

PUMP STATION 196

| Aug-22 | | PS 196 | |
|---------|----|------------------|-----------------|
| | | METER READING | 24 HOUR FLOW |
| MON | 1 | 37745850 | 0.151850 |
| TUE | 2 | 37897700 | 0.143760 |
| WED | 3 | 38041460 | 0.150700 |
| THU | 4 | 38192160 | 0.151620 |
| FRI | 5 | 38343780 | 0.156820 |
| SAT | 6 | 38500600 | 0.170560 |
| SUN | 7 | 38671160 | 0.166130 |
| MON | 8 | 38837290 | 0.157050 |
| TUE | 9 | 38994340 | 0.146820 |
| WED | 10 | 39141160 | 0.148260 |
| THU | 11 | 39289420 | 0.151200 |
| FRI | 12 | 39440620 | 0.158260 |
| SAT | 13 | 39598880 | 0.171500 |
| SUN | 14 | 39770380 | 0.162220 |
| MON | 15 | 39932600 | 0.153380 |
| TUE | 16 | 40085980 | 0.142470 |
| WED | 17 | 40228450 | 0.138860 |
| THU | 18 | 40367310 | 0.148340 |
| FRI | 19 | 40515650 | 0.151830 |
| SAT | 20 | 40667480 | 0.157870 |
| SUN | 21 | 40825350 | 0.162680 |
| MON | 22 | 40988030 | 0.151250 |
| TUE | 23 | 41139280 | 0.139280 |
| WED | 24 | 41278560 | 0.138220 |
| THU | 25 | 41416780 | 0.138140 |
| FRI | 26 | 41554920 | 0.146670 |
| SAT | 27 | 41701590 | 0.157750 |
| SUN | 28 | 41859340 | 0.154260 |
| MON | 29 | 42013600 | 0.139460 |
| TUE | 30 | 42153060 | 0.137340 |
| WED | 31 | 42290400 | 0.133360 |
| TOTAL | | 42423760 | 4.677910 |
| COUNT | | | 31 |
| AVERAGE | | | 0.150900 |
| MINIMUM | | | 0.133360 |
| MAXIMUM | | | 0.171500 |

Monthly Operations Report: July 2022

Site: LEWES WWTP

| FINAL EFFLUENT OUTFALL 001 | | | | | | | | | | | | | | | | | |
|----------------------------|------|---------|-------|--------|-------|--------|-----------|---------|------|---------|-------|--------------|------|-------------------|-------|------|------|
| DATE | DAY | Flow | BOD | | TSS | | Enteroc. | Total P | | Total N | | Ammonia as N | | Nitrite + Nitrate | | TKN | |
| | | MGD | mg/L | lbs | mg/L | lbs | col/100ml | mg/L | lbs | mg/L | lbs | mg/L | lbs | mg/L | lbs | mg/L | lbs |
| 1 | Fri. | 0.851 | | | | | | | | | | | | | | | |
| 2 | Sat. | 0.892 | | | | | | | | | | | | | | | |
| 3 | Sun. | 1.087 | | | | | | | | | | | | | | | |
| 4 | Mon. | 0.887 | | | | | | | | | | | | | | | |
| 5 | Tue. | 0.947 | <2.4 | <19 | 0.5 | 4 | | 1.0 | 7.98 | 5.2 | 41.07 | 0.1 | 1 | 4.6 | 36 | 0.6 | 5 |
| 6 | Wed. | 0.910 | | | | | <1.0 | | | | | | | | | | |
| 7 | Thu. | 0.867 | | | | | | | | | | | | | | | |
| 8 | Fri. | 0.904 | | | | | | | | | | | | | | | |
| 9 | Sat. | 0.188 | | | | | | | | | | | | | | | |
| 10 | Sun. | 1.092 | | | | | | | | | | | | | | | |
| 11 | Mon. | 0.656 | | | | | | | | | | | | | | | |
| 12 | Tue. | 0.753 | <2.4 | <15 | <2.0 | <13 | | | | | | | | | | | |
| 13 | Wed. | 0.762 | | | | | <1.0 | | | | | | | | | | |
| 14 | Thu. | 0.769 | | | | | | | | | | | | | | | |
| 15 | Fri. | 0.738 | | | | | | | | | | | | | | | |
| 16 | Sat. | 0.796 | | | | | | | | | | | | | | | |
| 17 | Sun. | 0.756 | | | | | | | | | | | | | | | |
| 18 | Mon. | 0.782 | | | | | | | | | | | | | | | |
| 19 | Tue. | 0.744 | <2.4 | <15 | 0.7 | 4 | | | | | | | | | | | |
| 20 | Wed. | 0.786 | | | | | <1.0 | | | | | | | | | | |
| 21 | Thu. | 0.792 | | | | | | | | | | | | | | | |
| 22 | Fri. | 0.807 | | | | | | | | | | | | | | | |
| 23 | Sat. | 0.872 | | | | | | | | | | | | | | | |
| 24 | Sun. | 0.757 | | | | | | | | | | | | | | | |
| 25 | Mon. | 0.779 | | | | | | | | | | | | | | | |
| 26 | Tue. | 0.681 | <2.4 | <14 | <0.5 | <3 | | | | | | | | | | | |
| 27 | Wed. | 0.741 | | | | | <1.0 | | | | | | | | | | |
| 28 | Thu. | 0.737 | | | | | | | | | | | | | | | |
| 29 | Fri. | 0.766 | | | | | | | | | | | | | | | |
| 30 | Sat. | 0.744 | | | | | | | | | | | | | | | |
| 31 | Sun. | 0.729 | | | | | | | | | | | | | | | |
| TOTAL | | 24.5720 | | | | | | | | | | | | | | | |
| AVERAGE | | 0.7926 | <2.40 | <15.65 | <0.93 | <5.90 | 1.0 | 1.01 | 7.98 | 5.20 | 41.07 | 0.10 | 0.79 | 4.57 | 36.09 | 0.63 | 4.98 |
| MAXIMUM | | 1.0920 | <2.40 | <19.00 | <2.00 | <12.60 | <1.00 | 1.01 | 7.98 | 5.20 | 41.07 | 0.10 | 0.79 | 4.57 | 36.09 | 0.63 | 4.98 |
| MINIMUM | | 0.1880 | <2.40 | <13.60 | <0.50 | <2.80 | <1.00 | 1.01 | 7.98 | 5.20 | 41.07 | 0.10 | 0.79 | 4.57 | 36.09 | 0.63 | 4.98 |
| Removal (%) | | | 98.9 | | 99.1 | | | | | | | | | | | | |

