

Director of Operations and Compliance Report

September 15, 2021

Plant Loading, CSO Report, and Director's Notes

Plant Influent Report

Biochemical Oxygen Demand, 5-Day (Avg. 24867 lbs/day)	39 percent of design
Total Suspended Solids (Avg. 32280 lbs/day)	30 percent of design
Average Daily Flow (28.67 million gallons/day)	70 percent of design
Maximum Daily Flow (45.16 million gallons/day)	36 percent of design

Plant Effluent Report

<u>Parameter</u>	<u>Report Frequency</u>	<u>Permit Limits</u>	<u>Reported Values</u>	<u>Violations</u>
CBOD ₅ , mg/L	Mo. Avg/Wk. Avg	20/40	2/2	0
TSS, mg/L	Mo. Avg/Wk. Avg	25/45	3/5	0
NH ₃ -N, mg/L	Wk. Avg/Daily Max	1.5/3.0	0.32/0.38	0
DO, mg/L	Daily Min	6.0	7.04	0
pH, S.U.	Daily Min/Max	6.0/9.0	7.71/8.02	0
Total Nickel, mg/L	Mo. Avg	0.015	0.025	1
Total Zinc, mg/L	Mo. Avg	0.075/0.416	0.012/0.022	0
CL ₂ Residual, mg/L	Daily Max	0.05*	0.011	0
Fecal Coliform CFU/100mL	Daily Max	400*	22	0

*Effluent disinfection is required May 1 through October 31.

CSO Report

<u>Location</u>	<u>Events</u>	<u>Est. Total Duration of Discharges (hrs.)</u>	<u>Discharge (million gallons)</u>
Oakland Avenue (Outfall 003)	3	2.97	0.53
Lincoln Park (Outfall 004)	0	0.0	0.0
McKinley Avenue (Outfall 007)	3	4.4	2.5
Seventh Ward (Outfall 008)	2	1.8	1.19

Director's Notes:

NPDES Permit:

No changes as of the writing of this report.

Covid-19 Update:

Some operator's availability for work has been impacted by the Covid-19 restrictions which translates to reduced staff to perform the necessary tasks and to fill shifts. The available operators are working to compensate for the reductions.

ADM Pretreatment:

ADM continues to discharge higher than normal levels of nickel to the District. They did meet their permit limit this month due to a multi-day shut-down for maintenance purposes however the concentrations remained high for the flow they did send to the facility. District staff are reviewing various forms of nickel limits for potential modifications to the upcoming permit renewal.

Influent Flow Study:

The Sanitary District is beginning an Influent Flow Study of the various sources of flow to allow for considerations to be made in the future regarding such things as plant designs and permit related concerns such as the new CMOM (Capacity, Management, Operation, & Maintenance) requirement that is expected to be included in that document. Preliminary data suggests what would be expected that newer pipes have less leaks.

Wyckles Facility East Lagoon:

J. Oros Environmental Inc. is expected to return mid-September to complete the cleaning work remaining in the East Lagoon.

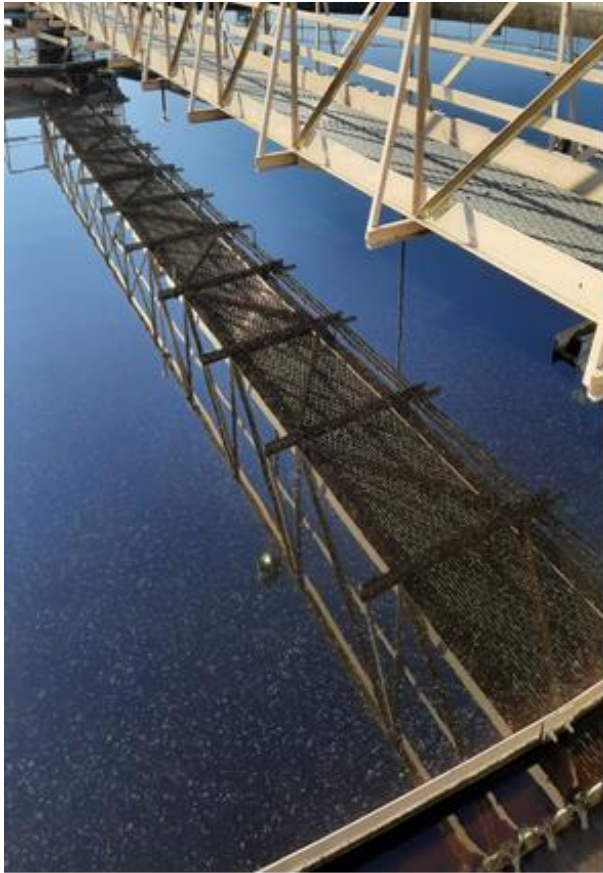
Operations, Laboratory, and Pretreatment Activity Reports – July/August 2021

