

**Savings for The Week: \$877.26**

**Costs for the Week: \$2,960.17**

**Four Stage Washer**  
**Feb 23, 2009 to Mar 01, 2009**

### Analyst Comments

- (1) Water use was high on Monday and Tuesday. Heavy water use occurred on second shift.
- (2) Stage #1 bottom spray pressure was low early in the week, then the Maintenance Department made adjustments to increase.
- (3) All other process parameters show good control for the week.

### Usages for the Week

Parameter	02/23	02/24	02/25	02/26	02/27	02/28	03/01	Total
Operating Hours	16.33	20.67	20.17	19.83	2.83	0.00	0.00	79.83
Finishing - Natural Gas Therms	567.00	631.00	624.00	614.00	95.00	0.00	0.00	2,531.00
Stage 1 - Cleaner gallons	4.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00
Total Plant - Water gallons	2,561.00	2,544.00	375.00	277.00	147.00	0.00	0.00	5,904.00
Washer - Electricity kW	3,773,632.00	4,905,536.00	4,831,552.00	4,758,016.00	664,000.00	0.00	0.00	18,932,736.00

### Cost for the Week

Parameter	02/23	02/24	02/25	02/26	02/27	02/28	03/01	Total
Finishing - Natural Gas Therms	\$567.00	\$631.00	\$624.00	\$614.00	\$95.00	\$0.00	\$0.00	\$2,531.00
Stage 1 - Cleaner gallons	\$68.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$68.00
Total Plant - Water gallons	\$26.63	\$26.46	\$3.90	\$2.88	\$1.53	\$0.00	\$0.00	\$61.40
Washer - Electricity kW	\$59.75	\$77.67	\$76.50	\$75.34	\$10.51	\$0.00	\$0.00	\$299.77
<b>Daily Total</b>	<b>\$721.38</b>	<b>\$735.13</b>	<b>\$704.40</b>	<b>\$692.22</b>	<b>\$107.04</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$2,960.17</b>

### Cost per Hour

Parameter	02/23	02/24	02/25	02/26	02/27	02/28	03/01
Finishing - Natural Gas Therm	\$34.72	\$30.53	\$30.94	\$30.96	\$33.57	\$0.00	\$0.00
Stage 1 - Cleaner Gal	\$4.16	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Plant - Water Gal	\$1.63	\$1.28	\$0.19	\$0.15	\$0.54	\$0.00	\$0.00
Washer - Electricity kW	\$3.66	\$3.76	\$3.79	\$3.80	\$3.71	\$0.00	\$0.00

## Benchmarks

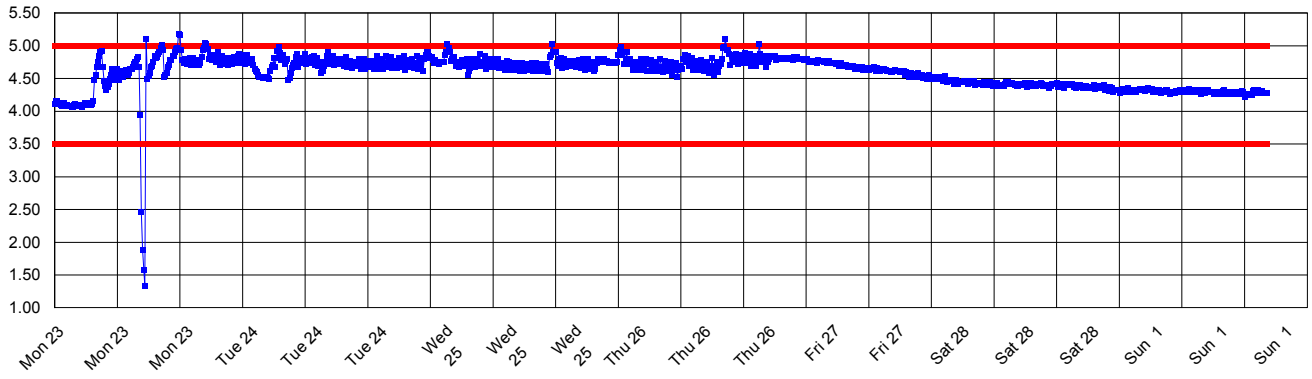
Benchmark	Description	Cost per Hour
Finishing - Natural Gas \$/hr	Year 2008	\$ 34.8800
Stage 1 - Cleaner \$/hr	Year 2008	\$ 7.9900
Total Plant - Water \$/hr	Year 2008	\$ 1.4700
Washer - Electricity \$/hr	Year 2008	\$ 3.7300

