1	78.3	78.1	78.2	272	272	272	231	232	232	201	201	201	100.0	0.00	0.00	76.64	76.64
7/23/2011	NA	20.3	26.6	24.4	36.6	94.1	79.4	84.8	89.7	80.8	138.3	80.8	80.8	81.1	80.8	80.9	296	296	296	255	256	256	225	225	225	100.0	0.00	0.00	79.34	79.34
7/24/2011	NA	21.5	29.4	24.5	32.7	78.0	61.3	81.7	89.9	62.9	138.5	63.0	62.9	64.1	62.9	63.0	320	320	320	279	280	280	249	249	249	100.0	0.00	0.00	61.31	61.31
7/25/2011	NA	19.0	28.2	24.4	37.7	91.9	65.9	80.3	87.2	72.5	135.0	72.1	71.9	72.6	71.9	72.0	339	339	340	303	304	304	273	273	273	100.0	0.00	0.00	65.85	65.85
7/26/2011	NS	20.2	34.5	24.4	12.0	100.2	67.7	84.6	86.0	78.9	126.1	75.6	75.1	77.1	75.2	75.6	348	347	348	314	315	315	284	284	284	100.0	0.00	0.00	30.94	30.94
7/27/2011	95.7	18.8	31.7	24.5	3.0	76.2	46.7	70.0	77.4	57.0	123.9	59.5	59.4	61.2	59.4	59.7	358	358	359	336	336	336	306	305	305	100.0	0.00	0.00	41.06	41.06
7/28/2011	94.0	21.6	25.4	24.4	66.9	77.7	72.0	76.5	81.2	73.4	124.9	73.5	73.4	73.7	73.5	73.6	382	382	383	360	360	360	330	329	329	100.0	0.00	0.00	72.00	72.00
7/29/2011	94.7	21.6	25.6	24.4	67.7	79.1	72.7	74.9	80.6	74.1	119.8	74.2	74.1	74.3	74.1	74.2	406	406	407	384	384	384	354	353	353	100.0	0.00	0.00	72.70	72.70
7/30/2011	NA	0.0	33.2	23.4	4.4	85.4	58.8	72.5	80.6	58.7	118.2	62.8	62.7	63.9	62.7	62.8	427	427	428	408	408	408	378	377	377	99.9	0.04	0.00	58.45	58.49
7/31/2011	NA	0.0	31.9	24.4	7.8	50.1	34.9	78.0	90.9	43.7	117.5	57.0	57.3	57.3	56.7	57.1	428	427	428	430	430	430	400	399	399	99.7	0.00	0.08	31.92	32.01

Report Created: **Tuesday, August 02, 2011**

Total [ML]: **0.04 0.12 1125.24 1125.40**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No Sample Taken due to Plant Shutdown

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-400A**
Report Period: **July 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]								
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-3	3-1	3-2	3-3	Untreated		Below Dose	To Dose	Total						
7/1/2011	NA	21.2	25.5	24.5	58.3	103.1	69.2	129.7	88.3	70.7	113.3	82.8	76.6	99.7	95.4	130.3	2744	4254	4254	4629	4630	3120	4115	4115	4115	100.0	0.00	0.00	69.25	69.25					
7/2/2011	NA	23.9	28.0	24.5	37.6	78.3	70.3	131.7	86.5	71.7	109.4	75.8	73.7	95.9	91.1	122.4	2768	4278	4278	4653	4654	3144	4139	4139	4139	100.0	0.00	0.00	70.31	70.31					
7/3/2011	NA	24.0	25.1	24.5	63.6	70.1	67.1	128.8	84.8	68.5	106.3	73.7	70.3	92.7	87.9	116.6	2792	4302	4302	4677	4678	3168	4163	4163	4163	100.0	0.00	0.00	67.10	67.10					
7/4/2011	NA	24.0	40.2	24.5	24.6	68.9	66.6	125.4	82.9	68.0	103.2	74.4	68.3	90.9	84.9	113.5	2801	4311	4310	4686	4686	3177	4172	4172	4172	100.0	0.00	0.00	24.82	24.82					
7/5/2011	94.3	16.6	31.0	24.3	20.5	95.3	84.9	130.5	86.3	85.6	117.3	92.9	86.2	89.5	87.6	110.8	2808	4318	4317	4693	4693	3184	4179	4179	4179	99.9	0.00	0.02	23.93	23.95					
7/6/2011	92.6	17.8	45.2	24.4	5.0	120.7	84.1	133.4	87.6	85.1	121.4	93.9	86.6	92.6	87.4	114.3	2820	4329	4329	4704	4705	3196	4191	4191	4190	99.9	0.00	0.04	41.17	41.22					
7/7/2011	94.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2820	4329	4329	4704	4705	3196	4191	4191	4190	OL	0.00	0.00	0.00	0.00					
7/8/2011	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2820	4329	4329	4704	4705	3196	4191	4191	4190	OL	0.00	0.00	0.00	0.00					
7/9/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2820	4329	4329	4704	4705	3196	4191	4191	4190	OL	0.00	0.00	0.00	0.00					
7/10/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2820	4329	4329	4704	4705	3196	4191	4191	4190	OL	0.00	0.00	0.00	0.00					
7/11/2011	NA	17.2	27.9	24.5	22.9	71.1	68.8	113.9	75.5	70.0	109.8	85.6	72.0	80.8	77.6	100.9	2834	4344	4344	4719	4720	3210	4206	4205	4205	100.0	0.00	0.02	41.85	41.87					
7/12/2011	94.3	21.5	25.6	24.5	66.7	71.3	68.9	120.3	75.9	70.4	112.6	84.4	72.4	83.2	75.9	101.5	2858	4368	4368	4743	4744	3234	4230	4229	4229	100.0	0.00	0.00	68.92	68.92					
7/13/2011	94.6	21.3	27.3	24.4	48.1	92.8	72.6	115.0	74.8	74.0	110.4	81.8	74.4	81.2	75.3	97.8	2882	4392	4392	4767	4768	3258	4254	4253	4253	100.0	0.00	0.00	72.64	72.64					
7/14/2011	93.9	21.4	24.9	24.3	76.5	83.2	79.6	111.1	81.1	80.9	107.1	81.3	81.2	81.1	81.1	91.9	2906	4416	4416	4791	4792	3282	4278	4277	4277	100.0	0.00	0.00	79.62	79.62					
7/15/2011	93.0	18.0	29.1	24.4	46.7	82.6	63.5	106.2	79.3	78.4	72.3	79.8	78.1	79.7	79.5	82.8	2930	4440	4440	4804	4805	3295	4302	4301	4301	100.0	0.00	0.02	63.52	63.54					
7/16/2011	NA	0.0	41.0	24.5	2.3	82.0	55.9	104.1	70.4	66.2	71.8	75.4	66.5	73.3	71.3	79.3	2954	4464	4463	4821	4822	3312	4324	4324	4324	100.0	0.01	0.00	54.84	54.85					
7/17/2011	NA	21.2	28.9	24.5	40.2	84.4	64.6	104.1	66.6	66.1	102.2	77.3	66.3	71.2	66.3	79.6	2978	4488	4487	4845	4846	3336	4348	4348	4348	100.0	0.00	0.00	64.57	64.57					
7/18/2011	NA	21.3	25.5	24.4	54.6	93.4	76.9	107.3	78.5	78.2	104.1	83.1	78.5	79.8	78.4	83.0	3002	4512	4511	4869	4870	3360	4372	4372	4372	100.0	0.00	0.00	76.87	76.87					
7/19/2011	94.1	20.0	25.6	23.9	78.3	93.2	85.0	103.7	86.5	84.5	99.2	86.5	86.5	86.5	86.5	86.6	3026	4536	4535	4893	4894	3384	4396	4396	4396	100.0	0.00	0.00	85.05	85.05					
7/20/2011	95.2	18.7	45.0	24.1	10.4	93.1	79.5	100.2	81.3	79.9	96.7	81.9	81.3	81.4	81.3	81.8	3050	4560	4559	4917	4918	3408	4420	4420	4420	100.0	0.00	0.00	79.48	79.48					
7/21/2011	94.8	20.0	26.0	24.0	55.0	85.1	73.6	96.7	75.2	73.5	94.6	77.2	75.3	75.2	75.2	75.4	3074	4584	4583	4941	4942	3432	4444	4444	4444	100.0	0.00	0.00	73.58	73.58					
7/22/2011	94.1	18.4	24.4	22.5	66.9	80.9	75.7	91.8	77.3	69.7	92.1	77.3	77.3	77.3	77.3	77.3	3098	4608	4607	4965	4966	3456	4468	4468	4468	100.0	0.00	0.00	75.71	75.71					
7/23/2011	NA	20.4	40.8	23.3	11.2	73.5	69.3	90.1	70.6	66.2	90.8	70.8	70.6	70.7	70.6	70.7	3101	4611	4610	4968	4969	3460	4472	4471	4471	100.0	0.00	0.00	8.85	8.85					
7/24/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3101	4611	4610	4968	4969	3460	4472	4471	4471	OL	0.00	0.00	0.00	0.00					
7/25/2011	NA	18.5	40.5	25.0	7.3	70.8	50.8	95.9	70.8	38.7	89.7	79.0	72.8	69.9	72.2	80.0	3101	4611	4611	4968	4969	3460	4472	4471	4471	100.0	0.00	0.00	0.18	0.18					
7/26/2011	NS	20.1	30.2	24.3	8.1	82.7	57.5	87.3	60.6	57.8	86.8	68.6	60.2	61.3	60.4	64.3	3108	4617	4617	4975	4976	3466	4478	4478	4478	100.0	0.00	0.00	15.76	15.76					
7/27/2011	95.7	19.4	29.0	24.1	29.0	79.6	55.9	88.3	57.6	55.7	87.3	66.6	58.0	59.6	57.8	62.1	3132	4641	4641	4999	5000	3490	4502	4502	4502	100.0	0.00	0.00	55.92	55.92					
7/28/2011	94.0	18.4	25.2	22.8	63.3	72.0	68.0	86.1	69.6	63.8	85.6	69.7	69.6	69.7	69.6	69.6	3156	4665	4665	5023	5024	3514	4526	4526	4526	100.0	0.00	0.00	68.02	68.02					
7/29/2011	94.7	19.5	24.8	22.7	61.3	72.0	67.3	84.9	69.0	62.7	83.7	69.0	68.9	69.0	68.9	68.9	3180	4689	4689	5047	5048	3538	4550	4550	4550	100.0	0.00	0.00	67.33	67.33					
7/30/2011	NA	0.0	36.5	23.5	6.0	68.6	55.6	85.1	57.5	53.8	84.2	63.1	57.6	57.9	57.6	58.2	3204	4713	4713	5071	5072	3562	4574	4574	4574	100.0	0.00	0.00	55.31	55.31					
7/31/2011	NA	20.4	35.6	24.7	5.2	65.6	44.4	89.2	46.3	46.0	87.1	63.9	46.4	49.2	46.3	49.9	3225	4735	4735	5093	5094	3584	4596	4596	4596	100.0	0.00	0.00	40.56	40.57					

Report Created: **Tuesday, August 02, 2011**

Total [ML]: **0.01 0.10 1445.16 1445.27**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No Sample Taken due to Plant Shutdown

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-500A**
Report Period: **July 2011**

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
7/1/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1417	1878	1417	1993	419	3678	1350	3389	1350	OL	0.00	0.00	0.00	0.00	
7/2/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1417	1878	1417	1993	419	3678	1350	3389	1350	OL	0.00	0.00	0.00	0.00	
7/3/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1417	1878	1417	1993	419	3678	1350	3389	1350	OL	0.00	0.00	0.00	0.00	
7/4/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1417	1878	1417	1993	419	3678	1350	3389	1350	OL	0.00	0.00	0.00	0.00	
7/5/2011	94.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1417	1878	1417	1993	419	3678	1350	3389	1350	OL	0.00	0.00	0.00	0.00	
7/6/2011	92.6	5.8	45.7	24.2	8.3	106.3	84.0	118.0	111.7	182.2	559.1	84.5	100.0	238.5	130.3	174.5	1425	1886	1424	1997	422	3682	1358	3397	1358	98.7	0.00	0.36	26.48	26.85
7/7/2011	94.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1425	1886	1424	1997	422	3682	1358	3397	1358	OL	0.00	0.00	0.00	0.00	
7/8/2011	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1425	1886	1424	1997	422	3682	1358	3397	1358	OL	0.00	0.00	0.00	0.00	
7/9/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1425	1886	1424	1997	422	3682	1358	3397	1358	OL	0.00	0.00	0.00	0.00	
7/10/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1425	1886	1424	1997	422	3682	1358	3397	1358	OL	0.00	0.00	0.00	0.00	
7/11/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1425	1886	1424	1997	422	3682	1358	3397	1358	OL	0.00	0.00	0.00	0.00	
7/12/2011	94.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1425	1886	1424	1997	422	3682	1358	3397	1358	OL	0.00	0.00	0.00	0.00	
7/13/2011	94.6	1.9	61.6	23.8	4.6	97.6	83.7	151.2	133.1	188.9	301.0	133.1	136.7	164.3	129.0	137.6	1442	1903	1441	2013	439	3699	1358	3398	1358	98.4	0.00	0.95	58.04	58.99
7/14/2011	93.9	18.7	24.7	24.1	81.7	88.2	85.0	156.1	136.2	187.6	195.9	136.3	138.1	OL	OL	OL	1466	1927	1465	2037	463	3723	1358	3398	1358	100.0	0.00	0.00	85.01	85.01
7/15/2011	93.0	18.4	24.7	24.1	61.1	88.2	74.1	144.5	119.1	171.9	171.6	119.2	127.8	OL	OL	OL	1490	1951	1489	2061	487	3747	1358	3398	1358	100.0	0.00	0.02	74.10	74.13
7/16/2011	NA	0.0	42.9	24.3	2.3	81.4	65.8	137.8	100.6	163.4	198.9	94.6	121.1	171.6	85.3	52.4	1513	1974	1513	2085	510	3770	1365	3405	1365	99.9	0.09	0.00	63.52	63.61
7/17/2011	NA	19.2	37.5	30.6	27.4	94.1	40.5	135.5	87.8	158.0	176.9	80.6	116.0	237.1	102.1	95.5	1537	1998	1537	2087	512	3772	1389	3429	1389	100.0	0.00	0.00	40.51	40.51
7/18/2011	NA	21.9	34.8	29.5	31.7	61.8	43.3	134.0	92.7	160.7	OL	OL	OL	237.2	102.0	155.3	1561	2022	1561	2087	512	3772	1413	3453	1413	100.0	0.00	0.00	43.34	43.34
7/19/2011	94.1	21.5	26.9	24.6	47.2	66.0	52.8	126.0	87.0	148.1	OL	OL	OL	232.1	97.0	151.8	1585	2046	1585	2087	512	3772	1437	3477	1437	100.0	0.00	0.00	52.91	52.91
7/20/2011	95.2	21.5	41.1	26.8	14.9	84.0	54.1	124.3	96.9	143.1	OL	OL	OL	236.8	101.8	142.7	1605	2066	1605	2087	512	3772	1457	3497	1458	100.0	0.00	0.00	45.20	45.20
7/21/2011	94.8	13.9	35.4	24.1	7.5	98.8	72.9	110.1	84.9	145.6	594.8	71.9	91.9	203.5	104.6	145.9	1610	2070	1609	2091	517	3776	1462	3501	1462	99.6	0.00	0.06	13.30	13.35
7/22/2011	94.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1610	2070	1609	2091	517	3776	1462	3501	1462	OL	0.00	0.00	0.00	0.00
7/23/2011	NA	0.2	82.3	22.9	4.0	91.3	81.6	141.0	131.1	157.6	200.9	132.7	135.7	197.8	142.1	170.2	1625	2085	1624	2106	532	3791	1462	3502	1462	91.5	0.00	4.35	46.75	51.10
7/24/2011	NA	15.4	28.3	23.9	42.1	80.9	72.6	128.0	116.6	180.6	163.7	117.0	128.1	OL	OL	OL	1649	2109	1648	2130	556	3815	1462	3502	1462	99.5	0.00	0.40	72.18	72.58
7/25/2011	NA	16.1	37.3	26.2	36.2	90.9	61.8	166.8	108.8	184.7	437.9	120.5	143.8	OL	OL	OL	1673	2133	1672	2154	580	3839	1462	3502	1462	100.0	0.00	0.03	61.75	61.78
7/26/2011	NS	0.5	41.2	26.7	5.6	84.5	48.5	163.8	91.3	171.8	405.2	119.7	147.4	44.9	36.9	15.3	1680	2141	1680	2162	587	3847	1462	3502	1463	98.4	0.00	0.24	14.84	15.07
7/27/2011	95.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1680	2141	1680	2162	587	3847	1462	3502	1463	OL	0.00	0.00	0.00	0.00
7/28/2011	94.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1680	2141	1680	2162	587	3847	1462	3502	1463	OL	0.00	0.00	0.00	0.00
7/29/2011	94.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1680	2141	1680	2162	587	3847	1462	3502	1463	OL	0.00	0.00	0.00	0.00
7/30/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1680	2141	1680	2162	587	3847	1462	3502	1463	OL	0.00	0.00	0.00	0.00
7/31/2011	NA	20.8	34.6	25.2	5.8	37.9	33.8	108.5	71.7	148.4	200.6	106.9	138.1	121.5	35.4	21.3	1682	2143	1682	2164	589	3849	1464	3504	1465	100.0	0.00	0.00	2.94	2.94

Report Created: **Tuesday, August 02, 2011**

Total [ML]: **0.09 6.41 700.88 707.38**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No Sample Taken due to Plant Shutdown

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-600A**
Report Period: **July 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
7/1/2011	NA	18.5	25.3	24.4	68.6	98.1	77.6	150.0	97.5	79.0	117.5	114.0	132.2	78.8	94.8	112.5	4371	4433	4433	4745	4745	4745	2460	4426	4426	100.0	0.00	0.00	77.62	77.62
7/2/2011	NA	18.8	26.5	24.4	46.1	82.9	78.5	148.4	97.0	79.9	113.9	110.8	129.7	79.7	92.3	107.5	4395	4457	4457	4769	4769	4769	2484	4450	4450	100.0	0.00	0.00	78.56	78.56
7/3/2011	NA	18.6	25.0	24.4	75.0	82.9	78.9	144.1	94.7	80.2	111.6	108.7	126.7	80.1	90.5	105.5	4419	4481	4481	4793	4793	4793	2508	4474	4474	100.0	0.00	0.00	78.93	78.93
7/4/2011	NA	18.2	25.0	24.2	75.5	87.4	82.4	137.5	93.5	83.1	109.9	107.4	124.4	83.5	89.1	103.6	4443	4505	4505	4817	4817	4817	2532	4498	4498	100.0	0.00	0.00	82.45	82.45
7/5/2011	94.3	17.6	26.6	24.1	48.2	87.8	73.6	140.0	93.4	73.6	105.8	103.5	116.5	75.0	85.8	102.7	4467	4529	4529	4841	4841	4841	2556	4522	4522	99.9	0.00	0.05	73.59	73.64
7/6/2011	92.6	0.0	36.6	24.3	15.8	150.0	78.1	155.7	104.9	90.4	112.8	110.8	126.9	79.2	93.2	114.8	4484	4545	4545	4857	4857	4857	2572	4538	4538	99.8	0.06	0.03	53.02	53.11
7/7/2011	94.2	18.7	27.1	24.4	81.9	88.0	85.0	177.5	116.3	113.0	119.4	115.7	146.8	86.1	97.7	130.9	4508	4569	4569	4881	4881	4881	2596	4562	4562	100.0	0.00	0.00	85.01	85.01
7/8/2011	93.9	18.5	27.1	24.4	81.9	88.4	85.0	170.9	111.1	99.8	115.2	113.2	139.6	86.0	94.6	122.7	4532	4593	4593	4905	4905	4905	2620	4586	4586	100.0	0.00	0.00	85.01	85.01
7/9/2011	NA	18.8	26.0	24.4	77.7	87.8	83.2	163.8	105.5	87.6	111.0	109.1	131.9	84.2	91.0	116.7	4556	4617	4617	4929	4929	4929	2644	4610	4610	100.0	0.00	0.00	83.18	83.18
7/10/2011	NA	18.5	25.7	24.4	62.3	87.0	80.3	162.1	101.0	82.6	111.1	109.6	130.4	81.4	91.3	112.7	4580	4641	4641	4953	4953	4953	2668	4634	4634	100.0	0.00	0.00	80.30	80.30
7/11/2011	NA	18.4	25.0	24.4	76.9	87.7	81.3	162.2	98.0	82.7	109.8	108.0	128.1	82.4	90.4	109.9	4604	4665	4665	4977	4977	4977	2692	4658	4658	100.0	0.00	0.00	81.34	81.34
7/12/2011	94.3	18.4	25.0	24.4	77.7	83.9	81.1	159.7	95.7	82.4	108.8	107.0	125.9	82.2	90.0	106.0	4628	4689	4689	5001	5001	5001	2716	4682	4682	100.0	0.00	0.00	81.12	81.12
7/13/2011	94.6	18.8	34.5	24.4	6.7	86.2	80.7	156.8	86.8	82.0	105.7	102.6	118.1	81.7	87.3	95.3	4635	4697	4696	5009	5008	5008	2724	4689	4689	100.0	0.00	0.00	23.93	23.93
7/14/2011	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4635	4697	4696	5009	5008	5008	2724	4689	4689	OL	0.00	0.00	0.00	0.00
7/15/2011	93.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4635	4697	4696	5009	5008	5008	2724	4689	4689	OL	0.00	0.00	0.00	0.00
7/16/2011	NA	0.0	27.4	16.2	2.8	45.6	31.6	115.6	84.6	76.2	102.0	98.9	94.1	40.2	88.2	97.3	4635	4697	4697	5009	5009	5009	2724	4690	4690	74.9	0.17	0.00	0.50	0.66
7/17/2011	NA	18.5	30.9	24.5	6.2	72.1	68.9	145.6	82.6	72.2	102.2	100.4	109.5	70.2	85.8	96.0	4657	4719	4719	5031	5031	5031	2746	4712	4712	100.0	0.00	0.00	63.77	63.77
7/18/2011	NA	18.3	26.9	24.4	54.6	91.7	74.4	150.9	88.5	76.1	103.4	103.4	116.1	75.7	88.1	106.3	4681	4743	4743	5055	5055	5055	2770	4736	4736	100.0	0.00	0.00	74.42	74.42
7/19/2011	94.1	17.2	25.3	23.4	76.8	92.1	85.0	139.9	86.6	86.3	97.7	97.6	105.7	81.8	86.6	94.7	4705	4767	4767	5079	5079	5079	2794	4760	4760	99.8	0.00	0.18	84.81	84.99
7/20/2011	95.2	16.4	31.6	23.6	42.3	94.0	77.5	134.8	83.0	78.9	96.0	94.9	103.8	75.1	84.7	91.5	4729	4791	4791	5103	5103	5103	2818	4784	4784	99.8	0.00	0.17	77.25	77.42
7/21/2011	94.8	18.2	45.5	23.6	13.3	83.7	79.9	118.1	81.3	81.2	95.3	94.6	103.9	77.6	82.6	94.0	4741	4803	4802	5115	5114	5114	2830	4795	4795	100.0	0.00	0.00	37.96	37.97
7/22/2011	94.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4741	4803	4802	5115	5114	5114	2830	4795	4795	OL	0.00	0.00	0.00	0.00
7/23/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4741	4803	4802	5115	5114	5114	2830	4795	4795	OL	0.00	0.00	0.00	0.00
7/24/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4741	4803	4802	5115	5114	5114	2830	4795	4795	OL	0.00	0.00	0.00	0.00
7/25/2011	NA	18.0	33.1	24.6	4.9	63.4	58.8	165.0	116.1	108.6	137.7	120.9	139.3	60.3	120.7	127.1	4748	4810	4810	5122	5122	5121	2837	4803	4802	99.9	0.00	0.01	17.37	17.38
7/26/2011	NS	18.6	39.5	24.4	22.7	101.7	71.7	136.8	80.6	75.8	113.7	101.5	111.0	72.9	103.2	110.2	4760	4822	4822	5134	5134	5134	2849	4815	4815	100.0	0.00	0.00	36.18	36.18
7/27/2011	95.7	18.7	30.5	24.3	4.0	91.5	81.8	135.2	83.3	90.7	112.1	97.5	122.3	82.7	101.8	106.0	4782	4844	4844	5156	5156	5155	2871	4837	4836	100.0	0.00	0.00	74.22	74.22
7/28/2011	94.0	18.5	25.7	24.3	78.6	91.3	85.0	154.4	87.2	94.3	121.4	103.2	130.9	86.0	107.1	109.8	4806	4868	4868	5180	5180	5179	2895	4861	4860	100.0	0.00	0.00	84.99	84.99
7/29/2011	94.7	18.3	25.6	24.3	77.7	92.5	85.0	160.1	86.4	87.8	125.5	106.0	123.2	86.0	106.2	106.9	4830	4892	4892	5204	5204	5203	2919	4885	4884	100.0	0.00	0.00	85.01	85.01
7/30/2011	NA	18.0	26.0	24.3	55.4	90.3	82.6	157.8	84.1	84.0	123.3	103.4	115.5	83.7	105.7	93.5	4854	4916	4916	5228	5228	5227	2943	4909	4908	100.0	0.00	0.03	82.63	82.65
7/31/2011	NA	18.7	25.9	24.4	49.3	95.5	73.7	160.0	75.3	75.1	127.3	106.5	119.8	75.1	109.3	100.5	4878	4940	4940	5252	5252	5251	2967	4933	4932	100.0	0.00	0.00	73.72	73.72

Report Created: **Tuesday, August 02, 2011**

Total [ML]: **0.23 0.47 1756.92 1757.61**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No Sample Taken due to Plant Shutdown

UV Monitoring Report – Monthly



Water System Code: 252.00
Licence Number: PWS-09-412 RR

Report Period: August 2011

Date	UVR-D100A				UVR-D200A				UVR-D300A				UVR-D400A				UVR-D500A				UVR-D600A				Total				% Volume Treated To Dose		
	Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]						
	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total		Untreated	Below
8/1/2011	0.00	0.00	7.12	7.12	0.11	1.62	66.63	68.36	0.05	0.00	36.87	36.92	0.03	0.00	46.64	46.67	0.00	0.00	0.00	0.00	0.04	0.02	66.42	66.48	0.23	1.64	223.69	225.56	99.2		
8/2/2011	0.00	0.00	66.80	66.80	0.00	0.00	4.31	4.31	0.00	0.02	53.72	53.74	0.00	0.00	70.00	70.00	0.00	0.00	0.01	0.01	0.00	0.00	70.24	70.24	0.00	0.02	265.09	265.11	100.0		
8/3/2011	0.00	0.00	1.51	1.51	0.00	0.03	68.51	68.54	0.00	0.00	57.19	57.19	0.00	0.00	74.58	74.58	0.00	0.00	0.00	0.00	0.00	0.00	70.16	70.16	0.00	0.03	271.95	271.98	100.0		
8/4/2011	0.00	0.00	0.00	0.00	0.05	0.00	73.42	73.46	0.05	0.00	29.53	29.58	0.02	0.00	64.46	64.48	0.00	0.00	14.80	14.80	0.02	0.00	60.28	60.30	0.14	0.00	242.48	242.63	99.9		
8/5/2011	0.00	0.00	0.00	0.00	0.00	0.00	83.67	83.67	0.00	0.00	16.38	16.38	0.00	0.00	80.67	80.67	0.00	0.00	23.66	23.66	0.00	0.00	65.74	65.74	0.00	0.00	270.13	270.13	100.0		
8/6/2011	0.00	0.00	0.00	0.00	0.00	0.00	82.71	82.71	0.00	0.00	46.87	46.87	0.00	0.00	74.12	74.12	0.00	0.00	0.00	0.00	0.00	0.00	70.01	70.01	0.00	0.00	273.71	273.71	100.0		
8/7/2011	0.00	0.00	7.45	7.45	0.00	0.00	83.02	83.02	0.00	0.00	41.60	41.60	0.00	0.00	64.22	64.22	0.00	0.00	5.79	5.79	0.00	0.00	70.08	70.08	0.00	0.00	272.16	272.16	100.0		
8/8/2011	0.00	0.00	62.43	62.43	0.00	0.00	83.83	83.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.13	40.13	0.00	0.03	70.71	70.73	0.00	0.03	257.09	257.12	100.0		
8/9/2011	0.00	0.00	65.37	65.37	0.00	0.00	85.02	85.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.75	38.75	0.00	0.00	71.26	71.26	0.00	0.00	260.40	260.40	100.0		
8/10/2011	0.00	0.00	62.68	62.68	0.00	0.00	78.39	78.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.03	37.03	0.00	0.00	67.64	67.64	0.00	0.00	245.75	245.75	100.0		
8/11/2011	0.00	0.00	70.08	70.08	0.00	0.00	65.04	65.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46.14	46.14	0.00	0.00	66.29	66.29	0.00	0.00	247.54	247.54	100.0		
8/12/2011	0.00	0.00	70.02	70.02	0.00	0.00	65.02	65.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.91	53.91	0.00	0.00	65.00	65.00	0.00	0.00	253.95	253.95	100.0		
8/13/2011	0.00	0.00	70.01	70.01	0.00	0.00	65.01	65.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57.72	57.72	0.00	0.00	64.99	64.99	0.00	0.00	257.73	257.73	100.0		
8/14/2011	0.00	0.00	70.01	70.01	0.00	0.00	65.02	65.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.00	60.00	0.00	0.00	65.00	65.00	0.00	0.00	260.03	260.03	100.0		
8/17/2011	0.00	0.00	70.00	70.00	0.00	0.00	65.01	65.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69.08	69.08	0.00	0.00	64.99	64.99	0.00	0.00	269.07	269.07	100.0		
8/16/2011	0.00	0.00	69.98	69.98	0.00	0.00	63.68	63.68	0.00	0.03	1.06	1.08	0.00	0.00	41.38	41.38	0.00	0.00	77.33	77.33	0.00	0.00	23.16	23.16	0.00	0.03	276.58	276.61	100.0		
8/17/2011	0.00	0.00	69.86	69.86	0.00	0.00	35.74	35.74	0.00	0.00	23.45	23.45	0.00	0.00	63.68	63.68	0.00	0.00	79.30	79.30	0.00	0.00	0.00	0.00	0.00	0.00	272.03	272.04	100.0		
8/18/2011	0.00	0.12	60.02	60.14	0.00	0.00	14.35	14.35	0.00	0.00	56.17	56.17	0.00	0.06	69.84	69.90	0.00	0.00	34.11	34.11	0.00	0.03	46.08	46.11	0.00	0.21	280.56	280.78	99.9		
8/19/2011	0.00	0.00	84.32	84.32	0.00	0.00	0.00	0.00	0.00	0.00	47.02	47.02	0.00	0.00	77.38	77.38	0.00	0.00	0.00	0.00	0.00	0.00	82.27	82.27	0.00	0.00	290.99	290.99	100.0		
8/20/2011	0.00	0.00	83.00	83.00	0.00	0.00	0.00	0.00	0.00	0.00	44.82	44.82	0.00	0.00	72.35	72.35	0.00	0.00	0.00	0.00	0.00	0.00	79.27	79.27	0.00	0.00	279.43	279.43	100.0		
8/21/2011	0.00	0.00	74.33	74.33	0.00	0.00	0.00	0.00	0.00	0.00	40.04	40.04	0.00	0.00	65.03	65.03	0.00	0.00	0.00	0.00	0.00	0.00	71.43	71.43	0.00	0.00	250.82	250.82	100.0		
8/22/2011	0.00	0.00	75.77	75.77	0.00	0.00	0.00	0.00	0.00	0.00	39.79	39.79	0.00	0.00	65.17	65.17	0.00	0.00	0.00	0.00	0.00	0.00	71.57	71.57	0.00	0.00	252.30	252.30	100.0		
8/23/2011	0.00	0.00	77.28	77.28	0.00	0.00	0.00	0.00	0.00	0.00	41.92	41.92	0.00	0.00	67.45	67.45	0.00	0.00	0.00	0.00	0.00	0.00	74.46	74.46	0.00	0.00	261.11	261.11	100.0		
8/24/2011	0.00	0.33	46.33	46.66	0.00	0.00	34.89	34.89	0.00	0.00	44.15	44.15	0.00	0.00	68.64	68.64	0.00	0.00	0.00	0.00	0.00	0.00	76.27	76.27	0.00	0.33	270.27	270.60	99.9		
8/25/2011	0.00	0.00	1.30	1.30	0.00	0.00	80.99	80.99	0.00	0.00	45.34	45.34	0.00	0.00	67.43	67.43	0.00	0.00	0.00	0.00	0.00	0.00	77.60	77.60	0.00	0.00	272.67	272.67	100.0		
8/26/2011	0.00	0.00	65.88	65.88	0.00	0.00	21.37	21.37	0.00	0.00	54.95	54.95	0.00	0.02	49.28	49.30	0.00	0.00	54.48	54.48	0.00	0.00	24.27	24.27	0.00	0.02	270.24	270.26	100.0		
8/27/2011	0.00	0.00	75.62	75.62	0.00	0.00	0.00	0.00	0.00	0.00	44.82	44.82	0.00	0.00	71.34	71.34	0.00	0.00	77.46	77.46	0.00	0.00	0.00	0.00	0.00	0.00	269.25	269.25	100.0		
8/28/2011	0.00	0.00	75.79	75.79	0.00	0.00	0.00	0.00	0.00	0.00	44.95	44.95	0.00	0.00	71.75	71.75	0.00	0.00	77.51	77.51	0.00	0.00	0.00	0.00	0.00	0.00	270.01	270.01	100.0		
8/29/2011	0.00	0.00	75.95	75.95	0.00	0.00	0.00	0.00	0.00	0.00	45.00	45.00	0.00	0.00	71.52	71.52	0.00	0.00	77.51	77.51	0.00	0.00	0.00	0.00	0.00	0.00	269.98	269.98	100.0		
8/30/2011	0.00	0.00	78.48	78.48	0.00	0.00	0.00	0.00	0.00	0.00	45.92	45.92	0.00	0.00	73.67	73.67	0.00	0.00	79.75	79.75	0.00	0.00	0.00	0.00	0.00	0.00	277.82	277.82	100.0		
8/31/2011	0.00	0.00	78.78	78.78	0.00	0.00	0.00	0.00	0.00	0.00	45.93	45.93	0.00	0.00	74.12	74.12	0.00	0.00	79.93	79.93	0.00	0.00	0.00	0.00	0.00	0.00	278.77	278.77	100.0		

Total [ML]: 0.00 0.45 1716.17 1716.63 0.15 1.64 1285.61 1287.41 0.10 0.05 947.49 947.65 0.06 0.09 1544.72 1544.86 0.00 0.00 1084.41 1084.41 0.06 0.08 1635.21 1635.34 0.38 2.31 8213.60 8216.29

Report Created: Thursday, September 01, 2011

Water Volume [%]:

Untreated 0.0%
Below Dose 0.0%
To Dose 100.0%

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV\2011\08-2011

Notes: 1 UV Comparative Dose: 18.1 mj/cm2

Submitted By (Print): D.Sulymka

Original Signed By: D.Sulymka

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-100A**
Report Period: **August 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]					
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total		
8/1/2011	NA	0.0	30.4	24.2	5.4	75.9	67.5	OL	OL	OL	110.8	108.4	108.3	127.4	108.2	113.5	116	2248	3307	1665	1665	1665	1665	1665	1665	1665	1665	100.0	0.00	0.00	7.12	7.12
8/2/2011	NA	18.9	93.0	24.2	9.4	95.7	70.1	79.0	91.4	159.4	121.5	112.1	112.4	129.4	111.9	118.8	116	2248	3308	1688	1688	1688	1688	1688	1688	1688	1688	100.0	0.00	0.00	66.80	66.80
8/3/2011	95.1	0.0	31.6	23.9	2.3	73.8	67.9	OL	OL	OL	115.4	109.8	108.9	125.2	106.4	110.4	116	2248	3308	1689	1688	1689	1689	1689	1689	1688	100.0	0.00	0.00	1.51	1.51	
8/4/2011	95.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	116	2248	3308	1689	1688	1689	1689	1689	1689	1688	OL	0.00	0.00	0.00	0.00	
8/5/2011	94.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	116	2248	3308	1689	1688	1689	1689	1689	1689	1688	OL	0.00	0.00	0.00	0.00	
8/6/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	116	2248	3308	1689	1688	1689	1689	1689	1689	1688	OL	0.00	0.00	0.00	0.00	
8/7/2011	NA	18.5	35.4	24.4	7.0	63.6	61.4	62.6	66.4	136.7	106.0	88.8	81.7	124.8	82.0	92.1	118	2250	3309	1691	1691	1692	1692	1692	1691	1691	100.0	0.00	0.00	7.45	7.45	
8/8/2011	92.9	20.0	31.2	24.2	19.6	86.6	62.4	OL	OL	OL	121.1	100.6	100.4	130.7	100.6	109.2	118	2250	3309	1715	1715	1716	1716	1716	1715	1715	100.0	0.00	0.00	62.43	62.43	
8/9/2011	NA	20.0	24.8	24.2	59.3	69.1	65.4	OL	OL	OL	140.2	105.2	105.3	144.4	105.2	142.2	118	2250	3309	1739	1739	1740	1740	1740	1739	1739	100.0	0.00	0.00	65.37	65.37	
8/10/2011	95.1	20.2	24.9	24.2	54.0	75.9	62.7	OL	OL	OL	141.5	101.5	101.1	143.5	101.0	151.5	118	2250	3309	1763	1763	1764	1764	1764	1763	1763	100.0	0.00	0.00	62.68	62.68	
8/11/2011	95.1	20.4	24.6	24.2	65.8	80.8	70.1	OL	OL	OL	147.2	112.5	112.6	149.6	112.5	155.5	118	2250	3309	1787	1787	1788	1788	1788	1787	1787	100.0	0.00	0.00	70.08	70.08	
8/12/2011	94.3	20.2	24.7	24.2	66.1	74.0	70.0	OL	OL	OL	143.2	112.5	112.6	144.8	112.5	147.8	118	2250	3309	1811	1811	1812	1812	1812	1811	1811	100.0	0.00	0.00	70.02	70.02	
8/13/2011	NA	20.3	24.8	24.2	65.9	75.0	70.0	OL	OL	OL	140.8	112.4	112.5	143.3	112.5	140.8	118	2250	3309	1835	1835	1836	1836	1836	1835	1835	100.0	0.00	0.00	70.01	70.01	
8/14/2011	NA	20.3	24.8	24.2	64.2	74.6	70.0	OL	OL	OL	140.0	112.4	112.5	143.3	112.4	136.9	118	2250	3309	1859	1859	1860	1860	1860	1859	1859	100.0	0.00	0.00	70.01	70.01	
8/15/2011	NA	20.2	24.8	24.2	66.3	73.6	70.0	OL	OL	OL	139.9	112.4	112.5	143.6	112.4	135.9	118	2250	3309	1883	1883	1884	1884	1884	1883	1883	100.0	0.00	0.00	70.00	70.00	
8/16/2011	94.8	20.3	25.2	24.2	48.6	87.8	70.0	OL	OL	OL	132.8	112.5	112.4	136.8	112.4	126.4	118	2250	3309	1907	1907	1908	1908	1908	1907	1907	100.0	0.00	0.00	69.98	69.98	
8/17/2011	NA	20.4	26.7	24.2	53.5	95.7	69.9	OL	OL	OL	119.1	112.2	112.2	128.0	112.3	114.1	118	2250	3309	1931	1931	1932	1932	1932	1931	1931	100.0	0.00	0.00	69.86	69.86	
8/18/2011	95.1	0.0	103.4	24.2	2.2	111.7	76.5	131.9	138.1	148.9	109.7	111.7	111.7	132.2	122.0	126.5	127	2259	3319	1941	1941	1942	1951	1950	1950	99.8	0.00	0.12	60.02	60.14		
8/19/2011	94.5	19.3	25.1	24.3	80.8	88.6	84.3	91.3	109.2	91.9	89.8	85.9	85.7	115.4	91.8	91.9	151	2283	3343	1963	1962	1963	1975	1974	1974	100.0	0.00	0.00	84.32	84.32		
8/20/2011	NA	19.3	25.1	24.3	77.9	86.3	83.0	84.4	106.7	84.8	92.7	84.6	84.5	115.4	84.7	84.7	175	2307	3367	1987	1986	1987	1999	1998	1998	100.0	0.00	0.00	83.00	83.00		
8/21/2011	NA	19.5	25.7	24.3	70.2	80.6	74.3	93.9	111.9	96.8	87.5	75.6	75.6	117.6	94.4	97.4	199	2331	3391	2001	2001	2001	2023	2022	2022	100.0	0.00	0.00	74.33	74.33		
8/22/2011	NA	20.3	24.7	24.2	72.7	78.9	75.8	121.5	127.2	145.9	OL	OL	OL	127.9	121.5	134.8	223	2355	3415	2001	2001	2001	2047	2046	2046	100.0	0.00	0.00	75.77	75.77		
8/23/2011	94.7	20.3	24.7	24.2	72.0	81.8	77.3	124.0	140.2	158.0	OL	OL	OL	140.0	123.9	148.5	247	2379	3439	2001	2001	2001	2071	2070	2070	100.0	0.00	0.00	77.28	77.28		
8/24/2011	96.2	0.0	25.6	24.0	2.4	97.6	79.1	126.8	138.4	145.0	44.4	26.0	18.5	140.0	126.4	140.9	261	2393	3453	2001	2001	2001	2085	2085	2084	99.3	0.00	0.33	46.33	46.66		
8/25/2011	94.5	29.7	62.2	32.5	3.4	45.7	42.7	113.0	158.3	165.1	166.6	114.8	141.9	157.4	78.1	162.7	262	2394	3454	2002	2001	2002	2085	2085	2084	100.0	0.00	0.00	1.30	1.30		
8/26/2011	94.6	19.8	34.4	26.1	39.4	79.3	65.9	112.5	141.4	122.1	141.2	109.1	115.1	227.0	171.5	187.7	286	2418	3478	2026	2025	2026	2088	2088	2088	100.0	0.00	0.00	65.88	65.88		
8/27/2011	NA	19.7	24.8	24.2	70.6	79.2	75.6	121.6	134.0	132.2	133.2	121.3	121.8	OL	OL	OL	310	2442	3502	2050	2049	2050	2088	2088	2088	100.0	0.00	0.00	75.62	75.62		
8/28/2011	NA	20.1	24.8	24.2	72.2	78.2	75.8	121.8	141.7	130.8	134.1	121.5	121.9	OL	OL	OL	334	2466	3526	2074	2073	2074	2088	2088	2088	100.0	0.00	0.00	75.79	75.79		
8/29/2011	NA	20.3	24.8	24.1	71.7	78.7	76.0	122.0	139.3	122.4	122.1	121.8	121.9	OL	OL	OL	358	2490	3550	2098	2097	2098	2088	2088	2088	100.0	0.00	0.00	75.95	75.95		
8/30/2011	95.9	20.1	24.8	24.1	72.8	82.3	78.5	125.8	138.7	126.0	125.9	125.7	125.8	OL	OL	OL	382	2514	3574	2122	2121	2122	2088	2088	2088	100.0	0.00	0.00	78.48	78.48		
8/31/2011	94.7	19.9	24.9	24.1	72.9	82.6	78.8	126.5	141.3	126.7	127.0	126.2	126.3	OL	OL	OL	406	2538	3598	2146	2145	2146	2088	2088	2088	100.0	0.00	0.00	78.78	78.78		

Report Created: **Thursday, September 01, 2011**

Total [ML]: **0.00 0.45 1716.17 1716.63**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No Sample
 7. Aug. 17 Sample not analyzed due to instrument malfunction

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-200A**
Report Period: **August 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
8/1/2011	NA	0.0	38.3	23.3	1.6	112.2	75.8	14.4	6.5	104.3	247.5	121.4	122.5	236.9	122.3	122.6	1292	1292	1291	1409	1409	1410	1327	1326	1327	97.5	0.11	1.62	66.63	68.36
8/2/2011	NA	0.0	36.6	24.0	2.3	96.0	89.7	2.6	0.9	15.8	271.5	143.4	144.2	242.3	143.4	143.9	1292	1292	1291	1411	1410	1411	1328	1328	1328	100.0	0.00	0.00	4.31	4.31
8/3/2011	95.1	16.0	30.7	24.2	13.9	98.4	70.0	243.9	121.3	116.4	238.0	98.8	132.8	247.9	112.5	114.2	1316	1315	1315	1411	1411	1411	1351	1351	1352	100.0	0.00	0.03	68.51	68.54
8/4/2011	95.2	0.0	36.4	24.2	2.0	89.3	75.4	243.4	115.8	107.3	236.3	81.1	82.4	233.7	100.4	108.0	1339	1339	1338	1424	1424	1425	1375	1374	1375	99.9	0.05	0.00	73.42	73.46
8/5/2011	94.2	20.7	28.6	24.4	78.4	87.3	83.7	260.4	141.0	122.3	282.3	85.1	106.8	259.1	100.9	110.2	1363	1363	1362	1448	1448	1449	1399	1398	1399	100.0	0.00	0.00	83.67	83.67
8/6/2011	NA	23.6	29.0	24.4	79.1	86.3	82.7	260.0	141.7	113.0	271.6	84.2	107.6	259.1	98.6	104.2	1387	1387	1386	1472	1472	1473	1423	1422	1423	100.0	0.00	0.00	82.71	82.71
8/7/2011	NA	22.6	27.4	24.4	65.1	92.4	83.0	247.4	132.6	101.0	250.5	84.5	93.4	247.8	92.8	97.0	1411	1411	1410	1496	1496	1497	1447	1446	1447	100.0	0.00	0.00	83.02	83.02
8/8/2011	92.9	21.9	35.8	24.4	18.1	100.4	83.8	248.2	130.5	100.1	249.4	85.2	88.9	244.8	91.5	96.8	1435	1435	1434	1520	1520	1521	1471	1470	1471	100.0	0.00	0.00	83.83	83.83
8/9/2011	NA	22.7	27.2	24.4	81.6	88.9	85.0	259.2	136.7	106.5	259.9	86.4	91.7	257.7	95.7	100.5	1459	1459	1458	1544	1544	1545	1495	1494	1495	100.0	0.00	0.00	85.02	85.02
8/10/2011	95.1	22.5	27.0	24.4	59.2	88.2	78.4	255.4	133.7	101.8	250.2	79.8	86.6	253.2	93.8	97.1	1483	1483	1482	1568	1568	1569	1519	1518	1519	100.0	0.00	0.00	78.39	78.39
8/11/2011	95.1	23.9	35.9	24.5	61.0	69.2	65.0	260.3	136.8	101.3	256.5	66.6	86.8	259.2	97.2	98.7	1507	1507	1506	1592	1592	1593	1543	1542	1543	100.0	0.00	0.00	65.04	65.04
8/12/2011	94.3	23.2	33.1	24.5	61.0	68.7	65.0	257.1	133.2	95.7	245.2	66.6	82.0	239.6	94.9	95.4	1531	1531	1530	1616	1616	1617	1567	1566	1567	100.0	0.00	0.00	65.02	65.02
8/13/2011	NA	23.8	32.5	24.5	59.9	68.4	65.0	252.5	131.1	91.3	236.5	66.6	77.7	234.3	93.4	92.4	1555	1555	1554	1640	1640	1641	1591	1590	1591	100.0	0.00	0.00	65.01	65.01
8/14/2011	NA	23.9	31.8	24.5	59.0	70.1	65.0	250.5	130.4	87.5	230.8	66.6	74.6	231.6	92.9	90.1	1579	1579	1578	1664	1664	1665	1615	1614	1615	100.0	0.00	0.00	65.02	65.02
8/15/2011	NA	22.0	30.6	24.5	60.7	67.9	65.0	249.5	130.6	86.4	231.2	66.6	72.7	230.7	92.9	89.4	1603	1603	1602	1688	1688	1689	1639	1638	1639	100.0	0.00	0.00	65.01	65.01
8/16/2011	94.8	0.0	40.2	24.5	2.5	98.2	65.0	236.4	123.2	80.6	218.0	66.6	69.3	217.6	89.2	84.2	1626	1626	1626	1712	1712	1712	1662	1662	1663	100.0	0.00	0.00	63.68	63.68
8/17/2011	NA	0.0	30.7	24.5	1.8	68.3	64.9	224.9	114.8	70.3	194.1	66.5	67.1	201.6	85.5	75.6	1640	1639	1639	1725	1725	1725	1676	1675	1676	100.0	0.00	0.00	35.74	35.74
8/18/2011	95.1	0.0	29.6	24.4	3.5	100.6	66.7	190.2	112.1	69.0	167.9	67.6	69.4	177.7	82.2	78.1	1645	1645	1644	1730	1730	1731	1681	1680	1681	100.0	0.00	0.00	14.35	14.35
8/19/2011	94.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1645	1645	1644	1730	1730	1731	1681	1680	1681	OL	0.00	0.00	0.00	0.00
8/20/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1645	1645	1644	1730	1730	1731	1681	1680	1681	OL	0.00	0.00	0.00	0.00
8/21/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1645	1645	1644	1730	1730	1731	1681	1680	1681	OL	0.00	0.00	0.00	0.00
8/22/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1645	1645	1644	1730	1730	1731	1681	1680	1681	OL	0.00	0.00	0.00	0.00
8/23/2011	94.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1645	1645	1644	1730	1730	1731	1681	1680	1681	OL	0.00	0.00	0.00	0.00
8/24/2011	96.2	20.9	28.4	24.3	27.6	89.8	85.0	204.1	115.6	86.5	285.3	85.9	101.5	192.2	86.8	87.2	1655	1655	1654	1740	1740	1740	1691	1690	1691	100.0	0.00	0.00	34.89	34.89
8/25/2011	94.5	21.4	40.5	24.3	22.6	90.0	81.0	205.4	109.6	82.6	312.6	82.5	107.8	186.7	83.2	82.7	1679	1679	1678	1764	1764	1764	1715	1714	1715	100.0	0.00	0.00	80.99	80.99
8/26/2011	94.6	21.8	41.4	24.5	6.4	71.6	69.1	206.6	104.6	71.2	314.3	71.3	108.0	182.8	79.9	70.5	1686	1686	1686	1772	1771	1772	1722	1722	1722	100.0	0.00	0.00	21.37	21.37
8/27/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1686	1686	1686	1772	1771	1772	1722	1722	1722	OL	0.00	0.00	0.00	0.00
8/28/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1686	1686	1686	1772	1771	1772	1722	1722	1722	OL	0.00	0.00	0.00	0.00
8/29/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1686	1686	1686	1772	1771	1772	1722	1722	1722	OL	0.00	0.00	0.00	0.00
8/30/2011	95.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1686	1686	1686	1772	1771	1772	1722	1722	1722	OL	0.00	0.00	0.00	0.00
8/31/2011	94.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1686	1686	1686	1772	1771	1772	1722	1722	1722	OL	0.00	0.00	0.00	0.00

Report Created: **Thursday, September 01, 2011**

Total [ML]: **0.15 1.64 1285.61 1287.41**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
- UV Comparative Dose: 18.1 mJ/cm2
 - UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 - NR - No Result
 - NA - Not Analyzed
 - OL - Off Line
 - NS - No Sample
 - Aug. 17 Sample not analyzed due to instrument malfunction

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-300A**
Report Period: **August 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
8/1/2011	NA	0.0	30.8	24.5	1.7	69.3	40.4	71.6	105.2	45.9	146.6	48.9	60.3	58.4	49.0	50.2	444	444	445	449	450	450	421	421	421	99.9	0.05	0.00	36.87	36.92
8/2/2011	NA	18.0	27.6	24.5	38.2	79.0	53.7	56.8	90.6	55.9	143.2	56.6	57.3	56.9	56.4	56.6	467	467	468	473	474	474	445	445	445	100.0	0.00	0.02	53.72	53.74
8/3/2011	95.1	22.0	25.8	24.5	43.2	61.0	57.2	59.1	91.7	58.7	148.8	58.8	61.7	58.9	58.7	58.8	491	491	492	497	498	498	469	469	469	100.0	0.00	0.00	57.19	57.19
8/4/2011	95.2	0.0	29.9	24.1	1.9	78.5	58.3	60.5	96.0	60.0	146.3	60.2	61.7	60.4	59.0	60.2	503	503	504	509	510	510	482	481	481	99.8	0.05	0.00	29.53	29.58
8/5/2011	94.2	20.2	50.6	24.5	14.6	49.5	45.8	128.9	102.0	106.1	120.1	71.4	86.1	130.9	75.6	88.9	512	511	512	510	510	510	490	490	490	100.0	0.00	0.00	16.38	16.38
8/6/2011	NA	23.1	27.3	24.4	41.8	51.2	46.9	102.9	94.0	85.3	OL	OL	OL	108.9	76.0	76.3	536	535	536	510	510	510	514	514	514	100.0	0.00	0.00	46.87	46.87
8/7/2011	NA	22.1	30.7	24.4	4.5	82.9	47.3	104.5	91.7	98.9	OL	OL	OL	102.5	76.5	77.8	557	557	557	510	510	510	535	535	535	100.0	0.00	0.00	41.60	41.60
8/8/2011	92.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	557	557	557	510	510	510	535	535	535	OL	0.00	0.00	0.00	0.00
8/9/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	557	557	557	510	510	510	535	535	535	OL	0.00	0.00	0.00	0.00
8/10/2011	95.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	557	557	557	510	510	510	535	535	535	OL	0.00	0.00	0.00	0.00
8/11/2011	95.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	557	557	557	510	510	510	535	535	535	OL	0.00	0.00	0.00	0.00
8/12/2011	94.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	557	557	557	510	510	510	535	535	535	OL	0.00	0.00	0.00	0.00
8/13/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	557	557	557	510	510	510	535	535	535	OL	0.00	0.00	0.00	0.00
8/14/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	557	557	557	510	510	510	535	535	535	OL	0.00	0.00	0.00	0.00
8/15/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	557	557	557	510	510	510	535	535	535	OL	0.00	0.00	0.00	0.00
8/16/2011	94.8	14.5	37.6	22.1	2.6	81.4	74.2	118.1	98.4	111.0	74.4	57.7	68.9	111.5	80.4	89.2	557	557	558	510	511	510	536	535	535	97.7	0.00	0.03	1.06	1.08
8/17/2011	NA	21.5	73.7	24.7	3.9	55.4	52.0	140.0	114.2	130.0	143.9	85.6	84.9	142.8	85.9	93.4	557	557	558	521	522	521	547	546	546	100.0	0.00	0.00	23.45	23.45
8/18/2011	95.1	18.2	28.1	24.3	37.7	103.6	56.1	89.0	78.6	89.4	125.2	81.1	80.8	124.3	81.1	86.7	563	563	564	545	546	545	571	570	570	100.0	0.00	0.00	56.17	56.17
8/19/2011	94.5	21.5	26.2	24.3	41.4	53.4	47.0	OL	OL	OL	125.1	76.3	76.2	105.0	76.3	87.2	563	563	564	569	570	569	595	594	594	100.0	0.00	0.00	47.02	47.02
8/20/2011	NA	22.0	26.2	24.4	39.5	48.8	44.8	OL	OL	OL	130.0	72.9	73.0	107.4	72.8	88.5	563	563	564	593	594	593	619	618	618	100.0	0.00	0.00	44.82	44.82
8/21/2011	NA	21.7	26.0	24.4	36.0	46.3	40.1	OL	OL	OL	137.7	65.7	65.5	105.0	65.3	87.4	563	563	564	617	618	617	643	642	642	100.0	0.00	0.00	40.04	40.04
8/22/2011	NA	21.4	26.6	24.7	36.0	43.8	39.8	OL	OL	OL	147.9	67.4	66.2	110.0	67.1	89.0	563	563	564	641	642	641	667	666	666	100.0	0.00	0.00	39.79	39.79
8/23/2011	94.7	21.5	26.2	24.5	36.9	46.6	41.9	OL	OL	OL	151.2	69.4	68.6	114.2	70.0	89.0	563	563	564	665	666	665	691	690	690	100.0	0.00	0.00	41.92	41.92
8/24/2011	96.2	21.7	26.5	24.4	37.0	60.6	44.2	OL	OL	OL	147.8	71.8	71.9	111.5	71.9	85.4	563	563	564	689	690	689	715	714	714	100.0	0.00	0.00	44.15	44.15
8/25/2011	94.5	21.4	34.6	24.4	2.6	80.8	45.4	OL	OL	OL	138.8	73.7	73.8	107.4	73.8	80.0	563	563	564	713	714	713	739	738	738	100.0	0.00	0.00	45.34	45.34
8/26/2011	94.6	21.6	26.3	24.3	38.5	81.0	55.0	OL	OL	OL	141.4	89.1	88.9	122.4	88.8	91.4	563	563	564	737	738	737	763	762	762	100.0	0.00	0.00	54.95	54.95
8/27/2011	NA	21.5	25.7	24.4	39.1	48.4	44.8	OL	OL	OL	140.1	72.9	73.0	116.0	72.8	77.2	563	563	564	761	762	761	787	786	786	100.0	0.00	0.00	44.82	44.82
8/28/2011	NA	21.7	25.7	24.4	40.1	48.8	44.9	OL	OL	OL	138.1	73.0	73.1	115.3	73.0	77.6	563	563	564	785	786	785	811	810	810	100.0	0.00	0.00	44.95	44.95
8/29/2011	NA	21.7	26.3	24.4	41.1	48.2	45.0	OL	OL	OL	132.9	73.1	73.2	109.0	73.1	74.9	563	563	564	809	810	809	835	834	834	100.0	0.00	0.00	45.00	45.00
8/30/2011	95.9	21.6	26.5	24.3	40.8	49.8	45.9	OL	OL	OL	134.5	74.5	74.6	101.3	74.5	75.3	563	563	564	833	834	833	859	858	858	100.0	0.00	0.00	45.92	45.92
8/31/2011	94.7	22.2	25.7	24.4	40.6	49.5	45.9	OL	OL	OL	141.4	74.6	74.8	113.0	74.6	74.8	563	563	564	857	858	857	883	882	882	100.0	0.00	0.00	45.93	45.93

Report Created: **Thursday, September 01, 2011**

Total [ML]: **0.10 0.05 947.49 947.65**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No Sample
 7. Aug. 17 Sample not analyzed due to instrument malfunction

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-400A**
Report Period: **August 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2												UV Lamp Status Hours												% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	W/m2												Hours													Untreated	Below Dose	To Dose	Total
								1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3											
8/1/2011	NA	0.0	45.8	24.3	2.0	75.3	58.2	125.9	70.2	69.5	99.5	84.1	75.3	67.7	67.2	72.7	3245	4755	4754	5112	5113	3603	4609	4608	4608	99.9	0.03	0.00	46.64	46.67						
8/2/2011	NA	21.3	27.6	24.4	48.9	95.0	70.0	125.6	71.8	71.7	103.2	81.9	74.0	72.0	72.0	72.6	3269	4779	4778	5136	5137	3627	4633	4632	4632	100.0	0.00	0.00	70.00	70.00						
8/3/2011	95.1	21.2	25.7	24.4	58.6	78.4	74.5	132.4	76.1	76.0	101.8	84.3	79.5	76.2	76.2	76.2	3293	4803	4802	5160	5161	3651	4657	4656	4656	100.0	0.00	0.00	74.58	74.58						
8/4/2011	95.2	0.0	33.5	24.3	1.6	87.3	75.1	134.6	76.9	76.6	105.1	90.5	80.2	76.8	76.8	77.0	3313	4823	4823	5181	5181	3672	4677	4677	4677	100.0	0.02	0.00	64.46	64.48						
8/5/2011	94.2	21.2	25.4	24.4	68.7	88.0	80.6	137.6	82.2	82.0	113.9	95.2	83.0	82.2	82.2	82.4	3337	4847	4847	5205	5205	3696	4701	4701	4701	100.0	0.00	0.00	80.67	80.67						
8/6/2011	NA	21.5	25.5	24.4	68.4	79.0	74.1	135.5	75.7	75.5	107.4	90.8	76.3	75.7	75.7	75.8	3361	4871	4871	5229	5229	3720	4725	4725	4725	100.0	0.00	0.00	74.12	74.12						
8/7/2011	NA	21.2	34.3	24.4	7.6	82.9	74.2	127.6	75.8	75.6	101.8	86.1	75.9	75.8	75.8	75.8	3382	4892	4892	5249	5250	3741	4746	4746	4745	100.0	0.00	0.00	64.22	64.22						
8/8/2011	92.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3382	4892	4892	5249	5250	3741	4746	4746	4745	OL	0.00	0.00	0.00	0.00						
8/9/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3382	4892	4892	5249	5250	3741	4746	4746	4745	OL	0.00	0.00	0.00	0.00						
8/10/2011	95.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3382	4892	4892	5249	5250	3741	4746	4746	4745	OL	0.00	0.00	0.00	0.00						
8/11/2011	95.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3382	4892	4892	5249	5250	3741	4746	4746	4745	OL	0.00	0.00	0.00	0.00						
8/12/2011	94.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3382	4892	4892	5249	5250	3741	4746	4746	4745	OL	0.00	0.00	0.00	0.00						
8/13/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3382	4892	4892	5249	5250	3741	4746	4746	4745	OL	0.00	0.00	0.00	0.00						
8/14/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3382	4892	4892	5249	5250	3741	4746	4746	4745	OL	0.00	0.00	0.00	0.00						
8/15/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3382	4892	4892	5249	5250	3741	4746	4746	4745	OL	0.00	0.00	0.00	0.00						
8/16/2011	94.8	18.8	40.3	24.5	7.4	84.7	63.5	134.6	65.4	64.9	111.5	84.0	72.9	65.6	65.4	65.6	3398	4908	4907	5265	5266	3756	4762	4761	4761	100.0	0.00	0.00	41.38	41.38						
8/17/2011	NA	21.8	25.4	24.5	51.3	69.8	63.7	115.9	65.2	65.1	97.5	78.5	69.0	65.3	65.3	65.3	3422	4932	4931	5289	5290	3780	4786	4785	4785	100.0	0.00	0.00	63.68	63.68						
8/18/2011	95.1	17.8	26.2	24.4	53.8	96.3	69.9	72.6	71.4	71.1	71.7	71.6	71.6	71.4	71.4	71.4	3446	4956	4955	5313	5314	3804	4810	4809	4809	99.9	0.00	0.06	69.84	69.90						
8/19/2011	94.5	22.7	25.6	24.3	69.0	84.7	77.4	79.0	78.8	78.3	79.0	79.0	79.0	78.8	78.8	78.8	3470	4980	4979	5337	5338	3828	4834	4833	4833	100.0	0.00	0.00	77.38	77.38						
8/20/2011	NA	23.4	25.7	24.4	67.5	76.8	72.4	74.1	73.8	73.8	74.1	74.0	74.1	73.9	73.8	73.9	3494	5004	5003	5361	5362	3852	4858	4857	4857	100.0	0.00	0.00	72.35	72.35						
8/21/2011	NA	23.4	25.6	24.5	60.7	73.3	65.0	66.9	66.6	66.5	70.4	67.0	66.8	66.6	66.6	66.6	3518	5028	5027	5385	5386	3876	4882	4881	4881	100.0	0.00	0.00	65.03	65.03						
8/22/2011	NA	23.5	25.6	24.5	60.9	69.3	65.2	67.7	66.7	66.7	83.4	67.6	66.9	66.7	66.7	66.8	3542	5052	5051	5409	5410	3900	4906	4905	4905	100.0	0.00	0.00	65.17	65.17						
8/23/2011	94.7	23.5	25.4	24.5	62.1	72.7	67.4	75.7	69.0	68.9	87.8	69.2	69.2	68.9	68.9	69.0	3566	5076	5075	5433	5434	3924	4930	4929	4929	100.0	0.00	0.00	67.45	67.45						
8/24/2011	96.2	22.0	25.9	24.5	58.9	82.8	68.6	80.5	70.1	70.1	83.8	70.3	70.3	70.1	70.1	70.1	3590	5100	5099	5457	5458	3948	4954	4953	4953	100.0	0.00	0.00	68.64	68.64						
8/25/2011	94.5	21.3	38.1	24.5	6.0	74.6	69.1	81.6	70.5	70.5	76.9	70.9	70.8	70.6	70.5	70.6	3613	5123	5123	5481	5481	3972	4977	4977	4977	100.0	0.00	0.00	67.43	67.43						
8/26/2011	94.6	15.5	27.7	24.4	15.1	76.2	71.3	107.9	72.5	72.4	99.2	75.3	73.3	72.5	72.6	72.6	3630	5140	5139	5497	5498	3988	4994	4993	4993	100.0	0.00	0.02	49.28	49.30						
8/27/2011	NA	21.2	25.6	24.4	66.5	76.1	71.3	112.4	72.8	72.8	99.5	74.3	73.1	72.8	72.8	72.8	3654	5164	5163	5521	5522	4012	5018	5017	5017	100.0	0.00	0.00	71.34	71.34						
8/28/2011	NA	20.9	25.4	24.4	67.9	76.2	71.8	115.0	73.2	73.2	100.4	74.4	73.5	73.2	73.2	73.2	3678	5188	5187	5545	5546	4036	5042	5041	5041	100.0	0.00	0.00	71.75	71.75						
8/29/2011	NA	21.3	25.5	24.4	67.8	75.3	71.5	108.1	73.0	73.0	95.9	73.4	73.2	73.0	73.0	73.0	3702	5212	5211	5569	5570	4060	5066	5065	5065	100.0	0.00	0.00	71.52	71.52						
8/30/2011	95.9	21.0	25.4	24.4	67.9	78.6	73.7	105.9	75.1	75.1	95.9	75.4	75.4	75.1	75.1	75.1	3726	5236	5235	5593	5594	4084	5090	5089	5089	100.0	0.00	0.00	73.67	73.67						
8/31/2011	94.7	21.0	25.7	24.4	68.2	79.0	74.1	109.1	75.5	75.5	98.1	75.8	75.8	75.5	75.5	75.5	3750	5260	5259	5617	5618	4108	5114	5113	5113	100.0	0.00	0.00	74.12	74.12						

Report Created: **Thursday, September 01, 2011**

Total [ML]: **0.06 0.09 1544.72 1544.86**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No Sample
 7. Aug. 17 Sample not analyzed due to instrument malfunction

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-500A**
Report Period: **August 2011**

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
8/1/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1682	2143	1682	2164	589	3849	1464	3504	1465	OL	0.00	0.00	0.00	0.00	
8/2/2011	NA	48.5	49.1	48.8	1.6	22.2	11.9	140.6	113.7	179.4	308.9	135.1	235.7	1.7	0.3	OL	1682	2143	1682	2164	590	3849	1464	3504	1465	93.0	0.00	0.00	0.01	0.01
8/3/2011	95.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1682	2143	1682	2164	590	3849	1464	3504	1465	OL	0.00	0.00	0.00	0.00	
8/4/2011	95.2	18.7	28.6	24.6	6.0	42.2	34.8	129.7	90.5	170.6	182.8	108.9	153.6	249.0	50.6	98.0	1693	2153	1692	2167	593	3852	1475	3514	1465	100.0	0.00	0.00	14.80	14.80
8/5/2011	94.2	20.7	30.6	24.5	5.1	42.0	36.6	135.0	78.8	162.8	OL	OL	OL	271.7	60.1	129.6	1708	2169	1708	2167	593	3852	1490	3530	26	100.0	0.00	0.00	23.66	23.66
8/6/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1708	2169	1708	2167	593	3852	1490	3530	26	OL	0.00	0.00	0.00	0.00	
8/7/2011	NA	21.3	53.5	24.7	4.6	47.7	42.7	103.1	72.4	156.6	457.0	122.5	133.5	208.1	69.9	123.1	1711	2172	1711	2167	593	3852	1493	3533	29	100.0	0.00	0.00	5.79	5.79
8/8/2011	92.9	22.2	32.7	25.5	9.1	47.2	40.2	124.5	80.6	168.9	OL	OL	OL	252.9	70.0	154.4	1735	2196	1735	2167	593	3852	1517	3557	53	100.0	0.00	0.00	40.13	40.13
8/9/2011	NA	25.0	32.6	30.5	35.6	41.9	38.7	140.4	89.2	171.8	OL	OL	OL	269.7	94.4	170.1	1759	2220	1759	2167	593	3852	1541	3581	77	100.0	0.00	0.00	38.75	38.75
8/10/2011	95.1	26.7	34.0	31.5	33.4	41.3	37.0	136.5	89.4	164.9	OL	OL	OL	266.0	97.5	169.3	1783	2244	1783	2167	593	3852	1565	3605	101	100.0	0.00	0.00	37.03	37.03
8/11/2011	95.1	23.1	35.0	28.8	34.4	57.7	46.1	145.5	95.0	173.5	OL	OL	OL	277.8	102.3	176.1	1807	2268	1807	2167	593	3852	1589	3629	125	100.0	0.00	0.00	46.14	46.14
8/12/2011	94.3	22.4	29.3	25.5	44.5	62.2	53.9	140.9	93.8	166.1	OL	OL	OL	270.6	99.1	164.4	1831	2292	1831	2167	593	3852	1613	3653	149	100.0	0.00	0.00	53.91	53.91
8/13/2011	NA	21.9	26.8	24.6	49.3	65.8	57.7	138.1	95.2	159.6	OL	OL	OL	266.8	97.7	158.0	1855	2316	1855	2167	593	3852	1637	3677	173	100.0	0.00	0.00	57.72	57.72
8/14/2011	NA	21.7	26.2	24.3	49.7	68.8	60.0	136.1	97.0	154.5	OL	OL	OL	265.1	98.0	153.2	1879	2340	1879	2167	593	3852	1661	3701	197	100.0	0.00	0.00	60.00	60.00
8/15/2011	NA	21.5	25.4	24.2	53.6	82.3	69.1	136.2	111.3	153.7	OL	OL	OL	265.9	111.8	151.4	1903	2364	1903	2167	593	3852	1685	3725	221	100.0	0.00	0.00	69.08	69.08
8/16/2011	94.8	21.5	25.1	24.2	59.6	84.6	77.3	129.9	124.1	144.4	OL	OL	OL	256.6	124.5	139.9	1927	2388	1927	2167	593	3852	1709	3749	245	100.0	0.00	0.00	77.33	77.33
8/17/2011	NA	21.4	24.6	24.2	65.4	101.1	79.3	128.0	127.3	133.3	OL	OL	OL	239.7	127.4	128.7	1951	2412	1951	2167	593	3852	1733	3773	269	100.0	0.00	0.00	79.30	79.30
8/18/2011	95.1	21.4	38.4	24.2	8.3	99.1	84.9	136.4	136.4	137.2	OL	OL	OL	224.9	135.5	135.6	1961	2422	1961	2167	593	3852	1743	3783	279	100.0	0.00	0.00	34.11	34.11
8/19/2011	94.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1961	2422	1961	2167	593	3852	1743	3783	279	OL	0.00	0.00	0.00	0.00	
8/20/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1961	2422	1961	2167	593	3852	1743	3783	279	OL	0.00	0.00	0.00	0.00	
8/21/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1961	2422	1961	2167	593	3852	1743	3783	279	OL	0.00	0.00	0.00	0.00	
8/22/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1961	2422	1961	2167	593	3852	1743	3783	279	OL	0.00	0.00	0.00	0.00	
8/23/2011	94.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1961	2422	1961	2167	593	3852	1743	3783	279	OL	0.00	0.00	0.00	0.00	
8/24/2011	96.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1961	2422	1961	2167	593	3852	1743	3783	279	OL	0.00	0.00	0.00	0.00	
8/25/2011	94.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1961	2422	1961	2167	593	3852	1743	3783	279	OL	0.00	0.00	0.00	0.00	
8/26/2011	94.6	18.9	32.9	24.2	6.6	83.2	77.5	111.7	111.7	116.2	560.1	79.5	79.1	217.3	112.9	114.8	1978	2439	1978	2172	597	3857	1760	3800	295	100.0	0.00	0.00	54.48	54.48
8/27/2011	NA	21.5	24.8	24.2	72.6	80.1	77.5	124.5	124.4	129.5	OL	OL	OL	235.4	124.5	124.4	2002	2463	2002	2172	597	3857	1784	3824	319	100.0	0.00	0.00	77.46	77.46
8/28/2011	NA	21.6	24.7	24.2	74.6	79.4	77.5	124.6	124.4	132.3	OL	OL	OL	239.2	124.5	124.5	2026	2487	2026	2172	597	3857	1808	3848	343	100.0	0.00	0.00	77.51	77.51
8/29/2011	NA	21.6	24.7	24.2	74.6	79.5	77.5	124.6	124.4	127.7	OL	OL	OL	229.8	124.4	124.5	2050	2511	2050	2172	597	3857	1832	3872	367	100.0	0.00	0.00	77.51	77.51
8/30/2011	95.9	21.6	24.6	24.2	75.0	83.1	79.7	128.1	127.9	129.5	OL	OL	OL	227.3	127.9	127.9	2074	2535	2074	2172	597	3857	1856	3896	391	100.0	0.00	0.00	79.75	79.75
8/31/2011	94.7	21.7	24.6	24.2	73.9	82.5	79.9	128.4	128.2	133.3	OL	OL	OL	237.9	128.3	133.7	2098	2559	2098	2172	597	3857	1880	3920	415	100.0	0.00	0.00	79.93	79.93

Report Created: **Thursday, September 01, 2011**

Total [ML]: **0.00 0.00 1084.41 1084.41**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No Sample
 7. Aug. 17 Sample not analyzed due to instrument malfunction

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-600A**
Report Period: **August 2011**

Date	Transmittance			UV Dose			Reactor Flow			Average UV Lamp Intensity												UV Lamp Status												% Volume Treated to Validated Conditions	Daily Totals			
	%			mJ/cm2			MLD			W/m2												Hours													Water Volume [ML]			
	Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	Untreated	Below Dose	To Dose	Total										
8/1/2011	NA	0.0	34.0	24.3	1.4	95.8	70.7	145.9	75.0	74.2	123.4	102.8	115.0	73.4	106.9	100.3	4900	4962	4962	5274	5274	5274	2989	4955	4955	99.9	0.04	0.02	66.42	66.48								
8/2/2011	NA	18.5	26.0	24.3	60.3	101.9	70.1	149.0	71.6	71.5	120.0	100.1	108.7	71.5	104.2	98.1	4924	4986	4986	5298	5298	5298	3013	4979	4979	100.0	0.00	0.00	70.24	70.24								
8/3/2011	95.1	18.8	25.9	24.3	62.9	89.8	70.0	150.6	71.5	71.4	122.8	101.5	110.6	71.4	105.7	99.1	4948	5010	5010	5322	5322	5322	3037	5003	5003	100.0	0.00	0.00	70.16	70.16								
8/4/2011	95.2	0.0	29.0	24.3	1.4	77.9	62.7	142.0	68.2	65.8	116.6	95.9	108.3	64.2	100.4	99.7	4971	5033	5033	5345	5345	5345	3060	5026	5026	100.0	0.02	0.00	60.28	60.30								
8/5/2011	94.2	18.4	26.1	24.4	57.6	77.8	65.8	138.7	69.0	67.3	119.2	98.4	113.6	67.2	102.7	103.4	4995	5057	5057	5369	5369	5369	3084	5050	5050	100.0	0.00	0.00	65.74	65.74								
8/6/2011	NA	18.5	25.2	24.4	66.8	73.1	70.0	128.6	71.5	71.4	114.9	95.7	108.5	71.4	99.2	94.2	5019	5081	5081	5393	5393	5393	3108	5074	5074	100.0	0.00	0.00	70.01	70.01								
8/7/2011	NA	18.4	25.5	24.3	55.8	75.7	70.1	118.9	71.5	71.5	108.4	91.5	100.5	71.0	94.8	88.7	5043	5105	5105	5417	5417	5417	3132	5098	5098	100.0	0.00	0.00	70.08	70.08								
8/8/2011	92.9	17.7	55.4	24.1	10.6	85.1	70.7	132.5	72.2	72.2	105.7	89.0	99.6	70.7	92.7	90.2	5067	5129	5129	5441	5441	5441	3156	5122	5122	100.0	0.00	0.03	70.71	70.73								
8/9/2011	NA	18.6	25.1	24.4	67.6	74.1	71.3	147.6	72.7	72.6	112.0	93.7	105.3	72.5	97.5	100.1	5091	5153	5153	5465	5465	5465	3180	5146	5146	100.0	0.00	0.00	71.26	71.26								
8/10/2011	95.1	18.5	25.1	24.4	63.3	73.6	67.6	145.1	69.1	69.1	110.0	92.7	102.1	69.0	96.2	99.9	5115	5177	5177	5489	5489	5489	3204	5170	5170	100.0	0.00	0.00	67.64	67.64								
8/11/2011	95.1	18.6	25.1	24.4	61.5	73.3	66.3	152.1	67.8	67.7	113.5	96.1	105.2	67.7	99.8	104.6	5139	5201	5201	5513	5513	5513	3228	5194	5194	100.0	0.00	0.00	66.29	66.29								
8/12/2011	94.3	18.8	25.4	24.4	61.2	68.0	65.0	146.9	66.5	66.4	109.3	93.6	101.0	66.5	96.7	100.2	5163	5225	5225	5537	5537	5537	3252	5218	5218	100.0	0.00	0.00	65.00	65.00								
8/13/2011	NA	18.4	25.4	24.5	61.7	68.9	65.0	142.9	66.5	66.4	106.3	92.3	97.9	66.5	95.5	97.8	5187	5249	5249	5561	5561	5561	3276	5242	5242	100.0	0.00	0.00	64.99	64.99								
8/14/2011	NA	18.7	25.4	24.4	59.8	69.4	65.0	141.3	66.4	66.5	104.8	92.1	95.2	66.4	94.9	96.3	5211	5273	5273	5585	5585	5585	3300	5266	5266	100.0	0.00	0.00	65.00	65.00								
8/15/2011	NA	18.6	25.7	24.4	61.1	69.1	65.0	141.0	66.5	66.4	103.7	92.2	94.4	66.4	94.8	95.5	5235	5297	5297	5609	5609	5609	3324	5290	5290	100.0	0.00	0.00	64.99	64.99								
8/16/2011	94.8	18.3	36.0	24.4	9.4	68.6	64.9	137.3	66.3	66.4	98.7	88.2	91.2	66.3	90.8	91.1	5244	5306	5306	5618	5617	5617	3333	5299	5299	100.0	0.00	0.00	23.16	23.16								
8/17/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	5244	5306	5306	5618	5617	5617	3333	5299	5299	OL	0.00	0.00	0.00	0.00								
8/18/2011	95.1	0.0	31.0	24.4	2.0	91.1	76.9	141.5	100.9	91.2	135.2	105.0	105.5	78.0	115.5	113.0	5244	5306	5306	5618	5617	5617	3333	5299	5299	99.9	0.00	0.03	46.08	46.11								
8/19/2011	94.5	18.6	25.2	24.3	75.9	88.1	82.3	126.8	83.6	83.6	120.8	93.5	84.1	83.3	104.3	90.5	38	38	38	38	39	39	38	38	38	100.0	0.00	0.00	82.27	82.27								
8/20/2011	NA	18.7	25.0	24.3	74.7	81.8	79.3	138.6	80.7	80.7	125.5	95.2	81.4	80.4	107.6	86.2	62	62	62	62	63	63	62	62	62	100.0	0.00	0.00	79.27	79.27								
8/21/2011	NA	18.4	25.1	24.4	68.1	78.4	71.4	146.6	72.9	72.9	128.8	95.5	90.5	72.8	109.1	88.0	86	86	86	86	87	87	86	86	86	100.0	0.00	0.00	71.43	71.43								
8/22/2011	NA	18.9	27.0	24.4	68.5	74.6	71.5	159.1	78.4	85.6	137.7	104.3	131.7	72.9	118.2	105.7	110	110	110	110	111	111	110	110	110	100.0	0.00	0.00	71.57	71.57								
8/23/2011	94.7	18.6	27.1	24.4	70.5	78.4	74.4	156.0	90.1	87.5	137.5	110.2	135.7	75.7	121.4	108.6	134	134	134	134	135	135	134	134	134	100.0	0.00	0.00	74.46	74.46								
8/24/2011	96.2	18.7	26.0	24.4	65.4	91.5	76.2	152.0	84.6	79.2	130.9	108.1	124.6	77.4	118.3	101.5	158	158	158	158	159	159	158	158	158	100.0	0.00	0.00	76.27	76.27								
8/25/2011	94.5	18.4	28.7	24.4	60.3	83.0	77.6	138.5	81.2	79.0	121.3	101.1	112.9	78.7	111.0	93.6	182	182	182	182	183	183	182	182	182	100.0	0.00	0.00	77.60	77.60								
8/26/2011	94.6	18.5	33.8	24.3	5.6	84.1	81.2	137.8	83.1	83.0	117.7	98.6	111.1	81.5	108.5	88.7	190	190	189	189	190	190	190	189	189	100.0	0.00	0.00	24.27	24.27								
8/27/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	190	190	189	189	190	190	190	189	189	OL	0.00	0.00	0.00	0.00								
8/28/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	190	190	189	189	190	190	190	189	189	OL	0.00	0.00	0.00	0.00								
8/29/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	190	190	189	189	190	190	190	189	189	OL	0.00	0.00	0.00	0.00								
8/30/2011	95.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	190	190	189	189	190	190	190	189	189	OL	0.00	0.00	0.00	0.00								
8/31/2011	94.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	190	190	189	189	190	190	190	189	189	OL	0.00	0.00	0.00	0.00								

