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## LABORATORY ANALYSIS REPORT

DATE: 2010/07/13  
CLIENT: Underwriters Laboratory  
333 Pfingsten Road  
Northbrook, IL 60062-2096

PAGE: 1 of 15  
PROJECT: 660  
COLLECTED BY: AB  
PROJECT REC'D: 2010-05-07  
PROJECT DESC: Shower Filter

CONTACT: Keith Peltason

UL Project # 10NK08570

Cycle Type: 50/50

Cycle Time: 15 min on 15 min off

Preconditioning: Filters were flushed with a public water supply until clear, then the temperature was adjusted to 40 degrees celsius. The filters were then flushed again until clear. Finally they were surge flushed until clear. The showerhead was then installed and the flow rate recorded.

Initial Test Setup: Ashley Baeten and Liz Schwartz

Brine Preparation: Ashley Baeten and Liz Schwartz

Sample Point Collection: Ashley Baeten and Liz Schwartz

Water Type: Public Water Supply

Name of Applicant: Sun Water Systems

Testing was conducted in accordance with ANSI/NSF Standard 177 for chlorine reduction. Cycle testing was not performed since the hydrostatic testing did not pass.

No general environmental conditons are specified in the standard or have been identified that could affect the test results or measurements.

Rated Service Flow: For the AQ-4100s at 80 psi and a water temperature of 40.8 degrees celsius the initial clean system flow rate for E1 was 2.56 gpm and E2 was 2.40. For the AQ-4105 see sample ID's 660-7393 and 660-7394.

Pace Analyticals Product Testing Division received 4 Shower Filter (s) for the analysis presented in the following report.

All data reported is associated with quality control that met method, EPA, NSF/ANSI or internal laboratory specification. Any exceptions are noted in a footnote or narrative format.

Pace Analytical Services, Inc. appreciates the opportunity to provide you with this product testing service. We value your feedback, would you please take a few minutes to access our customer satisfaction survey at: <http://www.pacelabs.com/my-account/customer-survey.html> . If you have any questions or comments regarding this report, please feel free to contact us.

Sincerely,

A handwritten signature in black ink that reads "Ashley Batten". The signature is written in a cursive style with a horizontal line underlining the name.

Enclosure



**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007337</b>		<b>Description: Influent</b>			<b>Volume: 10 Unit Volume</b>		
<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date Collected</u>	<u>Date Analyzed</u>	
Chlorine	1.92	mg/L	0.01	SM 4500-CL-F	2010-06-22	2010-06-22	
pH (wc)	6.97 <sup>22</sup>	(None)	NA	EPA 150.1	2010-06-22	2010-06-22	
Pressure (psi)	80	psi	NA	(None)	2010-06-22	2010-06-22	
Temperature (wc)	41.3	°C	NA	EPA 150.1	2010-06-22	2010-06-22	
Total Dissolved Solids (wc)	299	mg/L	10	EPA 160.1	2010-06-22	2010-06-24	
Total Organic Carbon (wc)	3.39	mg/L	0.5	SM 5310C	2010-06-22	2010-06-28	
Turbidity (wc)	<1.0	NTU	1.0	EPA 180.1	2010-06-22	2010-06-22	

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007348</b>		<b>Description: AQ-4100 Shower SN: 247915</b>			<b>Volume: 10 Unit Volume</b>		
<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date Collected</u>	<u>Date Analyzed</u>	
Chlorine	<0.01	mg/L	0.01	SM 4500-CL-F	2010-06-22	2010-06-22	
Chlorine % Red	>99	(None)	NA	SM 4500-CL-F	2010-06-22	2010-06-22	
Flow Rate	2.6	GPM	NA	(None)	2010-06-22	2010-06-22	