## Cost Inputs

Input	Unit	Cost
Finishing - Natural Gas	Therms	\$ 1.0000000000
Stage 1 - Cleaner	gallons	\$ 17.0000000000
Total Plant - Water	gallons	\$ 0.0104000000
Washer - Electricity	kW	\$ 0.0000158333

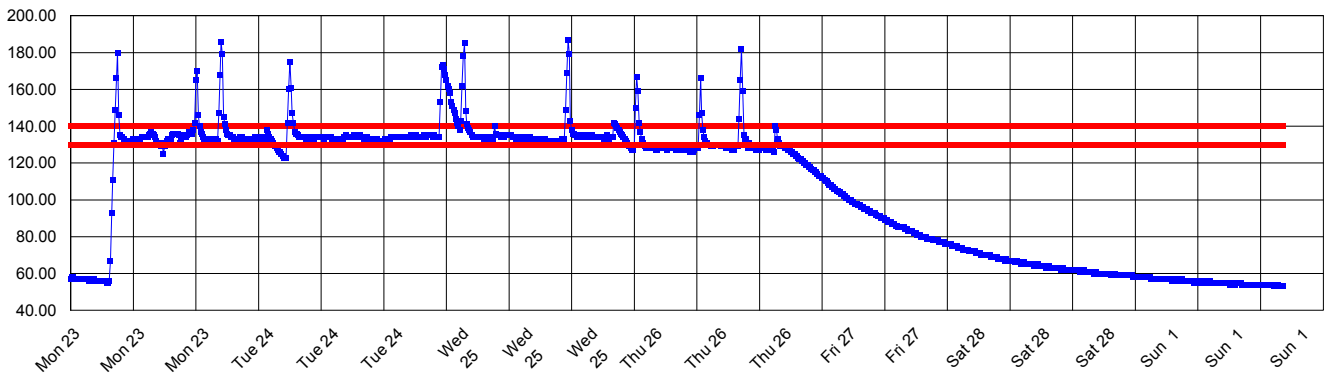
Four Stage Washer

Stage 1 - Cleaner - % Concentration



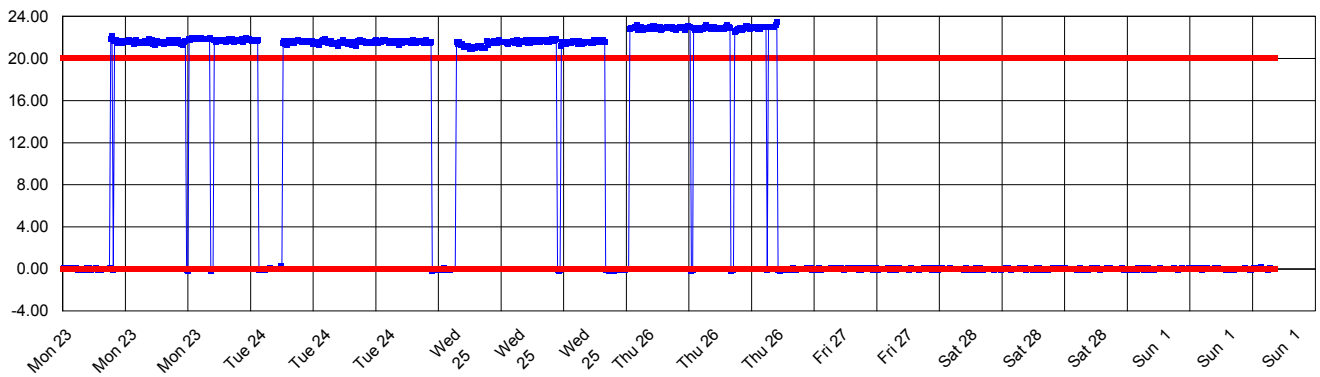
Four Stage Washer