Operations Activities:

Normal operational activities were conducted as prescribed by standard procedures or in response to conditions within the plant related to the new measures being employed due to Covid-19.

- 1) The Disinfection system is on-line and operating well. There were no exceedances during the month of August, and none as of the writing of this report.
- 2) The Operators work with Christy-Foltz to facilitate the construction project at the anaerobic digester facility is continuing. This work includes transferring materials from various digesters to allow C-F to work on the remaining units.
- 3) Staff is also monitoring a pilot project to compare using plant water or ammonia used in the disinfection process to commercial fertilizers for use in the Biological Odor Control Units.
- 4) Operators have also worked with Maintenance personnel to facilitate maintenance projects such as primary clarifier annual servicing, I&C work in building #335, etc.

- 5) Operations staff have been working with Maintenance on ashing issues in the final clarifiers. Ashing is more common during the warmer months of the year but occurs anytime gas bubbles cause the sludge to float. You can see the evidence of ashing in the before picture below. You can also see the impact of the .



Before



After

- 6) Operations staff continue to actively address PMs as time, workload, and staff levels allow.

Laboratory Activities:

Routine:

A total of 1,842 analyses were performed in the laboratory during the month of August 2021.

Monitoring of treatment plant, industrial users, and receiving stream samples for compliance purposes and process monitoring continued. Laboratory personnel continued to perform additional background nutrient monitoring to help fully characterize the nutrient loading on the plant.

Non-Routine:

- 1) The quarterly NPDES sampling of the influent, effluent, and sludge to Wyckles was conducted during the first week of August 2021.
- 2) The SDD continued to send samples of raw influent twice a week throughout the month of August 2021 for the "COVID-19 in wastewater" study funded by the Illinois Department of Public Health.

- 3) SDD lab staff attended two webinars that were hosted by SEAL Analytical. The first webinar, on August 10, 2021, was focused on Ammonia and Total Kjeldahl Nitrogen (TKN) analysis. The second webinar, on August 25, 2021, was focused on Ortho and Total Phosphorus analysis. Both webinars were very informative and will be beneficial since we will be performing increased nutrient analysis in the near future as the plant is modified for nutrient removal and since additional nutrient monitoring requirements will be included in our new NPDES permit.

Pretreatment Activities:

General Activities:

- 1) Pretreatment personnel monitored ten commercial and industrial users (IU) during August 2021 and conducted four industrial site inspections.
- 2) The draft Pretreatment Ordinance public notice period ended in mid-August. The SDD did not receive any comments from the public. We are currently waiting for USEPA to submit any comments they received to the SDD.
- 3) There are no updates to the USEPA desk audit.
- 4) A wastewater discharge permit application was received from **ADM**. Review of the application is ongoing.
- 5) Wastewater hauler permit applications were sent to **Kelley's, Decatur Municipal Services, K&M Portable Toilets, Parks Sewer, Bodine Services, Bodine Environmental, Septic Specialist, Midwest Pottyhouse, Environmental Works** and **Zeschke**.