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007349</b>		<b>Description: AQ-4100 Shower SN: 247913</b>			<b>Volume: 10 Unit Volume</b>		
<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date Collected</u>	<u>Date Analyzed</u>	
Chlorine	<0.01	mg/L	0.01	SM 4500-CL-F	2010-06-22	2010-06-22	
Chlorine % Red	>99	(None)	NA	SM 4500-CL-F	2010-06-22	2010-06-22	
Flow Rate	2.4	GPM	NA	(None)	2010-06-22	2010-06-22	



**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

**Sample: 007393**

**Description: AQ-4105 Shower SN: 321737**

**Volume: 10 Unit Volume**

<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting</u>		<u>Method</u>	<u>Date</u>	<u>Date</u>
			<u>Limit</u>	<u>Collected</u>		<u>Analyzed</u>	
Flow Rate	2.1	GPM	NA		(None)	2010-06-14	2010-06-14
Pressure (psi)	80	psi	NA		(None)	2010-06-14	2010-06-14
Temperature (wc)	39.1	°C	NA		EPA 150.1	2010-06-14	2010-06-14

Rated Service Flow

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

**Sample: 007394**

**Description: AQ-4105 Shower SN: 321793**

**Volume: 10 Unit Volume**

<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting</u>		<u>Method</u>	<u>Date</u>	<u>Date</u>
			<u>Limit</u>	<u>Collected</u>		<u>Analyzed</u>	
Flow Rate	2.2	GPM	NA		(None)	2010-06-14	2010-06-14
Pressure (psi)	80	psi	NA		(None)	2010-06-14	2010-06-14
Temperature (wc)	39.1	°C	NA		EPA 150.1	2010-06-14	2010-06-14

Rated Service Flow

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

**Sample: 007338**

**Description: Influent**

**Volume: 1000 Gallons**

<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting</u>		<u>Method</u>	<u>Date</u>	<u>Date</u>
			<u>Limit</u>	<u>Collected</u>		<u>Analyzed</u>	
Chlorine	2.01	mg/L	0.01		SM 4500-CL-F	2010-06-22	2010-06-22
pH (wc)	7.15	(None)	NA		EPA 150.1	2010-06-22	2010-06-22
Pressure (psi)	80	psi	NA		(None)	2010-06-22	2010-06-22
Temperature (wc)	38.3	°C	NA		EPA 150.1	2010-06-22	2010-06-22
Total Dissolved Solids (wc)	299	mg/L	10		EPA 160.1	2010-06-22	2010-06-24
Total Organic Carbon (wc)	3.39	mg/L	0.5		SM 5310C	2010-06-22	2010-06-28
Turbidity (wc)	<1.0	NTU	1.0		EPA 180.1	2010-06-22	2010-06-22

TOC and TDS were collected at the 10 Unit Volume sample point.



**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

**Sample: 007350**

**Description: AQ-4100 Shower SN: 247915**

**Volume: 1000 Gallons**

<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting</u>		<u>Date</u>	
			<u>Limit</u>	<u>Method</u>	<u>Collected</u>	<u>Analyzed</u>
Chlorine	0.14	mg/L	0.01	SM 4500-CL-F	2010-06-22	2010-06-22
Chlorine % Red	93	(None)	NA	SM 4500-CL-F	2010-06-22	2010-06-22
Flow Rate	2.5	GPM	NA	(None)	2010-06-22	2010-06-22

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

**Sample: 007351**

**Description: AQ-4100 Shower SN: 247913**

**Volume: 1000 Gallons**

<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting</u>		<u>Date</u>	
			<u>Limit</u>	<u>Method</u>	<u>Collected</u>	<u>Analyzed</u>
Chlorine	0.09	mg/L	0.01	SM 4500-CL-F	2010-06-22	2010-06-22
Chlorine % Red	96	(None)	NA	SM 4500-CL-F	2010-06-22	2010-06-22
Flow Rate	2.4	GPM	NA	(None)	2010-06-22	2010-06-22