Stage 1 - Cleaner - Temperature



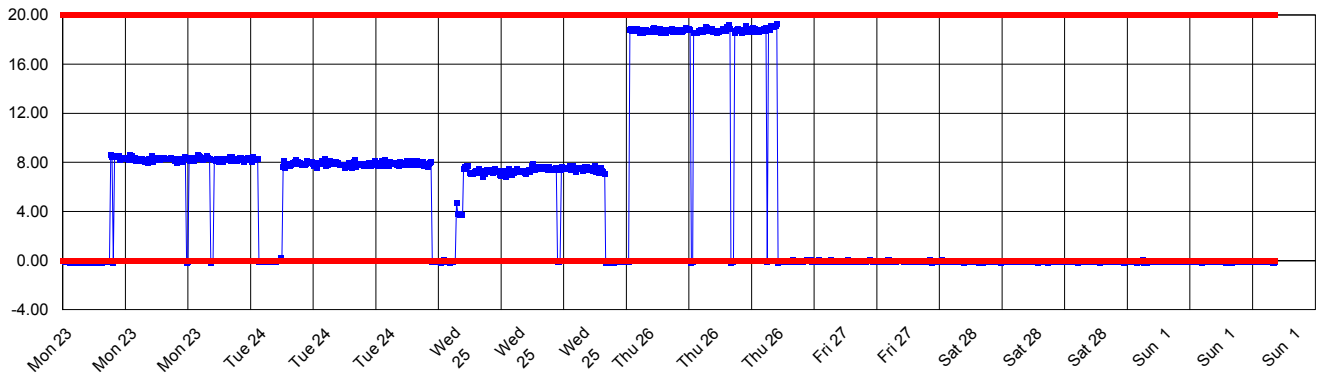
Four Stage Washer

Stage 1 - Cleaner - Top Spray Pressure



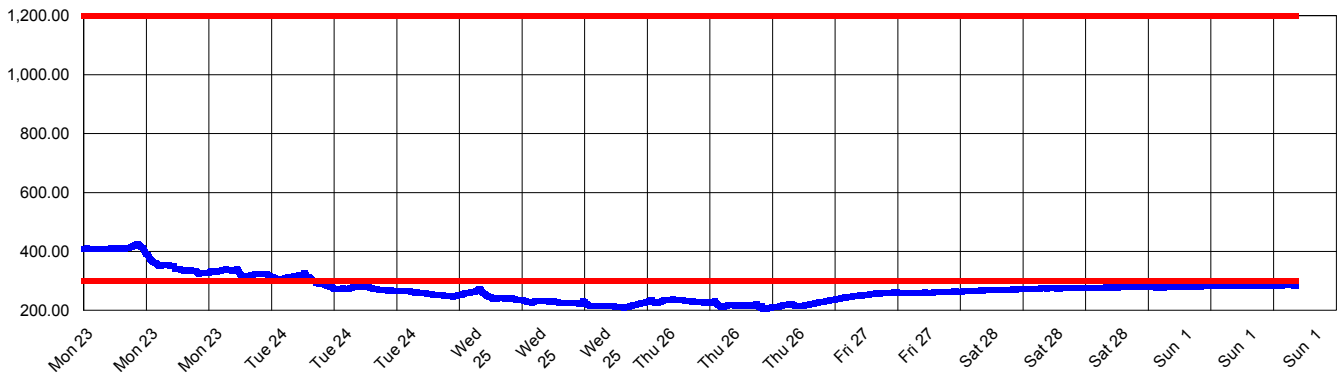
Four Stage Washer

Stage 1 - Cleaner - Bottom Spray Pressure



Four Stage Washer

Stage 4 - Seal Rinse - Conductivity



Four Stage Washer

Stage 4 - Seal Rinse - Temperature

