Underwriters Laboratories Inc.®

**Northbrook Division**
333 Pfingsten Road
Northbrook, IL 60062-2096 USA
www.ul.com
tel: 1 847 272 8800

January 22, 2004

Sun Water Systems
Attn: Mr. Charles Strand
325 N. Beach Street
Fort Worth, TX 76111

Reference: Classification of Drinking Water Systems, Project 03NK25243, MH29286

Subject: Data for Chlorine Reduction Claim under ANSI/NSF Standard 42 - 2003

Dear Charles:

Attached to this letter is the data from the Chlorine Reduction test run using the Rhino EQ-300 filtration unit. Pace Analytical completed the testing for this portion of the project.

The data indicates that the Rhino EQ-300 drinking water system meets the requirements for Chlorine Reduction under ANSI/NSF Standard 42 - 2003.

If you have any questions about the data, please feel free to contact us. You will be receiving a complete UL report when all of the testing has been completed.

Sincerely,

Kenneth Jenke
Senior Project Chemist
Drinking Water Treatment Units
Environmental Sciences

Reviewed by,

Thomas Bowman
Section Manager

Underwriters Laboratories Inc.®

**Northbrook Division**
333 Pfingsten Road
Northbrook, IL 60062-2096 USA
www.ul.com
tel: 1 847 272 8800

# ANSI/NSF Standard 42 Chlorine Reduction

**Project Number:** **03NK25243**

**Applicant:** Sun Water Systems
325 N. Beach Street
Fort Worth, TX 76111

**Test Unit Description:** Rhino EQ-300
**Date Unit Received:** August 2003
Filter Capacity: 300,000 gallons
Rated Flow Rate: 7.0 gpm
Test Conducted: Chlorine Reduction
ANSI/NSF Standard 42 - 2003
Maximum Allowable Effluent: 0.5 mg/L
Actual Maximum Effluent: <0.01 mg/L
Verdict: **PASS**

| Lab Sample Number | Sample Point | Test Unit # | Chlorine Concentration (mg/L) | Percent Reduction | Flow Rate (GPM) | Date Analyzed |
|---|---|---|---|---|---|---|
| 40020301 | Initial | Influent | 2.0 | | | 9/12/03 |
| 40020302 | Initial | 4002-1 | <0.01 | 99 | 7.0 | 9/12/03 |
| 40020303 | 30,000 gal | Influent | 2.0 | | | 9/20/03 |
| 40020304 | 30,000 gal | 4002-1 | <0.01 | 99 | 7.0 | 9/22/03 |
| 40020305 | 60,000 gal | Influent | 2.0 | | | 9/30/03 |
| 40020306 | 60,000 gal | 4002-1 | <0.01 | 99 | 7.1 | 9/30/03 |
| 40020307 | 90,000 gal | Influent | 2.1 | | | 10/09/03 |
| 40020308 | 90,000 gal | 4002-1 | <0.01 | 99 | 7.0 | 10/09/03 |
| 40020309 | 120,000 gal | Influent | 2.0 | | | 10/18/03 |
| 40020310 | 120,000 gal | 4002-1 | <0.01 | 99 | 7.0 | 10/18/03 |
| 40020311 | 150,000 gal | Influent | 2.2 | | | 10/27/03 |
| 40020312 | 150,000 gal | 4002-1 | <0.01 | 99 | 7.0 | 10/27/03 |
| 40020313 | 180,000 gal | Influent | 2.1 | | | 11/04/03 |
| 40020314 | 180,000 gal | 4002-1 | <0.01 | 99 | 7.0 | 11/04/03 |
| 40020315 | 210,000 gal | Influent | 2.1 | | | 11/13/03 |
| 40020316 | 210,000 gal | 4002-1 | <0.01 | 99 | 7.0 | 11/13/03 |

Underwriters Laboratories Inc.®

**Northbrook Division**
333 Pfingsten Road
Northbrook, IL 60062-2096 USA
www.ul.com
tel: 1 847 272 8800

| Lab Sample Number | Sample Point | Test Unit # | Chlorine Concentration (mg/L) | Percent Reduction | Flow Rate (GPM) | Date Analyzed |
|---|---|---|---|---|---|---|
| 40020317 | 240,000 gal | Influent | 1.9 | | | 11/23/03 |
| 40020318 | 240,000 gal | 4002-1 | <0.01 | 99 | 7.0 | 11/23/03 |
| 40020319 | 270,000 gal | Influent | 2.1 | | | 12/01/03 |
| 40020320 | 270,000 gal | 4002-1 | <0.01 | 99 | 7.0 | 12/01/03 |
| 40020321 | 300,000 gal | Influent | 2.0 | | | 12/10/03 |
| 40020322 | 300,000 gal | 4002-1 | <0.01 | 99 | 7.0 | 12/10/03 |

Average Chlorine Influent Level: 2.0mg/L
Average Chlorine Effluent Level: 4002-1: <0.01 mg/L
Average Percent Reduction: 4002-1: 99
Average Flow Rate at 60 PSIG: 4002-1: 7.0 gpm
Initial Dynamic Pressure: 60 psig

**General Test Water Characteristics**

| Parameters | Specifications | Results |
|---|---|---|
| pH | 7.5 ± 0.5 | 7.1 |
| Temperature | 20 ± 3°C | 18°C |
| Total Dissolved Solids | 200-500 mg/L | 330 mg/L |
| Turbidity | < 1 NTU | < 1 NTU |
| Total Organic Carbon | ≥ 1.0 mg/L | 1.4 mg/L |

Underwriters Laboratories Inc.®

**Northbrook Division**
333 Pfingsten Road
Northbrook, IL 60062-2096 USA
www.ul.com
tel: 1 847 272 8800

Test completed using 10 minute on, 10 minute off cycle 16 hours/day

Chlorine analyses completed using SM4500Cl - F

Pace Analytical Test Unit 4002-1 = UL Sample Number 57451

All work performed at Pace Analytical Services, 301 W. County Road E-2, St.Paul, MN 55112

Reviewed By: _____ Date: 1/22/04
Kenneth Jenke
Senior Project Chemist