

Union Sanitary District, Alvarado Treatment Plant, Union City, CA

Test #	(SE)	Plant Inf.		Flow - GPM		Turbidity - NTU		TSS			Air		Filt 1	Filt 2	Rotoco	Notes	
		TSS	Influent	Reject	Influent	Effluent	Reject	Influent	Effluent	Reject	P-Drop	SCFF					
1		2.5		20								1.3			3.2		
2		6.4		20									2.2		3.2		
3				20								1.5			3.7		
4P				20								1.7			3.5		
5				20								1.7	1.8		3.2		
6				20											3.4		
7		15.21		20		7.95						1.68	1.82		3.6		
8		12.81		20		7.27						1.55	1.57		3.2		
9		15.32		20		6.89						1.47	1.49		3.7		
10		9.44		20		5.55						1.31	1.35		5.34		
11		7.85		35		4.74						1.78	1.32		4.53		
12		8.63		35		4.81						1.83	1.44		2.74		
13		9.2		35	4	4.85						1.85	1.83		3.23		
14		11.34		50		9.32	1.1					1.52	1.2		8.8		
15				50		5.28	1.34					1.21	1.81		17		
16				50		8.2	1.5					1.18	2		10.3		
17				50		5.57	1.24					1.09	1.67		9.8		
18				50		6.39	1.21					1.14	1.48				
19				50		4.42	1.51				50	1.29	1.48		5.7		
20				50		7.22	1.35					1.57	2.8		7.8		
21P				50		4.16	1.45					1.16	1.47			Plant Shutdown	
22Pmax				50		0	5.4					5	7			Polymer 100/100	
23		8.04		50		7.03	3.1					3.91	4.82			Polymer 100/100	
24		8.43		50		6.49	0					3.35	4.28			Polymer 100/100	
25		8.74		50		5.1	1.7	28				1.5			4.4	Polymer 100/100	
26		7.31		50		5.49	1.63	50	8	3	143	1.29					
28		9.07		50	3	7.51	1.72	38	30	4	143	24	50	1.24	1.94	3	
29		8.72		50	4	5.47	1.52	36				26	50	1.13	2.08	2.5	1.7
30		8.42		28	5	6.56	1.67	36				27		1.16	2.49	3.1	1.9
27				28		4.7	1.7	36				20		0.9		3.1	
31		8.3		28	4	5.44	1.57	38				25		1.15		16	1.9
32LF		9.64		28	3.5	7.13	2.52	35	14	4	100	36		1.8		Lost feed	2.
71DF				28		0	1.86					14				Direct Filtration	
72				28	4	0	2.68	45				15					
74		9.26		28		10.47	7.3					18		3.39			
75		9.44		28		10.57	7.64					14		4.58			
73		11.8		28	2	7.8	4.43					15	38	4.22		5.1	
76		9.17		28	10	10.9	4.92					12	42	3.59		No Ferric	
77		10.25		28	10	16	2.73	30				18		3.3		4.2	
78		10		28	10	8.92	3.14					15	70	2.69			
79				55		0	0					15				Fe @ .36 in/hr	
80 L AL		12.5		33	4	0	5.12					22	50	5.37		No air/feed, 7-10hr	
33		13.85		33	5.5	12.44	5.68	26				27	50	4.52		Clarifier on line	
34		11.84		33	4.5	10.85	5.02	32				18	50	5.6	4.68		
35		9.23		33	4	8.14	3.78	32				17	50	4.15	3.95		
36		11.97		33	3.5	9.15	3.6	28				20	50	3.03	3.37		
37		10.41		33	5	9.25	3.52	27				18	50	3	3.28		
38		13.02		33	4	7.26	3.72	29				17	50	2.51	2.99		
39		13.03		33	4	10.09	3.47	38				22	48	2.66	4.71		
40		9.41		33	4.5	3	1.34	22				18	48	1.63	2.13		
41		9.21		33	4.5	2.97	1.32	22				18	51	1.62	2.04		
42		8.23		33	3.5	3.25	1.37	22				18	50	1.65	2.09		Lost Ferric
43		8.52		33	5.5	3.55	1.78	18				18	50	1.64	2.56		
44		9.49		33	4.5	3.74	1.65	20				17	50	2.05	2.65		Fe too low
45		8.67		33	4.5	5.46	2.29	35				24		2.01	3.96		Fe too low
46		10.94		33	4	4.89	2.21	29				20		2.04	3.02		High SE
47		12.89		33	4	3.37	1.2	20				13		1.47	1.39		High SE
48		9.48		33	4	3.16	1.28	30				16		1.41	1.66		
49		9.24		33	3.5	5.37	0.72	20				22		1.2	1.65		
50		7.4		33	3.1	3.31	0.72	19				18		1.15	1.65	1.5	
51		7.75		33	4	2.21	0.48	19				20		0.99	1.7	1.5	
52		9.53		33	3.5	3.89	1.11	24	12	1	58	24		1.26	2.07	2	
53		12.02		33	3	4.25	0.93	20				20		1.69	1.73		High SE
54		10.03		33	3.3	2.93	1.03	24				24		1.7	1.73	2.3	High SE
55		8.45		33	3.3	3.35	1.18	24				25		1.51	1.83	2.2	
56		14.29		33	3.3	6.83	3.18	25				24		1.64	3.55	1.8	High SE
57		12.9		33	3.3	5.8	2.58	24				30		1.6	3.5	1.8	
58		9.29		33	3.4	3.78	1.75	26				23		1.44	2.17	2.5	

59	9.78	33	3.6	5.99	1.2	25				27	1.25	3.8	2.4
60	9.59	33	4	5.75	1.17	20	14	1	46	27	1.44	1.76	2.4
61	8.64	33	3.2	4.28	1.72		10	1	53	30	1.49	2.03	2.3
62	9.48	33	3.7	2.9	1.7	22				21	1.44	1.84	3
63	14.94	33	3.7	7.24	3.03					22	1.83	3.22	High SE
64	16.22	33	3.7	7.84	2.51					6	3.21	2.48	High SE
65	12.02	33	3.8	2.1	2.36	15				36	2.83	2.41	High SE
66	12.35	33	3.7	3.15	1.82	15				27	2.43	2.1	High SE
67	8.74	33	3.7	2.48	1.07	20				30	1.87	1.79	
68	7.33	33	3.5	3.88	0.71	20	9	1	78	36	1.31	2.19	
69	8.16	33	3.9	5.16	1.13	20				32	1.49	2.04	
70	7.61	33	3.7	2.8	1.48	17	8	1	51	34	50	1.95	1.51
81LFe	11.26	33	5	6.73	4.12	28				24	50	2.75	3.94
82	7.99	33	3.8	3.49	2.12	27				24	50	2.18	9.72
83	5.72	33	6	23	7.23	52				38	50	1.81	1.96
84	7.72	33	2.5	18	10.81	92				48		3.38	4.98
85	7.22	33	4.5	22	9.56	65				40		2.52	1.52

Averages
% TSS Removal

6.339	1.33955	13.13	2	18.75	50

Dir. Filt., Low Fe
DF
DF