Report Created: **Thursday, September 01, 2011**

Total [ML]: **0.06 0.08 1635.21 1635.34**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No Sample
 7. Aug. 17 Sample not analyzed due to instrument malfunction

UV Monitoring Report – Monthly



Water System Code: 252.00
Licence Number: PWS-09-412 RR

Report Period: September 2011

Date	UVR-D100A				UVR-D200A				UVR-D300A				UVR-D400A				UVR-D500A				UVR-D600A				Total				% Volume Treated To Dose		
	Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]						
	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total		Untreated	Below
9/1/2011	0.00	0.00	71.37	71.37	0.00	0.02	14.30	14.32	0.00	0.00	56.58	56.58	0.00	0.00	22.14	22.14	0.00	0.00	52.59	52.59	0.00	0.00	44.84	44.84	0.00	0.02	261.82	261.84	100.0		
9/2/2011	0.00	0.00	57.64	57.64	0.00	0.00	81.00	81.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.92	43.92	0.00	0.01	65.76	65.77	0.00	0.01	248.33	248.34	100.0		
9/3/2011	0.00	0.00	57.99	57.99	0.00	0.00	82.61	82.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.55	44.55	0.00	0.00	66.42	66.42	0.00	0.00	251.57	251.57	100.0		
9/4/2011	0.00	0.00	54.99	54.99	0.00	0.00	80.50	80.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.67	43.67	0.00	0.01	63.36	63.37	0.00	0.01	242.53	242.53	100.0		
9/5/2011	0.00	0.00	51.65	51.65	0.00	0.00	76.74	76.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.82	39.82	0.00	0.00	59.49	59.49	0.00	0.00	227.71	227.71	100.0		
9/6/2011	0.00	0.00	47.13	47.13	0.00	0.00	72.94	72.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.60	26.60	0.00	0.00	63.00	63.00	0.00	0.00	232.24	232.24	100.0		
9/7/2011	0.00	0.00	39.77	39.77	0.00	0.00	63.69	63.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.34	71.34	0.00	0.00	245.62	245.62	100.0		
9/8/2011	0.00	0.00	37.21	37.21	0.00	0.00	77.16	77.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.75	72.75	0.00	0.00	73.52	73.54	0.00	0.03	260.64	260.66	100.0		
9/9/2011	0.00	0.06	0.92	0.98	0.00	0.00	70.77	70.77	0.02	0.20	0.19	0.41	0.00	0.00	57.56	57.56	0.00	0.08	12.43	12.51	0.01	0.00	56.63	56.64	0.04	0.34	198.50	198.87	99.8		
9/10/2011	0.00	0.00	0.00	0.00	0.00	0.00	70.08	70.08	0.00	0.11	11.09	11.19	0.00	0.00	77.86	77.86	0.00	0.00	39.70	39.70	0.00	0.00	56.79	56.79	0.01	0.11	255.53	255.64	100.0		
9/11/2011	0.00	0.18	29.10	29.28	0.00	0.00	0.30	0.30	0.00	0.22	38.34	38.56	0.00	0.00	77.25	77.25	0.00	0.00	44.90	44.90	0.00	0.03	68.06	68.09	0.00	0.43	257.94	258.37	99.8		
9/12/2011	0.00	0.00	50.12	50.13	0.00	0.00	0.00	0.00	0.00	0.00	32.50	32.50	0.00	0.00	76.39	76.39	0.00	0.00	57.05	57.05	0.00	0.03	41.56	41.59	0.00	0.03	257.61	257.65	100.0		
9/13/2011	0.00	0.01	57.32	57.33	0.00	0.00	0.00	0.00	0.00	0.00	48.33	48.33	0.00	0.00	78.08	78.08	0.01	1.20	38.16	39.37	0.02	0.02	34.83	34.87	0.03	1.23	256.72	257.98	99.5		
9/14/2011	0.00	0.00	72.48	72.48	0.00	0.00	0.00	0.00	0.00	0.00	66.29	66.29	0.00	0.00	28.18	28.18	0.00	0.59	51.41	52.00	0.00	0.00	37.56	37.56	0.00	0.59	255.92	256.51	99.8		
9/15/2011	0.00	0.00	70.83	70.83	0.00	0.00	0.00	0.00	0.00	0.00	77.33	77.33	0.00	0.00	0.00	0.00	0.00	0.00	38.09	38.09	0.00	0.00	57.69	57.69	0.00	0.00	243.94	243.94	100.0		
9/16/2011	0.00	0.00	68.35	68.35	0.00	0.00	0.00	0.00	0.00	0.00	73.56	73.56	0.00	0.00	0.00	0.00	0.00	0.00	39.91	39.91	0.00	0.00	54.11	54.11	0.00	0.00	235.93	235.93	100.0		
9/17/2011	0.00	0.00	27.19	27.19	0.00	0.00	47.46	47.46	0.00	0.00	50.85	50.85	0.00	0.00	29.32	29.32	0.00	0.00	15.87	15.87	0.00	0.00	63.12	63.12	0.00	0.00	233.81	233.81	100.0		
9/18/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.00	85.00	0.00	0.00	34.83	34.83	0.00	0.00	43.75	43.75	0.00	0.00	0.00	0.00	0.00	0.00	72.86	72.86	0.00	0.00	236.44	236.44	100.0		
9/19/2011	0.03	0.12	0.58	0.73	0.00	0.00	83.68	83.68	0.00	0.00	36.50	36.50	0.35	0.00	42.05	42.40	0.00	0.00	1.70	1.70	0.00	0.00	70.52	70.52	0.38	0.12	235.03	235.53	99.8		
9/20/2011	0.02	0.00	27.09	27.11	0.00	0.00	46.88	46.88	0.00	0.00	37.36	37.36	0.00	0.00	55.98	55.98	0.00	0.02	0.79	0.81	0.01	0.01	66.42	66.44	0.03	0.04	234.52	234.59	100.0		
9/21/2011	0.00	0.00	63.33	63.33	0.00	0.00	0.00	0.00	0.00	0.00	36.86	36.86	0.00	0.00	59.81	59.81	0.00	0.00	0.00	0.00	0.00	0.00	65.45	65.45	0.00	0.00	225.45	225.46	100.0		
9/22/2011	0.00	0.00	65.03	65.03	0.00	0.00	0.00	0.00	0.00	0.00	38.61	38.61	0.00	0.00	63.09	63.09	0.00	0.00	0.00	0.00	0.00	0.00	68.66	68.66	0.00	0.00	235.39	235.39	100.0		
9/23/2011	0.00	0.00	67.48	67.48	0.00	0.00	0.00	0.00	0.00	0.00	39.14	39.14	0.00	0.00	63.66	63.66	0.00	0.00	0.00	0.00	0.00	0.00	69.70	69.70	0.00	0.00	239.98	239.98	100.0		
9/24/2011	0.00	0.00	67.18	67.18	0.00	0.00	0.00	0.00	0.00	0.00	38.91	38.91	0.00	0.00	63.17	63.17	0.00	0.00	0.00	0.00	0.00	0.00	69.18	69.18	0.00	0.00	238.45	238.45	100.0		
9/25/2011	0.00	0.00	44.93	44.93	0.00	0.02	23.57	23.59	0.00	0.00	38.65	38.65	0.00	0.00	62.49	62.49	0.00	0.00	0.00	0.00	0.00	0.00	68.97	68.97	0.00	0.02	238.60	238.63	100.0		
9/26/2011	0.00	0.00	0.00	0.00	0.00	0.00	74.45	74.45	0.00	0.00	39.94	39.94	0.00	0.00	63.50	63.50	0.00	0.07	40.55	40.62	0.00	0.00	30.09	30.09	0.00	0.07	248.54	248.61	100.0		
9/27/2011	0.00	0.18	18.95	19.14	0.00	0.43	82.94	83.37	0.01	0.00	28.71	28.72	0.00	0.00	65.08	65.08	0.03	0.17	41.79	41.96	0.00	0.05	14.19	14.25	0.04	0.84	251.66	252.54	99.7		
9/28/2011	0.04	0.01	22.78	22.82	0.00	0.00	82.35	82.35	0.00	0.00	36.83	36.83	0.00	0.00	62.56	62.56	0.00	0.00	4.68	4.68	0.00	0.10	35.70	35.81	0.04	0.11	244.90	245.05	99.9		
9/29/2011	0.00	0.00	0.00	0.00	0.00	0.00	70.40	70.40	0.00	0.00	37.15	37.15	0.00	0.00	62.47	62.47	0.00	0.00	0.00	0.00	0.00	0.00	71.46	71.49	0.00	0.02	241.48	241.50	100.0		
9/30/2011	0.00	0.00	0.00	0.00	0.00	0.00	69.69	69.69	0.00	0.00	37.14	37.14	0.00	0.00	62.01	62.01	0.00	0.00	0.00	0.00	0.00	0.00	70.97	71.04	0.00	0.07	239.80	239.88	100.0		

Total [ML]: 0.10 0.56 1171.44 1172.10 0.01 0.48 1356.50 1356.99 0.04 0.53 935.68 936.24 0.35 0.00 1382.57 1382.92 0.04 2.14 678.16 680.34 0.03 0.40 1752.24 1752.68 0.56 4.11 7276.60 7281.27

Report Created: Monday, October 03, 2011

Water Volume [%]:

Untreated 0.0%
Below Dose 0.1%
To Dose 99.9%

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV\2011\09-2011

Notes: 1 UV Comparative Dose: 18.1 mj/cm2

Submitted By (Print): D Sulymka

Original Signed By: D Sulymka

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-100A**
Report Period: **September 2011**

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
9/1/2011	96.0	19.4	24.9	24.2	54.8	80.1	71.4	114.8	141.5	118.0	129.0	114.6	114.8	OL	OL	OL	430	2562	3622	2170	2169	2170	2088	2088	2088	100.0	0.00	0.00	71.37	71.37
9/2/2011	94.8	19.6	26.0	24.3	49.7	61.7	57.8	101.0	137.5	112.3	129.7	93.5	99.8	OL	OL	OL	454	2586	3646	2194	2193	2194	2088	2088	2088	100.0	0.00	0.00	57.64	57.64
9/3/2011	NA	19.7	25.5	24.3	54.2	61.9	58.0	100.4	134.9	109.4	127.9	93.5	95.7	OL	OL	OL	478	2610	3670	2218	2217	2218	2088	2088	2088	100.0	0.00	0.00	57.99	57.99
9/4/2011	NA	20.6	26.1	24.3	50.6	60.8	55.0	97.5	131.9	107.2	123.8	88.8	92.5	OL	OL	OL	502	2634	3694	2242	2241	2242	2088	2088	2088	100.0	0.00	0.00	54.99	54.99
9/5/2011	NA	22.4	39.1	24.4	20.7	67.2	51.7	101.0	138.5	107.4	126.5	83.7	93.3	OL	OL	OL	526	2658	3718	2266	2265	2266	2088	2088	2088	100.0	0.00	0.00	51.65	51.65
9/6/2011	NA	21.4	31.4	25.7	32.4	54.5	47.1	97.0	136.9	99.2	121.1	81.5	88.9	OL	OL	OL	550	2682	3742	2290	2289	2290	2088	2088	2088	100.0	0.00	0.00	47.13	47.13
9/7/2011	94.6	22.9	30.6	25.8	33.0	43.2	39.8	90.2	130.3	86.1	106.5	70.4	80.1	OL	OL	OL	574	2706	3766	2314	2313	2314	2088	2088	2088	100.0	0.00	0.00	39.77	39.77
9/8/2011	94.8	22.7	36.0	26.5	7.1	42.6	37.2	85.8	131.0	80.1	102.6	68.6	76.5	OL	OL	OL	598	2730	3790	2338	2337	2338	2088	2088	2088	100.0	0.00	0.00	37.21	37.21
9/9/2011	94.4	0.0	35.5	24.5	1.9	39.5	33.3	86.8	125.7	87.6	108.3	73.0	81.7	OL	OL	OL	599	2731	3790	2338	2338	2339	2088	2088	2088	93.5	0.00	0.06	0.92	0.98
9/10/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	599	2731	3790	2338	2338	2339	2088	2088	2088	OL	0.00	0.00	0.00	0.00
9/11/2011	NA	5.3	32.4	24.1	25.4	86.8	65.8	105.8	126.0	107.5	109.7	105.7	106.3	OL	OL	OL	610	2742	3801	2349	2349	2349	2088	2088	2088	99.4	0.00	0.18	29.10	29.28
9/12/2011	NA	0.0	65.3	24.3	1.6	69.2	54.6	89.3	120.5	94.6	98.0	88.1	88.4	137.2	87.9	166.3	624	2756	3816	2371	2371	2372	2097	2096	2096	100.0	0.00	0.00	50.12	50.13
9/13/2011	93.7	15.7	62.6	24.3	2.7	86.8	58.1	74.1	94.7	94.6	94.7	92.9	93.2	125.1	93.0	126.9	625	2757	3817	2395	2395	2395	2120	2120	2120	100.0	0.00	0.01	57.32	57.33
9/14/2011	93.9	20.6	25.0	24.2	64.3	79.7	72.5	OL	OL	OL	116.3	116.2	116.2	119.4	116.4	130.2	625	2757	3817	2419	2419	2419	2144	2144	2144	100.0	0.00	0.00	72.48	72.48
9/15/2011	93.0	20.6	24.9	24.2	65.4	77.9	71.4	OL	OL	OL	113.6	113.5	113.5	117.3	113.6	152.7	625	2757	3817	2443	2443	2443	2168	2168	2168	100.0	0.00	0.00	70.83	70.83
9/16/2011	94.6	20.6	24.7	24.2	64.9	72.4	68.3	OL	OL	OL	109.8	109.7	109.6	124.6	109.8	146.2	625	2757	3817	2467	2467	2467	2192	2192	2192	100.0	0.00	0.00	68.35	68.35
9/17/2011	NA	20.6	36.5	24.1	28.2	92.7	68.6	56.8	62.3	87.5	108.8	108.7	108.7	132.5	109.4	151.9	626	2757	3817	2477	2476	2477	2202	2202	2201	100.0	0.00	0.00	27.19	27.19
9/18/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	626	2757	3817	2477	2476	2477	2202	2202	2201	OL	0.00	0.00	0.00	0.00
9/19/2011	NA	0.0	25.3	18.7	19.0	97.6	83.6	33.7	33.5	87.4	112.8	98.2	99.6	136.9	110.5	134.2	626	2758	3817	2477	2477	2477	2202	2202	2201	78.7	0.03	0.12	0.58	0.73
9/20/2011	93.8	0.0	103.0	24.3	4.2	69.9	67.0	108.1	137.1	139.1	137.4	105.0	122.0	134.4	106.9	158.5	635	2767	3827	2477	2477	2477	2212	2212	2211	99.9	0.02	0.00	27.09	27.11
9/21/2011	93.1	19.9	25.1	24.2	61.2	69.8	67.3	107.4	119.0	115.5	OL	OL	OL	115.2	107.5	126.5	659	2791	3851	2477	2477	2477	2236	2236	2235	100.0	0.00	0.00	63.33	63.33
9/22/2011	94.3	19.9	25.0	24.2	60.0	70.1	65.0	104.6	118.0	122.4	OL	OL	OL	113.6	104.6	140.4	683	2815	3875	2477	2477	2477	2260	2260	2259	100.0	0.00	0.00	65.03	65.03
9/23/2011	95.3	20.1	24.9	24.2	63.2	70.4	67.5	108.6	126.3	121.2	OL	OL	OL	121.6	108.4	154.2	707	2839	3899	2477	2477	2477	2284	2284	2283	100.0	0.00	0.00	67.48	67.48
9/24/2011	NA	19.8	25.0	24.2	63.4	69.6	67.2	108.0	129.3	113.8	OL	OL	OL	126.0	108.0	145.5	731	2863	3923	2477	2477	2477	2308	2308	2307	100.0	0.00	0.00	67.18	67.18
9/25/2011	NA	19.9	30.7	24.2	2.0	69.9	66.9	107.7	128.5	111.7	OL	OL	OL	122.9	107.7	141.3	748	2879	3939	2477	2477	2477	2324	2324	2323	100.0	0.00	0.00	44.93	44.93
9/26/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	748	2879	3939	2477	2477	2477	2324	2324	2323	OL	0.00	0.00	0.00	0.00
9/27/2011	94.2	5.7	31.8	24.0	6.9	124.7	53.6	88.3	120.0	113.8	13.1	11.1	6.6	123.3	86.5	149.9	756	2888	3948	2478	2477	2478	2333	2333	2332	99.0	0.00	0.18	18.95	19.14
9/28/2011	93.9	0.0	46.3	24.2	5.0	72.8	52.1	85.3	117.6	110.6	OL	OL	OL	124.7	84.7	147.4	767	2899	3959	2478	2477	2478	2344	2343	2343	99.8	0.04	0.01	22.78	22.82
9/29/2011	94.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	767	2899	3959	2478	2477	2478	2344	2343	2343	OL	0.00	0.00	0.00	0.00
9/30/2011	94.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	767	2899	3959	2478	2477	2478	2344	2343	2343	OL	0.00	0.00	0.00	0.00

Report Created: **Monday, October 03, 2011**

Total [ML]: **0.10 0.56 1171.44 1172.10**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-200A**
Report Period: **September 2011**

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
9/1/2011	96.0	17.3	33.0	24.3	29.0	89.5	84.7	183.3	106.8	85.3	305.9	85.9	109.8	173.6	86.9	85.9	1690	1690	1690	1776	1775	1776	1726	1726	1726	99.8	0.00	0.02	14.30	14.32
9/2/2011	94.8	21.6	25.0	24.3	72.3	86.0	81.2	229.3	116.7	83.0	337.5	82.7	130.8	202.4	85.6	83.1	1714	1714	1714	1800	1799	1800	1750	1750	1750	100.0	0.00	0.00	81.00	81.00
9/3/2011	NA	20.7	25.0	24.3	79.4	85.9	82.6	228.5	116.7	84.2	333.7	84.1	133.9	199.0	85.6	84.3	1738	1738	1738	1824	1823	1824	1774	1774	1774	100.0	0.00	0.00	82.61	82.61
9/4/2011	NA	21.3	25.1	24.3	75.0	84.8	80.5	221.9	116.5	82.1	323.9	82.0	127.7	190.9	83.4	82.1	1762	1762	1762	1848	1847	1848	1798	1798	1798	100.0	0.00	0.00	80.50	80.50
9/5/2011	NA	21.6	36.7	24.4	29.0	94.2	76.7	229.0	117.7	78.5	336.0	78.4	130.1	195.4	86.9	78.5	1786	1786	1786	1872	1871	1872	1822	1822	1822	100.0	0.00	0.00	76.74	76.74
9/6/2011	NA	18.4	26.0	24.3	58.5	81.6	72.9	222.1	115.2	86.2	226.0	62.4	126.2	185.1	90.4	86.2	1810	1810	1810	1888	1888	1888	1846	1846	1846	100.0	0.00	0.00	72.94	72.94
9/7/2011	94.6	21.6	24.6	24.2	60.2	67.0	63.7	200.1	107.1	102.4	OL	OL	OL	158.0	102.6	102.4	1834	1834	1834	1888	1888	1888	1870	1870	1870	100.0	0.00	0.00	63.69	63.69
9/8/2011	94.8	21.3	32.5	24.3	18.1	84.1	77.1	196.3	102.3	79.4	286.7	78.9	93.2	157.4	81.8	79.5	1858	1858	1858	1912	1911	1912	1894	1894	1894	100.0	0.00	0.00	77.16	77.16
9/9/2011	94.4	0.0	51.4	24.3	2.1	90.8	75.4	194.7	121.9	115.4	83.7	46.6	77.0	155.5	117.5	115.4	1881	1881	1880	1915	1914	1915	1917	1917	1917	100.0	0.00	0.00	70.77	70.77
9/10/2011	NA	0.0	35.2	24.3	1.9	87.9	84.8	195.0	103.9	86.4	287.9	85.9	92.7	157.7	86.7	86.4	1901	1901	1900	1935	1934	1935	1937	1936	1937	100.0	0.00	0.00	70.08	70.08
9/11/2011	NA	19.4	32.4	23.4	29.0	100.1	71.2	121.3	108.9	72.6	OL	OL	OL	139.0	100.1	74.9	1901	1901	1900	1935	1934	1935	1937	1937	1937	100.0	0.00	0.00	0.30	0.30
9/12/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1901	1901	1900	1935	1934	1935	1937	1937	1937	OL	0.00	0.00	0.00	0.00
9/13/2011	93.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1901	1901	1901	1935	1934	1935	1937	1937	1937	OL	0.00	0.00	0.00	0.00
9/14/2011	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1901	1901	1901	1935	1934	1935	1937	1937	1937	OL	0.00	0.00	0.00	0.00
9/15/2011	93.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1901	1901	1901	1935	0	1935	1937	1937	1937	OL	0.00	0.00	0.00	0.00
9/16/2011	94.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1901	1901	1901	1935	0	1935	1937	1937	1937	OL	0.00	0.00	0.00	0.00
9/17/2011	NA	21.1	72.8	24.2	6.2	94.9	78.5	237.0	139.4	137.0	406.5	126.5	142.0	30.5	102.3	128.8	1916	1916	1915	1949	15	1949	1937	1937	1937	100.0	0.00	0.00	47.46	47.46
9/18/2011	NA	21.8	24.7	24.1	75.8	94.5	85.0	245.2	136.3	138.2	382.6	136.4	143.0	OL	OL	OL	1940	1940	1939	1973	39	1973	1937	1937	1937	100.0	0.00	0.00	85.00	85.00
9/19/2011	NA	0.0	46.4	24.2	2.5	98.0	84.2	254.7	136.1	133.7	412.4	120.2	151.2	161.9	88.0	52.0	1964	1963	1963	1997	63	1997	1945	1945	1945	100.0	0.00	0.00	83.68	83.68
9/20/2011	93.8	0.1	63.0	24.5	1.8	94.0	79.4	246.9	132.9	129.7	412.8	97.4	143.2	168.8	97.0	92.8	1973	1973	1972	2011	77	2012	1959	1959	1959	100.0	0.00	0.00	46.88	46.88
9/21/2011	93.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1973	1973	1972	2011	77	2012	1959	1959	1959	OL	0.00	0.00	0.00	0.00
9/22/2011	94.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1973	1973	1972	2011	77	2012	1959	1959	1959	OL	0.00	0.00	0.00	0.00
9/23/2011	95.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1973	1973	1972	2011	77	2012	1959	1959	1959	OL	0.00	0.00	0.00	0.00
9/24/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1973	1973	1972	2011	77	2012	1959	1959	1959	OL	0.00	0.00	0.00	0.00
9/25/2011	NA	17.8	59.8	24.2	14.3	73.5	71.6	146.8	109.6	97.5	380.7	114.0	130.2	164.2	113.7	112.6	1973	1973	1973	2019	85	2020	1967	1967	1967	99.9	0.00	0.02	23.57	23.59
9/26/2011	NA	21.7	24.8	24.2	67.8	80.5	74.4	OL	OL	OL	399.1	119.8	133.1	177.5	119.6	119.5	1973	1973	1973	2043	109	2044	1991	1991	1991	100.0	0.00	0.00	74.45	74.45
9/27/2011	94.2	0.0	45.6	24.1	2.7	117.8	85.4	98.1	91.7	99.5	367.2	111.5	125.7	192.1	110.3	110.4	1986	1985	1985	2067	132	2067	2014	2014	2014	99.5	0.00	0.43	82.94	83.37
9/28/2011	93.9	18.3	25.3	24.2	60.3	123.0	82.3	161.1	105.5	105.6	347.8	105.5	116.8	209.8	95.3	95.5	2010	2009	2009	2091	156	2091	2026	2026	2026	100.0	0.00	0.00	82.35	82.35
9/29/2011	94.2	22.0	24.6	24.2	67.3	78.2	70.4	221.9	114.2	113.2	398.5	113.4	124.2	OL	OL	OL	2034	2033	2033	2115	180	2115	2026	2026	2026	100.0	0.00	0.00	70.40	70.40
9/30/2011	94.7	22.0	24.7	24.2	66.9	73.5	69.7	224.9	116.3	112.1	391.1	112.2	119.2	OL	OL	OL	2058	2057	2057	2139	204	2139	2026	2026	2026	100.0	0.00	0.00	69.69	69.69

Report Created: **Monday, October 03, 2011**

Total [ML]: **0.01 0.48 1356.50 1356.99**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-300A**
Report Period: **September 2011**

Date	Transmittance			UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%			mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
	Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	Untreated	Below Dose	To Dose		Total			
9/1/2011	96.0	21.4	32.7	24.2	10.3	89.1	68.1	OL	OL	OL	141.3	109.5	109.5	126.1	109.3	109.5	563	563	564	877	878	877	903	902	902	100.0	0.00	0.00	56.58	56.58		
9/2/2011	94.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	563	563	564	877	878	877	903	902	902	OL	0.00	0.00	0.00	0.00		
9/3/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	563	563	564	877	878	877	903	902	902	OL	0.00	0.00	0.00	0.00		
9/4/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	563	563	564	877	878	877	903	902	902	OL	0.00	0.00	0.00	0.00		
9/5/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	563	563	564	877	878	877	903	902	902	OL	0.00	0.00	0.00	0.00		
9/6/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	563	563	564	877	878	877	903	902	902	OL	0.00	0.00	0.00	0.00		
9/7/2011	94.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	563	563	564	877	878	877	903	902	902	OL	0.00	0.00	0.00	0.00		
9/8/2011	94.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	563	563	564	877	878	877	903	902	902	OL	0.00	0.00	0.00	0.00		
9/9/2011	94.4	0.0	31.1	14.4	2.6	36.2	27.5	22.3	13.6	6.9	104.3	79.3	77.2	112.8	77.3	78.3	563	563	564	877	878	878	903	903	903	46.2	0.02	0.20	0.19	0.41		
9/10/2011	NA	5.6	26.0	24.0	26.9	70.3	64.1	38.7	16.2	11.1	124.0	102.5	102.6	117.8	102.5	102.2	563	563	564	882	882	882	907	907	907	99.0	0.00	0.11	11.09	11.19		
9/11/2011	NA	5.1	34.9	24.0	5.3	79.2	70.6	33.4	18.7	8.7	133.2	112.8	112.9	118.8	112.6	112.8	564	564	564	895	896	895	921	920	920	99.4	0.00	0.22	38.34	38.56		
9/12/2011	NA	0.0	62.9	24.3	4.8	94.9	61.1	131.8	103.8	119.4	145.7	97.2	97.3	21.2	96.4	100.2	577	576	577	908	908	908	921	921	921	100.0	0.00	0.00	32.50	32.50		
9/13/2011	93.7	21.4	34.1	24.4	1.7	81.2	48.4	120.5	81.4	112.1	147.2	78.5	78.6	OL	OL	OL	601	600	601	932	932	932	921	921	921	100.0	0.00	0.00	48.33	48.33		
9/14/2011	93.9	21.5	26.5	24.2	37.0	87.7	66.3	125.3	109.0	125.3	147.1	106.7	106.7	OL	OL	OL	625	624	625	956	956	956	921	921	921	100.0	0.00	0.00	66.29	66.29		
9/15/2011	93.0	21.3	25.3	24.1	68.4	86.0	78.4	128.3	123.8	123.9	146.6	123.8	123.9	OL	OL	OL	649	648	649	980	980	980	921	921	921	100.0	0.00	0.00	77.33	77.33		
9/16/2011	94.6	21.6	25.2	24.2	68.1	77.9	73.6	126.1	118.0	118.1	144.5	118.0	118.1	OL	OL	OL	673	672	673	1004	1004	1004	921	921	921	100.0	0.00	0.00	73.56	73.56		
9/17/2011	NA	21.4	32.8	25.0	19.3	85.4	50.8	129.2	103.6	111.4	148.6	89.1	84.4	OL	OL	OL	697	696	697	1028	1028	1028	921	921	921	100.0	0.00	0.00	50.85	50.85		
9/18/2011	NA	22.2	33.6	25.3	30.6	38.0	34.8	125.9	89.8	102.2	146.2	67.1	60.0	OL	OL	OL	721	720	721	1052	1052	1052	921	921	921	100.0	0.00	0.00	34.83	34.83		
9/19/2011	NA	21.3	32.6	25.2	3.1	74.7	36.5	124.9	91.3	106.1	146.0	68.4	62.2	OL	OL	OL	745	744	745	1076	1076	1076	921	921	921	100.0	0.00	0.00	36.50	36.50		
9/20/2011	93.8	20.3	35.8	24.5	2.2	72.0	38.0	120.1	87.0	102.1	142.5	63.7	58.6	89.7	63.0	62.9	768	768	769	1085	1086	1085	936	936	936	100.0	0.00	0.00	37.36	37.36		
9/21/2011	93.1	22.8	29.6	24.5	33.6	43.7	39.2	113.6	82.0	95.8	OL	OL	OL	88.3	63.5	63.7	792	792	793	1085	1086	1085	960	960	960	100.0	0.00	0.00	36.86	36.86		
9/22/2011	94.3	23.3	29.8	24.5	34.2	41.9	38.6	115.2	84.0	95.5	OL	OL	OL	89.4	63.1	63.6	816	816	817	1085	1086	1085	984	984	984	100.0	0.00	0.00	38.61	38.61		
9/23/2011	95.3	23.3	29.2	24.5	34.8	42.4	39.1	112.9	82.5	94.0	OL	OL	OL	89.3	63.9	64.4	840	840	841	1085	1086	1085	1008	1008	1008	100.0	0.00	0.00	39.14	39.14		
9/24/2011	NA	23.4	29.5	24.5	34.9	42.4	38.9	110.0	80.5	90.0	OL	OL	OL	87.0	63.5	63.6	864	864	865	1085	1086	1085	1032	1032	1032	100.0	0.00	0.00	38.91	38.91		
9/25/2011	NA	23.1	29.1	24.5	35.0	41.9	38.6	101.9	73.6	83.0	OL	OL	OL	87.1	63.1	63.1	888	888	889	1085	1086	1085	1056	1056	1056	100.0	0.00	0.00	38.65	38.65		
9/26/2011	NA	23.0	26.5	24.4	35.0	45.0	39.9	99.4	75.3	80.8	OL	OL	OL	87.6	65.1	65.1	912	912	913	1085	1086	1085	1080	1080	1080	100.0	0.00	0.00	39.94	39.94		
9/27/2011	94.2	0.0	45.9	24.6	1.5	45.3	38.5	119.2	88.5	103.7	148.5	59.2	64.3	87.9	68.6	69.4	930	930	931	1095	1096	1095	1088	1088	1088	100.0	0.01	0.00	28.71	28.72		
9/28/2011	93.9	21.4	30.6	24.6	18.0	48.9	36.9	121.7	82.2	106.1	150.3	60.5	63.0	OL	OL	OL	954	954	955	1119	1120	1119	1088	1088	1088	100.0	0.00	0.00	36.83	36.83		
9/29/2011	94.2	21.9	30.0	24.5	32.6	42.3	37.2	123.7	82.4	116.0	156.7	60.8	66.2	OL	OL	OL	978	978	979	1143	1144	1143	1088	1088	1088	100.0	0.00	0.00	37.15	37.15		
9/30/2011	94.7	21.7	32.9	24.5	32.5	41.0	37.2	127.2	92.9	111.0	156.2	60.8	64.2	OL	OL	OL	1002	1002	1003	1167	1168	1167	1088	1088	1088	100.0	0.00	0.00	37.14	37.14		

Report Created: **Monday, October 03, 2011**

Total [ML]: **0.04 0.53 935.68 936.24**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-400A**
Report Period: **September 2011**

Date	Transmittance			UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%			mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
	Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	Untreated	Below Dose	To Dose		Total			
9/1/2011	96.0	21.2	41.2	24.4	22.4	74.1	69.3	109.4	70.9	70.8	98.0	71.8	70.8	70.8	70.7	70.8	3757	5267	5267	5625	5625	4116	5121	5121	5121	100.0	0.00	0.00	22.14	22.14		
9/2/2011	94.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3757	5267	5267	5625	5625	4116	5121	5121	5121	OL	0.00	0.00	0.00	0.00		
9/3/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3757	5267	5267	5625	5625	4116	5121	5121	5121	OL	0.00	0.00	0.00	0.00		
9/4/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3757	5267	5267	5625	5625	4116	5121	5121	5121	OL	0.00	0.00	0.00	0.00		
9/5/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3757	5267	5267	5625	5625	4116	5121	5121	5121	OL	0.00	0.00	0.00	0.00		
9/6/2011	NA	21.4	43.4	24.5	23.9	69.5	67.2	88.7	85.0	68.3	130.8	88.4	92.9	122.9	129.2	155.9	3757	5267	5267	5625	5625	4116	5121	5121	5121	100.0	0.00	0.00	22.58	22.58		
9/7/2011	94.6	21.3	26.1	24.4	65.0	75.8	70.8	76.5	72.4	72.2	115.0	75.3	81.5	112.5	111.8	143.1	33	32	32	32	33	32	32	32	32	100.0	0.00	0.00	70.83	70.83		
9/8/2011	94.8	21.3	49.5	24.4	25.2	80.6	72.7	75.4	74.4	74.1	109.8	74.6	78.6	109.1	108.1	139.0	57	56	56	56	57	56	56	56	56	100.0	0.00	0.00	72.75	72.75		
9/9/2011	94.4	0.0	37.1	24.5	1.4	82.1	68.1	74.1	70.2	69.7	113.6	73.9	86.9	114.0	113.5	145.6	77	77	76	76	77	77	77	76	76	100.0	0.00	0.00	57.56	57.56		
9/10/2011	NA	21.5	25.8	24.3	69.2	83.5	77.8	79.5	79.4	79.2	121.8	80.0	84.4	119.4	118.2	145.1	101	101	100	100	101	101	101	100	100	100.0	0.00	0.00	77.86	77.86		
9/11/2011	NA	18.4	39.1	24.3	22.9	122.5	77.3	78.7	77.1	76.5	121.2	87.0	87.9	117.0	117.3	137.6	123	123	122	124	125	125	125	124	124	100.0	0.00	0.00	77.25	77.25		
9/12/2011	NA	21.8	45.7	24.3	14.8	97.9	86.8	127.4	91.5	78.6	126.1	117.7	118.0	126.0	126.1	136.0	133	132	132	145	146	146	146	146	145	100.0	0.00	0.00	76.39	76.39		
9/13/2011	93.7	21.6	54.6	24.4	18.6	99.4	78.0	86.1	79.7	79.3	80.7	79.7	79.8	82.5	88.9	100.9	157	156	156	169	170	170	170	170	169	100.0	0.00	0.00	78.08	78.08		
9/14/2011	93.9	23.3	42.6	24.5	3.7	75.4	70.9	77.1	73.2	72.3	73.7	73.4	73.5	76.0	92.2	99.6	166	166	166	179	180	179	180	179	179	100.0	0.00	0.00	28.18	28.18		
9/15/2011	93.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	166	166	166	179	180	179	180	179	179	OL	0.00	0.00	0.00	0.00		
9/16/2011	94.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	166	166	166	179	180	179	180	179	179	OL	0.00	0.00	0.00	0.00		
9/17/2011	NA	20.6	42.4	24.5	7.3	69.1	49.2	105.0	69.5	66.0	99.3	68.7	68.9	102.2	105.6	121.0	180	180	180	185	185	185	194	194	193	100.0	0.00	0.00	29.32	29.32		
9/18/2011	NA	21.8	28.7	24.4	39.9	46.7	43.7	123.9	85.6	70.9	OL	OL	OL	101.8	107.9	121.8	204	204	204	185	185	185	218	218	217	100.0	0.00	0.00	43.75	43.75		
9/19/2011	NA	0.0	39.1	24.2	4.0	79.5	44.5	117.0	88.6	71.3	74.3	72.3	72.5	98.4	105.8	118.8	227	227	227	197	198	197	229	228	228	99.2	0.35	0.00	42.05	42.40		
9/20/2011	93.8	21.8	43.6	24.5	2.4	98.6	57.2	108.9	86.9	68.2	86.2	69.1	69.9	90.0	90.6	110.3	251	251	250	221	221	221	244	244	243	100.0	0.00	0.00	55.98	55.98		
9/21/2011	93.1	23.6	25.6	24.5	58.1	66.8	63.4	93.7	75.9	64.7	77.0	64.9	64.9	80.0	83.9	98.3	275	275	274	245	245	245	268	268	267	100.0	0.00	0.00	59.81	59.81		
9/22/2011	94.3	23.6	25.7	24.5	58.8	67.1	63.1	89.4	72.8	64.6	78.2	64.8	64.9	82.6	89.1	99.9	299	299	298	269	269	269	292	292	291	100.0	0.00	0.00	63.09	63.09		
9/23/2011	95.3	23.6	25.7	24.5	59.7	67.2	63.7	86.4	70.7	65.2	83.5	65.4	65.4	83.3	86.9	97.7	323	323	322	293	293	293	316	316	315	100.0	0.00	0.00	63.66	63.66		
9/24/2011	NA	23.6	25.6	24.5	58.6	66.8	63.2	82.3	66.0	64.7	82.9	64.9	64.9	79.2	81.8	91.5	347	347	346	317	317	317	340	340	339	100.0	0.00	0.00	63.17	63.17		
9/25/2011	NA	23.4	25.7	24.5	58.3	66.4	62.5	83.4	64.8	64.0	82.3	64.2	64.2	76.9	79.1	86.9	371	371	370	341	341	341	364	364	363	100.0	0.00	0.00	62.49	62.49		
9/26/2011	NA	23.6	25.4	24.5	58.0	69.2	63.5	85.6	65.4	65.0	81.3	65.2	65.2	76.3	77.4	84.3	395	395	394	365	365	365	388	388	387	100.0	0.00	0.00	63.50	63.50		
9/27/2011	94.2	20.2	32.9	24.4	17.1	109.5	65.7	88.6	72.5	71.3	88.4	81.9	81.9	85.8	85.6	90.1	409	409	408	388	389	389	412	411	411	100.0	0.00	0.00	65.08	65.08		
9/28/2011	93.9	21.6	27.8	24.2	33.8	94.1	62.5	OL	OL	OL	102.2	100.7	100.7	101.7	102.1	102.5	409	409	408	412	413	413	436	435	435	100.0	0.00	0.00	62.56	62.56		
9/29/2011	94.2	21.7	25.0	24.2	58.7	67.6	62.5	OL	OL	OL	100.6	100.5	100.5	100.5	100.5	100.6	409	409	408	436	437	437	460	459	459	100.0	0.00	0.00	62.47	62.47		
9/30/2011	94.7	21.7	26.2	24.2	59.0	65.3	62.0	OL	OL	OL	99.9	99.8	99.8	99.8	99.8	99.9	409	409	408	460	461	461	484	483	483	100.0	0.00	0.00	62.01	62.01		

Report Created: **Monday, October 03, 2011**

Total [ML]: **0.35 0.00 1382.57 1382.92**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-500A**
Report Period: **September 2011**

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
9/1/2011	96.0	21.4	30.0	26.0	34.8	80.3	52.6	116.5	95.2	128.3	OL	OL	OL	239.8	92.2	129.2	2122	2583	2122	2172	597	3857	1904	3944	439	100.0	0.00	0.00	52.59	52.59
9/2/2011	94.8	22.0	28.4	25.3	37.2	48.6	44.1	112.9	79.4	123.8	OL	OL	OL	235.3	76.0	137.9	2146	2607	2146	2172	597	3857	1928	3968	463	100.0	0.00	0.00	43.92	43.92
9/3/2011	NA	21.7	27.2	24.9	38.3	48.4	44.7	111.0	77.5	120.4	OL	OL	OL	233.7	75.5	138.2	2170	2631	2170	2172	597	3857	1952	3992	487	100.0	0.00	0.00	44.55	44.55
9/4/2011	NA	21.4	27.9	24.8	36.5	47.8	43.7	109.5	76.1	119.0	OL	OL	OL	227.0	73.1	135.0	2194	2655	2194	2172	597	3857	1976	4016	511	100.0	0.00	0.00	43.67	43.67
9/5/2011	NA	22.3	31.0	26.8	31.7	48.3	39.9	109.2	78.9	119.1	OL	OL	OL	236.5	74.9	137.8	2218	2679	2218	2172	597	3857	2000	4040	535	100.0	0.00	0.00	39.82	39.82
9/6/2011	NA	23.4	36.5	26.3	9.7	43.7	40.1	105.4	80.2	115.2	OL	OL	OL	233.3	73.5	135.5	2234	2695	2234	2172	597	3857	2016	4056	551	100.0	0.00	0.00	26.60	26.60
9/7/2011	94.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2234	2695	2234	2172	597	3857	2016	4056	551	OL	0.00	0.00	0.00	0.00
9/8/2011	94.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2234	2695	2234	2172	597	3857	2016	4056	551	OL	0.00	0.00	0.00	0.00
9/9/2011	94.4	9.8	31.6	25.1	5.2	38.3	31.1	93.8	77.5	110.7	85.5	31.6	31.3	216.1	76.6	131.3	2244	2705	2243	2181	606	3866	2026	4066	561	99.4	0.00	0.08	12.43	12.51
9/10/2011	NA	20.0	28.0	24.9	27.9	46.5	39.8	97.3	68.0	107.6	99.6	41.4	41.4	233.2	73.7	129.3	2268	2729	2267	2205	630	3890	2050	4090	585	100.0	0.00	0.00	39.70	39.70
9/11/2011	NA	20.3	31.5	24.8	36.0	67.6	44.8	90.7	72.9	102.0	111.3	50.2	46.4	217.2	67.8	115.8	2292	2753	2291	2229	654	3914	2074	4114	609	100.0	0.00	0.00	44.90	44.90
9/12/2011	NA	18.8	32.5	24.4	36.1	99.0	57.1	88.2	74.7	102.8	168.6	90.7	84.3	209.3	88.7	116.8	2298	2759	2298	2253	678	3938	2098	4138	633	100.0	0.00	0.00	57.05	57.05
9/13/2011	93.7	0.3	76.2	24.0	3.6	87.6	77.9	144.2	113.0	18.4	503.9	128.8	138.7	228.4	125.8	131.1	2299	2759	2298	2265	691	3950	2110	4150	646	96.9	0.01	1.20	38.16	39.37
9/14/2011	93.9	15.5	31.1	26.0	32.3	78.5	51.9	OL	OL	OL	125.9	93.8	114.3	218.6	96.7	105.8	2299	2759	2298	2289	715	3974	2134	4174	670	98.9	0.00	0.59	51.41	52.00
9/15/2011	93.0	20.1	32.5	28.3	31.4	42.6	37.5	OL	OL	OL	137.9	81.2	128.1	253.1	89.4	123.7	2299	2759	2298	2313	739	3998	2158	4198	694	100.0	0.00	0.00	38.09	38.09
9/16/2011	94.6	24.1	33.0	29.6	35.6	42.9	39.9	OL	OL	OL	359.2	88.7	136.2	264.4	91.0	134.2	2299	2759	2298	2337	763	4022	2182	4222	718	100.0	0.00	0.00	39.91	39.91
9/17/2011	NA	27.0	43.7	31.8	3.6	43.5	39.1	OL	OL	OL	417.6	100.4	139.1	271.6	97.1	141.6	2299	2759	2298	2347	772	4032	2192	4232	727	100.0	0.00	0.00	15.87	15.87
9/18/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2299	2759	2298	2347	772	4032	2192	4232	727	OL	0.00	0.00	0.00	0.00
9/19/2011	NA	21.1	30.8	25.2	1.9	35.8	31.9	33.5	33.2	147.8	127.8	103.1	140.0	175.9	92.6	117.7	2300	2761	2300	2348	774	4033	2193	4233	729	100.0	0.00	0.00	1.70	1.70
9/20/2011	93.8	15.0	42.9	23.7	9.8	67.0	61.4	39.0	34.5	160.8	190.1	120.5	177.6	170.6	111.3	125.3	2300	2761	2300	2348	774	4034	2194	4233	729	97.3	0.00	0.02	0.79	0.81
9/21/2011	93.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2300	2761	2300	2348	774	4034	2194	4233	729	OL	0.00	0.00	0.00	0.00
9/22/2011	94.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2300	2761	0	2348	774	4034	2194	4233	729	OL	0.00	0.00	0.00	0.00
9/23/2011	95.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2300	2761	0	2348	774	4034	2194	4233	729	OL	0.00	0.00	0.00	0.00
9/24/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2300	2761	0	2348	774	4034	2194	4233	729	OL	0.00	0.00	0.00	0.00
9/25/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2300	2761	0	2348	774	4034	2194	4233	729	OL	0.00	0.00	0.00	0.00
9/26/2011	NA	8.3	60.6	24.1	6.1	75.1	71.8	114.1	110.0	128.8	126.7	102.3	141.8	198.8	115.0	129.5	2314	2775	13	2351	776	4036	2207	4247	743	99.8	0.00	0.07	40.55	40.62
9/27/2011	94.2	0.0	53.1	24.3	12.8	114.8	61.1	102.5	92.0	133.7	241.3	84.5	83.1	192.1	96.7	122.3	2330	2791	30	2353	779	4039	2224	4264	759	99.5	0.03	0.17	41.79	41.98
9/28/2011	93.9	21.8	33.6	24.3	24.2	78.5	71.3	116.2	113.3	153.4	OL	OL	OL	153.6	118.0	120.6	2332	2793	32	2353	779	4039	2226	4265	761	100.0	0.00	0.00	4.68	4.68
9/29/2011	94.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2332	2793	32	2353	779	4039	2226	4265	761	OL	0.00	0.00	0.00	0.00
9/30/2011	94.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2332	2793	32	2353	779	4039	2226	4265	761	OL	0.00	0.00	0.00	0.00

Report Created: **Monday, October 03, 2011**

Total [ML]: **0.04 2.14 678.16 680.34**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-600A**
Report Period: **September 2011**

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals							
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]							
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total				
9/1/2011	96.0	18.9	27.7	24.5	22.5	83.9	65.7	152.0	96.6	75.6	126.4	105.6	121.3	67.1	116.6	110.0	206	206	206	206	206	206	206	206	206	206	206	206	206	100.0	0.00	0.00	44.84	44.84
9/2/2011	94.8	17.9	27.4	24.5	57.5	72.6	65.9	160.9	100.1	79.1	125.0	104.6	125.8	67.3	114.2	117.3	230	230	230	230	230	230	230	230	230	230	230	230	230	100.0	0.00	0.01	65.76	65.77
9/3/2011	NA	18.6	27.1	24.5	62.5	71.6	66.3	160.5	99.5	76.9	122.1	102.3	123.1	67.8	111.0	113.6	254	254	254	254	254	254	254	254	254	254	254	254	254	100.0	0.00	0.00	66.42	66.42
9/4/2011	NA	17.9	27.1	24.5	57.5	70.9	63.3	155.9	102.9	74.1	117.3	99.9	117.7	64.8	107.4	113.5	278	278	278	278	278	278	278	278	278	278	278	278	278	100.0	0.00	0.01	63.36	63.37
9/5/2011	NA	18.3	27.2	24.6	43.2	72.8	59.4	160.5	105.4	73.8	120.7	104.5	117.5	60.9	112.8	113.4	302	302	302	302	302	302	302	302	302	302	302	302	302	100.0	0.00	0.00	59.49	59.49
9/6/2011	NA	18.8	27.1	24.5	45.5	70.4	62.9	153.7	101.3	70.2	117.8	102.1	111.1	64.4	110.3	107.6	326	326	326	326	326	326	326	326	326	326	326	326	326	100.0	0.00	0.00	63.00	63.00
9/7/2011	94.6	18.6	25.1	24.4	66.3	75.8	71.3	132.8	83.5	72.8	111.0	96.8	95.7	72.7	104.4	88.3	350	350	350	350	350	350	350	350	350	350	350	350	350	100.0	0.00	0.00	71.34	71.34
9/8/2011	94.8	17.5	31.7	24.3	46.3	81.2	73.5	127.5	75.8	75.0	107.8	94.6	89.3	74.4	102.7	77.6	374	374	374	374	374	374	374	374	374	374	374	374	374	100.0	0.00	0.03	73.52	73.54
9/9/2011	94.4	0.0	31.8	24.5	1.4	77.3	61.3	134.1	84.6	65.2	107.3	93.8	93.4	62.7	102.0	95.0	396	396	396	396	396	396	396	396	396	396	396	396	396	100.0	0.01	0.00	56.63	56.64
9/10/2011	NA	18.9	26.6	24.6	50.0	71.9	56.8	137.7	83.0	59.1	108.2	95.9	94.7	58.3	103.0	90.0	420	420	420	420	421	420	420	420	420	420	420	420	420	100.0	0.00	0.00	56.79	56.79
9/11/2011	NA	17.8	26.5	24.2	43.3	92.6	68.1	121.9	79.5	69.6	103.3	91.6	88.8	68.4	98.6	81.9	444	444	444	444	444	444	444	444	444	444	444	444	444	100.0	0.00	0.03	68.06	68.09
9/12/2011	NA	16.7	35.0	24.5	5.2	73.9	61.4	126.3	83.7	63.2	99.0	88.2	89.6	62.8	94.8	84.1	461	461	460	460	461	461	460	460	460	460	460	460	99.9	0.00	0.03	41.56	41.59	
9/13/2011	93.7	0.0	52.7	24.2	1.2	119.3	69.8	118.9	81.6	71.9	98.5	88.4	86.3	70.2	94.8	80.9	473	473	472	472	473	473	473	473	472	472	472	472	99.9	0.02	0.02	34.83	34.87	
9/14/2011	93.9	18.7	31.2	24.6	5.7	68.2	62.1	144.4	101.0	90.2	116.3	100.7	101.4	63.5	112.1	114.3	487	487	487	487	488	487	487	487	487	487	487	487	100.0	0.00	0.00	37.56	37.56	
9/15/2011	93.0	18.6	27.5	24.6	51.3	67.5	58.9	121.9	78.4	64.0	103.7	90.6	71.7	59.3	103.5	97.9	511	511	511	511	512	511	511	511	511	511	511	511	100.0	0.00	0.00	57.69	57.69	
9/16/2011	94.6	18.8	27.7	24.6	51.1	57.2	54.1	138.4	75.8	80.8	107.5	93.0	87.8	55.6	109.5	118.3	535	535	535	535	536	535	535	535	535	535	535	535	100.0	0.00	0.00	54.11	54.11	
9/17/2011	NA	18.4	27.1	24.6	48.8	74.3	63.1	162.9	97.2	106.0	120.8	105.3	129.0	64.6	118.5	127.2	559	559	559	559	560	559	559	559	559	559	559	559	100.0	0.00	0.00	63.12	63.12	
9/18/2011	NA	19.0	27.0	24.5	66.5	77.5	72.8	157.5	103.4	101.3	119.2	104.9	125.8	74.2	116.3	119.3	583	583	583	583	584	583	583	583	583	583	583	583	100.0	0.00	0.00	72.86	72.86	
9/19/2011	NA	18.1	52.5	24.5	4.6	85.6	70.5	151.9	101.5	93.6	114.2	101.3	118.3	71.9	112.4	116.1	607	607	607	607	608	607	607	607	607	607	607	607	100.0	0.00	0.00	70.52	70.52	
9/20/2011	93.8	0.0	39.7	24.4	1.4	76.8	69.9	150.4	99.5	91.2	110.8	98.4	116.1	71.1	108.8	113.2	630	630	630	630	631	630	630	630	630	630	630	630	100.0	0.01	0.01	66.42	66.44	
9/21/2011	93.1	18.5	27.0	24.5	65.6	72.0	69.4	144.6	88.1	81.7	104.3	94.1	105.4	70.5	104.3	101.6	654	654	654	654	655	654	654	654	654	654	654	654	100.0	0.00	0.00	65.45	65.45	
9/22/2011	94.3	18.4	26.8	24.5	65.8	72.3	68.7	144.4	87.6	79.3	104.0	94.8	102.7	70.1	105.2	97.8	678	678	678	678	679	678	678	678	678	678	678	678	100.0	0.00	0.00	68.66	68.66	
9/23/2011	95.3	18.5	27.0	24.5	67.4	72.2	69.7	140.9	87.0	77.6	101.9	92.9	100.3	71.1	102.5	95.8	702	702	702	702	703	702	702	702	702	702	702	702	100.0	0.00	0.00	69.70	69.70	
9/24/2011	NA	18.5	25.6	24.4	66.8	71.9	69.2	128.3	77.1	71.3	98.6	90.5	96.0	70.6	99.8	89.2	726	726	726	726	727	726	726	726	726	726	726	726	100.0	0.00	0.00	69.18	69.18	
9/25/2011	NA	18.5	25.2	24.4	65.9	72.2	68.9	112.1	73.2	70.4	96.9	89.5	93.9	70.4	98.6	87.5	750	750	750	750	751	750	750	750	750	750	750	750	100.0	0.00	0.00	68.97	68.97	
9/26/2011	NA	18.5	35.7	24.4	34.8	72.3	69.0	111.2	74.6	70.4	95.3	88.0	92.7	70.2	97.4	86.4	761	761	760	760	761	761	760	760	760	760	760	760	100.0	0.00	0.00	30.09	30.09	
9/27/2011	94.2	17.9	44.7	24.5	16.0	105.4	58.6	106.1	77.0	63.1	96.9	89.0	91.2	59.4	97.2	91.7	767	767	766	766	767	767	766	766	766	766	766	766	99.6	0.00	0.05	14.19	14.25	
9/28/2011	93.9	5.2	58.3	24.3	7.1	75.8	72.1	114.6	81.2	73.4	101.6	91.1	98.7	72.6	99.2	91.8	779	778	778	778	779	779	778	778	778	778	778	778	99.7	0.00	0.10	35.70	35.81	
9/29/2011	94.2	17.9	25.4	24.2	67.0	75.3	71.5	113.9	73.5	72.9	97.9	89.9	92.1	72.0	99.1	84.5	803	802	802	802	803	803	802	802	802	802	802	802	100.0	0.00	0.02	71.46	71.49	
9/30/2011	94.7	17.1	25.2	23.7	67.6	73.9	71.0	103.5	72.6	72.4	93.9	87.9	85.9	69.5	96.7	79.7	827	826	826	826	827	827	826	826	826	826	826	826	99.9	0.00	0.07	70.97	71.04	

Report Created: **Monday, October 03, 2011**

Total [ML]: **0.03 0.40 1752.24 1752.68**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line

Water System Code **252.00**
Licence Number **PWS-09-412 RR**

Report Period: **October 2011**

Date	UVR-D100A				UVR-D200A				UVR-D300A				UVR-D400A				UVR-D500A				UVR-D600A				Total				% Volume Treated To Dose		
	Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]						
	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total		Untreated	Below
10/1/2011	0.00	0.00	0.00	0.00	0.00	0.00	69.80	69.80	0.00	0.00	36.75	36.75	0.00	0.00	62.01	62.01	0.00	0.00	0.00	0.00	0.00	0.16	71.15	71.30	0.00	0.16	239.71	239.87	99.9		
10/2/2011	0.01	0.02	0.00	0.02	0.00	0.00	69.53	69.53	0.00	0.00	35.79	35.79	0.00	0.00	61.30	61.30	0.00	0.32	1.34	1.66	0.00	0.13	68.70	68.83	0.01	0.47	236.66	237.14	99.8		
10/3/2011	0.00	0.09	0.73	0.81	0.00	0.00	81.90	81.90	0.00	0.00	35.79	35.79	0.00	0.00	45.78	45.78	0.00	2.08	68.23	70.31	0.00	0.00	1.90	1.90	0.00	2.17	234.33	236.50	99.1		
10/4/2011	0.14	0.22	30.19	30.55	0.00	0.00	41.39	41.39	0.00	0.00	64.89	64.89	0.00	0.43	27.30	27.73	0.00	0.00	29.05	29.05	0.00	0.07	44.87	44.95	0.14	0.73	237.68	238.55	99.6		
10/5/2011	0.00	0.00	85.02	85.02	0.00	0.00	0.00	0.00	0.00	0.00	68.26	68.26	0.00	0.06	0.01	0.07	0.00	0.00	57.70	57.70	0.00	0.06	26.62	26.67	0.00	0.12	237.62	237.74	99.9		
10/6/2011	0.00	0.00	85.01	85.01	0.00	0.00	0.00	0.00	0.00	0.00	47.00	47.00	0.00	0.00	22.50	22.51	0.00	0.00	84.58	84.58	0.00	0.00	0.00	0.00	0.00	0.00	239.09	239.09	100.0		
10/7/2011	0.00	0.00	84.97	84.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70.79	70.79	0.02	0.12	84.10	84.23	0.00	0.00	0.00	0.00	0.02	0.12	239.86	240.00	99.9		
10/8/2011	0.00	0.00	84.99	84.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.90	75.90	0.00	3.12	81.60	84.72	0.00	0.00	0.00	0.00	0.00	3.12	242.49	245.61	98.7		
10/9/2011	0.00	0.00	84.95	84.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.68	71.68	0.00	0.00	80.34	80.34	0.00	0.00	0.00	0.00	0.00	0.00	236.97	236.97	100.0		
10/10/2011	0.00	0.00	73.45	73.45	0.00	0.00	11.49	11.49	0.00	0.00	0.00	0.00	0.00	0.00	67.70	67.70	0.00	0.00	67.11	67.11	0.00	0.00	10.35	10.35	0.00	0.00	230.10	230.10	100.0		
10/11/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.98	84.98	0.00	0.00	0.00	0.00	0.00	0.00	66.17	66.17	0.00	0.00	0.00	0.00	0.00	0.00	78.03	78.03	0.00	0.00	229.18	229.18	100.0		
10/12/2011	0.00	0.00	0.00	0.00	0.02	0.00	54.68	54.70	0.00	0.00	0.00	0.00	0.00	0.00	38.75	38.75	0.00	0.00	0.00	0.00	0.00	0.00	46.49	46.49	0.02	0.00	139.92	139.93	100.0		
10/13/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.00	85.00	0.00	0.00	0.00	0.00	0.00	0.00	64.49	64.49	0.00	0.00	0.00	0.00	0.00	0.00	75.90	75.90	0.00	0.00	225.39	225.39	100.0		
10/14/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.07	85.07	0.00	0.00	0.00	0.00	0.00	0.00	66.46	66.46	0.00	0.00	32.80	32.80	0.00	0.00	45.75	45.75	0.00	0.00	230.08	230.08	100.0		
10/15/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.97	84.97	0.00	0.00	0.00	0.00	0.00	0.00	64.66	64.66	0.00	0.00	74.62	74.62	0.00	0.00	0.00	0.00	0.00	0.00	224.25	224.25	100.0		
10/16/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.88	84.88	0.00	0.00	0.00	0.00	0.00	0.00	64.96	64.96	0.00	0.00	75.18	75.18	0.00	0.00	0.00	0.00	0.00	0.00	225.01	225.01	100.0		
10/17/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.66	84.66	0.00	0.00	0.00	0.00	0.00	0.00	65.32	65.32	0.00	0.00	75.74	75.74	0.00	0.00	0.09	0.09	0.00	0.00	225.81	225.81	100.0		
10/18/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.88	84.88	0.00	0.00	0.00	0.00	0.00	0.00	66.21	66.21	0.00	0.00	76.79	76.79	0.04	0.00	0.10	0.14	0.04	0.00	227.98	228.02	100.0		
10/19/2011	0.10	0.79	0.00	0.89	0.00	0.00	83.15	83.15	0.00	0.00	42.43	42.43	0.03	0.00	19.37	19.40	0.00	0.00	75.98	75.98	0.00	0.00	0.00	0.00	0.13	0.79	220.93	221.84	99.6		
10/20/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.02	85.02	0.00	0.00	62.16	62.16	0.00	0.00	0.00	0.00	0.00	0.00	79.39	79.39	0.00	0.00	0.01	0.01	0.00	0.00	225.58	225.58	100.0		
10/21/2011	0.00	0.00	56.13	56.13	0.00	0.00	30.66	30.66	0.00	0.00	61.76	61.76	0.00	0.00	0.00	0.00	0.00	0.00	80.55	80.55	0.00	0.00	0.00	0.00	0.00	0.00	229.10	229.10	100.0		
10/22/2011	0.00	0.00	85.96	85.96	0.00	0.00	0.00	0.00	0.00	0.00	62.66	62.66	0.00	0.00	0.00	0.00	0.00	0.00	79.63	79.63	0.00	0.00	0.00	0.00	0.00	0.00	228.25	228.25	100.0		
10/23/2011	0.00	0.00	85.19	85.19	0.00	0.00	0.00	0.00	0.00	0.00	63.23	63.23	0.00	0.00	0.00	0.00	0.00	0.00	80.54	80.54	0.00	0.00	0.00	0.00	0.00	0.00	228.95	228.95	100.0		
10/24/2011	0.00	0.00	85.05	85.05	0.00	0.00	0.00	0.00	0.00	0.00	63.35	63.35	0.00	0.00	0.00	0.00	0.00	0.00	80.63	80.63	0.00	0.00	0.00	0.00	0.00	0.00	229.03	229.03	100.0		
10/25/2011	0.00	0.00	85.01	85.01	0.00	0.00	0.00	0.00	0.00	0.00	63.37	63.37	0.00	0.00	0.00	0.00	0.00	0.00	80.48	80.48	0.00	0.00	0.00	0.00	0.00	0.00	228.86	228.86	100.0		
10/26/2011	0.00	0.00	84.96	84.96	0.00	0.00	0.00	0.00	0.00	0.00	63.34	63.34	0.00	0.00	0.00	0.00	0.00	0.00	80.24	80.24	0.00	0.00	0.00	0.00	0.00	0.00	228.54	228.54	100.0		
10/27/2011	0.00	0.00	77.83	77.83	0.00	0.00	14.21	14.21	0.01	0.13	27.25	27.40	0.00	1.71	25.15	26.86	0.06	0.00	34.95	35.01	0.00	0.00	47.43	47.43	0.08	1.84	226.82	228.74	99.2		
10/28/2011	0.00	0.00	48.64	48.64	0.00	0.00	30.65	30.65	0.00	0.00	26.69	26.69	0.00	0.00	39.53	39.53	0.00	0.07	0.36	0.43	0.00	0.00	81.86	81.86	0.00	0.07	227.73	227.80	100.0		
10/29/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.98	84.98	0.00	0.00	61.38	61.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.73	78.73	0.00	0.00	225.09	225.09	100.0		
10/30/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	61.21	61.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.81	77.81	0.00	0.00	224.03	224.03	100.0		
10/31/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.00	85.00	0.00	0.00	61.02	61.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.61	77.61	0.00	0.00	223.63	223.63	100.0		

Total [ML]: 0.24 1.12 1138.06 1139.42 0.02 0.00 1421.92 1421.94 0.01 0.13 1008.33 1008.48 0.03 2.20 1086.04 1088.28 0.09 5.70 1560.93 1566.73 0.04 0.42 833.40 833.86 0.43 9.58 7048.68 7058.69

Report Created: **Tuesday, November 01, 2011**

Water Volume [%]:

Untreated 0.0%
Below Dose 0.1%
To Dose 99.9%

N:\Water Treatment Branch\Admin\stration\Reports\Regulatory Submissions\UV\2011\09 2011

Notes: 1 UV Comparative Dose 18.1 mJ/cm2

Submitted By (Print) D.Sulymka

Original Signed By D.Sulymka

Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-200A**
Report Period: **October 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	W/m2									Hours										Untreated	Below Dose	To Dose	Total
								1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3					
10/1/2011	NA	22.0	24.7	24.2	67.3	73.1	69.8	223.9	118.2	112.3	387.4	112.7	117.6	0.1	OL	OL	2082	2081	2081	2163	228	2163	2026	2026	2026	100.0	0.00	0.00	69.80	69.80
10/2/2011	NA	21.9	24.7	24.2	63.9	72.6	69.5	224.6	122.8	111.9	397.1	112.2	117.8	0.3	OL	OL	2106	2105	2105	2187	252	2187	2026	2026	2026	100.0	0.00	0.00	69.53	69.53
10/3/2011	NA	18.9	25.3	24.1	62.3	103.9	83.7	216.6	130.4	122.6	368.5	121.8	128.4	154.2	86.8	85.8	2129	2129	2129	2210	276	2210	2032	2032	2032	100.0	0.00	0.00	81.90	81.90
10/4/2011	94.8	18.5	37.6	24.2	26.3	113.0	88.7	180.8	110.4	95.7	340.6	114.3	118.6	157.8	112.8	111.0	2135	2135	2135	2222	287	2222	2043	2043	2044	100.0	0.00	0.00	41.39	41.39
10/5/2011	95.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2135	2135	2135	2222	287	2222	2043	2043	2044	OL	0.00	0.00	0.00	0.00
10/6/2011	93.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2135	2135	2135	2222	287	2222	2043	2043	2044	OL	0.00	0.00	0.00	0.00
10/7/2011	93.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2135	2135	2135	2222	287	2222	2043	2043	2044	OL	0.00	0.00	0.00	0.00
10/8/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2135	2135	2135	2222	287	2222	2043	2043	2044	OL	0.00	0.00	0.00	0.00
10/9/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2135	2135	2135	2222	287	2222	2043	2043	2044	OL	0.00	0.00	0.00	0.00
10/10/2011	NA	22.0	29.4	24.3	38.7	98.1	84.6	129.6	88.2	86.9	285.2	92.7	100.1	146.9	92.7	89.3	2138	2138	2138	2225	290	2225	2047	2047	2047	100.0	0.00	0.00	11.49	11.49
10/11/2011	NA	22.1	24.6	24.1	77.5	93.5	85.0	OL	OL	OL	350.7	136.5	136.6	177.1	136.6	136.1	2138	2138	2138	2249	314	2249	2071	2071	2071	100.0	0.00	0.00	84.98	84.98
10/12/2011	NS	0.0	47.5	24.2	4.6	97.4	83.8	122.0	90.5	103.0	336.9	133.7	134.3	170.0	132.8	131.0	2139	2139	2138	2265	330	2265	2087	2086	2087	100.0	0.02	0.00	54.68	54.70
10/13/2011	93.3	21.9	24.8	24.1	78.0	91.7	85.0	OL	OL	OL	346.0	136.5	136.6	175.7	136.4	136.0	2139	2139	2138	2289	354	2289	2111	2110	2111	100.0	0.00	0.00	85.00	85.00
10/14/2011	92.9	21.9	24.7	24.1	77.2	93.5	85.0	OL	OL	OL	331.5	136.6	136.7	166.8	136.6	136.0	2139	2139	2138	2313	378	2313	2135	2134	2135	100.0	0.00	0.00	85.07	85.07
10/15/2011	NA	21.8	24.7	24.2	77.9	92.3	85.0	94.9	86.0	87.4	330.6	120.3	123.8	163.9	120.2	119.3	2147	2147	2147	2337	402	2337	2159	2158	2159	100.0	0.00	0.00	84.97	84.97
10/16/2011	NA	21.2	24.8	24.3	79.3	90.9	85.0	106.0	86.6	89.7	330.1	86.8	95.3	162.4	86.8	86.5	2171	2171	2171	2361	426	2361	2183	2182	2183	100.0	0.00	0.00	84.88	84.88
10/17/2011	NA	21.4	24.8	24.3	77.7	90.6	84.8	110.8	86.4	87.3	315.3	86.5	89.4	150.5	86.6	86.2	2195	2195	2195	2385	450	2385	2207	2206	2207	100.0	0.00	0.00	84.66	84.66
10/18/2011	93.8	21.2	24.9	24.3	77.9	92.1	85.0	113.3	86.9	86.7	303.0	86.8	87.1	140.7	86.9	86.4	2219	2219	2219	2409	474	2409	2231	2230	2231	100.0	0.00	0.00	84.88	84.88
10/19/2011	93.0	0.0	48.3	24.2	2.8	107.4	85.0	114.5	87.5	87.3	292.4	87.1	87.6	131.0	87.1	86.2	2243	2243	2242	2433	498	2433	2254	2254	2255	100.0	0.00	0.00	83.15	83.15
10/20/2011	92.8	21.4	25.0	24.3	75.2	93.9	85.0	113.5	86.9	86.6	285.2	86.7	86.9	123.4	86.8	84.0	2267	2267	2266	2457	522	2457	2278	2278	2279	100.0	0.00	0.00	85.02	85.02
10/21/2011	94.1	21.7	48.1	24.2	20.4	94.4	84.9	119.2	86.8	86.2	284.6	87.4	87.8	122.4	87.4	78.4	2276	2276	2275	2465	531	2465	2287	2287	2287	100.0	0.00	0.00	30.66	30.66
10/22/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2276	2276	2275	2465	531	2465	2287	2287	2287	OL	0.00	0.00	0.00	0.00
10/23/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2276	2276	2275	2465	531	2465	2287	2287	2287	OL	0.00	0.00	0.00	0.00
10/24/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2276	2276	2275	2465	531	2465	2287	2287	2287	OL	0.00	0.00	0.00	0.00
10/25/2011	93.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2276	2276	2275	2465	531	2465	2287	2287	2287	OL	0.00	0.00	0.00	0.00
10/26/2011	93.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2276	2276	2275	2465	531	2465	2287	2287	2287	OL	0.00	0.00	0.00	0.00
10/27/2011	93.6	20.8	35.8	24.3	23.9	91.8	84.7	104.1	91.2	86.6	242.8	88.6	89.3	113.9	86.6	78.4	2280	2280	2279	2469	535	2470	2291	2291	2292	100.0	0.00	0.00	14.21	14.21
10/28/2011	94.7	21.1	37.7	24.3	34.1	95.8	84.9	121.6	91.4	87.3	297.0	86.9	87.1	129.2	87.0	85.2	2289	2288	2288	2478	544	2478	2300	2300	2300	100.0	0.00	0.00	30.65	30.65
10/29/2011	NA	21.5	24.7	24.3	71.1	90.3	85.0	130.2	97.5	86.6	304.8	86.9	87.1	129.4	86.7	77.5	2313	2312	2312	2502	568	2502	2324	2324	2324	100.0	0.00	0.00	84.98	84.98
10/30/2011	NA	21.4	24.7	24.3	83.0	87.2	85.0	128.9	98.3	86.5	273.4	86.6	86.8	119.1	86.8	66.5	2337	2336	2336	2526	592	2526	2348	2348	2348	100.0	0.00	0.00	85.01	85.01
10/31/2011	NA	21.6	24.6	24.3	82.6	87.2	85.0	129.6	100.5	86.4	258.0	86.5	86.7	113.1	86.6	58.4	2361	2360	2360	2550	616	2550	2372	2372	2372	100.0	0.00	0.00	85.00	85.00

Report Created: **Tuesday, November 01, 2011**

Total [ML]: **0.02 0.00 1421.92 1421.94**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.1 %**
To Dose **99.9 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No sample taken due to plant shutdown

Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-300A**
Report Period: **October 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	W/m2									Hours										Untreated	Below Dose	To Dose	Total
								1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3					
10/1/2011	NA	22.2	34.1	24.5	32.2	40.4	36.8	125.1	94.2	106.7	152.8	60.3	62.3	OL	OL	OL	1026	1026	1027	1191	1192	1191	1088	1088	1088	100.0	0.00	0.00	36.75	36.75
10/2/2011	NA	22.1	34.6	24.5	28.8	42.1	35.9	127.0	97.5	105.2	156.0	58.9	63.3	OL	OL	OL	1050	1050	1051	1215	1216	1215	1088	1088	1088	100.0	0.00	0.00	35.79	35.79
10/3/2011	NA	22.1	34.1	24.5	16.9	56.8	35.8	120.9	91.9	98.7	147.4	58.8	61.4	OL	OL	OL	1074	1074	1075	1239	1240	1239	1088	1088	1088	100.0	0.00	0.00	35.79	35.79
10/4/2011	94.8	21.7	28.3	24.3	17.5	88.7	64.9	120.2	107.2	111.3	138.3	104.3	104.7	0.1	OL	OL	1098	1098	1099	1263	1264	1263	1088	1088	1088	100.0	0.00	0.00	64.89	64.89
10/5/2011	95.3	21.7	33.0	24.2	17.6	75.9	68.2	110.0	109.7	109.9	130.9	109.6	109.6	OL	OL	OL	1122	1122	1123	1287	1288	1287	1088	1088	1088	100.0	0.00	0.00	68.26	68.26
10/6/2011	93.4	22.2	29.9	24.2	11.6	73.1	68.9	110.7	110.6	110.6	130.2	110.6	110.6	OL	OL	OL	1139	1138	1139	1303	1304	1304	1088	1088	1088	100.0	0.00	0.00	47.00	47.00
10/7/2011	93.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1139	1138	1139	1303	1304	1304	1088	1088	1088	OL	0.00	0.00	0.00	0.00
10/8/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1139	1138	1139	1303	1304	1304	1088	1088	1088	OL	0.00	0.00	0.00	0.00
10/9/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1139	1138	1139	1303	1304	1304	1088	1088	1088	OL	0.00	0.00	0.00	0.00
10/10/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1139	1138	1139	1303	1304	1304	1088	1088	1088	OL	0.00	0.00	0.00	0.00
10/11/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1139	1138	1139	1303	1304	1304	1088	1088	1088	OL	0.00	0.00	0.00	0.00
10/12/2011	NS	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1139	1138	1139	1303	1304	1304	1088	1088	1088	OL	0.00	0.00	0.00	0.00
10/13/2011	93.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1139	1138	1139	1303	1304	1304	1088	1088	1088	OL	0.00	0.00	0.00	0.00
10/14/2011	92.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1139	1138	1139	1303	1304	1304	1088	1088	1088	OL	0.00	0.00	0.00	0.00
10/15/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1139	1138	1139	1303	1304	1304	1088	1088	1088	OL	0.00	0.00	0.00	0.00
10/16/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1139	1138	1139	1303	1304	1304	1088	1088	1088	OL	0.00	0.00	0.00	0.00
10/17/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1139	1138	1139	1303	1304	1304	1088	1088	1088	OL	0.00	0.00	0.00	0.00
10/18/2011	93.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1139	1138	1139	1303	1304	1304	1088	1088	1088	OL	0.00	0.00	0.00	0.00
10/19/2011	93.0	21.8	33.9	24.3	14.8	63.4	61.0	98.9	97.7	98.1	89.4	51.3	52.5	100.0	97.9	97.9	1156	1156	1156	1303	1304	1304	1106	1106	1105	100.0	0.00	0.00	42.43	42.43
10/20/2011	92.8	21.8	24.9	24.2	55.0	67.8	62.1	101.3	100.0	100.2	OL	OL	OL	103.2	100.0	100.1	1180	1180	1180	1303	1304	1304	1130	1129	1129	100.0	0.00	0.00	62.16	62.16
10/21/2011	94.1	21.6	33.7	24.4	23.1	67.9	63.4	104.0	92.1	97.9	113.6	64.7	64.8	108.8	83.5	92.0	1203	1203	1204	1315	1316	1316	1153	1153	1153	100.0	0.00	0.00	61.76	61.76
10/22/2011	NA	22.0	25.0	24.2	59.2	66.9	62.6	104.2	100.9	101.0	OL	OL	OL	108.7	100.9	100.9	1227	1227	1228	1315	1316	1316	1177	1177	1177	100.0	0.00	0.00	62.66	62.66
10/23/2011	NA	21.7	25.0	24.2	59.8	66.2	63.3	102.2	101.8	101.9	OL	OL	OL	104.2	101.8	101.8	1251	1251	1252	1315	1316	1316	1201	1201	1201	100.0	0.00	0.00	63.23	63.23
10/24/2011	NA	21.9	24.9	24.2	60.2	66.5	63.4	102.4	102.0	102.1	OL	OL	OL	104.6	102.0	102.0	1275	1275	1276	1315	1316	1316	1225	1225	1225	100.0	0.00	0.00	63.35	63.35
10/25/2011	93.8	21.4	24.8	24.2	59.8	67.3	63.4	102.1	102.0	102.1	OL	OL	OL	103.6	102.0	102.0	1299	1299	1300	1315	1316	1316	1249	1249	1249	100.0	0.00	0.00	63.37	63.37
10/26/2011	93.6	22.2	24.9	24.2	60.3	66.3	63.3	102.0	101.9	102.1	OL	OL	OL	102.8	101.9	101.9	1323	1323	1324	1315	1316	1316	1273	1273	1273	100.0	0.00	0.00	63.34	63.34
10/27/2011	93.6	6.1	31.3	24.1	2.3	66.8	63.2	102.5	101.3	101.6	11.2	15.7	31.8	103.0	101.2	101.3	1334	1334	1334	1316	1316	1316	1283	1283	1283	99.5	0.01	0.13	27.25	27.40
10/28/2011	94.7	19.6	47.9	24.3	35.3	132.4	62.9	122.3	97.3	16.9	145.4	100.1	100.7	108.0	100.4	101.3	1334	1334	1335	1326	1327	1326	1294	1294	1293	100.0	0.00	0.00	26.69	26.69
10/29/2011	NA	22.1	26.4	24.4	50.7	93.3	61.4	104.0	78.2	46.4	156.0	86.7	92.5	106.6	88.6	96.5	1343	1342	1343	1350	1351	1350	1318	1318	1317	100.0	0.00	0.00	61.38	61.38
10/30/2011	NA	21.7	25.7	24.4	59.4	63.2	61.2	90.9	65.0	66.7	157.0	81.6	87.9	105.4	85.9	94.2	1354	1354	1355	1374	1375	1374	1342	1342	1341	100.0	0.00	0.00	61.21	61.21
10/31/2011	NA	21.4	28.8	24.6	58.7	62.8	61.0	121.4	90.8	116.8	155.5	62.6	71.0	106.5	72.2	88.3	1378	1378	1379	1398	1399	1398	1366	1366	1365	100.0	0.00	0.00	61.02	61.02

Report Created: **Tuesday, November 01, 2011**

Total [ML]: **0.01 0.13 1008.33 1008.48**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No sample taken due to plant shutdown

Water System Code: 252.00
Licence Number: PWS-09-412 RR

Reactor: UVR-400A
Report Period: October 2011

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
10/1/2011	NA	21.5	24.9	24.2	58.5	66.0	62.0	OL	OL	OL	99.9	99.8	99.8	99.8	99.9	100.1	409	409	408	484	485	485	508	507	507	100.0	0.00	0.00	62.01	62.01
10/2/2011	NA	21.6	24.9	24.2	53.7	65.6	61.3	OL	OL	OL	98.9	98.8	98.8	98.8	98.8	98.9	409	409	408	508	509	509	532	531	531	100.0	0.00	0.00	61.30	61.30
10/3/2011	NA	22.3	26.3	24.3	31.9	68.1	45.8	OL	OL	OL	74.6	74.3	74.2	74.5	74.7	74.7	409	409	408	532	533	533	556	555	555	100.0	0.00	0.00	45.78	45.78
10/4/2011	94.8	12.2	26.7	23.8	22.8	98.6	56.6	37.1	28.9	39.3	90.6	90.1	89.3	91.7	92.5	91.9	410	410	409	544	545	545	567	567	567	98.4	0.00	0.43	27.30	27.73
10/5/2011	95.3	12.4	28.6	18.1	2.1	58.3	35.4	23.5	19.7	41.1	72.0	85.9	70.7	83.4	79.0	96.5	410	410	410	544	545	545	568	567	567	16.2	0.00	0.06	0.01	0.07
10/6/2011	93.4	21.9	25.2	24.4	41.6	73.1	70.2	133.2	71.6	71.2	106.3	75.4	78.4	102.0	111.7	133.9	418	418	417	552	553	552	575	575	575	100.0	0.00	0.00	22.50	22.51
10/7/2011	93.4	21.3	25.1	24.4	67.7	73.9	70.8	93.6	72.2	72.2	82.5	72.5	72.5	84.2	90.8	108.5	442	442	441	576	577	576	599	599	599	100.0	0.00	0.00	70.79	70.79
10/8/2011	NA	20.6	25.1	24.4	66.3	107.0	75.9	77.7	77.2	77.2	77.7	77.6	77.6	77.6	89.5	113.1	466	466	465	600	601	600	623	623	623	100.0	0.00	0.00	75.90	75.90
10/9/2011	NA	23.9	25.1	24.4	66.0	83.8	71.7	78.7	73.1	73.1	78.0	73.3	73.4	77.4	95.2	116.4	490	490	489	624	625	624	647	647	647	100.0	0.00	0.00	71.68	71.68
10/10/2011	NA	23.4	27.8	24.5	46.6	77.0	67.7	90.8	69.2	69.1	83.9	69.4	69.5	78.8	93.8	116.0	514	514	513	648	649	648	671	671	671	100.0	0.00	0.00	67.70	67.70
10/11/2011	NA	23.7	25.4	24.5	61.0	71.6	66.2	105.9	67.8	67.6	87.8	67.9	68.0	80.7	93.9	113.4	538	538	537	672	673	672	695	695	695	100.0	0.00	0.00	66.17	66.17
10/12/2011	NS	21.6	30.2	24.5	21.5	67.8	61.6	108.8	63.1	63.0	88.4	65.4	67.8	82.3	92.9	111.9	553	553	553	687	688	688	710	710	710	100.0	0.00	0.00	38.75	38.75
10/13/2011	93.3	23.8	25.1	24.5	53.1	69.6	64.5	109.0	66.2	66.0	85.1	66.3	67.5	86.9	92.7	118.6	577	577	577	711	712	712	734	734	734	100.0	0.00	0.00	64.49	64.49
10/14/2011	92.9	23.6	25.4	24.5	54.9	70.2	66.4	99.6	68.1	67.9	81.5	68.3	68.3	83.1	90.2	110.6	601	601	601	735	736	736	758	758	758	100.0	0.00	0.00	66.46	66.46
10/15/2011	NA	23.9	25.1	24.5	62.5	67.8	64.7	97.4	66.3	66.2	82.6	66.5	66.6	81.5	88.3	105.3	625	625	625	759	760	760	782	782	782	100.0	0.00	0.00	64.66	64.66
10/16/2011	NA	23.7	25.1	24.5	62.7	67.4	65.0	94.5	66.7	66.5	81.4	66.8	66.9	78.5	85.0	99.7	649	649	649	783	784	784	806	806	806	100.0	0.00	0.00	64.96	64.96
10/17/2011	NA	23.4	25.4	24.5	54.6	67.7	65.3	89.3	67.0	66.8	76.5	67.1	67.2	73.1	79.2	90.9	673	673	673	807	808	808	830	830	830	100.0	0.00	0.00	65.32	65.32
10/18/2011	93.8	23.3	25.4	24.5	55.1	69.9	66.2	85.0	67.9	67.7	72.4	68.0	68.0	69.1	74.4	84.2	697	697	697	831	832	832	854	854	854	100.0	0.00	0.00	66.21	66.21
10/19/2011	93.0	0.0	27.2	24.4	26.5	69.4	65.2	80.3	66.7	66.7	68.4	66.8	66.9	68.6	71.3	79.5	704	704	704	838	839	839	862	861	861	99.9	0.03	0.00	19.37	19.40
10/20/2011	92.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	704	704	704	838	839	839	862	861	861	OL	0.00	0.00	0.00	0.00
10/21/2011	94.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	704	704	704	838	839	839	862	861	861	OL	0.00	0.00	0.00	0.00
10/22/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	704	704	704	838	839	839	862	861	861	OL	0.00	0.00	0.00	0.00
10/23/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	704	704	704	838	839	839	862	861	861	OL	0.00	0.00	0.00	0.00
10/24/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	704	704	704	838	839	839	862	861	861	OL	0.00	0.00	0.00	0.00
10/25/2011	93.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	704	704	704	838	839	839	862	861	861	OL	0.00	0.00	0.00	0.00
10/26/2011	93.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	704	704	704	838	839	839	862	861	861	OL	0.00	0.00	0.00	0.00
10/27/2011	93.6	11.3	35.2	23.7	2.7	71.0	68.5	63.4	56.8	36.6	106.5	106.7	105.9	106.1	106.6	107.8	705	705	704	848	849	848	871	871	871	93.6	0.00	1.71	25.15	26.86
10/28/2011	94.7	19.9	40.6	24.2	11.2	71.9	68.8	58.8	43.2	39.6	110.8	110.4	110.5	110.7	110.8	111.1	705	705	705	862	862	862	885	885	884	100.0	0.00	0.00	39.53	39.53
10/29/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	705	705	705	862	862	862	885	885	884	OL	0.00	0.00	0.00	0.00
10/30/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	705	705	705	862	862	862	885	885	884	OL	0.00	0.00	0.00	0.00
10/31/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	705	705	705	862	862	862	885	885	884	OL	0.00	0.00	0.00	0.00

Report Created: Tuesday, November 01, 2011

Total [ML]: 0.03 2.20 1086.04 1088.28

Water Volume [%]:

Untreated 0.0 %
Below Dose 0.1 %
To Dose 99.9 %

- Notes:
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No sample taken due to plant shutdown

UV Monitoring Report – Monthly



Water System Code: 252.00
Licence Number: PWS-09-412 RR

Report Period: November 2011

Date	UVR-D100A				UVR-D200A				UVR-D300A				UVR-D400A				UVR-D500A				UVR-D600A				Total				% Volume Treated To Dose		
	Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]						
	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total		Untreated	Below
11/1/2011	0.00	0.00	30.51	30.51	0.00	0.00	84.81	84.81	0.14	0.00	32.78	32.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	80.36	80.42	0.14	0.06	228.46	228.66	99.9		
11/2/2011	0.00	0.00	69.88	69.88	0.00	0.00	84.01	84.01	0.00	0.00	0.00	0.00	0.00	0.00	53.59	53.59	0.00	0.00	0.00	0.00	0.00	0.06	30.91	30.96	0.00	0.06	238.38	238.44	100.0		
11/3/2011	0.00	0.00	76.65	76.65	0.00	0.00	85.03	85.03	0.00	0.00	0.01	0.01	0.00	0.00	85.03	85.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	246.72	246.72	100.0	
11/4/2011	0.00	0.00	69.95	69.95	0.00	0.00	86.50	86.50	0.00	0.00	0.00	0.00	0.00	0.00	87.32	87.32	0.05	0.00	0.03	0.08	0.00	0.00	0.00	0.00	0.05	0.00	243.80	243.85	100.0		
11/5/2011	0.00	0.00	73.20	73.20	0.00	0.00	83.86	83.86	0.00	0.01	45.82	45.83	0.00	0.00	41.77	41.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	244.64	244.65	100.0		
11/6/2011	0.00	0.00	85.01	85.01	0.00	0.00	32.68	32.68	0.00	0.00	82.23	82.23	0.00	0.00	56.39	56.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	256.31	256.31	100.0		
11/7/2011	0.00	0.02	85.71	85.73	0.00	0.00	0.00	0.00	0.00	0.00	71.92	71.92	0.00	0.10	80.83	80.93	0.00	0.10	0.00	0.10	0.04	0.03	5.66	5.72	0.04	0.24	244.11	244.39	99.9		
11/8/2011	0.00	0.03	53.01	53.04	0.00	0.00	0.00	0.00	0.00	0.00	77.96	77.96	0.00	0.00	83.66	83.66	0.00	0.00	0.00	0.00	0.00	0.03	27.98	28.01	0.00	0.06	242.60	242.67	100.0		
11/9/2011	0.00	0.02	13.32	13.33	0.00	0.00	0.00	0.00	0.00	0.00	25.35	25.35	0.00	0.15	9.72	9.87	0.00	0.24	0.00	0.24	0.00	0.00	30.76	30.76	0.00	0.41	79.15	79.56	99.5		
11/10/2011	0.03	0.00	35.15	35.18	0.15	0.03	40.10	40.29	0.00	0.00	68.69	68.69	0.07	0.08	2.89	3.04	0.00	0.00	0.00	0.00	0.00	0.00	80.45	80.45	0.26	0.11	227.28	227.65	99.8		
11/11/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.03	85.03	0.00	0.00	64.45	64.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	80.55	80.57	0.00	0.03	230.03	230.06	100.0		
11/12/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.03	85.03	0.00	0.00	64.59	64.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.45	80.45	0.00	0.00	230.07	230.07	100.0		
11/13/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.03	85.03	0.00	0.00	64.70	64.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.35	80.35	0.00	0.00	230.08	230.08	100.0		
11/14/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	61.02	61.02	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.17	0.00	0.00	76.54	76.55	0.00	0.00	222.74	222.74	100.0		
11/15/2011	0.00	0.00	23.44	23.44	0.00	0.00	82.05	82.05	0.00	0.76	35.53	36.29	0.00	0.07	0.00	0.07	0.00	0.00	30.25	30.25	0.00	0.01	47.94	47.95	0.00	0.84	219.21	220.05	99.6		
11/16/2011	0.00	0.00	57.28	57.28	0.00	0.00	77.56	77.56	0.00	0.00	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	52.23	52.23	0.00	0.00	28.83	28.83	0.00	0.00	220.05	220.05	100.0		
11/17/2011	0.00	0.00	31.98	31.98	0.00	0.00	81.28	81.28	0.00	0.00	0.00	0.00	0.07	0.01	27.98	28.06	0.00	0.00	0.00	0.00	0.00	0.00	78.60	78.60	0.07	0.01	219.84	219.92	100.0		
11/18/2011	0.00	0.01	25.40	25.41	0.00	0.00	81.88	81.88	0.00	0.04	0.23	0.27	0.00	0.00	72.59	72.59	0.00	0.00	0.00	0.00	0.00	0.35	39.47	39.82	0.00	0.40	219.57	219.96	99.8		
11/19/2011	0.00	0.02	57.62	57.64	0.00	0.00	77.37	77.37	0.00	0.00	0.00	0.00	0.00	0.00	85.00	85.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	219.99	220.01	100.0		
11/20/2011	0.00	0.00	29.44	29.44	0.00	0.31	51.86	52.18	0.07	0.01	22.76	22.83	0.00	0.00	69.79	69.79	0.00	0.00	0.00	0.00	0.00	0.08	41.86	41.94	0.07	0.40	215.71	216.18	99.8		
11/21/2011	0.00	0.00	44.84	44.84	0.00	0.00	0.00	0.00	0.00	0.00	37.01	37.01	0.00	0.00	61.50	61.50	0.00	0.00	0.00	0.00	0.05	0.44	64.98	65.47	0.05	0.44	208.34	208.82	99.8		
11/22/2011	0.00	0.00	66.91	66.91	0.00	0.00	0.00	0.00	0.00	0.00	42.09	42.09	0.00	0.00	69.29	69.29	0.00	0.00	0.00	0.00	0.08	0.04	41.72	41.83	0.08	0.04	220.01	220.13	99.9		
11/23/2011	0.00	0.00	84.99	84.99	0.00	0.00	0.00	0.00	0.00	0.00	57.26	57.26	0.00	0.00	77.00	77.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	219.26	219.26	100.0		
11/24/2011	0.00	0.00	84.98	84.98	0.00	0.00	0.00	0.00	0.00	0.00	22.50	22.50	0.00	0.00	70.58	70.58	0.00	0.00	0.00	0.00	0.00	0.08	45.49	45.57	0.00	0.08	223.54	223.62	100.0		
11/25/2011	0.00	0.00	84.97	84.97	0.00	0.18	0.05	0.23	0.00	0.00	0.00	0.00	0.00	0.00	63.01	63.01	0.00	0.01	1.70	1.71	0.00	0.00	69.25	69.25	0.00	0.19	218.98	219.17	99.9		
11/26/2011	0.00	0.00	84.99	84.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64.81	64.81	0.00	0.00	0.00	0.00	0.00	0.00	72.97	72.97	0.00	0.00	222.76	222.76	100.0		
11/27/2011	0.00	0.00	84.94	84.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.21	63.21	0.00	0.00	0.00	0.00	0.00	0.00	71.01	71.01	0.00	0.00	219.16	219.16	100.0		
11/28/2011	0.00	0.00	84.96	84.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.53	62.53	0.00	0.00	0.00	0.00	0.00	0.00	72.40	72.40	0.00	0.00	219.89	219.89	100.0		
11/29/2011	0.00	0.00	84.38	84.38	0.00	0.35	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	60.94	60.94	0.00	0.26	43.08	43.34	0.00	0.02	31.59	31.61	0.00	0.63	219.99	220.63	99.7		
11/30/2011	0.00	0.00	74.43	74.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.41	63.41	0.00	0.00	72.17	72.17	0.00	0.00	0.00	0.00	0.00	0.00	210.01	210.01	100.0		

Total [ML]: 0.04 0.10 1597.93 1598.06 0.16 0.88 1289.14 1290.18 0.21 0.82 881.02 882.06 0.14 0.40 1412.83 1413.38 0.05 0.60 199.64 200.29 0.17 1.23 1280.10 1281.49 0.77 4.04 6660.66 6665.47

Report Created: Thursday, December 01, 2011

Water Volume [%]:

Untreated 0.0%
Below Dose 0.1%
To Dose 99.9%

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV\2011\11-2011

Notes: 1 UV Comparative Dose: 18.1 mJ/cm2

Submitted By (Print): D Sulymka

Original Signed By: D Sulymka

UV Monitoring Report – Monthly



Water System Code: 252.00
Licence Number: PWS-09-412 RR

Reactor: UVR-100A
Report Period: November 2011

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
								1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3					
11/1/2011	94.3	19.5	29.0	24.5	10.4	70.9	67.2	69.0	68.4	86.2	142.6	69.1	69.1	86.2	69.1	87.8	889	3020	4080	337	2816	2816	2682	2682	2681	100.0	0.00	0.00	30.51	30.51
11/2/2011	94.4	18.1	34.3	24.3	42.9	81.3	69.9	90.8	90.6	94.4	140.9	89.7	89.7	82.0	69.0	81.7	913	3044	4104	361	2840	2840	2696	2696	2695	100.0	0.00	0.00	69.88	69.88
11/3/2011	93.7	23.6	24.7	24.2	66.6	82.9	76.6	122.8	122.9	122.9	131.5	122.8	122.7	OL	OL	OL	937	3068	4128	385	2864	2864	2696	2696	2695	100.0	0.00	0.00	76.65	76.65
11/4/2011	94.4	22.3	25.6	24.4	54.5	100.2	69.9	74.4	78.9	74.5	121.1	74.3	74.3	71.8	71.3	71.4	961	3092	4152	409	2888	2888	2718	2718	2718	100.0	0.00	0.00	69.95	69.95
11/5/2011	NA	21.1	25.0	24.4	66.2	81.4	73.2	74.7	76.8	74.8	113.7	74.7	74.7	78.8	74.7	78.3	985	3116	4176	433	2912	2912	2742	2742	2742	100.0	0.00	0.00	73.20	73.20
11/6/2011	NA	19.5	26.0	24.3	59.8	107.8	81.6	83.0	83.2	83.1	105.6	83.0	83.0	95.9	83.2	95.5	1010	3141	4201	458	2937	2937	2767	2767	2767	100.0	0.00	0.00	85.01	85.01
11/7/2011	NA	17.6	46.0	24.2	27.3	112.6	85.8	87.1	87.4	87.1	100.2	87.1	86.1	95.1	87.3	91.0	1034	3165	4225	482	2961	2961	2791	2791	2791	100.0	0.00	0.02	85.71	85.73
11/8/2011	95.3	0.0	36.7	23.6	2.9	97.7	79.1	80.5	80.7	80.5	90.0	80.5	77.3	91.3	80.9	82.4	1050	3181	4241	498	2977	2977	2807	2807	2807	99.9	0.00	0.03	53.01	53.04
11/9/2011	NS	17.0	31.3	24.4	10.1	79.9	65.4	66.8	66.9	66.6	91.8	66.8	66.1	92.2	67.6	84.2	1055	3186	4246	503	2982	2982	2812	2812	2812	99.9	0.00	0.02	13.32	13.33
11/10/2011	92.3	0.0	38.8	24.4	9.0	90.8	63.9	65.3	66.4	65.2	99.3	65.2	65.0	97.8	66.2	89.5	1068	3200	4259	516	2995	2995	2826	2826	2825	99.9	0.03	0.00	35.15	35.18
11/11/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1068	3200	4259	516	2995	2995	2826	2826	2825	OL	0.00	0.00	0.00	0.00
11/12/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1068	3200	4259	516	2995	2995	2826	2826	2825	OL	0.00	0.00	0.00	0.00
11/13/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1068	3200	4259	516	2995	2995	2826	2826	2825	OL	0.00	0.00	0.00	0.00
11/14/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1068	3200	4259	516	2995	2995	2826	2826	2825	OL	0.00	0.00	0.00	0.00
11/15/2011	94.3	18.3	26.4	24.5	18.5	60.2	57.3	58.7	59.0	58.8	75.6	58.8	58.6	86.1	58.9	79.5	1078	3210	4269	526	3005	3005	2836	2836	2835	100.0	0.00	0.00	23.44	23.44
11/16/2011	94.7	20.0	25.8	24.5	44.7	60.7	57.3	58.9	59.4	58.8	80.7	58.9	58.8	91.2	59.1	80.5	1102	3234	4293	550	3029	3029	2860	2859	2859	100.0	0.00	0.00	57.28	57.28
11/17/2011	94.9	0.0	36.8	24.5	1.5	63.2	58.0	59.4	59.6	59.4	79.3	59.4	59.3	92.1	60.4	79.4	1115	3247	4307	563	3042	3043	2873	2873	2872	100.0	0.00	0.00	31.98	31.98
11/18/2011	95.2	17.8	26.0	24.5	11.1	58.9	57.0	58.6	59.1	58.5	80.3	58.7	58.3	91.9	58.8	77.8	1126	3258	4317	574	3053	3053	2884	2883	2883	100.0	0.00	0.01	25.40	25.41
11/19/2011	NA	17.8	25.6	23.8	54.6	66.8	57.6	59.2	62.7	59.2	83.5	59.2	57.1	87.7	59.6	71.1	1150	3282	4341	598	3077	3077	2908	2907	2907	100.0	0.00	0.02	57.62	57.64
11/20/2011	NA	18.5	37.3	24.1	2.2	97.7	59.5	58.6	86.3	58.9	133.0	66.0	62.6	91.3	66.5	75.2	1161	3293	4352	610	3089	3089	2920	2919	2919	100.0	0.00	0.00	29.44	29.44
11/21/2011	NA	19.3	25.0	24.0	83.3	108.2	98.6	98.4	113.0	133.4	175.2	99.8	102.7	117.5	99.4	128.6	1172	3304	4363	621	3100	3101	2931	2931	2930	100.0	0.00	0.00	44.84	44.84
11/22/2011	92.8	0.0	38.6	23.6	1.5	103.6	84.2	79.3	87.1	104.6	168.4	118.9	119.2	123.6	118.9	128.5	1178	3310	4370	641	3119	3120	2950	2950	2949	100.0	0.00	0.00	66.91	66.91
11/23/2011	92.2	19.5	24.7	24.1	80.0	90.0	85.0	OL	OL	OL	142.4	135.9	136.0	136.2	135.9	136.0	1178	3310	4370	665	3143	3144	2974	2974	2973	100.0	0.00	0.00	84.99	84.99
11/24/2011	93.1	19.5	24.7	24.1	77.3	91.5	85.0	OL	OL	OL	138.7	135.9	136.0	136.3	136.0	136.3	1178	3310	4370	689	3167	3168	2998	2998	2997	100.0	0.00	0.00	84.98	84.98
11/25/2011	94.2	20.0	25.9	24.1	48.9	104.6	85.0	OL	OL	OL	187.4	136.1	136.3	137.1	136.1	161.3	1178	3310	4370	713	3191	3192	3022	3022	3021	100.0	0.00	0.00	84.97	84.97
11/26/2011	NA	20.1	25.3	24.1	81.0	88.6	85.0	OL	OL	OL	206.5	135.9	136.1	136.4	135.9	156.8	1178	3310	4370	737	3215	3216	3046	3046	3045	100.0	0.00	0.00	84.99	84.99
11/27/2011	NA	19.8	25.5	24.1	40.9	104.1	84.9	87.4	85.3	153.7	202.0	132.5	133.2	136.2	132.5	149.5	1180	3312	4372	761	3239	3240	3070	3070	3069	100.0	0.00	0.00	84.94	84.94
11/28/2011	NA	19.6	26.0	24.2	36.6	95.8	84.9	87.0	86.9	157.4	205.9	112.8	115.8	133.4	113.0	145.6	1192	3323	4383	785	3263	3264	3094	3094	3093	100.0	0.00	0.00	84.96	84.96
11/29/2011	94.3	19.3	69.3	24.2	27.5	101.1	84.9	86.7	85.4	155.0	200.9	126.3	127.4	135.7	126.3	142.4	1196	3328	4388	808	3287	3288	3118	3118	3117	100.0	0.00	0.00	84.38	84.38
11/30/2011	NS	19.6	48.4	24.2	10.4	89.3	81.5	122.4	122.6	148.8	202.3	122.9	123.3	127.1	85.7	138.1	1218	3350	4410	830	3309	3310	3122	3121	3121	100.0	0.00	0.00	74.43	74.43

Report Created: Thursday, December 01, 2011

Total [ML]: 0.04 0.10 1597.93 1598.06

Water Volume [%]:

Untreated 0.0 %
Below Dose 0.0 %
To Dose 100.0 %

- Notes:
- UV Comparative Dose: 18.1 mJ/cm2
 - UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 - NR - No Result
 - NA - Not Analyzed
 - OL - Off Line
 - NS - No sample taken due to plant shutdown

D.Sulymka

D.Sulymka

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV\2011\11-2011

Water System Code: 252.00
Licence Number: PWS-09-412 RR

Reactor: RUV-200A
Report Period: November 2011

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
11/1/2011	94.3	21.6	24.8	24.3	65.7	88.0	84.8	131.6	101.0	86.2	259.0	86.3	86.3	107.6	86.3	52.2	2385	2384	2384	2574	640	2574	2396	2396	2396	100.0	0.00	0.00	84.81	84.81
11/2/2011	94.4	21.1	24.9	24.3	59.4	88.1	84.0	142.7	101.0	85.4	252.7	85.5	85.5	104.5	85.5	49.2	2409	2408	2408	2598	664	2598	2420	2420	2420	100.0	0.00	0.00	84.01	84.01
11/3/2011	93.7	21.4	24.8	24.3	81.7	88.7	85.0	146.6	99.3	86.3	233.5	86.4	86.4	95.9	86.5	41.4	2433	2432	2432	2622	688	2622	2444	2444	2444	100.0	0.00	0.00	85.03	85.03
11/4/2011	94.4	20.5	24.9	24.3	68.6	91.7	86.5	151.5	96.1	87.8	218.2	87.8	87.8	90.1	87.9	37.4	2457	2456	2456	2646	712	2646	2468	2468	2468	100.0	0.00	0.00	86.50	86.50
11/5/2011	NA	20.6	25.0	24.0	71.9	90.7	83.8	158.3	94.4	83.8	203.4	85.2	85.2	86.6	85.3	33.4	2481	2480	2480	2670	736	2670	2492	2492	2492	100.0	0.00	0.00	83.86	83.86
11/6/2011	NA	18.8	30.4	22.9	15.3	97.4	85.7	162.8	91.6	80.3	192.6	87.0	86.9	87.9	87.5	30.3	2490	2490	2489	2679	745	2680	2501	2501	2501	100.0	0.00	0.00	32.68	32.68
11/7/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2490	2490	2489	2679	745	2680	2501	2501	2501	OL	0.00	0.00	0.00	0.00
11/8/2011	95.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2490	2490	2489	2679	745	2680	2501	2501	2501	OL	0.00	0.00	0.00	0.00
11/9/2011	NS	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2490	2490	2489	2679	745	2680	2501	2501	2501	OL	0.00	0.00	0.00	0.00
11/10/2011	92.3	0.0	52.8	24.1	1.9	94.3	84.0	232.3	144.6	134.9	422.1	133.0	138.9	67.3	95.0	117.5	2501	2501	2501	2691	757	2691	2502	2502	2502	99.5	0.15	0.03	40.10	40.29
11/11/2011	NA	21.8	24.5	24.1	82.3	87.9	85.0	227.2	136.2	136.1	427.3	136.1	136.1	OL	OL	OL	2525	2525	2525	2715	781	2715	2502	2502	2502	100.0	0.00	0.00	85.03	85.03
11/12/2011	NA	21.9	24.5	24.1	82.5	87.4	85.0	236.4	136.3	136.2	427.3	136.1	136.1	OL	OL	OL	2549	2549	2549	2739	805	2739	2502	2502	2502	100.0	0.00	0.00	85.03	85.03
11/13/2011	NA	21.7	24.4	24.1	82.4	87.7	85.0	233.4	136.2	136.1	427.3	136.2	136.1	OL	OL	OL	2573	2573	2573	2763	829	2763	2502	2502	2502	100.0	0.00	0.00	85.03	85.03
11/14/2011	NA	21.8	24.5	24.1	80.6	87.8	85.0	228.9	136.2	136.1	358.2	136.2	136.1	OL	OL	OL	2597	2597	2597	2787	853	2787	2502	2502	2502	100.0	0.00	0.00	85.01	85.01
11/15/2011	94.3	21.9	24.6	24.1	63.3	87.6	82.0	222.3	131.9	131.5	348.3	131.6	131.4	OL	OL	OL	2621	2621	2621	2811	877	2811	2502	2502	2502	100.0	0.00	0.00	82.05	82.05
11/16/2011	94.7	21.8	24.7	24.1	64.1	81.9	77.5	214.2	125.5	124.4	313.3	124.5	124.4	OL	OL	OL	2645	2645	2645	2835	901	2835	2502	2502	2502	100.0	0.00	0.00	77.56	77.56
11/17/2011	94.9	21.8	24.6	24.1	58.6	92.0	81.3	208.9	130.4	130.1	292.6	130.5	130.2	OL	OL	OL	2669	2669	2669	2859	925	2859	2502	2502	2502	100.0	0.00	0.00	81.28	81.28
11/18/2011	95.2	21.7	24.9	24.1	65.9	105.2	81.9	200.2	131.3	131.1	272.2	131.4	131.1	OL	OL	OL	2693	2693	2693	2883	949	2883	2502	2502	2502	100.0	0.00	0.00	81.88	81.88
11/19/2011	NA	21.6	24.6	24.1	67.8	81.0	77.4	187.1	124.2	123.9	249.2	124.3	123.9	OL	OL	OL	2717	2717	2717	2907	973	2907	2502	2502	2502	100.0	0.00	0.00	77.37	77.37
11/20/2011	NA	14.2	29.2	23.9	1.7	96.3	80.5	174.4	128.7	127.1	319.5	130.4	128.3	OL	OL	OL	2733	2733	2732	2923	988	2923	2502	2502	2502	99.4	0.00	0.31	51.86	52.18
11/21/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2733	2733	2732	2923	988	2923	2502	2502	2502	OL	0.00	0.00	0.00	0.00
11/22/2011	92.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2733	2733	2732	2923	988	2923	2502	2502	2502	OL	0.00	0.00	0.00	0.00
11/23/2011	92.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2733	2733	2732	2923	988	2923	2502	2502	2502	OL	0.00	0.00	0.00	0.00
11/24/2011	93.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2733	2733	2732	2923	988	2923	2502	2502	2502	OL	0.00	0.00	0.00	0.00
11/25/2011	94.2	12.4	35.3	21.0	9.1	85.2	44.6	129.0	95.2	57.8	215.3	139.0	81.0	OL	OL	OL	2733	2733	2733	2923	988	2923	2502	2502	2502	21.4	0.00	0.18	0.05	0.23
11/26/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2733	2733	2733	2923	988	2923	2502	2502	2502	OL	0.00	0.00	0.00	0.00
11/27/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2733	2733	2733	2923	988	2923	2502	2502	2502	OL	0.00	0.00	0.00	0.00
11/28/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2733	2733	2733	2923	988	2923	2502	2502	2502	OL	0.00	0.00	0.00	0.00
11/29/2011	94.3	0.0	32.7	13.2	2.5	95.7	68.6	124.2	100.7	70.2	203.8	131.5	90.0	OL	OL	OL	2734	2733	2733	2923	989	2923	2502	2502	2502	1.0	0.00	0.35	0.00	0.35
11/30/2011	NS	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2734	2733	2733	2923	989	2923	2502	2502	2502	OL	0.00	0.00	0.00	0.00

Report Created: Thursday, December 01, 2011

Total [ML]: 0.16 0.88 1289.14 1290.18

Water Volume [%]:

Untreated 0.0 %
Below Dose 0.0 %
To Dose 100.0 %

- Notes:
- UV Comparative Dose: 18.1 mJ/cm2
 - UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 - NR - No Result
 - NA - Not Analyzed
 - OL - Off Line
 - NS - No sample taken due to plant shutdown

D.Sulymka

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UV Monitoring Report – Monthly



Water System Code: 252.00
Licence Number: PWS-09-412 RR

Reactor: RUV-300A
Report Period: November 2011

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
11/1/2011	94.3	0.0	28.1	24.4	21.5	62.4	60.2	121.9	96.9	106.9	152.7	61.7	64.3	101.3	70.2	82.5	1391	1391	1392	1411	1412	1411	1379	1379	1379	99.6	0.14	0.00	32.78	32.92
11/2/2011	94.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1391	1391	1392	1411	1412	1411	1379	1379	1379	OL	0.00	0.00	0.00	0.00
11/3/2011	93.7	24.7	25.9	25.3	9.1	18.0	13.5	98.8	76.1	105.9	102.0	35.7	89.6	100.9	85.9	0.8	1391	1391	1392	1411	1412	1412	1379	1379	1379	97.9	0.00	0.00	0.00	0.01
11/4/2011	94.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1391	1391	1392	1411	1412	1412	1379	1379	1379	OL	0.00	0.00	0.00	0.00
11/5/2011	NA	16.9	25.0	23.9	17.3	98.2	88.9	104.2	90.1	90.8	135.6	88.2	90.6	108.5	90.2	48.1	1404	1404	1404	1423	1424	1424	1391	1391	1391	100.0	0.00	0.01	45.82	45.83
11/6/2011	NA	21.1	31.0	24.3	33.3	90.0	78.9	104.7	81.5	80.9	136.5	80.4	80.3	109.6	80.6	80.8	1429	1429	1429	1448	1449	1449	1416	1416	1416	100.0	0.00	0.00	82.23	82.23
11/7/2011	NA	21.2	53.0	24.4	8.2	101.3	71.9	107.2	88.2	86.5	135.5	75.1	75.1	111.6	86.0	87.2	1453	1453	1453	1465	1466	1466	1440	1440	1440	100.0	0.00	0.00	71.92	71.92
11/8/2011	95.3	20.5	27.5	24.2	47.3	120.4	77.9	107.8	96.6	95.5	120.7	78.2	77.8	109.5	95.4	95.8	1477	1477	1477	1481	1482	1482	1464	1464	1464	100.0	0.00	0.00	77.96	77.96
11/9/2011	NS	18.1	34.0	24.5	9.5	78.3	54.4	99.2	76.3	68.1	122.6	60.3	66.0	99.1	68.4	41.5	1488	1488	1489	1489	1489	1489	1476	1476	1475	100.0	0.00	0.00	25.35	25.35
11/10/2011	92.3	21.2	28.1	24.4	29.8	103.8	68.7	105.3	89.9	86.8	137.9	76.8	77.1	103.7	86.1	87.4	1512	1512	1513	1502	1503	1503	1500	1500	1499	100.0	0.00	0.00	68.69	68.69
11/11/2011	NA	21.7	25.5	24.2	62.1	66.9	64.4	103.7	103.6	103.6	OL	OL	OL	103.6	103.6	103.6	1536	1536	1537	1502	1503	1503	1524	1524	1523	100.0	0.00	0.00	64.45	64.45
11/12/2011	NA	21.6	25.5	24.2	62.4	66.8	64.6	103.9	103.8	103.7	OL	OL	OL	103.8	103.8	103.8	1560	1560	1561	1502	1503	1503	1548	1548	1547	100.0	0.00	0.00	64.59	64.59
11/13/2011	NA	21.4	24.7	24.2	62.3	66.7	64.7	104.1	104.0	103.9	OL	OL	OL	104.0	104.0	104.0	1584	1584	1585	1502	1503	1503	1572	1572	1571	100.0	0.00	0.00	64.70	64.70
11/14/2011	NA	21.3	25.0	24.2	48.3	66.6	61.0	98.3	98.2	98.1	OL	OL	OL	98.3	98.2	98.2	1608	1608	1609	1502	1503	1503	1596	1596	1595	100.0	0.00	0.00	61.02	61.02
11/15/2011	94.3	12.3	31.0	23.9	4.0	61.9	58.9	96.2	94.3	93.0	39.7	27.4	50.1	95.3	93.7	58.7	1623	1623	1623	1503	1504	1504	1611	1610	1610	97.9	0.00	0.76	35.53	36.29
11/16/2011	94.7	21.0	29.6	24.3	23.8	49.2	46.1	92.4	74.3	72.9	OL	OL	OL	86.4	74.5	7.3	1625	1625	1626	1503	1504	1504	1613	1613	1612	100.0	0.00	0.00	4.15	4.15
11/17/2011	94.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1625	1625	1626	1503	1504	1504	1613	1613	1612	OL	0.00	0.00	0.00	0.00
11/18/2011	95.2	15.9	34.8	22.9	11.9	72.3	51.4	97.2	72.6	125.8	42.2	94.9	59.5	89.0	72.5	1.5	1625	1625	1626	1503	1504	1504	1613	1613	1613	84.5	0.00	0.04	0.23	0.27
11/19/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	0.1	1625	1625	1626	1503	1504	1504	1613	1613	1613	OL	0.00	0.00	0.00	0.00
11/20/2011	NA	0.0	47.3	24.0	5.2	64.3	50.0	94.5	85.8	119.3	29.4	69.5	45.0	94.0	83.0	39.6	1636	1636	1637	1504	1505	1504	1624	1624	1624	99.7	0.07	0.01	22.76	22.83
11/21/2011	NA	22.0	27.6	24.3	4.6	64.7	58.0	95.9	93.8	98.7	OL	OL	OL	94.6	93.2	61.8	1653	1652	1653	1504	1505	1504	1640	1640	1640	100.0	0.00	0.00	37.01	37.01
11/22/2011	92.8	18.4	39.8	24.3	20.1	89.2	56.6	81.3	65.7	86.7	91.0	90.2	86.4	90.6	86.7	64.9	1655	1655	1656	1522	1523	1522	1658	1658	1658	100.0	0.00	0.00	42.09	42.09
11/23/2011	92.2	20.8	26.0	24.5	51.0	63.0	57.3	76.9	59.0	87.1	90.0	83.0	58.8	74.5	59.0	59.0	1679	1679	1680	1546	1547	1546	1682	1682	1682	100.0	0.00	0.00	57.26	57.26
11/24/2011	93.1	21.2	31.9	24.5	20.3	62.7	59.2	75.0	60.7	92.4	88.9	81.8	60.7	73.9	61.2	23.5	1688	1688	1689	1555	1556	1555	1691	1691	1691	100.0	0.00	0.00	22.50	22.50
11/25/2011	94.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1688	1688	1689	1555	1556	1555	1691	1691	1691	OL	0.00	0.00	0.00	0.00
11/26/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1688	1688	1689	1555	1556	1555	1691	1691	1691	OL	0.00	0.00	0.00	0.00
11/27/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1688	1688	1689	1555	1556	1555	1691	1691	1691	OL	0.00	0.00	0.00	0.00
11/28/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1688	1688	1689	1555	1556	1555	1691	1691	1691	OL	0.00	0.00	0.00	0.00
11/29/2011	94.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1688	1688	1689	1555	1556	1555	1691	1691	1691	OL	0.00	0.00	0.00	0.00
11/30/2011	NS	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1688	1688	1689	1555	1556	1555	1691	1691	1691	OL	0.00	0.00	0.00	0.00