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

**Sample: 007339**

**Description: Influent**

**Volume: 2000 Gallons**

<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting</u>		<u>Date</u>	
			<u>Limit</u>	<u>Method</u>	<u>Collected</u>	<u>Analyzed</u>
Chlorine	1.79 <sup>20</sup>	mg/L	0.01	SM 4500-CL-F	2010-06-23	2010-06-23
pH (wc)	7.20	(None)	NA	EPA 150.1	2010-06-23	2010-06-23
Pressure (psi)	80	psi	NA	(None)	2010-06-23	2010-06-23
Temperature (wc)	41.2	°C	NA	EPA 150.1	2010-06-23	2010-06-23
Total Dissolved Solids (wc)	319	mg/L	10	EPA 160.1	2010-06-23	2010-06-30
Total Organic Carbon (wc)	3.81	mg/L	0.5	SM 5310C	2010-06-23	2010-06-25
Turbidity (wc)	<1.0	NTU	1.0	EPA 180.1	2010-06-23	2010-06-23

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**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007352</b>		<b>Description: AQ-4100 Shower SN: 247915</b>			<b>Volume: 2000 Gallons</b>	
<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
Chlorine	0.02	mg/L	0.01	SM 4500-CL-F	2010-06-23	2010-06-23
Chlorine % Red	99	(None)	NA	SM 4500-CL-F	2010-06-23	2010-06-23
Flow Rate	2.6	GPM	NA	(None)	2010-06-23	2010-06-23

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007353</b>		<b>Description: AQ-4100 Shower SN: 247913</b>			<b>Volume: 2000 Gallons</b>	
<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
Chlorine	0.08	mg/L	0.01	SM 4500-CL-F	2010-06-23	2010-06-23
Chlorine % Red	96	(None)	NA	SM 4500-CL-F	2010-06-23	2010-06-23
Flow Rate	2.4	GPM	NA	(None)	2010-06-23	2010-06-23

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007340</b>		<b>Description: Influent</b>			<b>Volume: 3000 Gallons</b>	
<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
Chlorine	1.91 <sup>18</sup>	mg/L	0.01	SM 4500-CL-F	2010-06-24	2010-06-24
pH (wc)	7.23	(None)	NA	EPA 150.1	2010-06-24	2010-06-24
Pressure (psi)	80	psi	NA	(None)	2010-06-24	2010-06-24
Temperature (wc)	40.0	°C	NA	EPA 150.1	2010-06-24	2010-06-24
Total Dissolved Solids (wc)	342	mg/L	10	EPA 160.1	2010-06-24	2010-06-30
Total Organic Carbon (wc)	3.95	mg/L	0.5	SM 5310C	2010-06-24	2010-06-25
Turbidity (wc)	<1.0	NTU	1.0	EPA 180.1	2010-06-24	2010-06-24



**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

**Sample: 007354**

**Description: AQ-4100 Shower SN: 247915**

**Volume: 3000 Gallons**

<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting</u>		<u>Method</u>	<u>Date</u>	
			<u>Limit</u>			<u>Collected</u>	<u>Analyzed</u>
Chlorine	0.18 <sup>18</sup>	mg/L	0.01		SM 4500-CL-F	2010-06-24	2010-06-24
Chlorine % Red	91	(None)	NA		SM 4500-CL-F	2010-06-24	2010-07-13
Flow Rate	2.6	GPM	NA		(None)	2010-06-24	2010-06-24

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

**Sample: 007355**

**Description: AQ-4100 Shower SN: 247913**

**Volume: 3000 Gallons**

<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting</u>		<u>Method</u>	<u>Date</u>	
			<u>Limit</u>			<u>Collected</u>	<u>Analyzed</u>
Chlorine	0.21 <sup>18</sup>	mg/L	0.01		SM 4500-CL-F	2010-06-24	2010-06-24
Chlorine % Red	89	(None)	NA		SM 4500-CL-F	2010-06-24	2010-07-13
Flow Rate	2.4	GPM	NA		(None)	2010-06-24	2010-06-24