| INFLUENT | | | | | | |
|-------------|------|---------|-------|-------|-------|-----|
| DATE | DAY | Flow | BOD | | TSS | |
| | | MGD | mg/L | lbs | mg/L | lbs |
| 1 | Fri. | 0.854 | | | | |
| 2 | Sat. | 0.903 | | | | |
| 3 | Sun. | 0.948 | | | | |
| 4 | Mon. | 0.949 | | | | |
| 5 | Tue. | 0.930 | 217.0 | 1683 | 100.0 | 776 |
| 6 | Wed. | 0.847 | | | | |
| 7 | Thu. | 0.877 | | | | |
| 8 | Fri. | 0.823 | | | | |
| 9 | Sat. | 0.804 | | | | |
| 10 | Sun. | 0.797 | | | | |
| 11 | Mon. | 0.762 | | | | |
| 12 | Tue. | 0.729 | | | | |
| 13 | Wed. | 0.732 | | | | |
| 14 | Thu. | 0.731 | | | | |
| 15 | Fri. | 0.764 | | | | |
| 16 | Sat. | 0.767 | | | | |
| 17 | Sun. | 0.782 | | | | |
| 18 | Mon. | 0.738 | | | | |
| 19 | Tue. | 0.732 | | | | |
| 20 | Wed. | 0.720 | | | | |
| 21 | Thu. | 0.747 | | | | |
| 22 | Fri. | 0.787 | | | | |
| 23 | Sat. | 0.793 | | | | |
| 24 | Sun. | 0.788 | | | | |
| 25 | Mon. | 0.755 | | | | |
| 26 | Tue. | 0.723 | | | | |
| 27 | Wed. | 0.726 | | | | |
| 28 | Thu. | 0.740 | | | | |
| 29 | Fri. | 0.777 | | | | |
| 30 | Sat. | 0.773 | | | | |
| 31 | Sun. | 0.771 | | | | |
| TOTAL | | 24.5690 | | | | |
| AVERAGE | | 0.79 | 217 | 1,683 | 100 | 776 |
| MAXIMUM | | 0.95 | 217 | 1,683 | 100 | 776 |
| MINIMUM | | 0.72 | 217 | 1,683 | 100 | 776 |
| Removal (%) | | | | | | |

LEWES WWTF

NUTRIENT OFFSET REPORT 2022

| Month | Days | Average Monthly Flow | Monthly Average TN | Total Monthly TN Discharged | TN Based 16.9 lbs Manure Offset Required | Monthly Average TP | Total Monthly TP Discharged | TP Based 285 lbs Manure Offset Required | Max Manure Equivalent | Poultry Manure Relocated | Poultry Manure Offset Balance |
|---------------------|------|----------------------|--------------------|-----------------------------|--|--------------------|-----------------------------|---|-----------------------|--------------------------|-------------------------------|
| | | MGD | mg/L | lbs | Tons | mg/L | lbs | Tons | Tons | Tons | Tons |
| Carry Over | | | | | | | | | | | 479.43 |
| July | 31 | 0.7926 | 5.20 | 1,065.58 | 9.00 | 1.01 | 206.97 | 29.49 | 29.49 | - | 449.94 |
| August | 31 | 255.5006 | 4.24 | 280,082.21 | - | 0.54 | 35,670.85 | - | - | - | 449.94 |
| September | 30 | - | - | - | - | - | - | - | - | - | - |
| October | 31 | - | - | - | - | - | - | - | - | - | - |
| November | 30 | - | - | - | - | - | - | - | - | - | - |
| December | 31 | - | - | - | - | - | - | - | - | - | - |
| January | 31 | - | - | - | - | - | - | - | - | - | - |
| February | 28 | - | - | - | - | - | - | - | - | - | - |
| March | 31 | - | - | - | - | - | - | - | - | - | - |
| April | 30 | - | - | - | - | - | - | - | - | - | - |
| May | 31 | - | - | - | - | - | - | - | - | - | - |
| June | 30 | - | - | - | - | - | - | - | - | - | - |
| Year Balance | | | | | | | | | | | 449.94 |

Comments:

Authorized Signatory

Date



Lewes BPW WWTP Biweekly InSight Report

Date: 9/7/2022

From: Erin Horocholyn - Suez Water Technologies & Solutions
To: Austin Calaman BPW, Inframark
cc: Matt Stapleford - Suez Water Technologies & Solutions

System Equipment

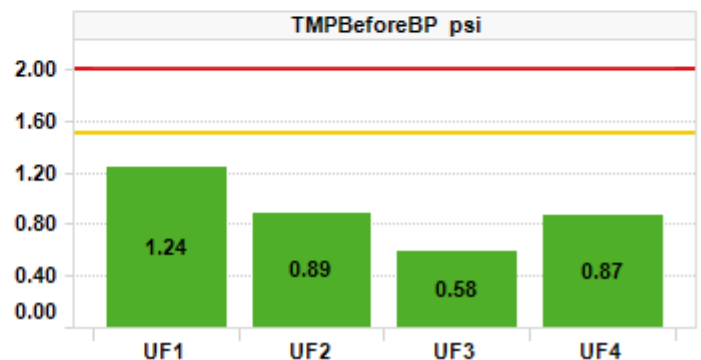
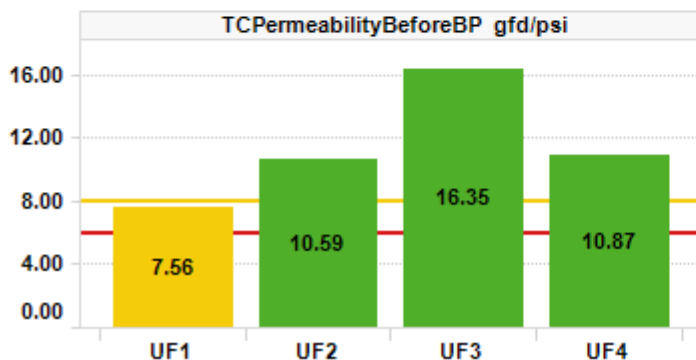
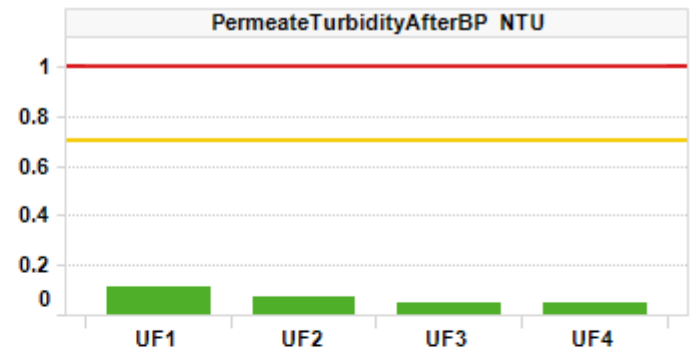
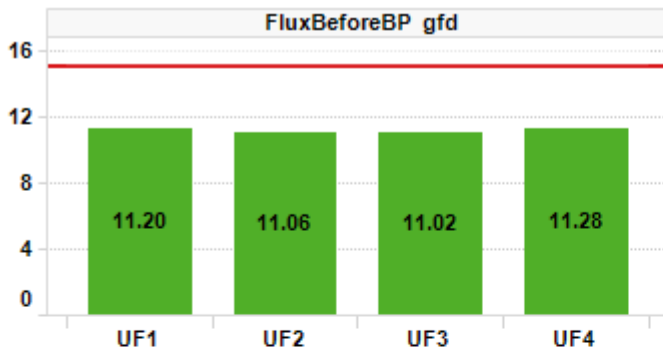
4 × ZW trains, each train consists of 4 - 500D cassettes, 120 modules x 370 sq. ft. per train (surface area 44,400 sq. ft. per train)
Replacement membranes installed Q1 2020 on trains UF3 and UF4

Cleaning Strategy

Recovery cleaning - 2 NaOCl @ 2000 ppm dose/1000 ppm soak per year, 1 Citric acid @ 2000 ppm per year
Maintenance cleaning - 1 NaOCl per week @ 200 ppm, 1 Citric acid per week @ 2000 ppm

KPI Dashboard – Avg values through reporting period

■ Action Required
■ Caution
■ No Limits
■ Normal



Plant Summary

Data was unavailable from June 1 – Aug 17. This report covers Aug 17 – Sept 6.

- Daily permeate production averaged 0.68 MGD. Permeate temperature averaged 83°F. All trains are in Backpulse with constant LEAP Hi aeration. Flux averaged 11 gfd
- UF3 has significantly improved performance compared to before the data outage, increasing its permeability from 4.5 in late May to 16.4 gfd/psi now
- Permeate turbidity ABP averages ranged from 0.05 – 0.11 NTU with stable trends
- TMP BBP was excellent and <1.0 psi on UF2,3,4. UF1’s TMP averaged 1.2 psi which is good
- TC permeability BBP was excellent and ≥ 8 gfd/psi on UF2,3,4. UF1’s TCP averaged 7.6 gfd/psi

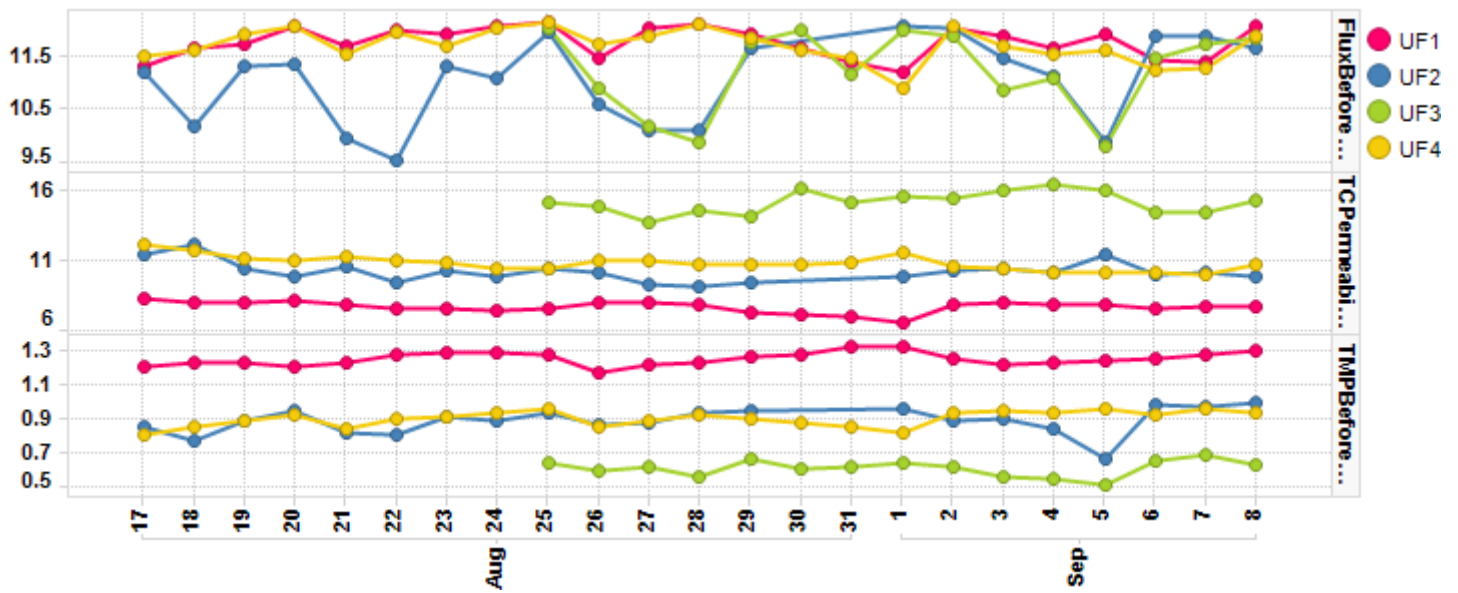


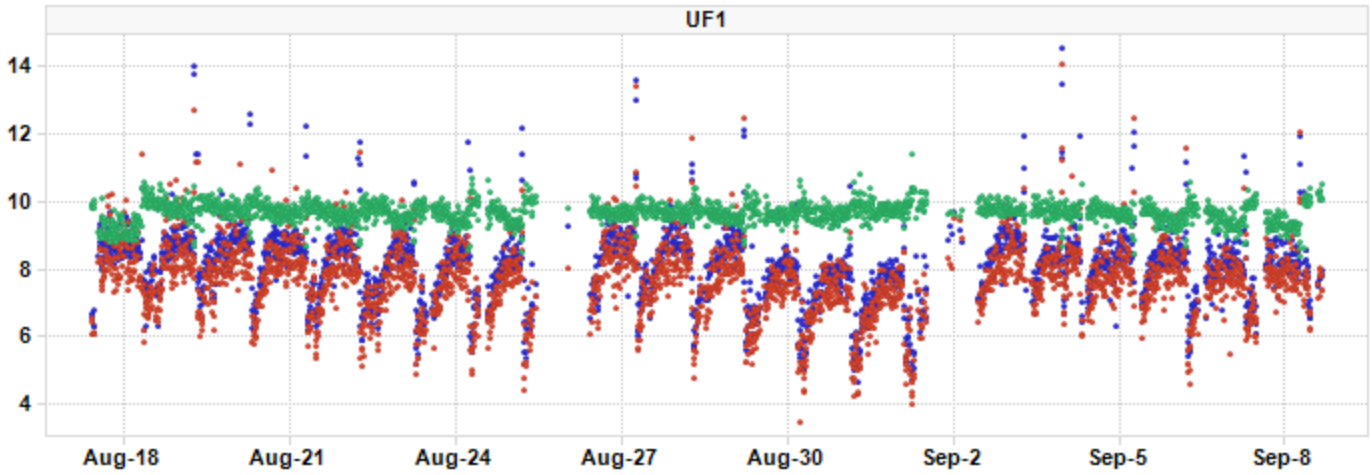
Table 1. Record of maintenance cleans (MCs) run from Aug 17 – Sept 6.

| Train | UF1 | UF2 | UF3 | UF4 |
|-----------------------|-----|-----|-----|-----|
| # of Hypochlorite MCs | 3 | 2 | 2 | 1 |
| # of Citric Acid MCs | 3 | 3 | 0 | 2 |

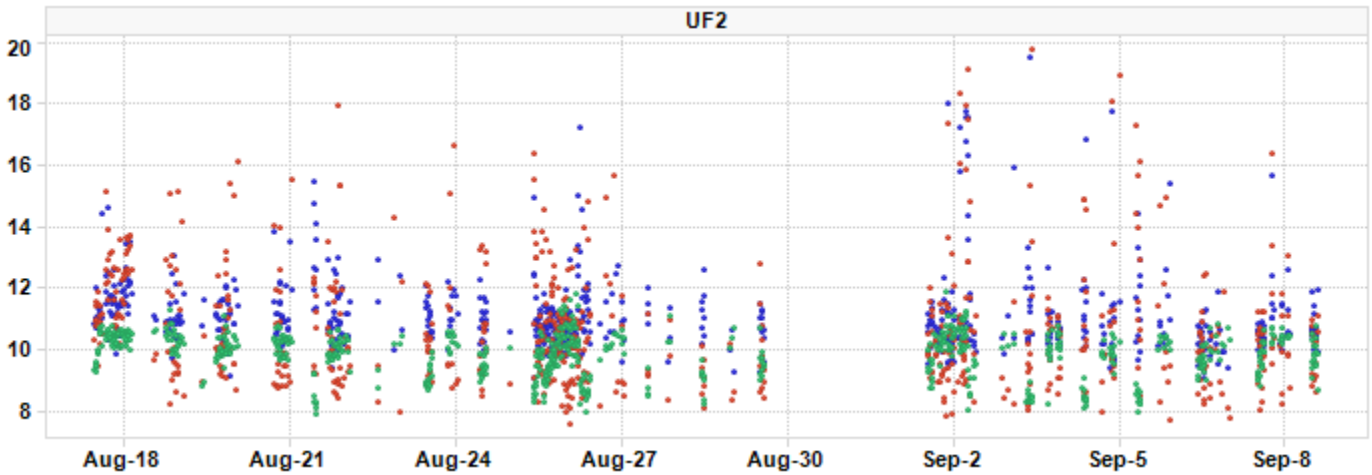


TC Permeability Trends By Train

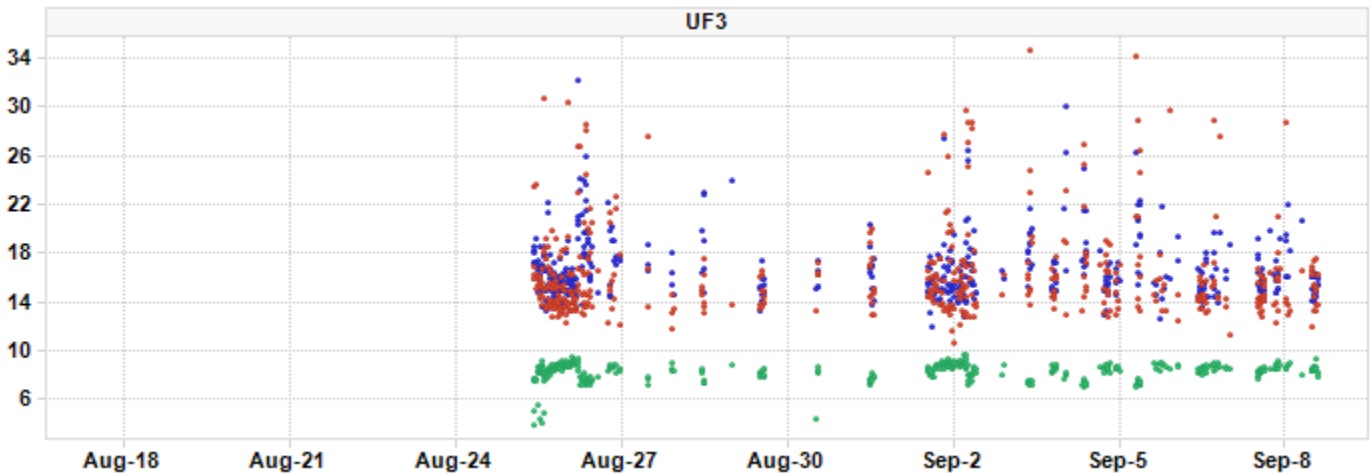
■ TCPermeabilityAfterBP
■ TCPermeabilityBeforeBP
■ TCPermeabilityDuringBP



■ TCPermeabilityAfterBP
■ TCPermeabilityBeforeBP
■ TCPermeabilityDuringBP

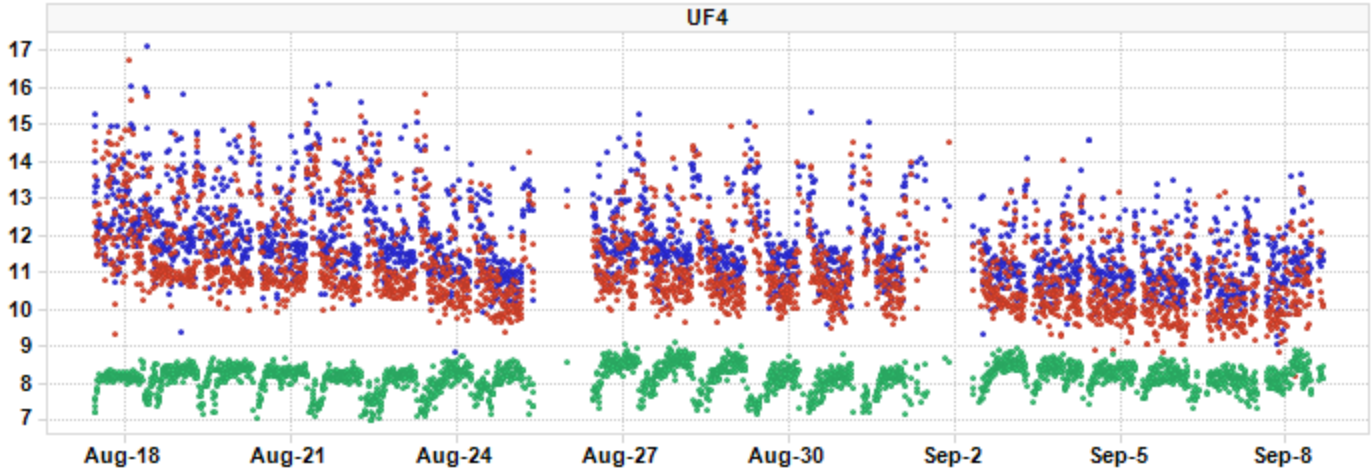


■ TCPermeabilityAfterBP
■ TCPermeabilityBeforeBP
■ TCPermeabilityDuringBP

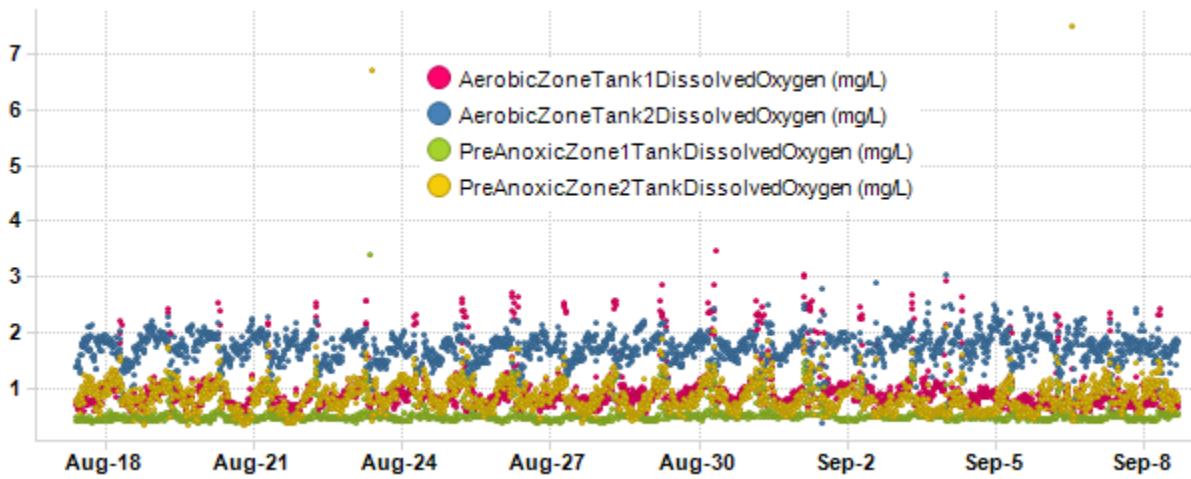




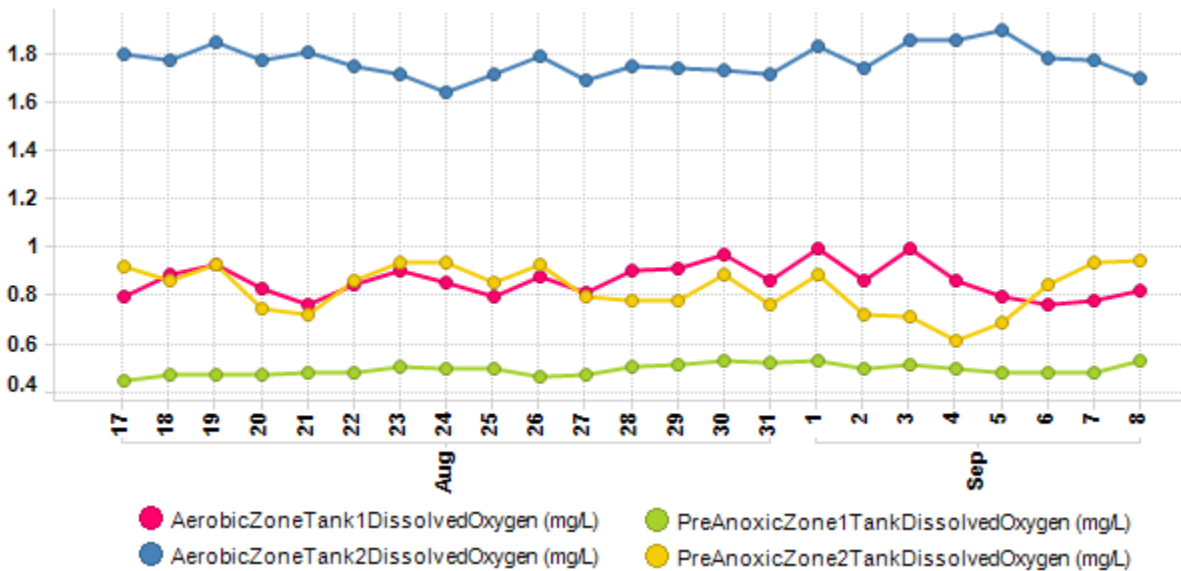
■ TCPermeabilityAfterBP
■ TCPermeabilityBeforeBP
■ TCPermeabilityDuringBP