Report Created: Thursday, December 01, 2011

Total [ML]: 0.21 0.82 881.02 882.06

Water Volume [%]:

Untreated 0.0 %
Below Dose 0.1 %
To Dose 99.9 %

- Notes:
- UV Comparative Dose: 18.1 mJ/cm2
 - UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 - NR - No Result
 - NA - Not Analyzed
 - OL - Off Line
 - NS - No sample taken due to plant shutdown

D.Sulymka

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UV Monitoring Report – Monthly



Water System Code: 252.00
Licence Number: PWS-09-412 RR

Reactor: UVR-500A
Report Period: November 2011

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
11/1/2011	94.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2813	3274	512	2514	940	4199	2609	4649	1145	OL	0.00	0.00	0.00	0.00	
11/2/2011	94.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2813	3274	512	2514	940	4199	2609	4649	1145	OL	0.00	0.00	0.00	0.00	
11/3/2011	93.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2813	3274	512	2514	940	4199	2609	4649	1145	OL	0.00	0.00	0.00	0.00	
11/4/2011	94.4	0.0	37.0	16.1	13.8	68.7	42.5	130.0	118.2	151.4	329.7	2.6	206.6	165.5	142.0	146.1	2813	3274	512	2514	940	4199	2610	4649	1145	34.6	0.05	0.00	0.03	0.08
11/5/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2813	3274	512	2514	940	4199	2610	4649	1145	OL	0.00	0.00	0.00	0.00	
11/6/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2813	3274	512	2514	940	4199	2610	4649	1145	OL	0.00	0.00	0.00	0.00	
11/7/2011	NA	1.6	4.4	2.4	26.1	71.3	55.1	125.0	104.8	149.9	288.5	3.4	189.2	189.4	130.2	147.8	2813	3274	513	2514	940	4199	2610	4649	1145	0.0	0.00	0.10	0.00	0.10
11/8/2011	95.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2813	3274	513	2514	940	4199	2610	4649	1145	OL	0.00	0.00	0.00	0.00	
11/9/2011	NS	2.4	4.2	3.4	7.3	42.4	30.1	111.6	85.6	130.8	265.6	3.3	191.3	176.7	113.2	146.3	2813	3274	513	2514	940	4200	2610	4650	1145	0.0	0.00	0.24	0.00	0.24
11/10/2011	92.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2813	3274	513	2514	940	4200	2610	4650	1145	OL	0.00	0.00	0.00	0.00	
11/11/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2813	3274	513	2514	940	4200	2610	4650	1145	OL	0.00	0.00	0.00	0.00	
11/12/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2813	3274	513	2514	940	4200	2610	4650	1145	OL	0.00	0.00	0.00	0.00	
11/13/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2813	3274	513	2514	940	4200	2610	4650	1145	OL	0.00	0.00	0.00	0.00	
11/14/2011	NA	18.8	33.5	24.8	15.2	74.8	41.1	124.5	108.6	187.1	413.9	35.7	233.4	189.7	125.1	148.1	2814	3274	513	2515	940	4200	2610	4650	1145	99.7	0.00	0.00	0.17	0.17
11/15/2011	94.3	18.2	53.4	24.4	3.3	84.8	78.8	133.8	129.3	180.7	148.5	34.7	199.1	233.0	131.9	144.7	2823	3284	522	2515	941	4200	2619	4659	1155	100.0	0.00	0.00	30.25	30.25
11/16/2011	94.7	19.3	31.2	23.7	10.5	84.3	79.8	140.6	127.9	124.5	OL	OL	OL	237.6	127.9	153.0	2839	3299	538	2515	941	4200	2635	4675	1170	100.0	0.00	0.00	52.23	52.23
11/17/2011	94.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2839	3299	538	2515	941	4200	2635	4675	1170	OL	0.00	0.00	0.00	0.00	
11/18/2011	95.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2839	3299	538	2515	941	4200	2635	4675	1170	OL	0.00	0.00	0.00	0.00	
11/19/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2839	3299	538	2515	941	4200	2635	4675	1170	OL	0.00	0.00	0.00	0.00	
11/20/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2839	3299	538	2515	941	4200	2635	4675	1170	OL	0.00	0.00	0.00	0.00	
11/21/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2839	3299	538	2515	941	4200	2635	4675	1170	OL	0.00	0.00	0.00	0.00	
11/22/2011	92.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2839	3299	538	2515	941	4200	2635	4675	1170	OL	0.00	0.00	0.00	0.00	
11/23/2011	92.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2839	3299	538	2515	941	4200	2635	4675	1170	OL	0.00	0.00	0.00	0.00	
11/24/2011	93.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2839	3299	538	2515	941	4200	2635	4675	1170	OL	0.00	0.00	0.00	0.00	
11/25/2011	94.2	0.0	39.1	23.7	0.8	73.9	47.9	134.1	89.6	61.1	387.5	43.0	69.2	192.9	101.2	132.4	2840	3300	539	2516	942	4201	2636	4676	1171	99.4	0.00	0.01	1.70	1.71
11/26/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2840	3300	539	2516	942	4201	2636	4676	1171	OL	0.00	0.00	0.00	0.00	
11/27/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2840	3300	539	2516	942	4201	2636	4676	1171	OL	0.00	0.00	0.00	0.00	
11/28/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2840	3300	539	2516	942	4201	2636	4676	1171	OL	0.00	0.00	0.00	0.00	
11/29/2011	94.3	9.7	68.8	24.5	3.6	76.5	71.6	142.6	92.5	120.3	161.3	125.2	92.2	264.1	87.4	142.5	2854	3315	554	2531	942	4216	2646	4685	1181	99.4	0.00	0.26	43.08	43.34
11/30/2011	NS	20.9	26.8	24.1	45.9	85.8	72.1	138.1	116.9	139.6	307.2	119.3	127.8	OL	OL	OL	2878	3339	578	2555	38	4240	2646	4685	1181	100.0	0.00	0.00	72.17	72.17

Report Created: Thursday, December 01, 2011

Total [ML]: 0.05 0.60 199.64 200.29

Water Volume [%]:

Untreated 0.0 %
Below Dose 0.1 %
To Dose 99.9 %

- Notes:
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No sample taken due to plant shutdown

D.Sulymka

D.Sulymka

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV\2011\11-2011



Water System Code: 252.00
Licence Number: PWS-09-412 RR

Reactor: UVR-600A
Report Period: November 2011

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
11/1/2011	94.3	17.5	26.2	24.0	55.7	87.2	80.4	121.9	85.8	81.8	108.2	96.6	113.1	79.9	107.8	113.4	1111	1111	1111	1111	1111	1111	1099	1099	1099	99.9	0.00	0.06	80.36	80.42
11/2/2011	94.4	17.0	34.4	23.1	35.8	87.1	84.9	115.4	86.5	86.2	105.3	93.8	109.6	80.3	104.8	109.1	1120	1120	1119	1119	1120	1120	1108	1108	1108	99.8	0.00	0.06	30.91	30.96
11/3/2011	93.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1120	1120	1119	1119	1120	1120	1108	1108	1108	OL	0.00	0.00	0.00	0.00
11/4/2011	94.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1120	1120	1119	1119	1120	1120	1108	1108	1108	OL	0.00	0.00	0.00	0.00
11/5/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1120	1120	1119	1119	1120	1120	1108	1108	1108	OL	0.00	0.00	0.00	0.00
11/6/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1120	1120	1119	1119	1120	1120	1108	1108	1108	OL	0.00	0.00	0.00	0.00
11/7/2011	NA	0.0	38.4	24.5	2.8	113.6	71.2	148.9	122.8	120.5	130.3	113.0	134.8	70.3	127.9	156.5	1122	1122	1121	1121	1122	1122	1110	1110	1110	98.8	0.04	0.03	5.66	5.72
11/8/2011	95.3	16.8	26.6	24.3	50.3	108.4	84.9	137.4	97.2	93.4	113.7	97.6	110.0	85.3	111.1	114.7	1130	1130	1129	1129	1130	1130	1118	1118	1118	99.9	0.00	0.03	27.98	28.01
11/9/2011	NS	18.8	39.3	24.4	4.5	91.8	76.9	132.3	83.1	85.8	106.5	88.2	97.9	77.8	104.6	111.7	1139	1139	1139	1139	1140	1140	1128	1127	1127	100.0	0.00	0.00	30.76	30.76
11/10/2011	92.3	18.3	27.9	24.4	49.9	113.3	80.4	180.0	106.6	103.6	126.1	107.9	144.3	81.6	122.1	145.3	1163	1163	1163	1163	1164	1164	1152	1151	1151	100.0	0.00	0.00	80.45	80.45
11/11/2011	NA	18.0	26.7	24.4	77.5	83.4	80.6	157.8	88.0	90.0	119.8	100.1	131.9	81.6	112.9	127.7	1187	1187	1187	1187	1188	1188	1176	1175	1175	100.0	0.00	0.03	80.55	80.57
11/12/2011	NA	18.1	25.0	24.3	77.7	82.9	80.4	142.1	81.9	81.8	114.3	93.5	114.3	81.5	105.8	115.5	1211	1211	1211	1211	1212	1212	1200	1199	1199	100.0	0.00	0.00	80.45	80.45
11/13/2011	NA	18.4	24.9	24.3	78.2	82.5	80.3	143.2	81.8	81.7	113.5	91.2	103.4	81.3	103.8	114.3	1235	1235	1235	1235	1236	1236	1224	1223	1223	100.0	0.00	0.00	80.35	80.35
11/14/2011	NA	17.2	36.2	24.4	16.1	82.4	76.6	149.6	78.7	78.0	113.8	90.5	96.0	77.7	103.8	113.4	1259	1259	1259	1259	1260	1260	1248	1247	1247	100.0	0.00	0.00	76.54	76.55
11/15/2011	94.3	16.3	39.7	24.3	2.2	84.8	74.0	154.9	79.0	75.5	114.9	91.2	92.8	75.0	104.6	115.3	1275	1275	1275	1275	1275	1275	1263	1263	1263	100.0	0.00	0.01	47.94	47.95
11/16/2011	94.7	0.0	29.9	24.3	3.3	85.4	82.5	143.5	84.8	83.9	116.5	92.5	91.5	83.5	105.8	117.1	1283	1283	1283	1283	1284	1284	1272	1271	1271	100.0	0.00	0.00	28.83	28.83
11/17/2011	94.9	18.7	25.6	24.4	58.9	85.3	78.6	157.5	82.4	79.9	115.7	93.4	93.3	79.9	105.4	114.3	1307	1307	1307	1307	1308	1308	1296	1295	1295	100.0	0.00	0.00	78.60	78.60
11/18/2011	95.2	0.3	32.6	24.2	9.2	75.5	72.5	158.4	78.7	74.0	112.5	91.3	87.6	72.8	102.3	106.2	1321	1320	1320	1320	1321	1321	1309	1309	1309	99.1	0.00	0.35	39.47	39.82
11/19/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1321	1320	1320	1320	1321	1321	1309	1309	1309	OL	0.00	0.00	0.00	0.00
11/20/2011	NA	0.2	27.2	24.0	10.9	97.3	75.4	137.9	121.2	119.9	124.6	120.8	120.4	0.8	7.0	111.5	1334	1334	1334	1334	1334	1334	1309	1309	1309	99.8	0.00	0.08	41.86	41.94
11/21/2011	NA	0.0	24.8	23.1	3.3	88.5	76.8	137.0	124.2	116.0	130.0	123.2	131.2	0.4	94.6	117.9	1355	1355	1355	1355	1356	1356	1309	1309	1309	99.3	0.05	0.44	64.98	65.47
11/22/2011	92.8	0.0	30.5	23.6	8.4	110.7	77.9	126.0	123.8	119.8	124.4	123.6	123.4	29.4	61.7	57.6	1368	1368	1368	1368	1369	1368	1309	1309	1309	99.7	0.08	0.04	41.72	41.83
11/23/2011	92.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1368	1368	1368	1368	1369	1368	1309	1309	1309	OL	0.00	0.00	0.00	0.00
11/24/2011	93.1	0.4	26.9	24.2	20.9	76.2	73.1	93.9	75.1	74.3	85.0	76.2	74.9	110.0	100.4	75.3	1383	1383	1383	1383	1384	1383	16	1324	1324	99.8	0.00	0.08	45.49	45.57
11/25/2011	94.2	19.0	48.0	24.1	10.5	77.2	70.6	113.4	109.5	109.2	97.2	103.6	103.7	111.2	111.0	113.4	1397	1397	1396	1395	1396	1396	39	1348	1348	100.0	0.00	0.00	69.25	69.25
11/26/2011	NA	20.0	24.7	24.1	67.9	76.9	73.0	122.8	116.8	116.9	OL	OL	OL	116.9	116.9	148.2	1421	1421	1420	1395	1396	1396	63	1372	1372	100.0	0.00	0.00	72.97	72.97
11/27/2011	NA	19.8	29.2	24.2	38.0	100.3	71.0	154.9	113.9	113.7	OL	OL	OL	113.8	113.9	144.3	1445	1445	1444	1395	1396	1396	87	1396	1396	100.0	0.00	0.00	71.01	71.01
11/28/2011	NA	19.6	26.2	24.1	40.7	78.8	72.4	147.2	116.1	116.0	OL	OL	OL	116.2	116.2	141.9	1469	1469	1468	1395	1396	1396	111	1420	1420	100.0	0.00	0.00	72.40	72.40
11/29/2011	94.3	13.9	47.0	24.1	14.2	88.0	73.7	146.2	117.7	117.3	49.0	45.0	44.1	119.7	117.8	142.3	1479	1479	1479	1395	1396	1396	122	1430	1430	99.9	0.00	0.02	31.59	31.61
11/30/2011	NS	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1479	1479	1479	1395	1396	1396	122	1430	1430	OL	0.00	0.00	0.00	0.00

Report Created: Thursday, December 01, 2011

Total [ML]: 0.17 1.23 1280.10 1281.49

Water Volume [%]:

Untreated 0.0 %
Below Dose 0.1 %
To Dose 99.9 %

- Notes:
- UV Comparative Dose: 18.1 mJ/cm2
 - UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 - NR - No Result
 - NA - Not Analyzed
 - OL - Off Line
 - NS - No sample taken due to plant shutdown

D.Sulymka

D.Sulymka

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UV Monitoring Report – Monthly



Water System Code: 252.00
Licence Number: PWS-09-412 RR

Report Period: December 2011

Date	UVR-D100A				UVR-D200A				UVR-D300A				UVR-D400A				UVR-D500A				UVR-D600A				Total				% Volume Treated To Dose		
	Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]						
	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total		Untreated	Below
12/1/2011	0.00	0.00	84.91	84.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69.75	69.75	0.00	0.10	79.72	79.82	0.00	0.00	0.00	0.00	0.00	0.10	234.38	234.48	100.0		
12/2/2011	0.00	0.00	84.87	84.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69.78	69.78	0.00	0.00	80.22	80.22	0.00	0.00	0.00	0.00	0.00	0.00	234.87	234.87	100.0		
12/3/2011	0.00	0.00	84.89	84.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69.96	69.96	0.00	0.00	80.50	80.50	0.00	0.00	0.00	0.00	0.00	0.00	235.35	235.35	100.0		
12/4/2011	0.00	0.00	84.90	84.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69.04	69.04	0.00	0.00	78.66	78.66	0.00	0.00	0.00	0.00	0.00	0.00	232.60	232.60	100.0		
12/5/2011	0.00	0.00	84.93	84.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64.71	64.71	0.00	0.00	73.66	73.66	0.00	0.00	0.00	0.00	0.00	0.00	223.31	223.31	100.0		
12/6/2011	0.00	0.00	84.55	84.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64.53	64.53	0.00	0.00	73.20	73.20	0.00	0.00	0.00	0.00	0.00	0.00	222.27	222.27	100.0		
12/7/2011	0.00	0.00	82.99	82.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	9.74	9.77	0.00	0.00	37.21	37.21	0.00	0.00	66.96	66.96	0.00	0.00	21.97	21.97	0.00	0.03	218.88	218.91	100.0
12/8/2011	0.00	0.00	84.98	84.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	65.58	65.58	0.00	0.00	31.16	31.16	0.00	0.00	45.59	45.59	0.00	0.00	227.32	227.32	100.0		
12/9/2011	0.00	0.00	84.87	84.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	67.47	67.47	0.00	0.11	55.11	55.22	0.00	0.00	22.29	22.29	0.00	0.11	229.74	229.85	100.0		
12/10/2011	0.00	0.00	84.87	84.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.04	3.04	0.00	0.00	63.82	63.82	0.00	0.00	76.58	76.58	0.00	0.00	0.00	0.00	0.00	0.00	228.32	228.32	100.0
12/11/2011	0.00	0.00	84.92	84.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.77	63.77	0.00	0.00	0.00	0.00	0.00	0.00	78.25	78.25	0.00	0.00	0.00	0.00	0.00	0.00	226.94	226.94	100.0
12/12/2011	0.00	0.41	61.99	62.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.18	63.18	0.00	0.02	18.08	18.10	0.00	0.00	80.10	80.10	0.00	0.00	4.17	4.17	0.00	0.43	227.53	227.96	99.8
12/13/2011	0.00	0.00	0.00	0.00	0.00	0.00	34.91	34.91	0.00	0.00	77.89	77.89	0.00	0.00	0.00	0.00	0.00	0.00	74.91	74.91	0.00	0.00	50.19	50.19	0.00	0.00	237.90	237.90	100.0		
12/14/2011	0.00	0.00	0.00	0.00	0.00	0.00	75.91	75.91	0.00	0.00	51.58	51.58	0.00	0.00	0.00	0.00	0.00	0.39	53.43	53.82	0.00	0.00	0.00	0.00	0.00	0.39	180.92	181.31	99.8		
12/15/2011	0.00	0.00	0.00	0.00	0.00	0.00	81.49	81.49	0.00	0.00	66.91	66.91	0.00	0.00	48.60	48.60	0.00	0.00	33.04	33.04	0.00	0.00	0.00	0.00	0.00	0.00	230.04	230.04	100.0		
12/16/2011	0.00	0.00	0.00	0.00	0.00	0.00	80.83	80.83	0.00	0.00	67.85	67.85	0.00	0.00	43.92	43.92	0.00	0.00	0.00	0.00	0.00	0.00	37.38	37.38	0.00	0.00	229.97	229.97	100.0		
12/17/2011	0.00	0.00	0.00	0.00	0.00	0.00	77.20	77.20	0.00	0.00	75.23	75.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.50	77.50	0.00	0.00	0.00	0.00	229.93	229.93	100.0		
12/18/2011	0.00	0.00	0.00	0.00	0.00	0.00	75.59	75.59	0.00	0.00	74.67	74.67	0.00	0.00	0.00	0.00	0.00	0.16	54.35	54.51	0.00	0.00	21.86	21.86	0.00	0.16	226.48	226.64	99.9		
12/19/2011	0.00	0.00	0.00	0.00	0.00	0.00	76.05	76.05	0.00	0.00	36.04	36.04	0.00	0.00	37.27	37.27	0.00	0.00	74.09	74.09	0.00	0.00	0.00	0.00	0.00	0.00	223.45	223.45	100.0		
12/20/2011	0.00	0.00	0.00	0.00	0.00	0.00	75.74	75.74	0.00	0.00	0.00	0.00	0.00	0.00	70.64	70.64	0.00	0.00	34.29	34.29	0.00	0.00	36.46	36.46	0.00	0.00	217.13	217.13	100.0		
12/21/2011	0.00	0.00	0.00	0.00	0.00	0.00	82.53	82.53	0.00	0.00	34.05	34.05	0.00	0.00	25.21	25.21	0.00	0.00	0.00	0.00	72.56	72.56	0.00	0.00	214.35	214.35	100.0				
12/22/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.00	85.00	0.00	0.00	57.49	57.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.67	73.67	0.00	0.00	216.16	216.16	100.0				
12/23/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.02	85.02	0.00	0.00	59.08	59.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	74.90	74.90	0.00	0.00	219.01	219.01	100.0				
12/24/2011	0.00	0.00	1.75	1.75	0.00	0.00	83.97	83.97	0.00	0.00	51.46	51.46	0.00	0.00	2.83	2.83	0.00	0.03	2.99	3.03	0.00	0.00	66.85	66.85	0.00	0.03	209.84	209.88	100.0		
12/25/2011	0.00	0.00	10.20	10.20	0.00	0.00	79.27	79.27	0.00	0.00	0.00	0.00	0.00	0.00	53.72	53.72	0.00	0.66	63.25	63.91	0.00	0.00	0.00	0.00	0.00	0.66	206.44	207.10	99.7		
12/26/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.00	85.00	0.00	0.00	0.00	0.00	0.00	0.00	56.18	56.18	0.00	0.00	66.24	66.24	0.00	0.00	0.00	0.00	0.00	0.00	207.42	207.42	100.0		
12/27/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	0.00	0.00	0.00	0.00	57.47	57.47	0.00	0.00	36.48	36.49	0.00	0.00	32.02	32.02	0.00	0.00	210.99	210.99	100.0		
12/28/2011	0.00	0.00	0.00	0.00	0.00	0.00	85.00	85.00	0.00	0.00	31.38	31.38	0.00	0.00	30.53	30.53	0.00	0.00	0.00	0.00	0.00	0.00	74.72	74.72	0.00	0.00	221.62	221.62	100.0		
12/29/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.66	84.66	0.00	0.03	46.22	46.25	0.00	0.00	18.68	18.68	0.00	0.00	0.00	0.00	0.00	0.00	78.43	78.43	0.00	0.03	227.98	228.01	100.0		
12/30/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.92	84.92	0.00	0.00	0.00	0.00	0.00	0.00	66.53	66.53	0.00	1.55	15.03	16.57	0.00	0.00	59.58	59.58	0.00	1.55	226.06	227.61	99.3		
12/31/2011	0.00	0.00	0.00	0.00	0.00	0.00	84.99	84.99	0.00	0.00	0.00	0.00	0.00	0.00	66.96	66.96	0.00	10.11	65.90	76.01	0.00	0.00	0.00	0.00	0.00	10.11	217.85	227.97	95.6		

Total [ML]: 0.00 0.41 1005.61 1006.02 0.00 0.00 1503.11 1503.11 0.00 0.06 869.58 869.64 0.00 0.02 1238.48 1238.50 0.00 13.11 1428.15 1441.26 0.00 0.00 850.13 850.13 0.00 0.00 6895.06 6908.67

Report Created: Tuesday, January 03, 2012

Water Volume [%]:

Untreated 0.0%
Below Dose 0.2%
To Dose 99.8%

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV2011\12-2011

Notes: 1 UV Comparative Dose: 18.1 mj/cm2

Submitted By (Print): D_Minor

Original Signed By: D_Minor

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-100A**
Report Period: **December 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
12/1/2011	94.9	19.9	24.6	24.1	81.0	88.6	85.0	136.2	135.9	144.9	206.6	136.1	136.0	OL	OL	OL	1242	3374	4434	854	3333	3334	3122	3121	3121	100.0	0.00	0.00	84.91	84.91
12/2/2011	93.5	19.8	24.6	24.1	80.0	88.4	85.0	136.2	136.1	137.9	202.0	136.2	136.1	OL	OL	OL	1266	3398	4458	878	3357	3358	3122	3121	3121	100.0	0.00	0.00	84.87	84.87
12/3/2011	NA	19.6	24.6	24.1	81.2	89.4	85.0	136.2	136.0	136.3	198.6	136.2	136.1	OL	OL	OL	1290	3422	4482	902	3381	3382	3122	3121	3121	100.0	0.00	0.00	84.89	84.89
12/4/2011	NA	20.2	24.7	24.1	80.7	88.8	85.0	136.2	136.0	136.2	193.6	136.0	136.0	OL	OL	OL	1314	3446	4506	926	3405	3406	3122	3121	3121	100.0	0.00	0.00	84.90	84.90
12/5/2011	NA	20.3	24.6	24.1	80.2	89.6	85.0	136.2	136.1	136.1	189.0	136.1	135.9	OL	OL	OL	1338	3470	4530	950	3429	3430	3122	3121	3121	100.0	0.00	0.00	84.93	84.93
12/6/2011	94.3	20.1	24.7	24.1	76.2	89.4	84.6	135.6	135.5	135.4	183.0	135.6	135.2	OL	OL	OL	1362	3494	4554	974	3453	3454	3122	3121	3121	100.0	0.00	0.00	84.55	84.55
12/7/2011	95.1	20.3	24.8	24.1	62.7	101.8	83.0	133.2	133.6	132.9	181.3	133.0	132.7	OL	OL	OL	1386	3518	4578	998	3477	3478	3122	3121	3121	100.0	0.00	0.00	82.99	82.99
12/8/2011	93.9	19.4	24.7	24.1	71.8	91.1	85.0	136.2	135.9	135.9	180.5	136.0	135.6	OL	OL	OL	1410	3542	4602	1022	3501	3502	3122	3121	3121	100.0	0.00	0.00	84.98	84.98
12/9/2011	94.1	19.9	24.7	24.1	80.6	89.7	85.0	136.1	136.1	135.8	177.9	136.1	135.5	OL	OL	OL	1434	3566	4626	1046	3525	3526	3122	3121	3121	100.0	0.00	0.00	84.87	84.87
12/10/2011	NA	20.0	24.6	24.1	79.5	88.7	85.0	136.2	136.1	136.1	176.6	136.0	135.5	OL	OL	OL	1458	3590	4650	1070	3549	3550	3122	3121	3121	100.0	0.00	0.00	84.87	84.87
12/11/2011	NA	18.7	24.8	24.1	79.9	88.4	85.0	136.1	136.1	135.5	175.3	136.0	135.3	OL	OL	OL	1482	3614	4674	1094	3573	3574	3122	3121	3121	100.0	0.00	0.00	84.92	84.92
12/12/2011	NA	0.0	40.9	24.2	1.3	99.4	78.4	127.1	132.7	123.2	171.2	125.2	121.8	52.1	45.0	8.8	1502	3633	4693	1114	3592	3593	3124	3124	3124	99.3	0.00	0.41	61.99	62.40
12/13/2011	93.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1502	3633	4693	1114	3592	3593	3124	3124	3124	OL	0.00	0.00	0.00	0.00
12/14/2011	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1502	3633	4693	1114	3592	3593	3124	0	3124	OL	0.00	0.00	0.00	0.00
12/15/2011	92.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1502	3633	4693	1114	3592	3593	3124	0	3124	OL	0.00	0.00	0.00	0.00
12/16/2011	94.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1502	3633	4693	1114	3592	3593	3124	0	3124	OL	0.00	0.00	0.00	0.00
12/17/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1502	3633	4693	1114	3592	3593	3124	0	3124	OL	0.00	0.00	0.00	0.00
12/18/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1502	3633	4693	1114	3592	3593	3124	0	3124	OL	0.00	0.00	0.00	0.00
12/19/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1502	3633	4693	1114	3592	3593	3124	0	3124	OL	0.00	0.00	0.00	0.00
12/20/2011	93.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1502	3633	4693	1114	3592	3593	3124	0	3124	OL	0.00	0.00	0.00	0.00
12/21/2011	92.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1502	3633	4693	1114	3592	3593	3124	0	3124	OL	0.00	0.00	0.00	0.00
12/22/2011	92.7	OL	OL	OL	OL	OL	OL	OL	0.1	OL	OL	OL	OL	OL	OL	OL	1502	3633	4693	1114	3592	3593	3124	0	3124	OL	0.00	0.00	0.00	0.00
12/23/2011	92.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1502	3633	4693	1114	3592	3593	3124	0	3124	OL	0.00	0.00	0.00	0.00
12/24/2011	NA	20.6	24.7	24.3	32.8	44.3	42.6	67.3	76.9	67.8	80.5	68.0	65.8	OL	OL	OL	1503	3635	4694	1115	3593	3594	3124	0	3124	100.0	0.00	0.00	1.75	1.75
12/25/2011	NA	23.9	26.5	24.4	4.3	45.2	42.9	69.6	86.5	69.5	94.1	70.8	70.0	OL	OL	OL	1508	3640	4700	1120	3599	3600	3124	0	3124	100.0	0.00	0.00	10.20	10.20
12/26/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1508	3640	4700	1120	3599	3600	3124	0	3124	OL	0.00	0.00	0.00	0.00
12/27/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1508	3640	4700	1120	3599	3600	3124	0	3124	OL	0.00	0.00	0.00	0.00
12/28/2011	93.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1508	3640	4700	1120	3599	3600	3124	0	3124	OL	0.00	0.00	0.00	0.00
12/29/2011	93.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1508	3640	4700	1120	3599	3600	3124	0	3124	OL	0.00	0.00	0.00	0.00
12/30/2011	92.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1508	3640	4700	1120	3599	3600	3124	0	3124	OL	0.00	0.00	0.00	0.00
12/31/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1508	3640	4700	1120	3599	3600	3124	0	3124	OL	0.00	0.00	0.00	0.00

Report Created: **Tuesday, January 03, 2012**

Total [ML]: **0.00 0.41 1005.61 1006.02**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No sample taken due to plant shutdown

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-200A**
Report Period: **December 2011**

Date	Transmittance	UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%	mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
12/1/2011	94.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2734	2733	2733	2923	989	2923	2502	2502	2502	OL	0.00	0.00	0.00	0.00	
12/2/2011	93.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2734	2733	2733	2923	989	0	2502	2502	2502	OL	0.00	0.00	0.00	0.00	
12/3/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2734	2733	2733	2923	989	0	2502	2502	2502	OL	0.00	0.00	0.00	0.00	
12/4/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2734	2733	2733	2923	989	0	2502	2502	2502	OL	0.00	0.00	0.00	0.00	
12/5/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2734	2733	2733	2923	989	0	2502	2502	2502	OL	0.00	0.00	0.00	0.00	
12/6/2011	94.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2734	2733	2733	2923	989	0	2502	2502	2502	OL	0.00	0.00	0.00	0.00	
12/7/2011	95.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2734	2733	2733	2923	989	0	2502	2502	2502	OL	0.00	0.00	0.00	0.00	
12/8/2011	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2734	2733	2733	2923	989	0	2502	2502	2502	OL	0.00	0.00	0.00	0.00	
12/9/2011	94.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2734	2733	2733	2923	989	0	2502	2502	2502	OL	0.00	0.00	0.00	0.00	
12/10/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2734	2733	2733	2923	989	0	2502	2502	2502	OL	0.00	0.00	0.00	0.00	
12/11/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2734	2733	2733	2923	989	0	2502	2502	2502	OL	0.00	0.00	0.00	0.00	
12/12/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2734	2733	2733	2923	989	0	2502	2502	2502	OL	0.00	0.00	0.00	0.00	
12/13/2011	93.7	21.7	60.1	24.3	27.4	100.1	84.9	166.7	141.4	130.3	418.2	145.7	155.4	255.4	135.9	135.7	2734	2733	2733	2933	998	10	2512	2512	2513	100.0	0.00	0.00	34.91	34.91
12/14/2011	93.9	22.1	34.7	24.2	29.7	102.8	75.9	OL	OL	OL	427.3	131.2	148.9	242.9	123.2	124.6	2734	2733	2733	2957	1022	34	2536	2536	2537	100.0	0.00	0.00	75.91	75.91
12/15/2011	92.9	21.7	29.0	24.2	73.5	90.3	81.5	OL	OL	OL	427.3	174.0	159.5	234.6	131.4	131.5	2734	2733	2733	2981	1046	58	2560	2560	2561	100.0	0.00	0.00	81.49	81.49
12/16/2011	94.0	21.8	27.4	24.2	73.7	87.0	80.8	OL	OL	OL	427.3	160.3	149.1	205.2	130.4	130.4	2734	2733	2733	3005	1070	82	2584	2584	2585	100.0	0.00	0.00	80.83	80.83
12/17/2011	NA	21.6	26.1	24.2	74.9	79.9	77.2	OL	OL	OL	424.6	149.5	140.6	199.9	124.5	124.7	2734	2733	2733	3029	1094	106	2608	2608	2609	100.0	0.00	0.00	77.20	77.20
12/18/2011	NA	21.8	26.3	24.2	68.6	79.3	75.6	OL	OL	OL	402.4	141.4	131.9	185.5	122.0	122.0	2734	2733	2733	3053	1118	130	2632	2632	2633	100.0	0.00	0.00	75.59	75.59
12/19/2011	NA	22.0	25.7	24.2	65.3	80.2	76.0	OL	OL	OL	387.6	140.3	129.3	176.5	122.5	122.8	2734	2733	2733	3077	1142	154	2656	2656	2657	100.0	0.00	0.00	76.05	76.05
12/20/2011	93.3	23.6	25.0	24.2	69.3	79.7	75.7	OL	OL	OL	377.5	138.8	127.0	169.8	121.6	122.0	2734	2733	2733	3101	1166	178	2680	2680	2681	100.0	0.00	0.00	75.74	75.74
12/21/2011	92.6	22.2	39.1	24.1	16.8	102.3	82.5	OL	OL	OL	366.8	136.6	132.7	162.5	132.2	132.6	2734	2733	2733	3125	1190	202	2704	2704	2705	100.0	0.00	0.00	82.53	82.53
12/22/2011	92.7	22.1	24.5	24.1	82.8	87.8	85.0	OL	OL	OL	361.1	137.1	136.2	158.0	136.1	136.4	2734	2733	2733	3149	1214	226	2728	2728	2729	100.0	0.00	0.00	85.00	85.00
12/23/2011	92.3	23.6	24.6	24.1	82.7	87.5	85.0	OL	OL	OL	348.9	137.0	136.2	151.8	136.1	136.3	2734	2733	2733	3173	1238	250	2752	2752	2753	100.0	0.00	0.00	85.02	85.02
12/24/2011	NA	23.6	24.5	24.1	59.1	87.2	84.0	OL	OL	OL	343.0	136.3	134.6	148.7	134.5	134.7	2734	2733	2733	3197	1262	274	2776	2776	2777	100.0	0.00	0.00	83.97	83.97
12/25/2011	NA	23.3	24.7	24.1	58.8	87.6	79.3	OL	OL	OL	330.2	131.5	127.2	142.9	127.1	127.2	2734	2733	2733	3221	1286	298	2800	2800	2801	100.0	0.00	0.00	79.27	79.27
12/26/2011	NA	23.6	24.5	24.1	82.3	87.6	85.0	OL	OL	OL	330.4	136.9	136.3	142.1	136.2	135.9	2734	2733	2733	3245	1310	322	2824	2824	2825	100.0	0.00	0.00	85.00	85.00
12/27/2011	NA	22.1	24.7	24.2	82.9	87.4	85.0	167.9	104.0	112.7	329.4	128.1	120.5	139.6	120.4	120.4	2741	2741	2741	3269	1334	346	2848	2848	2849	100.0	0.00	0.00	85.01	85.01
12/28/2011	93.6	23.6	24.8	24.3	82.9	87.5	85.0	183.9	106.9	116.8	317.2	108.0	86.8	135.7	86.7	86.5	2765	2765	2765	3293	1358	370	2872	2872	2873	100.0	0.00	0.00	85.00	85.00
12/29/2011	93.0	22.8	25.0	24.3	66.3	96.4	84.7	177.1	105.0	111.4	308.1	103.3	87.6	131.5	87.2	87.0	2789	2789	2788	3317	1382	394	2896	2896	2897	100.0	0.00	0.00	84.66	84.66
12/30/2011	92.9	23.6	25.3	24.4	68.5	95.2	84.9	166.0	100.7	103.7	298.6	96.7	86.8	127.2	86.6	86.3	2813	2813	2812	3341	1406	418	2920	2920	2921	100.0	0.00	0.00	84.92	84.92
12/31/2011	NA	23.3	24.8	24.4	82.8	87.4	85.0	160.5	98.0	98.2	293.9	91.9	86.8	126.3	86.6	86.4	2837	2837	2836	3365	1430	442	2944	2944	2945	100.0	0.00	0.00	84.99	84.99

Report Created: **Tuesday, January 03, 2012**

Total [ML]: **0.00 0.00 1503.11 1503.11**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No sample taken due to plant shutdown

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-400A**
Report Period: **December 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]			
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
12/1/2011	94.9	21.2	25.1	24.4	66.2	72.9	69.7	103.7	71.5	71.2	100.7	71.5	71.5	90.0	103.8	89.0	1197	1197	1197	1339	1340	1339	1374	344	1374	100.0	0.00	0.00	69.75	69.75
12/2/2011	93.5	21.3	25.1	24.4	67.4	72.3	69.8	99.6	71.5	71.2	98.9	71.4	71.6	89.1	100.5	85.5	1221	1221	1221	1363	1364	1363	1398	368	1398	100.0	0.00	0.00	69.78	69.78
12/3/2011	NA	21.3	25.0	24.4	67.5	73.1	70.0	95.7	71.6	71.4	96.6	71.5	71.8	88.0	97.7	83.3	1245	1245	1245	1387	1388	1387	1422	392	1422	100.0	0.00	0.00	69.96	69.96
12/4/2011	NA	21.3	25.1	24.4	65.0	75.3	69.0	91.6	70.7	70.4	94.4	70.5	70.8	86.2	97.9	80.9	1269	1269	1269	1411	1412	1411	1446	416	1446	100.0	0.00	0.00	69.04	69.04
12/5/2011	NA	21.3	25.0	23.9	60.8	68.4	64.7	86.4	66.4	64.0	91.5	66.2	66.6	84.3	96.2	77.6	1293	1293	1293	1435	1436	1435	1470	440	1470	100.0	0.00	0.00	64.71	64.71
12/6/2011	94.3	19.9	25.0	23.1	59.0	72.3	64.5	84.8	66.1	62.2	88.9	64.9	66.4	82.5	94.5	75.6	1317	1317	1317	1459	1460	1459	1494	464	1494	100.0	0.00	0.00	64.53	64.53
12/7/2011	95.1	20.7	38.6	24.2	14.6	65.0	62.6	108.4	96.7	63.9	114.7	79.3	82.6	96.0	116.8	113.0	1332	1331	1331	1473	1474	1474	1508	478	1508	100.0	0.00	0.00	37.21	37.21
12/8/2011	93.9	21.8	26.6	24.5	54.0	82.7	65.6	100.1	82.4	67.1	111.6	70.9	69.2	95.2	115.3	115.3	1356	1355	1355	1497	1498	1498	1532	502	1532	100.0	0.00	0.00	65.58	65.58
12/9/2011	94.1	21.9	25.0	24.5	65.1	70.2	67.5	109.8	69.5	68.9	113.4	69.7	80.8	96.7	114.1	121.9	1380	1379	1379	1521	1522	1522	1556	526	1556	100.0	0.00	0.00	67.47	67.47
12/10/2011	NA	23.2	29.3	24.5	34.2	69.6	66.8	113.9	68.5	68.3	117.4	81.1	85.2	97.9	112.1	123.1	1403	1402	1402	1544	1545	1545	1579	549	1579	100.0	0.00	0.00	63.82	63.82
12/11/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1403	1402	1402	1544	1545	1545	1579	549	1579	OL	0.00	0.00	0.00	0.00
12/12/2011	NA	17.6	30.2	23.4	7.7	80.5	63.4	111.3	59.9	64.5	110.0	81.4	81.7	96.8	114.4	115.3	1409	1409	1409	1551	1552	1551	1586	556	1586	99.9	0.00	0.02	18.08	18.10
12/13/2011	93.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1409	1409	1409	1551	1552	1551	1586	556	1586	OL	0.00	0.00	0.00	0.00
12/14/2011	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1409	1409	1409	1551	1552	1551	1586	556	1586	OL	0.00	0.00	0.00	0.00
12/15/2011	92.9	21.4	50.1	24.4	7.7	90.5	84.9	113.8	97.0	86.0	102.7	87.3	87.9	99.3	115.9	122.9	1423	1423	1423	1565	1566	1565	1600	570	1599	100.0	0.00	0.00	48.60	48.60
12/16/2011	94.0	21.2	24.9	24.3	82.7	87.7	85.0	100.8	86.2	86.1	93.8	86.6	86.7	92.6	105.7	114.7	1436	1435	1435	1577	1578	1578	1612	582	1612	100.0	0.00	0.00	43.92	43.92
12/17/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1436	1435	1435	1577	1578	1578	1612	582	1612	OL	0.00	0.00	0.00	0.00
12/18/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1436	1435	1435	1577	1578	1578	1612	582	1612	OL	0.00	0.00	0.00	0.00
12/19/2011	NA	21.6	29.6	24.4	38.0	75.1	72.1	103.0	73.9	73.2	98.4	73.9	82.1	89.9	115.2	118.2	1448	1448	1448	1590	1590	1590	1625	595	1624	100.0	0.00	0.00	37.27	37.27
12/20/2011	93.3	21.4	26.3	24.5	62.0	73.2	70.6	114.1	83.3	72.0	110.1	75.9	81.8	97.5	123.9	119.3	1472	1472	1472	1614	1614	1614	1649	619	1648	100.0	0.00	0.00	70.64	70.64
12/21/2011	92.6	21.9	51.2	24.5	10.5	71.7	62.6	110.7	88.0	72.1	104.1	74.2	78.1	95.2	120.7	112.9	1482	1482	1481	1621	1622	1621	1659	628	1658	100.0	0.00	0.00	25.21	25.21
12/22/2011	92.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1482	1482	1481	1621	1622	1621	1659	628	1658	OL	0.00	0.00	0.00	0.00
12/23/2011	92.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1482	1482	1481	1621	1622	1621	1659	628	1658	OL	0.00	0.00	0.00	0.00
12/24/2011	NA	21.6	36.6	24.5	11.9	55.8	47.2	97.7	77.0	70.8	84.6	78.9	75.9	85.8	111.7	99.8	1483	1483	1483	1621	1622	1621	1660	630	1660	100.0	0.00	0.00	2.83	2.83
12/25/2011	NA	21.4	31.8	24.6	44.1	58.7	53.7	103.1	77.7	61.9	90.9	64.4	65.5	88.1	115.4	100.8	1507	1507	1507	1639	1640	1640	1684	654	1684	100.0	0.00	0.00	53.72	53.72
12/26/2011	NA	20.0	28.3	24.6	53.6	59.4	56.2	105.3	77.0	57.8	94.9	65.4	67.5	90.8	118.5	99.4	1531	1531	1531	1663	1664	1664	1708	678	1708	100.0	0.00	0.00	56.18	56.18
12/27/2011	NA	19.8	27.2	24.6	55.1	59.3	57.5	104.6	74.9	59.1	95.0	64.6	66.0	90.6	116.7	96.5	1555	1555	1555	1687	1688	1688	1732	702	1732	100.0	0.00	0.00	57.47	57.47
12/28/2011	93.6	21.3	35.2	24.6	11.5	66.0	59.6	102.0	72.0	61.3	93.1	63.8	64.2	88.8	113.1	92.1	1568	1567	1567	1700	1700	1700	1744	714	1744	100.0	0.00	0.00	30.53	30.53
12/29/2011	93.0	22.0	39.9	24.5	5.9	74.7	66.6	102.0	71.1	67.8	92.0	69.1	69.0	87.0	112.9	91.0	1574	1574	1574	1706	1707	1707	1751	721	1751	100.0	0.00	0.00	18.68	18.68
12/30/2011	92.9	20.9	25.2	24.5	58.3	88.1	66.5	97.8	69.6	68.0	90.6	68.3	68.3	86.1	108.5	86.8	1598	1598	1598	1730	1731	1731	1775	745	1775	100.0	0.00	0.00	66.53	66.53
12/31/2011	NA	23.9	25.2	24.5	64.7	69.5	67.0	94.1	68.8	68.5	89.5	68.7	68.8	85.9	106.2	84.2	1622	1622	1622	1754	1755	1755	1799	769	1799	100.0	0.00	0.00	66.96	66.96

Report Created: **Tuesday, January 03, 2012**

Total [ML]: **0.00 0.02 1238.48 1238.50**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No sample taken due to plant shutdown

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-500A**
Report Period: **December 2011**

Date	Transmittance %	UV Dose mJ/cm2			Reactor Flow MLD			Average UV Lamp Intensity W/m2									UV Lamp Status Hours									% Volume Treated to Validated Conditions	Daily Totals Water Volume [ML]				
		Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total	
																															OL
12/1/2011	94.9	17.5	24.9	24.1	75.8	83.9	79.8	134.7	110.2	151.5	370.6	118.7	140.0	227.7	82.0	85.6	2902	3363	602	2579	62	4264	2656	4696	1191	99.9	0.00	0.10	79.72	79.82	
12/2/2011	93.5	20.6	25.1	24.2	77.3	83.1	80.2	129.7	82.4	162.5	393.0	87.8	131.0	267.0	82.4	127.7	2926	3387	626	2603	86	4288	2680	4720	1215	100.0	0.00	0.00	80.22	80.22	
12/3/2011	NA	20.4	24.9	24.2	77.6	84.2	80.5	126.1	82.6	160.7	414.5	83.1	123.7	265.5	82.6	131.2	2950	3411	650	2627	110	4312	2704	4744	1239	100.0	0.00	0.00	80.50	80.50	
12/4/2011	NA	20.3	25.0	24.2	73.3	85.8	78.7	122.6	80.6	155.6	360.7	81.4	119.5	264.4	80.8	129.0	2974	3435	674	2651	134	4336	2728	4768	1263	100.0	0.00	0.00	78.66	78.66	
12/5/2011	NA	20.4	25.0	24.2	69.2	78.0	73.7	119.7	75.9	145.6	297.6	75.9	113.7	261.3	75.8	125.8	2998	3459	698	2675	158	4360	2752	4792	1287	100.0	0.00	0.00	73.66	73.66	
12/6/2011	94.3	20.2	25.0	24.2	66.1	83.3	73.2	116.6	75.2	137.0	296.7	75.5	110.8	257.4	75.1	122.4	3022	3483	722	2699	182	4384	2776	4816	1311	100.0	0.00	0.00	73.20	73.20	
12/7/2011	95.1	20.8	32.0	24.2	40.8	76.7	67.0	117.6	99.9	135.7	275.4	100.2	114.5	245.7	71.2	118.1	3046	3507	746	2723	206	4408	2781	4820	1316	100.0	0.00	0.00	66.96	66.96	
12/8/2011	93.9	21.1	30.4	24.2	34.3	80.3	74.1	118.7	118.6	129.8	213.7	118.6	118.9	OL	OL	OL	3056	3517	756	2733	217	4418	2781	4820	1316	100.0	0.00	0.00	31.16	31.16	
12/9/2011	94.1	9.5	56.4	24.1	3.7	80.6	77.2	123.3	120.2	128.2	192.2	120.1	125.2	171.5	83.4	79.2	3073	3534	773	2750	234	4435	2782	4822	1318	99.8	0.00	0.11	55.11	55.22	
12/10/2011	NA	20.9	24.7	24.1	68.3	80.2	76.6	123.3	122.9	125.5	221.4	122.5	123.7	OL	OL	OL	3097	3558	797	2774	258	4459	2782	4822	1318	100.0	0.00	0.00	76.58	76.58	
12/11/2011	NA	20.9	24.6	24.1	75.6	81.2	78.3	126.0	125.7	126.2	244.1	125.1	126.2	OL	OL	OL	3121	3582	821	2798	282	4483	2782	4822	1318	100.0	0.00	0.00	78.25	78.25	
12/12/2011	NA	20.7	30.3	24.2	25.4	106.8	80.0	119.1	112.1	120.3	245.5	112.0	116.6	210.6	87.6	86.2	3145	3606	845	2822	306	4507	2790	4830	1326	100.0	0.00	0.00	80.10	80.10	
12/13/2011	93.7	19.9	26.4	24.4	52.5	92.1	74.9	106.0	76.8	107.3	213.5	76.6	93.6	233.4	76.7	83.2	3169	3630	869	2846	330	4531	2814	4854	1350	100.0	0.00	0.00	74.91	74.91	
12/14/2011	93.9	16.0	37.4	24.2	27.6	94.1	79.7	104.8	82.6	110.0	135.1	81.3	95.9	227.3	81.6	96.9	3186	3647	885	2862	346	4548	2831	4870	1366	99.3	0.00	0.39	53.43	53.82	
12/15/2011	92.9	20.7	40.3	24.4	12.0	79.9	77.0	114.8	78.4	118.0	249.1	78.2	101.6	250.2	79.4	120.1	3196	3657	896	2873	356	4558	2841	4881	1376	100.0	0.00	0.00	33.04	33.04	
12/16/2011	94.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3196	3657	896	2873	356	4558	2841	4881	1376	OL	0.00	0.00	0.00	0.00	0.00
12/17/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3196	3657	896	2873	356	4558	2841	4881	1376	OL	0.00	0.00	0.00	0.00	0.00
12/18/2011	NA	16.7	38.8	24.3	12.0	90.9	75.9	104.6	78.6	111.0	170.6	77.4	93.6	228.7	78.3	108.7	3213	3674	913	2890	374	4575	2858	4898	1394	99.7	0.00	0.16	54.35	54.51	
12/19/2011	NA	20.6	25.1	24.4	65.7	77.7	74.1	103.8	76.1	109.3	176.0	75.7	89.6	233.6	75.9	108.5	3237	3698	937	2914	398	4599	2882	4922	1418	100.0	0.00	0.00	74.09	74.09	
12/20/2011	93.3	20.4	33.5	24.4	18.8	73.8	71.5	100.3	73.0	102.2	167.3	72.7	84.3	231.1	72.9	106.2	3249	3710	948	2925	409	4611	2894	4934	1429	100.0	0.00	0.00	34.29	34.29	
12/21/2011	92.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3249	3710	948	2925	409	4611	2894	4934	1429	OL	0.00	0.00	0.00	0.00	0.00
12/22/2011	92.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3249	3710	948	2925	409	4611	2894	4934	1429	OL	0.00	0.00	0.00	0.00	0.00
12/23/2011	92.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3249	3710	948	2925	409	4611	2894	4934	1429	OL	0.00	0.00	0.00	0.00	0.00
12/24/2011	NA	17.8	25.8	23.8	27.3	65.6	56.6	73.6	60.3	78.1	92.3	56.5	79.2	157.7	62.1	107.6	3250	3711	950	2927	410	4612	2895	4935	1431	98.9	0.00	0.03	2.99	3.03	
12/25/2011	NA	14.6	25.3	24.2	54.1	68.9	63.9	89.6	65.8	89.7	150.8	65.5	76.4	213.6	65.8	113.6	3274	3735	974	2951	434	4636	2919	4959	1455	99.0	0.00	0.66	63.25	63.91	
12/26/2011	NA	20.3	25.1	24.4	63.6	70.1	66.2	93.8	68.2	88.9	117.0	67.8	76.4	216.0	68.0	106.8	3298	3759	998	2975	458	4660	2943	4983	1479	100.0	0.00	0.00	66.24	66.24	
12/27/2011	NA	20.5	30.7	24.4	40.0	70.0	68.2	95.4	70.6	88.7	122.6	69.8	76.1	212.8	70.2	102.7	3311	3772	1011	2988	471	4673	2956	4996	1491	100.0	0.00	0.00	36.48	36.49	
12/28/2011	93.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3311	3772	1011	2988	471	4673	2956	4996	1491	OL	0.00	0.00	0.00	0.00	0.00
12/29/2011	93.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3311	3772	1011	2988	471	4673	2956	4996	1491	OL	0.00	0.00	0.00	0.00	0.00
12/30/2011	92.9	9.8	30.9	23.1	22.3	77.7	75.7	86.4	78.2	80.9	144.5	76.4	79.9	183.1	77.5	113.2	3316	3777	1016	2993	477	4678	2961	5001	1497	90.7	0.00	1.55	15.03	16.57	
12/31/2011	NA	5.9	24.8	22.5	73.8	78.1	76.0	92.6	77.9	78.6	145.4	77.5	78.0	214.4	77.6	105.0	3340	3801	1040	3017	501	4702	2985	5025	1521	86.7	0.00	10.11	65.90	76.01	

Report Created: **Tuesday, January 03, 2012**

Total [ML]: **0.00 13.11 1428.15 1441.26**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.9 %**
To Dose **99.1 %**

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm2
 2. UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 3. NR - No Result
 4. NA - Not Analyzed
 5. OL - Off Line
 6. NS - No sample taken due to plant shutdown

UV Monitoring Report – Monthly



Water System Code: **252.00**
Licence Number: **PWS-09-412 RR**

Reactor: **UVR-600A**
Report Period: **December 2011**

Date	Transmittance			UV Dose			Reactor Flow			Average UV Lamp Intensity									UV Lamp Status									% Volume Treated to Validated Conditions	Daily Totals			
	%			mJ/cm2			MLD			W/m2									Hours										Water Volume [ML]			
	Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	Untreated	Below Dose	To Dose		Total			
12/1/2011	94.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1479	1479	1479	1395	1396	1396	122	1430	1430	OL	0.00	0.00	0.00	0.00			
12/2/2011	93.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1479	1479	1479	1395	1396	1396	122	1430	1430	OL	0.00	0.00	0.00	0.00			
12/3/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1479	1479	1479	1395	1396	1396	122	1430	1430	OL	0.00	0.00	0.00	0.00			
12/4/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1479	1479	1479	1395	1396	1396	122	1430	1430	OL	0.00	0.00	0.00	0.00			
12/5/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1479	1479	1479	1395	1396	1396	122	1430	1430	OL	0.00	0.00	0.00	0.00			
12/6/2011	94.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1479	1479	1479	1395	1396	1396	122	1430	1430	OL	0.00	0.00	0.00	0.00			
12/7/2011	95.1	18.7	38.1	24.2	27.8	100.5	89.4	126.4	93.2	90.6	90.1	89.8	88.9	129.7	103.6	91.4	1485	1485	1485	1401	1402	1402	128	1436	1436	100.0	0.00	0.00	21.97	21.97		
12/8/2011	93.9	19.7	39.5	24.0	31.0	89.5	78.6	118.3	96.1	93.7	124.7	124.3	123.7	144.8	125.4	123.9	1486	1485	1485	1415	1416	1416	142	1450	1450	100.0	0.00	0.00	45.59	45.59		
12/9/2011	94.1	19.8	31.2	24.0	46.1	80.5	77.8	OL	OL	OL	125.0	124.2	124.3	143.4	125.0	123.0	1486	1485	1485	1422	1423	1423	148	1457	1457	100.0	0.00	0.00	22.29	22.29		
12/10/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1486	1485	1485	1422	1423	1423	148	1457	1457	OL	0.00	0.00	0.00	0.00		
12/11/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1486	1485	1485	1422	1423	1423	148	1457	1457	OL	0.00	0.00	0.00	0.00		
12/12/2011	NA	20.3	36.1	24.2	41.7	106.2	85.1	109.6	88.8	89.9	107.7	87.1	94.0	148.3	100.3	90.1	1487	1487	1486	1423	1424	1424	150	1458	1458	100.0	0.00	0.00	4.17	4.17		
12/13/2011	93.7	18.9	41.4	24.2	30.0	88.0	84.9	132.0	86.3	86.1	110.0	86.7	105.3	139.3	102.2	85.3	1501	1501	1501	1438	1438	1438	164	1473	1472	100.0	0.00	0.00	50.19	50.19		
12/14/2011	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1501	1501	1501	1438	1438	1438	164	1473	1472	OL	0.00	0.00	0.00	0.00		
12/15/2011	92.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1501	1501	1501	1438	1438	1438	164	1473	1472	OL	0.00	0.00	0.00	0.00		
12/16/2011	94.0	19.9	28.2	24.3	51.7	80.3	77.4	125.8	81.1	79.0	110.8	84.7	103.4	137.5	100.4	79.2	1513	1513	1512	1449	1450	1450	176	1484	1484	100.0	0.00	0.00	37.38	37.38		
12/17/2011	NA	20.0	25.4	24.4	74.5	80.6	77.5	140.1	84.3	78.9	111.3	86.3	106.0	141.6	100.8	78.4	1537	1537	1536	1473	1474	1474	200	1508	1508	100.0	0.00	0.00	77.50	77.50		
12/18/2011	NA	20.4	45.5	24.4	22.8	79.7	77.4	140.3	86.3	78.6	109.6	86.0	103.9	143.4	100.2	78.1	1543	1543	1543	1480	1481	1481	206	1515	1515	100.0	0.00	0.00	21.86	21.86		
12/19/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1543	1543	1543	1480	1481	1481	206	1515	1515	OL	0.00	0.00	0.00	0.00		
12/20/2011	93.3	19.7	49.8	24.1	8.3	73.5	69.5	113.3	91.3	75.9	113.5	110.7	110.3	144.0	111.5	108.1	1544	1544	1544	1493	1493	1493	219	1528	1527	100.0	0.00	0.00	36.46	36.46		
12/21/2011	92.6	19.9	45.3	24.3	3.8	85.6	72.5	135.6	84.6	75.1	107.8	92.1	100.3	142.1	102.9	85.1	1562	1562	1562	1517	1517	1517	243	1552	1551	100.0	0.00	0.00	72.56	72.56		
12/22/2011	92.7	20.0	25.3	24.4	70.2	77.5	73.7	135.6	83.4	75.0	104.1	82.4	90.3	139.6	97.4	74.7	1586	1586	1586	1541	1541	1541	267	1576	1575	100.0	0.00	0.00	73.67	73.67		
12/23/2011	92.3	19.4	25.1	24.3	72.2	77.6	74.9	131.5	82.7	76.3	101.2	80.0	84.8	135.7	94.2	75.8	1610	1610	1610	1565	1565	1565	291	1600	1599	100.0	0.00	0.00	74.90	74.90		
12/24/2011	NA	19.4	34.3	24.4	7.7	76.8	70.4	130.4	83.0	71.9	100.1	79.1	81.4	133.8	92.7	71.8	1633	1633	1633	1587	1588	1588	314	1623	1622	100.0	0.00	0.00	66.85	66.85		
12/25/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1633	1633	1633	1587	1588	1588	314	1623	1622	OL	0.00	0.00	0.00	0.00		
12/26/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1633	1633	1633	1587	1588	1588	314	1623	1622	OL	0.00	0.00	0.00	0.00		
12/27/2011	NA	20.3	27.7	24.4	33.6	71.3	68.8	124.9	86.0	70.2	101.4	79.3	79.7	132.3	93.4	70.6	1644	1644	1644	1599	1599	1599	325	1634	1633	100.0	0.00	0.00	32.02	32.02		
12/28/2011	93.6	18.6	25.3	24.3	66.5	80.7	74.7	130.2	89.2	76.1	99.9	79.5	79.4	131.0	92.6	75.6	1668	1668	1668	1623	1623	1623	349	1658	1657	100.0	0.00	0.00	74.72	74.72		
12/29/2011	93.0	18.9	25.4	24.2	68.4	89.3	78.4	126.5	88.7	79.8	99.0	80.0	79.5	128.8	91.1	78.7	1692	1692	1692	1647	1647	1647	373	1682	1681	100.0	0.00	0.00	78.43	78.43		
12/30/2011	92.9	19.0	27.3	24.4	60.2	81.5	76.2	123.9	84.9	77.5	97.0	77.7	77.5	126.7	88.3	77.2	1711	1711	1711	1665	1666	1666	392	1701	1700	100.0	0.00	0.00	59.58	59.58		
12/31/2011	NA	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	1711	1711	1711	1665	1666	1666	392	1701	1700	OL	0.00	0.00	0.00	0.00		

Report Created: **Tuesday, January 03, 2012**

Total [ML]: **0.00 0.00 850.13 850.13**

Water Volume [%]:

Untreated **0.0 %**
Below Dose **0.0 %**
To Dose **100.0 %**

- Notes:**
- UV Comparative Dose: 18.1 mJ/cm2
 - UV Transmittance values determined via grab samples (average of Branch 1 & 2).
 - NR - No Result
 - NA - Not Analyzed
 - OL - Off Line
 - NS - No sample taken due to plant shutdown

2011 Corrective Action Reports



Water and Waste Department • Service des eaux et des déchets

Thursday, May 5, 2011

Our Incident/Report No: 02-2011

LIMS Reference No: 29226

Mr. Gilbert Bushati
Senior Drinking Water Officer
Manitoba Water Stewardship, Office of Drinking Water
1007 Century Street
Winnipeg MB R3H 0W4

RE: CORRECTIVE ACTION REPORT

WATER SYSTEM	Winnipeg Public Water System
WATER SYSTEM CODE	252.00
LOCATION OF NON-COMPLIANT INCIDENT	Winnipeg 3-Dist SE-06
OPERATOR IN CHARGE	NA
INCIDENT REPORTED BY	Steve Fletcher, Supervisor of Analytical Services Branch Treated (or distribution system) water sample contains:
TYPE OF NON-COMPLIANT INCIDENT	<ul style="list-style-type: none">• E. Coliform (>0 per 100mL), 3 MR 41/2007• Low positive Total Coliform (<10 per100mL), 3 MR 41/2007
INCIDENT DATE	April 27, 2011
DESCRIPTION OF CORRECTIVE ACTIONS	IMMEDIATELY: Resampled original location, tested additional samples upstream/downstream of original location for; turbidity, free/total chlorine, temperature and contacted the ODW.
TEST RESULTS	See Attached

NOTES/COMMENTS:

1. All microbiological tests performed by contract laboratory.
2. UP/DOWN STREAM testing performed when EC is >0 /100mL, TC is >10 /100mL or when resample/consecutive sample is positive for EC or TC or as directed by the Manager of Environmental Standards Division or the Office of Drinking Water
3. INITIAL chlorine, turbidity and temperature only tested at the required 39 sample locations.
4. NR No Result due to laboratory/analyst error.

EMERGENCY REPORTING IS REQUIRED WHERE A POTENTIAL HEALTH RISK IS INVOLVED. FOLLOW THE INSTRUCTIONS OF YOUR DRINKING WATER OFFICER ON SITUATIONS REQUIRING IMMEDIATE REPORTING

DISTRIBUTION

FORWARD THE ORIGINAL TO THE DRINKING WATER OFFICER WITH THE MONTHLY COMPLIANCE SUBMISSIONS.

Contact the Drinking Water Officer for any comments, questions or concerns

REFERENCE: ODW-RF-016

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2230 Main Street. • 2230, rue Main • Winnipeg • Manitoba R2V 4T8
fax/télé. (204) 339-2147 • www.winnipeg.ca

SampleName	SampleNumber	DateSampled	bacColiEsch-QT (MPNU/100mL)	bacColiTotal-QT (MPNU/100mL)	Turbidity (ntu)	Chlorine, Free (mg/L)	Chlorine, Total (mg/L)	Temperature (°C)	
SE06		289651	27-Apr-11	1	1				
SE06		290263	29-Apr-11	<1	<1	0.27	0.47	0.64	8.2
SE06		290265	29-Apr-11	<1	<1	0.18	0.74	0.95	4.9
SE06		290264	29-Apr-11	<1	<1	0.18	0.69	0.87	5.4



Water and Waste Department • Service des eaux et des déchets

Friday, May 27, 2011

Our Incident/Report No: 03-2011

LIMS Reference No: 29433

Mr. Gilbert Bushati
Senior Drinking Water Officer
Manitoba Water Stewardship, Office of Drinking Water
1007 Century Street
Winnipeg MB R3H 0W4

RE: CORRECTIVE ACTION REPORT

WATER SYSTEM	Winnipeg Public Water System
WATER SYSTEM CODE	252.00
LOCATION OF NON-COMPLIANT INCIDENT	Winnipeg 3-Dist SE-04
OPERATOR IN CHARGE	NA
INCIDENT REPORTED BY	Gerry Levesque, Acting Supervisor of Analytical Services Branch
TYPE OF NON-COMPLIANT INCIDENT	Low positive Total Coliform (<10 per100mL), 3 MR 41/2007
INCIDENT DATE	May 16, 2011
DESCRIPTION OF CORRECTIVE ACTIONS	AS SOON AS POSSIBLE: Re-sampled original location, also tested for turbidity, free/total chlorine, temperature and contacted the ODW.
TEST RESULTS	See Attached

NOTES/COMMENTS:

1. All microbiological tests performed by contract laboratory.
2. UP/DOWN STREAM testing performed when EC is >0 /100mL, TC is >10 /100mL or when resample/consecutive sample is positive for EC or TC or as directed by the Manager of Environmental Standards Division or the Office of Drinking Water
3. INITIAL chlorine, turbidity and temperature only tested at the required 39 sample locations.
4. NR No Result due to laboratory/analyst error.

EMERGENCY REPORTING IS REQUIRED WHERE A POTENTIAL HEALTH RISK IS INVOLVED. FOLLOW THE INSTRUCTIONS OF YOUR DRINKING WATER OFFICER ON SITUATIONS REQUIRING IMMEDIATE REPORTING

DISTRIBUTION

FORWARD THE ORIGINAL TO THE DRINKING WATER OFFICER WITH THE MONTHLY COMPLIANCE SUBMISSIONS.

Contact the Drinking Water Officer for any comments, questions or concerns

REFERENCE: ODW-RF-016

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SampleName	SampleNumber	DateSampled	bacColiEsch QT (MPNU/100mL)	bacColiTotal QT (MPNU/100mL)	Chlorine, Free (mg/L)	Chlorine, Total (mg/L)	Temperature (°C)	Turbidity (ntu)
SE04	291721	16 May 11	<1	1	0.57	0.95	6.6	0.18
SE04	292274	19 May 11	<1	<1	0.73	0.89	7.0	0.17



Water and Waste Department • Service des eaux et des déchets

Wednesday, June 22, 2011

Our Incident/Report No: 04-2011

LIMS Reference No: 29730

Mr. Gilbert Bushati
Senior Drinking Water Officer
Manitoba Water Stewardship, Office of Drinking Water
1007 Century Street
Winnipeg MB R3H 0W4

RE: CORRECTIVE ACTION REPORT

WATER SYSTEM	Winnipeg Public Water System
WATER SYSTEM CODE	252.00
LOCATION OF NON-COMPLIANT INCIDENT	Winnipeg 3-Dist NE-05; SE-07; WC-12
OPERATOR IN CHARGE	NA
INCIDENT REPORTED BY	Steve Fletcher, Supervisor of Analytical Services Branch
TYPE OF NON-COMPLIANT INCIDENT	1. High positive Total Coliform (>10 per100mL), 3 MR 41/2007 2. Low positive Total Coliform (<10 per100mL), 3 MR 41/2007
INCIDENT DATE	June 13, 2011
DESCRIPTION OF CORRECTIVE ACTIONS	AS SOON AS POSSIBLE: Re-sampled original locations, also tested additional samples upstream/downstream where Total Coliform >10 per 100 mL was reported. All additional samples tested for turbidity, free/total chlorine and temperature. The ODW was contacted.
TEST RESULTS	See Attached

NOTES/COMMENTS:

1. All microbiological tests performed by contract laboratory.
2. UP/DOWN STREAM testing performed when EC is >0 /100mL, TC is >10 /100mL or when resample/consecutive sample is positive for EC or TC or as directed by the Manager of Environmental Standards Division or the Office of Drinking Water
3. INITIAL chlorine, turbidity and temperature only tested at the required 39 sample locations.
4. NR No Result due to laboratory/analyst error.

EMERGENCY REPORTING IS REQUIRED WHERE A POTENTIAL HEALTH RISK IS INVOLVED. FOLLOW THE INSTRUCTIONS OF YOUR DRINKING WATER OFFICER ON SITUATIONS REQUIRING IMMEDIATE REPORTING

DISTRIBUTION

FORWARD THE ORIGINAL TO THE DRINKING WATER OFFICER WITH THE MONTHLY COMPLIANCE SUBMISSIONS.

Contact the Drinking Water Officer for any comments, questions or concerns

REFERENCE: ODW-RF-016

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SampleName	SampleNumber	DateSampled	bacColiEsch-QT (MPNU/100mL)	bacColiTotal-QT (MPNU/100mL)	Chlorine, Free (mg/L)	Chlorine, Total (mg/L)	Temperature (°C)	Turbidity (ntu)
NE05	294834	13-Jun-11	<1	19	0.39	0.62	11.2	0.22
NE05	295407	16-Jun-11	<1	<1	0.38	0.61	11.4	0.31
NE05	295411	16-Jun-11	<1	<1	0.36	0.55	15.1	0.32
NE05	295412	16-Jun-11	<1	<1	0.68	0.88	14.5	0.19
SE07	294855	13-Jun-11	<1	88	0.45	0.62	11.7	0.29
SE07	295408	16-Jun-11	<1	<1	0.51	0.70	7.7	0.17
SE07	295413	16-Jun-11	<1	<1	0.43	0.66	10.1	0.22
SE07	295414	16-Jun-11	<1	<1	0.54	0.74	9.7	0.19
WC12	294889	14-Jun-11	<1	3	0.41	0.63	12.3	0.26
WC12	295415	16-Jun-11	<1	<1	0.45	0.61	11.2	0.24



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Thursday, July 14, 2011

Our Incident/Report No: 05-2011

LIMS Reference No: 30022

Mr. Gilbert Bushati
Senior Drinking Water Officer
Manitoba Water Stewardship, Office of Drinking Water
1007 Century Street
Winnipeg MB R3H 0W4

RE: CORRECTIVE ACTION REPORT

WATER SYSTEM	Winnipeg Public Water System
WATER SYSTEM CODE	252.00
LOCATION OF NON-COMPLIANT INCIDENT	Winnipeg 3-Dist SE-04
OPERATOR IN CHARGE	NA
INCIDENT REPORTED BY	Steve Fletcher, Supervisor of Analytical Services Branch
TYPE OF NON-COMPLIANT INCIDENT	High positive Total Coliform (>10 per100mL), 3 MR 41/2007
INCIDENT DATE	July 4, 2011
DESCRIPTION OF CORRECTIVE ACTIONS	AS SOON AS POSSIBLE: Re-sampled original location also tested additional samples upstream/downstream. All additional samples tested for turbidity, free/total chlorine and temperature. The ODW was contacted.
TEST RESULTS	See Attached

NOTES/COMMENTS:

1. All microbiological tests performed by contract laboratory.
2. UP/DOWN STREAM testing performed when EC is >0 /100mL, TC is >10 /100mL or when resample/consecutive sample is positive for EC or TC or as directed by the Manager of Environmental Standards Division or the Office of Drinking Water
3. INITIAL chlorine, turbidity and temperature only tested at the required 39 sample locations.
4. NR No Result due to laboratory/analyst error.

EMERGENCY REPORTING IS REQUIRED WHERE A POTENTIAL HEALTH RISK IS INVOLVED. FOLLOW THE INSTRUCTIONS OF YOUR DRINKING WATER OFFICER ON SITUATIONS REQUIRING IMMEDIATE REPORTING

DISTRIBUTION

FORWARD THE ORIGINAL TO THE DRINKING WATER OFFICER WITH THE MONTHLY COMPLIANCE SUBMISSIONS.

Contact the Drinking Water Officer for any comments, questions or concerns

REFERENCE: ODW-RF-016

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SampleName	SampleNumber	DateSampled	ColiEsch-QT (MPNU/100mL)	ColiTotal-QT (MPNU/100mL)	Chlorine, Free (mg/L)	Chlorine, Total (mg/L)	Temperature (°C)	Turbidity (ntu)
SE04	296937	04-Jul-11	<1	29	0.48	0.75	14.8	0.15
SE04	297520	06-Jul-11	<1	<1	0.56	0.73	18.6	0.14
SE04	297518	06-Jul-11	<1	<1	0.54	0.72	15.0	0.29
SE04	297519	06-Jul-11	<1	<1	0.48	0.66	14.7	0.15



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Wednesday, August 10, 2011

Our Incident/Report No: 06-2011

LIMS Reference No: 30326

Mr. Gilbert Bushati
Senior Drinking Water Officer
Manitoba Water Stewardship, Office of Drinking Water
1007 Century Street
Winnipeg MB R3H 0W4

RE: CORRECTIVE ACTION REPORT

WATER SYSTEM	Winnipeg Public Water System
WATER SYSTEM CODE	252.00
LOCATION OF NON-COMPLIANT INCIDENT	Winnipeg 3-Dist NW-01
OPERATOR IN CHARGE	NA
INCIDENT REPORTED BY	Steve Fletcher, Supervisor of Analytical Services Branch
TYPE OF NON-COMPLIANT INCIDENT	Low positive Total Coliform (<10 per100mL), 3 MR 41/2007
INCIDENT DATE	August 2, 2011
DESCRIPTION OF CORRECTIVE ACTIONS	AS SOON AS POSSIBLE: Resampled original location, also tested for turbidity, free/total chlorine, temperature and contacted the ODW.
TEST RESULTS	See Attached

NOTES/COMMENTS:

1. All microbiological tests performed by contract laboratory.
2. UP/DOWN STREAM testing performed when EC is >0 /100mL, TC is >10 /100mL or when resample/consecutive sample is positive for EC or TC or as directed by the Manager of Environmental Standards Division or the Office of Drinking Water
3. INITIAL chlorine, turbidity and temperature only tested at the required 39 sample locations.
4. NR No Result due to laboratory/analyst error.

EMERGENCY REPORTING IS REQUIRED WHERE A POTENTIAL HEALTH RISK IS INVOLVED. FOLLOW THE INSTRUCTIONS OF YOUR DRINKING WATER OFFICER ON SITUATIONS REQUIRING IMMEDIATE REPORTING

DISTRIBUTION

FORWARD THE ORIGINAL TO THE DRINKING WATER OFFICER WITH THE MONTHLY COMPLIANCE SUBMISSIONS.

Contact the Drinking Water Officer for any comments, questions or concerns

REFERENCE: ODW-RF-016

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SampleName	SampleNumber	DateSampled	ColiEsch-QT (MPNU/100mL)	ColiTotal-QT (MPNU/100mL)	Chlorine, Free (mg/L)	Chlorine, Total (mg/L)	Temperature (°C)	Turbidity (ntu)	
NW01		299868	02-Aug-11	<1	1	0.37	0.48	17.4	0.18
NW01		300406	04-Aug-11	<1	<1	0.45	0.61	18.5	0.19



Water and Waste Department • Service des eaux et des déchets

Monday, March 5, 2012

Our Incident/Report No: 07-2011

LIMS Reference No: 30532

Mr. Gilbert Bushati
Senior Drinking Water Officer
Manitoba Water Stewardship, Office of Drinking Water
1007 Century Street
Winnipeg MB R3H 0W4

RE: CORRECTIVE ACTION REPORT

WATER SYSTEM	Winnipeg Public Water System
WATER SYSTEM CODE	252.00
LOCATION OF NON-COMPLIANT INCIDENT	Winnipeg 3-Dist SE-09; WC-03
OPERATOR IN CHARGE	NA
INCIDENT REPORTED BY	Steve Fletcher, Supervisor of Analytical Services Branch
TYPE OF NON-COMPLIANT INCIDENT	1. High positive Total Coliform (>10 per100mL), 3 MR 41/2007 2. Low positive Total Coliform (<10 per100mL), 3 MR 41/2007
INCIDENT DATE	August 23, 2011
DESCRIPTION OF CORRECTIVE ACTIONS	AS SOON AS POSSIBLE: Re-sampled original locations, also tested additional samples upstream/downstream where Total Coliform >10 per 100 mL was reported. All additional samples tested for turbidity, free/total chlorine and temperature. The ODW was contacted.
TEST RESULTS	See Attached

NOTES/COMMENTS:

1. All microbiological tests performed by contract laboratory.
2. UP/DOWN STREAM testing performed when EC is >0 /100mL, TC is >10 /100mL or when resample/consecutive sample is positive for EC or TC or as directed by the Manager of Environmental Standards Division or the Office of Drinking Water
3. INITIAL chlorine, turbidity and temperature only tested at the required 39 sample locations.
4. NR No Result due to laboratory/analyst error.

EMERGENCY REPORTING IS REQUIRED WHERE A POTENTIAL HEALTH RISK IS INVOLVED. FOLLOW THE INSTRUCTIONS OF YOUR DRINKING WATER OFFICER ON SITUATIONS REQUIRING IMMEDIATE REPORTING

DISTRIBUTION

FORWARD THE ORIGINAL TO THE DRINKING WATER OFFICER WITH THE MONTHLY COMPLIANCE SUBMISSIONS.

Contact the Drinking Water Officer for any comments, questions or concerns

REFERENCE: ODW-RF-016

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SampleName	SampleNumber	DateSampled	ColiEsch-QT (MPNU/100mL)	ColiTotal-QT (MPNU/100mL)	Chlorine, Free (mg/L)	Chlorine, Total (mg/L)	Temperature (°C)	Turbidity (ntu)
SE09	301982	23-Aug-11	0	200	NA	NA	NA	NA
SE09	302561	25-Aug-11	0	0	0.53	0.72	20.1	0.17
SE09	302559	25-Aug-11	0	0	0.51	0.73	19	0.2
SE09	302560	25-Aug-11	0	0	0.46	0.64	19.6	0.19
WC03	302005	23-Aug-11	0	3	NA	NA	NA	NA
WC03	302562	25-Aug-11	0	0	0.45	0.58	16.5	0.15



Water and Waste Department • Service des eaux et des déchets

Thursday, September 8, 2011

Our Incident/Report No: 08-2011

LIMS Reference No: 30597

Mr. Gilbert Bushati
Senior Drinking Water Officer
Manitoba Water Stewardship, Office of Drinking Water
1007 Century Street
Winnipeg MB R3H 0W4

RE: CORRECTIVE ACTION REPORT

WATER SYSTEM	Winnipeg Public Water System
WATER SYSTEM CODE	252.00
LOCATION OF NON-COMPLIANT INCIDENT	Winnipeg 3-Dist NE-09
OPERATOR IN CHARGE	NA
INCIDENT REPORTED BY	Steve Fletcher, Supervisor of Analytical Services Branch
TYPE OF NON-COMPLIANT INCIDENT	Low disinfection residual in the distribution system, 22(1) MR 40/2007
INCIDENT DATE	August 29, 2011
DESCRIPTION OF CORRECTIVE ACTIONS	AS SOON AS POSSIBLE: Recommended an increase in chlorine setpoint level(s) and contacted the ODW. Location(s) to be re-tested at a later date. Water Services increased the chlorine setpoint/dosage and checked various watermain valve positions and condition throughout the immediate area.
TEST RESULTS	See Attached

NOTES/COMMENTS:

1. All microbiological tests performed by contract laboratory.
2. UP/DOWN STREAM testing performed when EC is >0 /100mL, TC is >10 /100mL or when resample/consecutive sample is positive for EC or TC or as directed by the Manager of Environmental Standards Division or the Office of Drinking Water
3. INITIAL chlorine, turbidity and temperature only tested at the required 39 sample locations.
4. NR No Result due to laboratory/analyst error.

EMERGENCY REPORTING IS REQUIRED WHERE A POTENTIAL HEALTH RISK IS INVOLVED. FOLLOW THE INSTRUCTIONS OF YOUR DRINKING WATER OFFICER ON SITUATIONS REQUIRING IMMEDIATE REPORTING

DISTRIBUTION

FORWARD THE ORIGINAL TO THE DRINKING WATER OFFICER WITH THE MONTHLY COMPLIANCE SUBMISSIONS.

Contact the Drinking Water Officer for any comments, questions or concerns

REFERENCE: ODW-RF-016

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SampleName	SampleNumber	DateSampled	ColiEsch QT (MPNU/100mL)	ColiTotal QT (MPNU/100mL)	Chlorine, Free (mg/L)	Chlorine, Total (mg/L)	Temperature (°C)	Turbidity (ntu)
NE09	302647	29 Aug 11	<1	<1	0.06	0.18	21.9	0.36
NE09	303304	02 Sep 11	NA	NA	0.10	0.25	17.3	NA



Water and Waste Department • Service des eaux et des déchets

Thursday, September 8, 2011

Our Incident/Report No: 09-2011

LIMS Reference No: 30597

Mr. Gilbert Bushati
Senior Drinking Water Officer
Manitoba Water Stewardship, Office of Drinking Water
1007 Century Street
Winnipeg MB R3H 0W4

RE: CORRECTIVE ACTION REPORT

WATER SYSTEM	Winnipeg Public Water System
WATER SYSTEM CODE	252.00
LOCATION OF NON-COMPLIANT INCIDENT	Winnipeg 3-Dist NE04; SW02; WC07; NW07; WC06; SE13
OPERATOR IN CHARGE	NA
INCIDENT REPORTED BY	Steve Fletcher, Supervisor of Analytical Services Branch
TYPE OF NON-COMPLIANT INCIDENT	1. High positive Total Coliform (>10 per100mL), 3 MR 41/2007 2. Low positive Total Coliform (<10 per100mL), 3 MR 41/2007
INCIDENT DATE	August 29 and 30, 2011
DESCRIPTION OF CORRECTIVE ACTIONS	AS SOON AS POSSIBLE: Re-sampled original locations, also tested additional samples upstream/downstream where Total Coliform >10 per 100 mL was reported. All additional samples tested for turbidity, free/total chlorine and temperature. The ODW was contacted.
TEST RESULTS	See Attached

NOTES/COMMENTS:

1. All microbiological tests performed by contract laboratory.
2. UP/DOWN STREAM testing performed when EC is >0 /100mL, TC is >10 /100mL or when resample/consecutive sample is positive for EC or TC or as directed by the Manager of Environmental Standards Division or the Office of Drinking Water
3. INITIAL chlorine, turbidity and temperature only tested at the required 39 sample locations.
4. NR No Result due to laboratory/analyst error.

EMERGENCY REPORTING IS REQUIRED WHERE A POTENTIAL HEALTH RISK IS INVOLVED. FOLLOW THE INSTRUCTIONS OF YOUR DRINKING WATER OFFICER ON SITUATIONS REQUIRING IMMEDIATE REPORTING

DISTRIBUTION

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Contact the Drinking Water Officer for any comments, questions or concerns

REFERENCE: ODW-RF-016

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SampleName	Sample Number	Date Sampled	ColiEsch-QT (MPNU/100mL)	ColiTotal-QT (MPNU/100mL)	Chlorine, Free (mg/L)	Chlorine, Total (mg/L)	Temperature (°C)	Turbidity (ntu)	
NE04		302642	30-Aug-11	<1	2	NA	NA	NA	NA
NE04		303269	01-Sep-11	<1	<1	0.74	0.87	17.1	0.18
NE04		303570	02-Sep-11	<1	<1	0.65	0.88	17.0	0.19
NW07		302655	30-Aug-11	<1	2	NA	NA	NA	NA
NW07		303276	01-Sep-11	<1	<1	0.07	0.22	18.4	0.20
NW07		303579	02-Sep-11	<1	<1	0.06	0.20	18.1	0.23
SE13		302670	29-Aug-11	<1	1	0.38	0.61	18.8	0.18
SE13		303278	01-Sep-11	<1	<1	0.51	0.70	20.5	0.18
SE13		303578	02-Sep-11	<1	<1	0.54	0.77	20.3	0.16
SW02		302672	30-Aug-11	<1	21	NA	NA	NA	NA
SW02		303270	01-Sep-11	<1	101	0.54	0.67	18.7	0.17
SW02		303271	01-Sep-11	<1	<1	0.57	0.73	18.9	0.21
SW02		303272	01-Sep-11	<1	<1	0.53	0.70	18.3	0.20
SW02		303571	02-Sep-11	<1	<1	0.52	0.69	19.1	0.15
SW02		303572	02-Sep-11	<1	<1	0.41	0.60	19.4	0.16
SW02		303573	02-Sep-11	<1	<1	0.23	0.36	20.1	0.20
WC06		302692	29-Aug-11	<1	4	0.47	0.63	19.7	0.26
WC06		303277	01-Sep-11	<1	<1	0.43	0.61	19.8	0.18
WC06		303577	02-Sep-11	<1	<1	0.45	0.61	19.7	0.17
WC07		302693	30-Aug-11	<1	18	NA	NA	NA	NA
WC07		303273	01-Sep-11	<1	<1	0.33	0.47	18.3	0.16
WC07		303274	01-Sep-11	<1	<1	0.43	0.56	19.5	0.18
WC07		303275	01-Sep-11	<1	<1	0.41	0.57	21.6	0.23
WC07		303574	02-Sep-11	<1	<1	0.29	0.52	19.4	0.13
WC07		303575	02-Sep-11	<1	<1	0.35	0.52	19.7	0.15
WC07		303576	02-Sep-11	<1	<1	0.39	0.62	19.7	0.13

NA: Not Analyzed, these locations are not routine chlorine test locations.

See Incident Report No: 09-2011 & LIMS Job No: 30597



Water and Waste Department • Service des eaux et des déchets

Wednesday, October 5, 2011

Our Incident/Report No: 10-2011

LIMS Reference No: 30796

Mr. Gilbert Bushati
Senior Drinking Water Officer
Manitoba Water Stewardship, Office of Drinking Water
1007 Century Street
Winnipeg MB R3H 0W4

RE: CORRECTIVE ACTION REPORT

WATER SYSTEM	Winnipeg Public Water System
WATER SYSTEM CODE	252.00
LOCATION OF NON-COMPLIANT INCIDENT	Winnipeg 3-Dist WC-08
OPERATOR IN CHARGE	NA
INCIDENT REPORTED BY	Steve Fletcher, Supervisor of Analytical Services Branch
TYPE OF NON-COMPLIANT INCIDENT	Low disinfection residual in the distribution system, 22(1) MR 40/2007
INCIDENT DATE	September 19, 2011
DESCRIPTION OF CORRECTIVE ACTIONS	AS SOON AS POSSIBLE: Water Services Division checked various watermain valve positions throughout the immediate area and flushed the watermain. Chlorine residuals were re-tested by Water Services Division and found to be greater than compliance requirement.
TEST RESULTS	Before: 0.07 mg/L Free Chlorine After: 0.52 mg/L Free Chlorine

NOTES/COMMENTS:

1. All microbiological tests performed by contract laboratory.
2. UP/DOWN STREAM testing performed when EC is >0 /100mL, TC is >10 /100mL or when resample/consecutive sample is positive for EC or TC or as directed by the Manager of Environmental Standards Division or the Office of Drinking Water
3. INITIAL chlorine, turbidity and temperature only tested at the required 39 sample locations.
4. NR No Result due to laboratory/analyst error.

EMERGENCY REPORTING IS REQUIRED WHERE A POTENTIAL HEALTH RISK IS INVOLVED. FOLLOW THE INSTRUCTIONS OF YOUR DRINKING WATER OFFICER ON SITUATIONS REQUIRING IMMEDIATE REPORTING

DISTRIBUTION

FORWARD THE ORIGINAL TO THE DRINKING WATER OFFICER WITH THE MONTHLY COMPLIANCE SUBMISSIONS.

Contact the Drinking Water Officer for any comments, questions or concerns

REFERENCE: ODW-RF-016

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Water and Waste Department • Service des eaux et des déchets

Wednesday, October 5, 2011

Our Incident/Report No: 11-2011

LIMS Reference No: 30853

Mr. Gilbert Bushati
Senior Drinking Water Officer
Manitoba Water Stewardship, Office of Drinking Water
1007 Century Street
Winnipeg MB R3H 0W4

RE: CORRECTIVE ACTION REPORT

WATER SYSTEM	Winnipeg Public Water System
WATER SYSTEM CODE	252.00
LOCATION OF NON-COMPLIANT INCIDENT	Winnipeg 3-Dist SW-10
OPERATOR IN CHARGE	NA
INCIDENT REPORTED BY	Steve Fletcher, Supervisor of Analytical Services Branch
TYPE OF NON-COMPLIANT INCIDENT	Low positive Total Coliform (<10 per100mL), 3 MR 41/2007
INCIDENT DATE	September 26, 2011
DESCRIPTION OF CORRECTIVE ACTIONS	AS SOON AS POSSIBLE: Resampled original location, also tested for turbidity, free/total chlorine, temperature and contacted the ODW.
TEST RESULTS	See Attached

NOTES/COMMENTS:

1. All microbiological tests performed by contract laboratory.
2. UP/DOWN STREAM testing performed when EC is >0 /100mL, TC is >10 /100mL or when resample/consecutive sample is positive for EC or TC or as directed by the Manager of Environmental Standards Division or the Office of Drinking Water
3. INITIAL chlorine, turbidity and temperature only tested at the required 39 sample locations.
4. NR No Result due to laboratory/analyst error.

EMERGENCY REPORTING IS REQUIRED WHERE A POTENTIAL HEALTH RISK IS INVOLVED. FOLLOW THE INSTRUCTIONS OF YOUR DRINKING WATER OFFICER ON SITUATIONS REQUIRING IMMEDIATE REPORTING

DISTRIBUTION

FORWARD THE ORIGINAL TO THE DRINKING WATER OFFICER WITH THE MONTHLY COMPLIANCE SUBMISSIONS.

Contact the Drinking Water Officer for any comments, questions or concerns

REFERENCE: ODW-RF-016

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SampleName	SampleNumber	DateSampled	ColiEsch-QT (MPNU/100mL)	ColiTotal-QT (MPNU/100mL)	Chlorine, Free (mg/L)	Chlorine, Total (mg/L)	Temperature (°C)	Turbidity (ntu)
SW10	305472	26-Sep-11	<1	8	0.29	0.51	18.1	0.33
SW10	306035	29-Sep-11	<1	<1	0.24	0.45	20.4	0.47



Water and Waste Department • Service des eaux et des déchets

Thursday, December 8, 2011

Our Incident/Report No: 12-2011

LIMS Reference No: 31368

Mr. Gilbert Bushati
Senior Drinking Water Officer
Manitoba Water Stewardship, Office of Drinking Water
1007 Century Street
Winnipeg MB R3H 0W4

RE: CORRECTIVE ACTION REPORT

WATER SYSTEM	Winnipeg Public Water System
WATER SYSTEM CODE	252.00
LOCATION OF NON-COMPLIANT INCIDENT	Winnipeg 3-Dist SE-09
OPERATOR IN CHARGE	NA
INCIDENT REPORTED BY	Steve Fletcher, Supervisor of Analytical Services Branch
TYPE OF NON-COMPLIANT INCIDENT	Low positive Total Coliform (<10 per100mL), 3 MR 41/2007
INCIDENT DATE	November 29, 2011
DESCRIPTION OF CORRECTIVE ACTIONS	AS SOON AS POSSIBLE: Resampled original location, also tested for turbidity, free/total chlorine, temperature and contacted the ODW.
TEST RESULTS	See Attached

NOTES/COMMENTS:

1. All microbiological tests performed by contract laboratory.
2. UP/DOWN STREAM testing performed when EC is >0 /100mL, TC is >10 /100mL or when resample/consecutive sample is positive for EC or TC or as directed by the Manager of Environmental Standards Division or the Office of Drinking Water
3. INITIAL chlorine, turbidity and temperature only tested at the required 39 sample locations.
4. NR No Result due to laboratory/analyst error.

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Contact the Drinking Water Officer for any comments, questions or concerns

REFERENCE: ODW-RF-016

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SampleName	SampleNumber	DateSampled	ColiEsch-QT (MPNU/100mL)	ColiTotal-QT (MPNU/100mL)	Chlorine, Free (mg/L)	Chlorine, Total (mg/L)	Temperature (°C)	Turbidity (ntu)	
SE09	[REDACTED]	311028	29-Nov-11	0	1	NA	NA	NA	NA
SE09	[REDACTED]	311724	01-Dec-11	0	0	0.75	0.99	7.1	0.17



Water and Waste Department • Service des eaux et des déchets

Wednesday, December 14, 2011

Our Incident/Report No: 13-2011
LIMS Reference No: 31428

Mr. Gilbert Bushati
Senior Drinking Water Officer
Manitoba Water Stewardship, Office of Drinking Water
1007 Century Street
Winnipeg MB R3H 0W4

RE: CORRECTIVE ACTION REPORT

WATER SYSTEM	Winnipeg Public Water System
WATER SYSTEM CODE	252.00
LOCATION OF NON-COMPLIANT INCIDENT	Winnipeg 3-Dist NW-08
OPERATOR IN CHARGE	NA
INCIDENT REPORTED BY	Steve Fletcher, Supervisor of Analytical Services Branch
TYPE OF NON-COMPLIANT INCIDENT	Low positive Total Coliform (<10 per100mL), 3 MR 41/2007
INCIDENT DATE	December 06, 2011
DESCRIPTION OF CORRECTIVE ACTIONS	AS SOON AS POSSIBLE: Resampled original location, also tested for turbidity, free/total chlorine, temperature and contacted the ODW.
TEST RESULTS	See Attached

NOTES/COMMENTS:

1. All microbiological tests performed by contract laboratory.
2. UP/DOWN STREAM testing performed when EC is >0 /100mL, TC is >10 /100mL or when resample/consecutive sample is positive for EC or TC or as directed by the Manager of Environmental Standards Division or the Office of Drinking Water
3. INITIAL chlorine, turbidity and temperature only tested at the required 39 sample locations.
4. NR No Result due to laboratory/analyst error.

EMERGENCY REPORTING IS REQUIRED WHERE A POTENTIAL HEALTH RISK IS INVOLVED. FOLLOW THE INSTRUCTIONS OF YOUR DRINKING WATER OFFICER ON SITUATIONS REQUIRING IMMEDIATE REPORTING

DISTRIBUTION

FORWARD THE ORIGINAL TO THE DRINKING WATER OFFICER WITH THE MONTHLY COMPLIANCE SUBMISSIONS.

Contact the Drinking Water Officer for any comments, questions or concerns

REFERENCE: ODW-RF-016

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SampleName	SampleNumber	DateSampled	ColiEsch-QT (MPNU/100mL)	ColiTotal-QT (MPNU/100mL)	Chlorine, Free (mg/L)	Chlorine, Total (mg/L)	Temperature (°C)	Turbidity (ntu)
NW08	311644	06-Dec-11	0	1	NA	NA	NA	NA
NW08	312266	08-Dec-11	0	0	0.62	0.82	9.2	0.16

2011 Monthly Fluoride Monitoring Reports



Water and Waste Department • Service des eaux et des déchets

February 3, 2011

Our File: 040-18-18-14-00

Khalida Hai-Santiago c/o Helen Browne
300 Carlton Street (Room 4068)
Winnipeg, Manitoba
R3B 3M9

Dear Dr. Hai-Santiago:

RE: CITY OF WINNIPEG FLUORIDE MONITORING DATA

As a participant in the Provincial Water Fluoridation Program, the City of Winnipeg Water and Waste Department hereby submits the following fluoride monitoring data on analyses conducted by the Environmental Standards Division.

<u>LOCATION</u>	<u>SAMPLE NUMBER</u>	<u>DATE</u>	<u>RESULT(mg/L F)</u>
Distribution System (Composite – 39 Locations)	279895	January 4, 2011	0.81
	280494	January 10, 2011	0.82
	281095	January 17, 2011	0.83
	282016	January 24, 2011	0.79
	282242	January 31, 2011	0.80

If you have any questions on the foregoing, please call Mrs. Renée Grosselle, Supervisor of Compliance Reporting, at 986-8359.

Yours truly,

Original signed by:

K.J.T. Kjartanson, P.Eng.
Manager of Environmental Standards Division

RG/pr

c: Diane Sacher, P.Eng., Manager of Water Services

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Water and Waste Department • Service des eaux et des déchets

March 7, 2011

Our File: 040-18-18-14-00

Khalida Hai-Santiago c/o Helen Browne
300 Carlton Street (Room 4068)
Winnipeg, Manitoba
R3B 3M9

Dear Dr. Hai-Santiago:

RE: CITY OF WINNIPEG FLUORIDE MONITORING DATA

As a participant in the Provincial Water Fluoridation Program, the City of Winnipeg Water and Waste Department hereby submits the following fluoride monitoring data on analyses conducted by the Environmental Standards Division.

<u>LOCATION</u>	<u>SAMPLE NUMBER</u>	<u>DATE</u>	<u>RESULT(mg/L F)</u>
Distribution System (Composite – 39 Locations)	283227	February 7, 2011	0.78
	283473	February 14, 2011	0.81
	284087	February 22, 2011	0.84
	284690	February 28, 2011	0.88

If you have any questions on the foregoing, please call Mrs. Renée Grosselle, Supervisor of Compliance Reporting, at 986-8359.

Yours truly,

Original signed by:

K.J.T. Kjartanson, P.Eng.
Manager of Environmental Standards Division

RG/pr

c: Diane Sacher, P.Eng., Manager of Water Services

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Water and Waste Department • Service des eaux et des déchets

April 6, 2011

Our File: 040-18-18-14-00

Khalida Hai-Santiago c/o Helen Browne
300 Carlton Street (Room 4068)
Winnipeg, Manitoba
R3B 3M9

Dear Dr. Hai-Santiago:

RE: CITY OF WINNIPEG FLUORIDE MONITORING DATA

As a participant in the Provincial Water Fluoridation Program, the City of Winnipeg Water and Waste Department hereby submits the following fluoride monitoring data on analyses conducted by the Environmental Standards Division.

<u>LOCATION</u>	<u>SAMPLE NUMBER</u>	<u>DATE</u>	<u>RESULT(mg/L F)</u>
Distribution System (Composite – 39 Locations)	285286	March 7, 2011	0.78
	285936	March 14, 2011	0.84
	286528	March 21, 2011	0.71
	287150	March 28, 2011	0.69

Please note that as of March 15, 2011, the optimal level of fluoride in Winnipeg's drinking water has been lowered from 0.85 parts per million to 0.70 parts per million in response to the new provincial guideline.

If you have any questions on the foregoing, please call Ms. Renée Grosselle, Supervisor of Compliance Reporting, at 986-8359.

Yours truly,

Original signed by:

K.J.T. Kjartanson, P.Eng.
Manager of Environmental Standards Division

RG/pr

c: Diane Sacher, P.Eng., Manager of Water Services

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Water and Waste Department • Service des eaux et des déchets

May 5, 2011

Our File: 040-18-18-14-00

Khalida Hai-Santiago c/o Helen Browne
300 Carlton Street (Room 4068)
Winnipeg, Manitoba
R3B 3M9

Dear Dr. Hai-Santiago:

RE: CITY OF WINNIPEG FLUORIDE MONITORING DATA

As a participant in the Provincial Water Fluoridation Program, the City of Winnipeg Water and Waste Department hereby submits the following fluoride monitoring data on analyses conducted by the Environmental Standards Division.

<u>LOCATION</u>	<u>SAMPLE NUMBER</u>	<u>DATE</u>	<u>RESULT(mg/L F)</u>
Distribution System (Composite – 39 Locations)	287824	April 4, 2011	0.69
	288527	April 11, 2011	0.68
	289090	April 18, 2011	0.67
	289623	April 26, 2011	0.67

If you have any questions on the foregoing, please call Ms. Renée Grosselle, Supervisor of Compliance Reporting, at 986-8359.

Yours truly,

Original signed by:

K.J.T. Kjartanson, P.Eng.
Manager of Environmental Standards Division

RG/pr

c: Diane Sacher, P.Eng., Manager of Water Services

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Water and Waste Department • Service des eaux et des déchets

June 7, 2011

Our File: 040-18-18-14-00

Khalida Hai-Santiago c/o Helen Browne
300 Carlton Street (Room 4068)
Winnipeg, Manitoba
R3B 3M9

Dear Dr. Hai-Santiago:

RE: CITY OF WINNIPEG FLUORIDE MONITORING DATA

As a participant in the Provincial Water Fluoridation Program, the City of Winnipeg Water and Waste Department hereby submits the following fluoride monitoring data on analyses conducted by the Environmental Standards Division.

<u>LOCATION</u>	<u>SAMPLE NUMBER</u>	<u>DATE</u>	<u>RESULT(mg/L F)</u>
Distribution System (Composite – 39 Locations)	290291	May 2, 2011	0.67
	291012	May 9, 2011	0.57
	291695	May 16, 2011	0.69
	292332	May 24, 2011	0.68
	293061	May 30, 2011	0.69

If you have any questions on the foregoing, please call Ms. Renée Grosselle, Supervisor of Compliance Reporting, at 986-8359.

Yours truly,

Original signed by:

K.J.T. Kjartanson, P.Eng.
Manager of Environmental Standards Division

RG/pr

c: Diane Sacher, P.Eng., Manager of Water Services

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Water and Waste Department • Service des eaux et des déchets

July 5, 2011

Our File: 040-18-18-14-00

Khalida Hai-Santiago c/o Helen Browne
300 Carlton Street (Room 4068)
Winnipeg, Manitoba
R3B 3M9

Dear Dr. Hai-Santiago:

RE: CITY OF WINNIPEG FLUORIDE MONITORING DATA

As a participant in the Provincial Water Fluoridation Program, the City of Winnipeg Water and Waste Department hereby submits the following fluoride monitoring data on analyses conducted by the Environmental Standards Division.

<u>LOCATION</u>	<u>SAMPLE NUMBER</u>	<u>DATE</u>	<u>RESULT(mg/L F)</u>
Distribution System (Composite – 39 Locations)	294015	June 6, 2011	0.67
	294826	June 13, 2011	0.67
	295534	June 20, 2011	0.65
	296187	June 27, 2011	0.78

If you have any questions on the foregoing, please call Ms. Renée Grosselle, Supervisor of Compliance Reporting, at 986-8359.

Yours truly,

Original signed by:

K.J.T. Kjartanson, P.Eng.
Manager of Environmental Standards Division

RG/pr

c: Diane Sacher, P.Eng., Manager of Water Services

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Mailing Address/Adresse Postale: 2230 Main Street • 2230, Rue Main • Winnipeg • Manitoba R2V 4T8
tel/tél. (204) 986 4684 • fax/télec. (204) 339 2147 • www.winnipeg.ca



Water and Waste Department • Service des eaux et des déchets

August 3, 2011

Our File: 040-18-18-14-00

Khalida Hai-Santiago c/o Helen Browne
300 Carlton Street (Room 4068)
Winnipeg, Manitoba
R3B 3M9

Dear Dr. Hai-Santiago:

RE: CITY OF WINNIPEG FLUORIDE MONITORING DATA

As a participant in the Provincial Water Fluoridation Program, the City of Winnipeg Water and Waste Department hereby submits the following fluoride monitoring data on analyses conducted by the Environmental Standards Division.

<u>LOCATION</u>	<u>SAMPLE NUMBER</u>	<u>DATE</u>	<u>RESULT(mg/L F)</u>
Distribution System (Composite – 39 Locations)	296911	July 4, 2011	0.68
	297699	July 12, 2011	0.71
	298397	July 18, 2011	0.71
	299169	July 25, 2011	0.70

If you have any questions on the foregoing, please call Ms. Renée Grosselle, Supervisor of Compliance Reporting, at 986-8359.

Yours truly,

Original signed by:

K.J.T. Kjartanson, P.Eng.
Manager of Environmental Standards Division

RG/pr

c: Diane Sacher, P.Eng., Manager of Water Services

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Water and Waste Department • Service des eaux et des déchets

September 8, 2011

Our File: 040-18-18-14-00

Khalida Hai-Santiago c/o Helen Browne
300 Carlton Street (Room 4068)
Winnipeg, Manitoba
R3B 3M9

Dear Dr. Hai-Santiago:

RE: CITY OF WINNIPEG FLUORIDE MONITORING DATA

As a participant in the Provincial Water Fluoridation Program, the City of Winnipeg Water and Waste Department hereby submits the following fluoride monitoring data on analyses conducted by the Environmental Standards Division.

<u>LOCATION</u>	<u>SAMPLE NUMBER</u>	<u>DATE</u>	<u>RESULT(mg/L F)</u>
Distribution System (Composite – 39 Locations)	299854	August 2, 2011	0.70
	300449	August 8, 2011	0.74
	301195	August 15, 2011	0.68
	301951	August 22, 2011	0.67
	302635	August 29, 2011	0.67

If you have any questions on the foregoing, please call Ms. Renée Grosselle, Supervisor of Compliance Reporting, at 986-8359.

Yours truly,

Original signed by:

K.J.T. Kjartanson, P.Eng.
Manager of Environmental Standards Division

RG/pr

c: Diane Sacher, P.Eng., Manager of Water Services

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Water and Waste Department • Service des eaux et des déchets

October 7, 2011

Our File: 040-18-18-14-00

Khalida Hai-Santiago c/o Helen Browne
300 Carlton Street (Room 4068)
Winnipeg, Manitoba
R3B 3M9

Dear Dr. Hai-Santiago:

RE: CITY OF WINNIPEG FLUORIDE MONITORING DATA

As a participant in the Provincial Water Fluoridation Program, the City of Winnipeg Water and Waste Department hereby submits the following fluoride monitoring data on analyses conducted by the Environmental Standards Division.

<u>LOCATION</u>	<u>SAMPLE NUMBER</u>	<u>DATE</u>	<u>RESULT(mg/L F)</u>
Distribution System (Composite – 39 Locations)	303473	September 6, 2011	0.69
	304118	September 12, 2011	0.70
	304790	September 19, 2011	0.72
	305427	September 26, 2011	0.70

If you have any questions on the foregoing, please call Ms. Renée Grosselle, Supervisor of Compliance Reporting, at 986-8359.

Yours truly,

Original signed by:
R. Grosselle for:

K.J.T. Kjartanson, P.Eng.
Manager of Environmental Standards Division

RG/pr

c: Diane Sacher, P.Eng., Manager of Water Services

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Water and Waste Department • Service des eaux et des déchets

November 9, 2011

Our File: 040-18-18-14-00

Khalida Hai-Santiago c/o Helen Browne
300 Carlton Street (Room 4068)
Winnipeg, Manitoba
R3B 3M9

Dear Dr. Hai-Santiago:

RE: CITY OF WINNIPEG FLUORIDE MONITORING DATA

As a participant in the Provincial Water Fluoridation Program, the City of Winnipeg Water and Waste Department hereby submits the following fluoride monitoring data on analyses conducted by the Environmental Standards Division.

<u>LOCATION</u>	<u>SAMPLE NUMBER</u>	<u>DATE</u>	<u>RESULT(mg/L F)</u>
Distribution System (Composite – 39 Locations)	306159	October 3, 2011	0.69
	306720	October 11, 2011	0.70
	307252	October 17, 2011	0.68
	307924	October 24, 2011	0.71
	308513	October 31, 2011	0.71

If you have any questions on the foregoing, please call Ms. Renée Grosselle, Supervisor of Compliance Reporting, at 986-8359.

Yours truly,

Original signed by:

K.J.T. Kjartanson, P.Eng.
Manager of Environmental Standards Division

RG/pr

cc: Terry Josephson, P.Eng. Acting Manager of Water Services

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Water and Waste Department • Service des eaux et des déchets

December 9, 2011

Our File: 040-18-18-14-00

Khalida Hai-Santiago c/o Helen Browne
300 Carlton Street (Room 4068)
Winnipeg, Manitoba
R3B 3M9

Dear Dr. Hai-Santiago:

RE: CITY OF WINNIPEG FLUORIDE MONITORING DATA

As a participant in the Provincial Water Fluoridation Program, the City of Winnipeg Water and Waste Department hereby submits the following fluoride monitoring data on analyses conducted by the Environmental Standards Division.

<u>LOCATION</u>	<u>SAMPLE NUMBER</u>	<u>DATE</u>	<u>RESULT(mg/L F)</u>
Distribution System (Composite – 39 Locations)	309217	November 7, 2011	0.69
	309775	November 14, 2011	0.70
	310427	November 21, 2011	0.70
	310997	November 28, 2011	0.75

If you have any questions on the foregoing, please call Ms. Renée Grosselle, Supervisor of Compliance Reporting, at 986-8359.

Yours truly,

Original signed by:

K.J.T. Kjartanson, P.Eng.
Manager of Environmental Standards Division

RG/pr

cc: Terry Josephson, P.Eng. Acting Manager of Water Services

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Water and Waste Department • Service des eaux et des déchets

January 6, 2012

Our File: 040-18-18-14-00

Khalida Hai-Santiago c/o Helen Browne
300 Carlton Street (Room 4068)
Winnipeg, Manitoba
R3B 3M9

Dear Dr. Hai-Santiago:

RE: CITY OF WINNIPEG FLUORIDE MONITORING DATA

As a participant in the Provincial Water Fluoridation Program, the City of Winnipeg Water and Waste Department hereby submits the following fluoride monitoring data on analyses conducted by the Environmental Standards Division.

<u>LOCATION</u>	<u>SAMPLE NUMBER</u>	<u>DATE</u>	<u>RESULT(mg/L F)</u>
Distribution System (Composite – 39 Locations)	311623	December 5, 2011	0.70
	312299	December 12, 2011	0.73
	312902	December 19, 2011	0.70
	313382	December 28, 2011	0.71

If you have any questions on the foregoing, please call Ms. Renée Grosselle, Supervisor of Compliance Reporting, at 986-8359.

Yours truly,

Original signed by:

K.J.T. Kjartanson, P.Eng.
Manager of Environmental Standards Division

RG/pr

cc: Tim Shanks, P.Eng. Acting Manager of Water Services

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**2011 Quarterly Total Trihalomethane
Summary Reports**

**CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENVIRONMENTAL STANDARDS DIVISION**

Total Trihalomethane Summary Report

Reporting Period: Quarter 1, 2011

SAMPLE DATE	DISTRIBUTION SYSTEM THM RESULTS (ug/L)					
Tuesday, May 11, 2010	53	47	50	50	48	50
Monday, August 16, 2010	84	86	84	51	59	89
Monday, November 08, 2010	25	19	18	24	20	22
Monday, February 07, 2011	23	21	23	26	23	22
RUNNING AVERAGE THM	46	43	44	38	37	46

COMMENTS:

NS - NO SAMPLE
NR - NO RESULT

Methodology

Trihalomethanes analyzed by GC-ECD, Standard Methods for the Examination of Water and Waste Water, 21'st Edition, Method 6232

Report Compiled by: J. Jones

Approved in LIMS by: S. Fletcher

File: WQR4

Date Approved: February 22, 2011

N:\Environmental Standards\Analytical Services\WQ Data\Routine Water Quality\2011\Quarterly THM\[Quarterly THM 2011.xls]Quarter 1

**CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENVIRONMENTAL STANDARDS DIVISION**

Total Trihalomethane Summary Report

Reporting Period: Quarter 2, 2011

SAMPLE DATE	DISTRIBUTION SYSTEM THM RESULTS (ug/L)					
Monday, August 16, 2010	84	86	84	51	59	89
Monday, November 08, 2010	25	19	18	24	20	22
Monday, February 07, 2011	23	21	23	26	23	22
Monday, May 16, 2011	26	27	26	26	27	29
RUNNING AVERAGE THM	39	38	38	32	32	41

COMMENTS:

NS - NO SAMPLE
NR - NO RESULT

Methodology

Trihalomethanes analyzed by GC-ECD, Standard Methods for the Examination of Water and Waste Water, 21'st Edition, Method 6232

Report Compiled by: J. Jones

Approved in LIMS by: S. Fletcher

File: WQR4

Date Approved: May 27, 2011

N:\Environmental Standards\Analytical Services\WQ Data\Routine Water Quality\2011\Quarterly THM\[Quarterly THM 2011.xls]Quarter 2

**CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENVIRONMENTAL STANDARDS DIVISION**

Total Trihalomethane Summary Report

Reporting Period: Quarter 3, 2011

SAMPLE DATE	DISTRIBUTION SYSTEM THM RESULTS (ug/L)					
	[REDACTED]					
Monday, November 08, 2010	25	19	18	24	20	22
Monday, February 07, 2011	23	21	23	26	23	22
Monday, May 16, 2011	26	27	26	26	27	29
Monday, August 15, 2011	55	56	59	61	56	60
RUNNING AVERAGE THM	32	31	32	34	32	33

COMMENTS:

NS - NO SAMPLE
NR - NO RESULT

Methodology

Trihalomethanes analyzed by GC-ECD, Standard Methods for the Examination of Water and Waste Water, 21'st Edition, Method 6232

Report Compiled by: H.Demchenko

Approved in LIMS by: S.Fletcher

File: WQR4

Date Approved: August 30, 2011

N:\Environmental Standards\Analytical Services\WQ Data\Routine Water Quality\2011\Quarterly THM\[Quarterly THM 2011.xls]Quarter 3

**CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENVIRONMENTAL STANDARDS DIVISION**

Total Trihalomethane Summary Report

Reporting Period: Quarter 4, 2011

SAMPLE DATE	DISTRIBUTION SYSTEM THM RESULTS (ug/L)					
Monday, February 07, 2011	23	21	23	26	23	22
Monday, May 16, 2011	26	27	26	26	27	29
Monday, August 15, 2011	55	56	59	61	56	60
Monday, November 14, 2011	18	17	17	24	22	22
RUNNING AVERAGE THM	30	30	31	34	32	33

COMMENTS:

NS - NO SAMPLE
NR - NO RESULT

Methodology

Trihalomethanes analyzed by GC-ECD, Standard Methods for the Examination of Water and Waste Water, 21'st Edition, Method 6232

Report Compiled by: H.Demchenko

Approved in LIMS by: S.Fletcher

File: WQR4

Date Approved: November 23, 2011

N:\Environmental Standards\Analytical Services\WQ Data\Routine Water Quality\2011\Quarterly THM\[Quarterly THM 2011.xls]Quarter 4

2011 Lead Loop Monitoring Report



**CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENVIRONMENTAL STANDARDS DIVISION**

Water System Code: 252.00

Licence Number: PWS-09-412RR

2011 Lead Loop System Summary Report

SAMPLE DATE	Five minute flushed Lead Concentration (mg/L)				
	Lead Loop Cu	Lead Loop Pb	Lead Loop Pb1	Lead Loop Pb2	Lead Loop Pb3
January 12, 2011	<0.001	<0.001	<0.001	<0.001	<0.001
February 17, 2011	<0.001	<0.001	<0.001	0.002	<0.001
March 10, 2011	<0.001	<0.001	0.008	0.001	0.001
April 21, 2011	<0.001	<0.001	0.002	0.002	<0.001
May 12, 2011	<0.001	<0.001	0.001	0.001	<0.001
June 9, 2011	<0.001	0.001	0.002	0.002	0.002
July 7, 2011	<0.001	0.003	0.003	0.004	0.001
August 26, 2011	<0.001	<0.001	<0.001	0.002	<0.001
September 29, 2011	<0.001	<0.001	<0.001	0.001	<0.001
October 25, 2011	<0.001	<0.001	<0.001	<0.001	<0.001
November 17, 2011	<0.001	<0.001	<0.001	<0.001	<0.001
December 15, 2011	<0.001	<0.001	0.002	0.006	0.001
2011 AVERAGE LEAD CONCENTRATION	<0.001	0.001	0.002	0.002	0.001

COMMENTS:

NS - NO SAMPLE
NR - NO RESULT

Report Compiled By: H.Demchenko

Approved in LIMS By: S.Fletcher

Date Approved: 16-Dec-11

Methodology

Lead was analyzed by ICP-MS according to Standard Methods for the Examination of Water and Wastewater, 21st Edition, Method 3125