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

**Sample: 007341**

**Description: Influent**

**Volume: 4000 Gallons**

<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting</u>		<u>Method</u>	<u>Date</u>	
			<u>Limit</u>			<u>Collected</u>	<u>Analyzed</u>
Chlorine	1.88 <sup>18</sup>	mg/L	0.01		SM 4500-CL-F	2010-06-25	2010-06-25
pH (wc)	7.21	(None)	NA		EPA 150.1	2010-06-25	2010-06-25
Pressure (psi)	80	psi	NA		(None)	2010-06-25	2010-06-25
Temperature (wc)	39.2	°C	NA		EPA 150.1	2010-06-25	2010-06-25
Total Dissolved Solids (wc)	338	mg/L	10		EPA 160.1	2010-06-25	2010-06-30
Total Organic Carbon (wc)	3.79	mg/L	0.5		SM 5310C	2010-06-25	2010-06-25
Turbidity (wc)	<1.0	NTU	1.0		EPA 180.1	2010-06-25	2010-06-25



**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

**Sample: 007356**

**Description: AQ-4100 Shower SN: 247915**

**Volume: 4000 Gallons**

<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting</u>		<u>Method</u>	<u>Date</u>	
			<u>Limit</u>			<u>Collected</u>	<u>Analyzed</u>
Chlorine	0.28 <sup>18</sup>	mg/L	0.01		SM 4500-CL-F	2010-06-25	2010-06-25
Chlorine % Red	85	%	NA		SM 4500-CL-F	2010-06-25	2010-07-13
Flow Rate	2.6	GPM	NA		(None)	2010-06-25	2010-06-25

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

**Sample: 007357**

**Description: AQ-4100 Shower SN: 247913**

**Volume: 4000 Gallons**

<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting</u>		<u>Method</u>	<u>Date</u>	
			<u>Limit</u>			<u>Collected</u>	<u>Analyzed</u>
Chlorine	0.17 <sup>18</sup>	mg/L	0.01		SM 4500-CL-F	2010-06-25	2010-06-25
Chlorine % Red	91	%	NA		SM 4500-CL-F	2010-06-25	2010-07-13
Flow Rate	2.4	GPM	NA		(None)	2010-06-25	2010-06-25

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

**Sample: 007342**

**Description: Influent**

**Volume: 5000 Gallons**

<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting</u>		<u>Method</u>	<u>Date</u>	
			<u>Limit</u>			<u>Collected</u>	<u>Analyzed</u>
Chlorine	2.03	mg/L	0.01		SM 4500-CL-F	2010-06-28	2010-06-28
pH (wc)	7.09	(None)	NA		EPA 150.1	2010-06-28	2010-06-28
Pressure (psi)	80	psi	NA		(None)	2010-06-28	2010-06-28
Temperature (wc)	39.1	°C	NA		EPA 150.1	2010-06-28	2010-06-28
Total Dissolved Solids (wc)	357	mg/L	10		EPA 160.1	2010-06-28	2010-06-30
Total Organic Carbon (wc)	3.61	mg/L	0.5		SM 5310C	2010-06-28	2010-06-30
Turbidity (wc)	<1.0	NTU	1.0		EPA 180.1	2010-06-28	2010-06-28





**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007358</b>	<b>Description: AQ-4100 Shower SN: 247915</b>	<b>Volume: 5000 Gallons</b>
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<u>Compound</u>	<u>Results</u>	<u>Units</u>	Reporting	<u>Method</u>	Date	Date
			<u>Limit</u>		<u>Collected</u>	<u>Analyzed</u>
Chlorine	0.36	mg/L	0.01	SM 4500-CL-F	2010-06-28	2010-06-28
Chlorine % Red	82	%	NA	SM 4500-CL-F	2010-06-28	2010-07-06
Flow Rate	2.6	GPM	NA	(None)	2010-06-28	2010-06-28

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007359</b>	<b>Description: AQ-4100 Shower SN: 247913</b>	<b>Volume: 5000 Gallons</b>
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<u>Compound</u>	<u>Results</u>	<u>Units</u>	Reporting	<u>Method</u>	Date	Date
			<u>Limit</u>		<u>Collected</u>	<u>Analyzed</u>
Chlorine	0.38	mg/L	0.01	SM 4500-CL-F	2010-06-28	2010-06-28
Chlorine % Red	81	%	NA	SM 4500-CL-F	2010-06-28	2010-07-06
Flow Rate	2.4	GPM	NA	(None)	2010-06-28	2010-06-28

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007343</b>	<b>Description: Influent</b>	<b>Volume: 6000 Gallons</b>
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<u>Compound</u>	<u>Results</u>	<u>Units</u>	Reporting	<u>Method</u>	Date	Date
			<u>Limit</u>		<u>Collected</u>	<u>Analyzed</u>
Chlorine	2.03	mg/L	0.01	SM 4500-CL-F	2010-06-29	2010-06-29
pH (wc)	7.22	(None)	NA	EPA 150.1	2010-06-29	2010-06-29
Pressure (psi)	80	psi	NA	(None)	2010-06-29	2010-06-29
Temperature (wc)	40.0	°C	NA	EPA 150.1	2010-06-29	2010-06-29
Total Dissolved Solids (wc)	359	mg/L	10	EPA 160.1	2010-06-29	2010-06-30
Total Organic Carbon (wc)	3.75	mg/L	0.5	SM 5310C	2010-06-29	2010-06-30
Turbidity (wc)	<1.0	NTU	1.0	EPA 180.1	2010-06-29	2010-06-29



**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007360</b>		<b>Description: AQ-4100 Shower SN: 247915</b>			<b>Volume: 6000 Gallons</b>	
<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
Chlorine	0.19	mg/L	0.01	SM 4500-CL-F	2010-06-29	2010-06-29
Chlorine % Red	91	%	NA	SM 4500-CL-F	2010-06-29	2010-07-06
Flow Rate	2.6	GPM	NA	(None)	2010-06-29	2010-06-29

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007361</b>		<b>Description: AQ-4100 Shower SN: 247913</b>			<b>Volume: 6000 Gallons</b>	
<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
Chlorine	0.26	mg/L	0.01	SM 4500-CL-F	2010-06-29	2010-06-29
Chlorine % Red	87	%	NA	SM 4500-CL-F	2010-06-29	2010-07-06
Flow Rate	2.4	GPM	NA	(None)	2010-06-29	2010-06-29

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007344</b>		<b>Description: Influent</b>			<b>Volume: 7000 Gallons</b>	
<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
Chlorine	2.06	mg/L	0.01	SM 4500-CL-F	2010-06-29	2010-06-29
pH (wc)	7.31	(None)	NA	EPA 150.1	2010-06-29	2010-06-29
Pressure (psi)	80	psi	NA	(None)	2010-06-29	2010-06-29
Temperature (wc)	40.8	°C	NA	EPA 150.1	2010-06-29	2010-06-29
Total Dissolved Solids (wc)	366	mg/L	10	EPA 160.1	2010-06-29	2010-06-30
Total Organic Carbon (wc)	3.78	mg/L	0.5	SM 5310C	2010-06-29	2010-06-30
Turbidity (wc)	<1.0	NTU	1.0	EPA 180.1	2010-06-29	2010-06-29



**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007362</b>	<b>Description: AQ-4100 Shower SN: 247915</b>	<b>Volume: 7000 Gallons</b>
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<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date</u>	<u>Date</u>
					<u>Collected</u>	<u>Analyzed</u>
Chlorine	0.18	mg/L	0.01	SM 4500-CL-F	2010-06-29	2010-06-29
Chlorine % Red	91	%	NA	SM 4500-CL-F	2010-06-29	2010-07-06
Flow Rate	2.6	GPM	NA	(None)	2010-06-29	2010-06-29

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007363</b>	<b>Description: AQ-4100 Shower SN: 247913</b>	<b>Volume: 7000 Gallons</b>
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<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date</u>	<u>Date</u>
					<u>Collected</u>	<u>Analyzed</u>
Chlorine	0.12 <sup>18</sup>	mg/L	0.01	SM 4500-CL-F	2010-06-30	2010-06-30
Chlorine % Red	94	%	NA	SM 4500-CL-F	2010-06-30	2010-07-13
Flow Rate	2.4	GPM	NA	(None)	2010-06-30	2010-06-30

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007345</b>	<b>Description: Influent</b>	<b>Volume: 8000 Gallons</b>
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<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date</u>	<u>Date</u>
					<u>Collected</u>	<u>Analyzed</u>
Chlorine	1.93 <sup>18</sup>	mg/L	0.01	SM 4500-CL-F	2010-06-30	2010-06-30
pH (wc)	7.15	(None)	NA	EPA 150.1	2010-06-30	2010-06-30
Pressure (psi)	80	psi	NA	(None)	2010-06-30	2010-06-30
Temperature (wc)	41.6	°C	NA	EPA 150.1	2010-06-30	2010-06-30
Total Dissolved Solids (wc)	366	mg/L	10	EPA 160.1	2010-06-30	2010-06-30
Total Organic Carbon (wc)	3.78	mg/L	0.5	SM 5310C	2010-06-30	2010-06-30
Turbidity (wc)	<1.0	NTU	1.0	EPA 180.1	2010-06-30	2010-07-01

TOC and TDS were collected at the 7000 gallon sample point.



**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007364</b>		<b>Description: AQ-4100 Shower SN: 247915</b>			<b>Volume: 8000 Gallons</b>	
<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
Chlorine	0.19 <sup>18</sup>	mg/L	0.01	SM 4500-CL-F	2010-06-30	2010-06-30
Chlorine % Red	90	%	NA	SM 4500-CL-F	2010-06-30	2010-07-13
Flow Rate	2.6	GPM	NA	(None)	2010-06-30	2010-06-30

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007365</b>		<b>Description: AQ-4100 Shower SN: 247913</b>			<b>Volume: 8000 Gallons</b>	
<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
Chlorine	0.13	mg/L	0.01	SM 4500-CL-F	2010-06-30	2010-06-30
Chlorine % Red	93	%	NA	SM 4500-CL-F	2010-06-30	2010-07-06
Flow Rate	2.4	GPM	NA	(None)	2010-06-30	2010-06-30

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007346</b>		<b>Description: Influent</b>			<b>Volume: 9000 Gallons</b>	
<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
Chlorine	1.90	mg/L	0.01	SM 4500-CL-F	2010-07-01	2010-07-01
pH (wc)	7.13	(None)	NA	EPA 150.1	2010-07-01	2010-07-01
Pressure (psi)	80	psi	NA	(None)	2010-07-01	2010-07-01
Temperature (wc)	38.3	°C	NA	EPA 150.1	2010-07-01	2010-07-01
Total Dissolved Solids (wc)	365	mg/L	10	EPA 160.1	2010-07-01	2010-07-08
Total Organic Carbon (wc)	3.79	mg/L	0.5	SM 5310C	2010-07-01	2010-07-07
Turbidity (wc)	<1.0	NTU	1.0	EPA 180.1	2010-07-01	2010-07-01



**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007366</b>	<b>Description: AQ-4100 Shower SN: 247915</b>	<b>Volume: 9000 Gallons</b>
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<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
Chlorine	0.27	mg/L	0.01	SM 4500-CL-F	2010-07-01	2010-07-01
Chlorine % Red	86	%	NA	SM 4500-CL-F	2010-07-01	2010-07-06
Flow Rate	2.6	GPM	NA	(None)	2010-07-01	2010-07-01

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007367</b>	<b>Description: AQ-4100 Shower SN: 247913</b>	<b>Volume: 9000 Gallons</b>
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<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
Chlorine	0.36	mg/L	0.01	SM 4500-CL-F	2010-07-01	2010-07-01
Chlorine % Red	81	%	NA	SM 4500-CL-F	2010-07-01	2010-07-06
Flow Rate	2.4	GPM	NA	(None)	2010-07-01	2010-07-01

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007347</b>	<b>Description: Influent</b>	<b>Volume: 10000 Gallons</b>
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<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
Chlorine	2.02 <sup>18</sup>	mg/L	0.01	SM 4500-CL-F	2010-07-02	2010-07-02
pH (wc)	7.10	(None)	NA	EPA 150.1	2010-07-02	2010-07-02
Pressure (psi)	80	psi	NA	(None)	2010-07-02	2010-07-02
Temperature (wc)	39.6	°C	NA	EPA 150.1	2010-07-02	2010-07-02
Total Dissolved Solids (wc)	375	mg/L	10	EPA 160.1	2010-07-02	2010-07-08
Total Organic Carbon (wc)	3.71	mg/L	0.5	SM 5310C	2010-07-02	2010-07-07
Turbidity (wc)	<1.0	NTU	1.0	EPA 180.1	2010-07-02	2010-07-02



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**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007368</b>	<b>Description: AQ-4100 Shower SN: 247915</b>	<b>Volume: 10000 Gallons</b>
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<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
Chlorine	0.23 <sup>18</sup>	mg/L	0.01	SM 4500-CL-F	2010-07-02	2010-07-02
Chlorine % Red	89	%	NA	SM 4500-CL-F	2010-07-02	2010-07-13
Flow Rate	2.6	GPM	NA	(None)	2010-07-02	2010-07-02

**NSF/ANSI Standard 177- 2004 Chlorine Reduction**

<b>Sample: 007369</b>	<b>Description: AQ-4100 Shower SN: 247913</b>	<b>Volume: 10000 Gallons</b>
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<u>Compound</u>	<u>Results</u>	<u>Units</u>	<u>Reporting Limit</u>	<u>Method</u>	<u>Date Collected</u>	<u>Date Analyzed</u>
Chlorine	0.26 <sup>18</sup>	mg/L	0.01	SM 4500-CL-F	2010-07-02	2010-07-02
Chlorine % Red	87	%	NA	SM 4500-CL-F	2010-07-02	2010-07-13
Flow Rate	2.4	GPM	NA	(None)	2010-07-02	2010-07-02



**PERFORMANCE SUMMARY**

Contaminant	Chlorine	
Number of Systems Tested	4	
Rated Claim	10000	GALLONS
Performance Indicating Device (PID)	No	
Total Test Volume	10000	GALLONS
Percentage of Rated Claim	100	PERCENT
Manufacturers Rated Flow Rate	2.5	GPM
Average Flow Rate (all devices)	2.5	GPM
Average Test Influent	1.95	mg/L
Average Effluent (all devices)	0.19	mg/L
Maximum Allowable Effluent Level	1	mg/L
Failure Point - AQ-4100 Shower SN: 247915	Didn't Fail	GALLONS
Failure Point - AQ-4100 Shower SN: 247913	Didn't Fail	GALLONS
Failure Point - AQ-4105 Shower SN: 321737	Didn't Fail	GALLONS
Failure Point - AQ-4105 Shower SN: 321793	Didn't Fail	GALLONS

*This report has been reviewed for technical accuracy and completeness. The analyses were performed using EPA or other approved methodologies and the results were reported on an "as received" basis unless otherwise noted. These results relate only to the items tested.*

Revisions:

Data qualifying flags were added to necessary samples.

NA = Not Applicable

su - Standard Units

UV - Unit Volume

mg/L = milligrams per Liter

ug/L = micrograms per Liter

GPM = Gallons Per Minute

NTU = Nephelometric Turbidity Unit

(wc) = Water Characteristics are for monitoring purposes only, quality control samples may or may not have been performed.

18 - Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low by less than 8%.

20 - Influent spike level was outside recommended limits.

22 - Water characteristic value is outside the specified protocol limits.

END OF DOCUMENT

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