Bioreactor Dissolved Oxygen

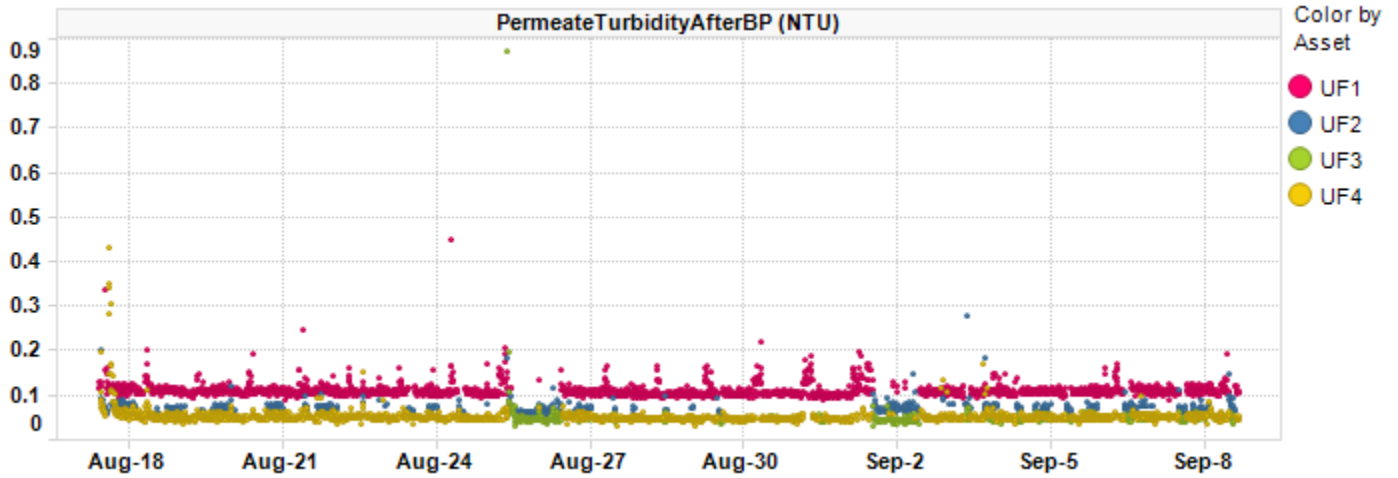


Daily median average values below

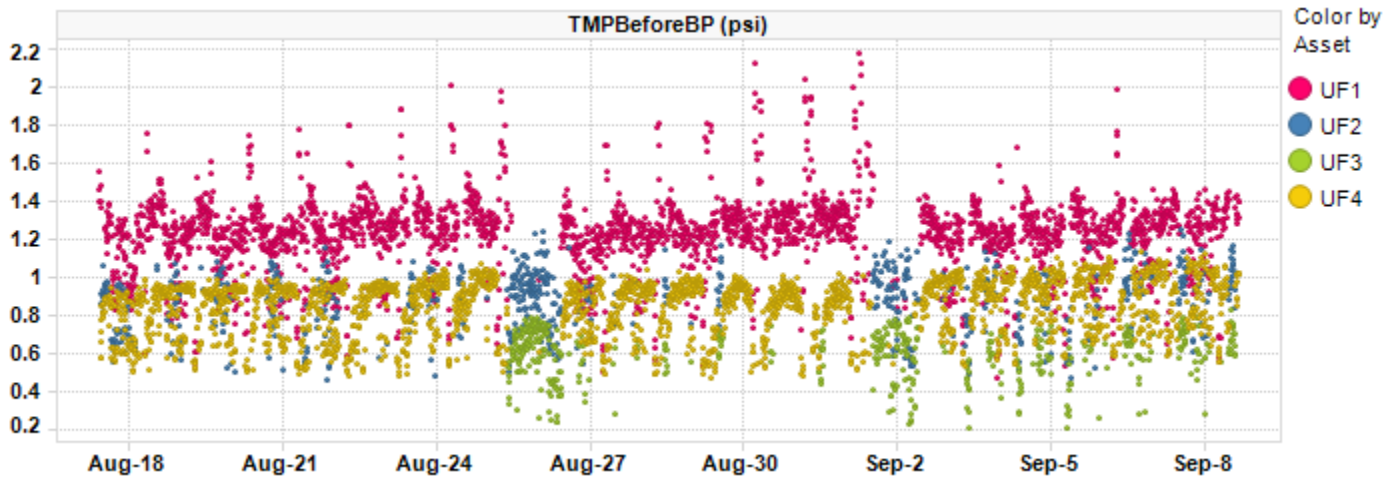




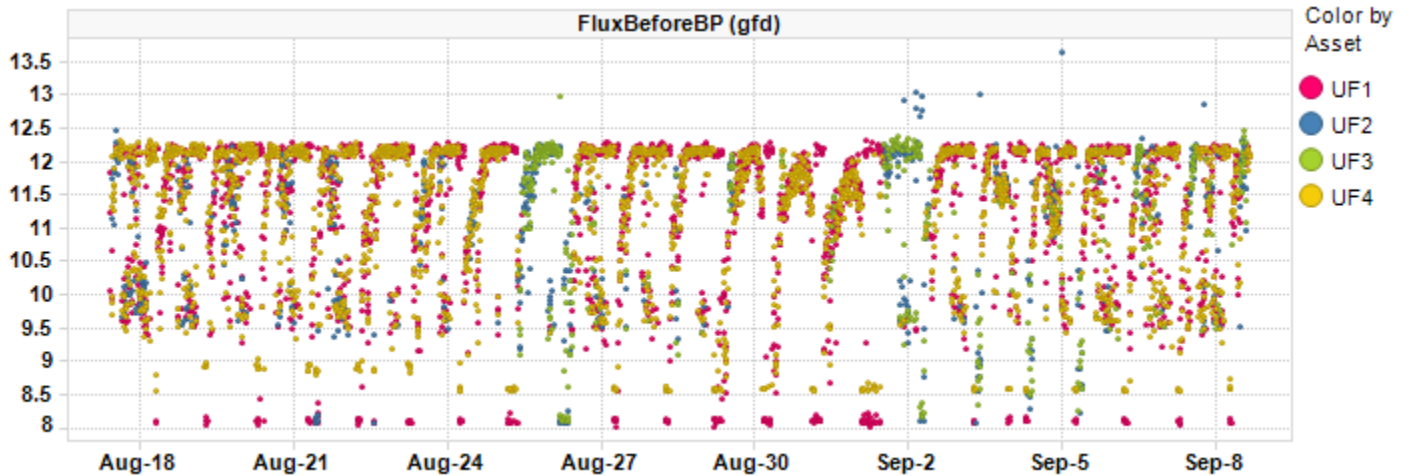
Permeate Turbidity Trend



Before BPTMP Trend

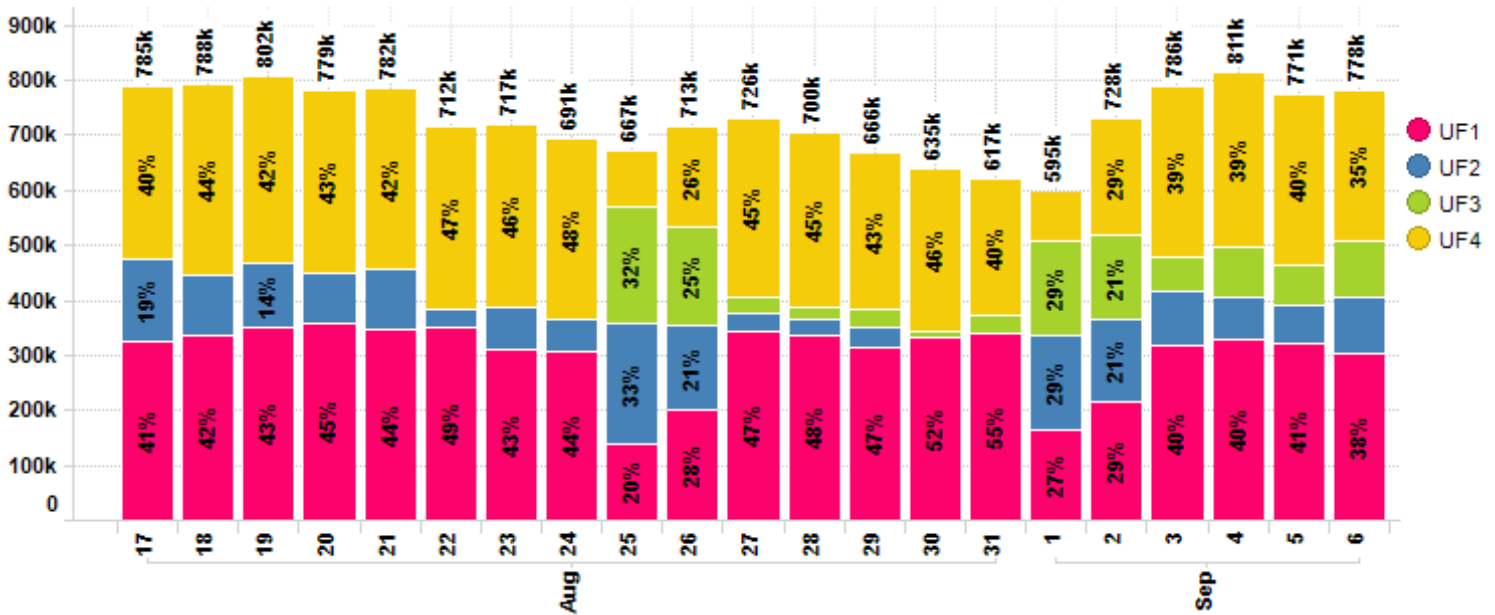


Before BP Flux Trend





Daily Permeate Flow



Average Daily permeate flow from 8/24/2022 to 9/6/2022 is 684.7k gal with a maximum daily flow of 811.0k gal.

Asset Summary

| KPI Parameters | Value/Ch... | UF1 | UF2 | UF3 | UF4 |
|---------------------------------|-------------|----------|----------|----------|----------|
| FluxBeforeBP gfd | Value | 11.20 | 11.06 | 11.02 | 11.28 |
| | Change | -0.23% | 2.92% | | 0.17% |
| FluxDuringBP gfd | Value | 18.74 | 18.32 | 18.29 | 18.76 |
| | Change | -0.08% | -0.32% | | 0.20% |
| PermeateTurbidityAfterBP NTU | Value | 0.11 | 0.07 | 0.05 | 0.05 |
| | Change | -1.48% | -7.36% | | -12.5... |
| TCPPermeabilityBeforeBP gfd/psi | Value | 7.56 | 10.59 | 16.35 | 10.87 |
| | Change | -4.59% | -5.03% | | -7.95% |
| TMPBeforeBP psi | Value | 1.24 | 0.89 | 0.58 | 0.87 |
| | Change | 3.11% | 6.95% | | 6.03% |
| TotalPermeateFlowDaily gal | Value | 278.0... | 85.61k | 84.17k | 256.7... |
| | Change | -21.0... | -14.3... | 100.0... | -29.2... |

Plant Summary

| KPI Parameters | Value/Change | UF Plant |
|----------------------------|--------------|----------|
| PermeateTemperature °F | Value | 83.05 |
| | Change | 1.09% |
| TotalPermeateFlowDaily gal | Value | 780.75k |
| | Change | -8.37% |



Contract Expiry Date : 08/11/2022

For InSight technical assistance please email insight.src@suez.com or please call technical support at 1 866 271 5425 or 905 469 7723 and follow the prompts, if you require after hours assistance please contact the 24/7 Emergency number provided in your plant documentation. This email is a summary of issues identified during a manual review of InSight data from the time period above. This review is an analysis of data that is logged by InSight and identifies key plant performance issues determined from this data. This data review was not focused on minor data issues but on identifying possible existing and/or upcoming critical operational issues.

This review was prepared by SUEZ Water Technologies & Solutions solely to assist water treatment plant owners and/or operators in analyzing and optimizing plant performance and is not intended to be used or relied upon for regulatory compliance or any other purpose. The content of this review is based in whole or in part on operation data obtained from the plant using InSight software. SUEZ Water Technologies & Solutions makes no representations or warranties as to the accuracy of the plant data utilized in the preparation of this review. SUEZ Water Technologies & Solutions accepts no liability for consequences or actions taken in whole or in part by any person on the basis of this review or its contents