

Industrial Case Study: Recycling Transfer Station

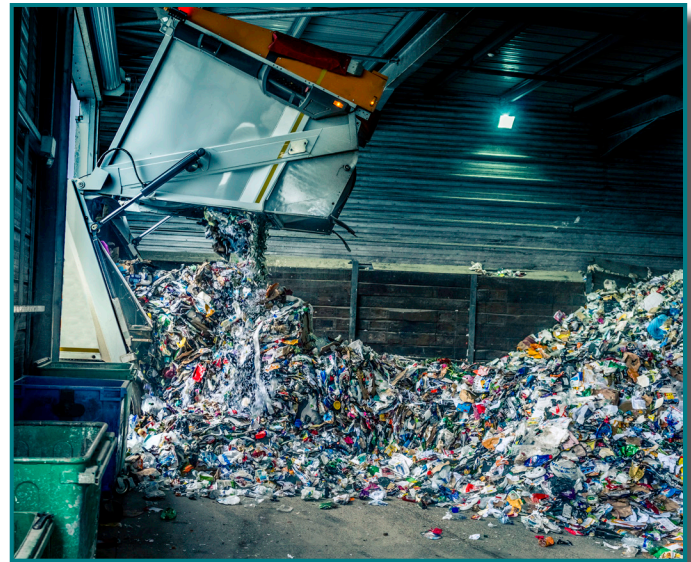
BACKGROUND

A recycling and transfer station in Northern California was facing legal action from the Bay Keepers, a nonprofit environmental advocacy organization if their facility did not reduce their industrial stormwater effluent discharge levels to within the those permissible in the California Industrial General Permit (IGP).

CHALLENGE

The facility was over was over their Numeric Action Levels for five different pollutants including Total Suspended Solids (TSS), zinc, copper, aluminum and iron, some of them by as much as 5-7 times the permissible limits.

The facility had sought other treatment options but were either unconvinced of the effectiveness or felt the cost was prohibitive to pursue further.



SOLUTION

Runoff samples taken from the facility were used in a Pollutant Removal Test conducted in the Hydro International hydraulics laboratory. Extremely high removal levels were shown using the Up-Flo® Filter membrane media for all five pollutants of concern and in all instances, the filter brought the facility under the Numeric Action Levels they needed to meet.

OUTCOME

Removal percentages ranged from 80% - 97% removal and the facility was extremely pleased with the data and felt the treatment option was a good fit for their budget

PRT Testing - Membrane					
Parameter	Annual NALs	Influent	Effluent	Removal Efficiency	Analysis Method
TSS (mg/L)	100	218	6	97.2%	SM 2540 D-97
		204	6	97.1%	
Turbidity (NTU)	N/A	47.6	4.34	90.9%	EPA 180.1
		24.6	5.4	78.0%	
Al (mg/L)	0.75	3.45	0.132	96.2%	EPA 200.8
		4.41	0.0684	98.5%	
Fe (mg/L)	1.0	6.43	0.228	96.5%	EPA 200.8
		7.48	0.117	98.4%	
Pb (mg/L)	0.262	0.0775	0.00217	97.2%	EPA 200.8
		0.0758	0.00129	98.3%	
Cu (mg/L)	0.0332	0.0348	0.00514	85.2%	EPA 200.8
		0.0383	0.00462	87.9%	
Zn (mg/L)	0.26	0.282	0.0515	81.7%	EPA 200.8
		0.284	0.0418	85.3%	