Pretreatment Ordinance - Verbal Notices:

- 1) A Verbal Notice was issued to **Mason Manufacturing** on August 16, 2021, for exceeding their daily maximum nickel limit.
- 2) A Verbal Notice was issued to **Tate and Lyle** on August 23, 2021, for discharging wastewater with a pH below their permitted limit. Tate and Lyle had an issue at the 25th Street Outfall that was captured in their monitoring tank, however some of the low pH material was discharged to the SDD prior to the valve being closed on the monitoring tank.

Pretreatment Ordinance - Warning Notices:

No Warning Notices were issued during August 2021.

Pretreatment Ordinance - Notices of Violation (NOV):

No Notices of Violation were issued during August 2021.

Pretreatment Ordinance - Executive Orders:

No Executive Orders were issued during August 2021.

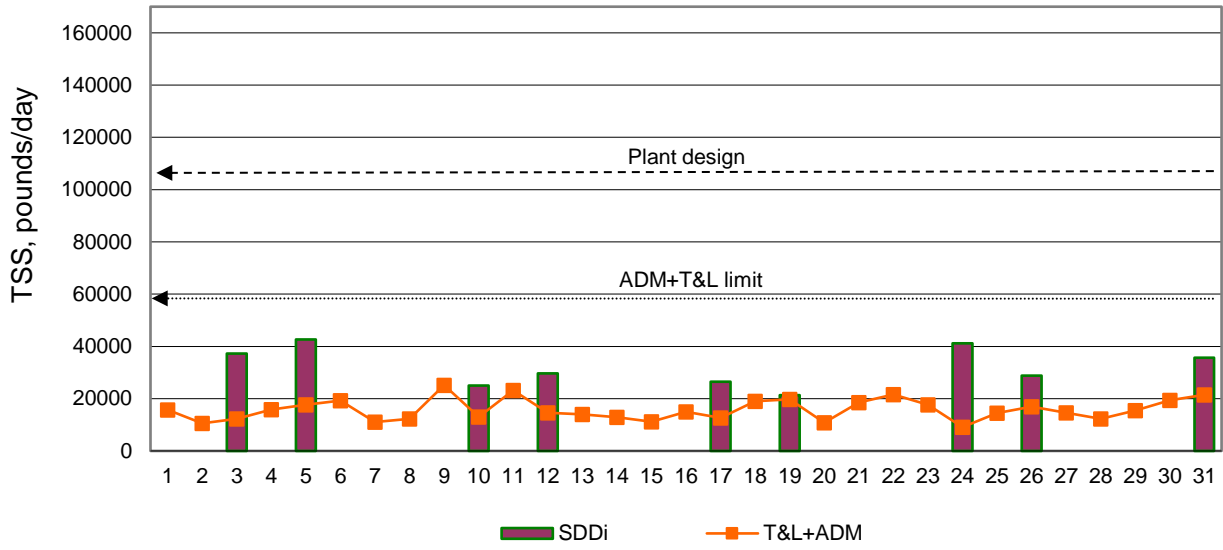
Pretreatment Ordinance - Penalty Assessments:

The following industrial penalties were assessed for August 2021:

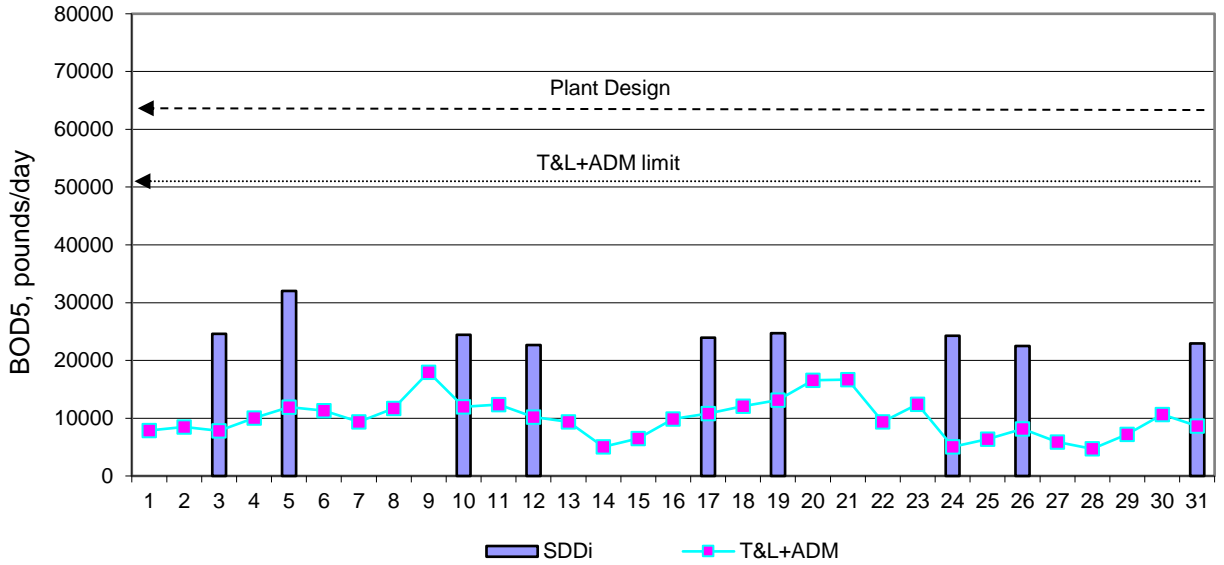
- 1) **Tate & Lyle** **\$2,000**

Plant Operating Graphs:

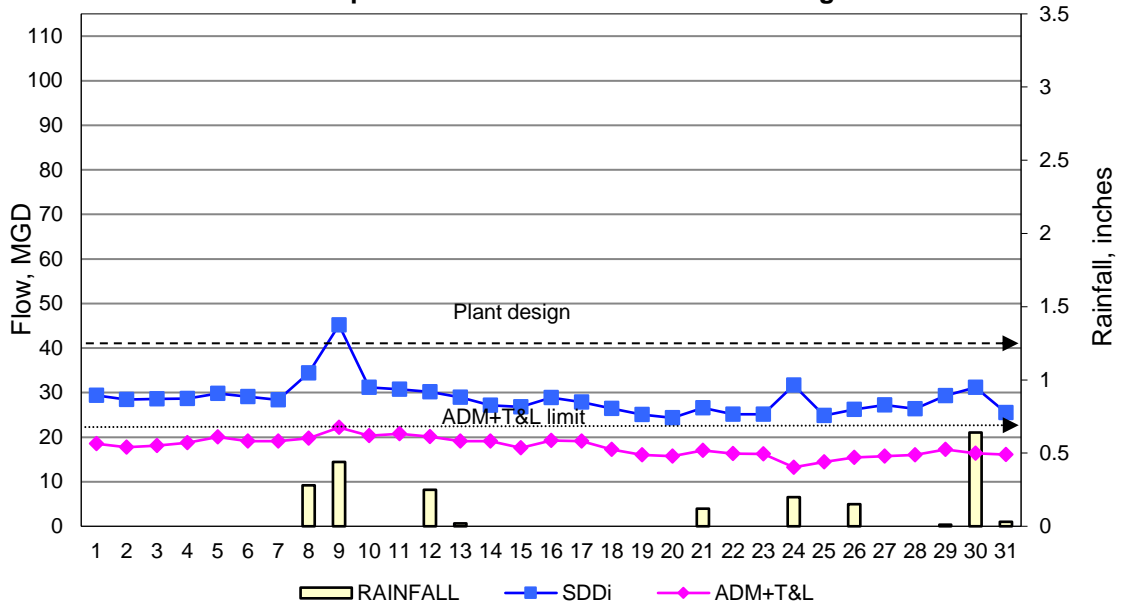
TSS Comparison: SDD Inf T&L+ADM Discharges



BOD Comparison: BOD Inf vs. T&L + ADM Discharges



Flow Comparison: SDD vs. ADM + T&L Discharges and Rainfall



Plant Efficiency Graphs:

