

Turkey Creek Wastewater Treatment Plant  
 March 21, 2017  
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Parameter	Pass-Through (µg/l)	Current Flow	Permitted Flow	Projected Activated Sludge	Current Flow Allowable Mass @	Permitted Flow Allowable Mass	Projected Primary	Calculated influent	Calculated Influent	Calculated Influent	Calculated	Activated Sludge	Controlling Influent
Current Flow = 4.5 MGD-Plant Permitted flow		lbs./day	lbs./day	Removal Rates %	Aeration Influent ( lbs./day )	Aeration Influent ( lbs./day )	Removal Rates %	Mass ( lbs./day) Current Flow	Mass ( lbs./day ) Permitted Flow	Conc. ( mg/l )@ 4.5 MGD	Concentration ( mg/l) @ 7.5 MGD	Inhibitory Conc. ( mg/l )	Conc. Mg/l)
Copper	71.66	2.6894	4.482333	84	16.80874875	28.01458125	20	21.01093594	35.01822656	0.55984375	0.55984375	1	0.56
Chromium, III		0	0		0	0		0	0	0	0		0
Chromium, VI	9.63	0.36141	0.6023565	80	1.8070695	3.0117825	25	2.409426	4.01571	0.0642	0.0642	1	0.0642
Chromium, Total	60.00	2.2518	3.753	80	11.259	18.765	25	15.012	25.02	0.4	0.4	10	0.4
Nickel	100.00	3.753	6.255	30	5.361428571	8.935714286	10	5.957142857	9.928571429	0.158730159	0.158730159	1	0.158730159
Cadmium	1.96	0.07356	0.122598	67	0.222905455	0.371509091	15	0.262241711	0.437069519	0.006987522	0.006987522	10	0.006987522
Lead	21.90	0.82191	1.369845	61	2.107453846	3.512423077	50	4.214907692	7.024846154	0.112307692	0.112307692	0.1	0.1
Mercury	0.20	0.00751	0.01251	60	0.018765	0.031275	10	0.02085	0.03475	0.000555556	0.000555556	0.1	0.000555556
Silver	5.00	0.18765	0.31275	75	0.7506	1.251	20	0.93825	1.56375	0.025	0.025	5	0.025
Zinc	200.00	7.506	12.51	79	35.74285714	59.57142857	25	47.65714286	79.42857143	1.26984127	1.26984127	1.5	1.26984127
Cyanide	4.55	0.17076	0.2846025	60	0.42690375	0.71150625	25	0.569205	0.948675	0.015166667	0.015166667	0.3	0.015166667
Toluene	15.00	0.56295	0.93825	90	5.6295	9.3825	0	5.6295	9.3825	0.15	0.15		0.15
Benzene	3.00	0.11259	0.18765	75	0.45036	0.7506	25	0.60048	1.0008	0.016	0.016		0.016
1,1,1-Trichloroethane	30.00	1.1259	1.8765	85	7.506	12.51	40	12.51	20.85	0.333333333	0.333333333		0.333333333
Ethylbenzene	4.00	0.15012	0.2502	90	1.5012	2.502	10	1.668	2.78	0.044444444	0.044444444		0.044444444
Carbon Tetrachloride	10.16	0.3813	0.635508	10	0.423672	0.70612	0	0.423672	0.70612	0.011288889	0.011288889		0.011288889
Chloroform	85.00	3.19005	5.31675	60	7.975125	13.291875	10	8.86125	14.76875	0.236111111	0.236111111		0.236111111
Tetrachloroethylene	22.09	0.82904	1.3817295	80	4.1451885	6.9086475	0	4.1451885	6.9086475	0.11045	0.11045		0.11045
Trichloroethylene	10.00	0.3753	0.6255	90	3.753	6.255	20	4.69125	7.81875	0.125	0.125		0.125
1,2 trans Dichloroethylene	1.50	0.0563	0.093825	80	0.281475	0.469125	30	0.402107143	0.670178571	0.010714286	0.010714286		0.010714286
Methylene Chloride	50.00	1.8765	3.1275	40	3.1275	5.2125	0	3.1275	5.2125	0.083333333	0.083333333		0.083333333
Phenols, Total	50.00	1.8765	3.1275	80	9.3825	15.6375	5	9.876315789	16.46052632	0.263157895	0.263157895		0.263157895
Naphthalene	1.00	0.03753	0.06255	92	0.469125	0.781875	40	0.781875	1.303125	0.020833333	0.020833333		0.020833333
Phthalates, Total	64.50	2.42069	4.034475	68	7.564640625	12.60773438	30	10.80662946	18.01104911	0.287946429	0.287946429		0.287946429

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Parameter	AHL @ 7.5	AHL @ 4.5	Current Domestic Comc.	Current Domestic	Domestic @ design	Non Domestic	Reserve	Non Domestic	Current ( mg/l)	industrial
Current Flow = 4.5 MGD-Plant Permitted flow	lbs./d	lbs/d	mg/l	lbs	lbs	lbs. @ current	10% of AHL	lbs@ design	Industrial	mg/l @ 7.5
Copper	35.028	21.0168	0.06167	1.470977508	2.430198855	19.54582249	3.5028	29.09500115	1.291648145	1.257156486
Chromium, III	0	0		0	0	0	0	0	0	0
Chromium, VI	4.01571	2.40943		0	0	2.409426	0.401571	3.614139	0.15922229	0.156162162
Chromium, Total	25.02	15.012	0.0095	0.2265978	0.37436175	14.7854022	2.502	22.14363825	0.977064911	0.956797297
Nickel	9.928571429	5.95714	0.015	0.357786	0.5910975	5.599356857	0.992857143	8.344616786	0.370022745	0.360559846
Cadmium	0.437069519	0.26224	0.00075	0.0178893	0.029554875	0.244352411	0.043706952	0.363807692	0.01614756	0.015719649
Lead	6.255	3.753	0.00575	0.1371513	0.226587375	3.6158487	0.6255	5.402912625	0.238946418	0.233452703
Mercury	0.03475	0.02085	0.0002	0.00477048	0.0078813	0.01607952	0.003475	0.0233937	0.001062584	0.001010811
Silver	1.56375	0.93825	0.00083	0.019797492	0.032707395	0.918452508	0.156375	1.374667605	0.06069417	0.059397568
Zinc	79.42857143	47.6571	0.12283	2.929790292	4.840300395	44.72735257	7.942857143	66.64541389	2.955721202	2.879660116
Cyanide	0.948675	0.56921	0.00375	0.0894465	0.147774375	0.4797585	0.0948675	0.706033125	0.031703919	0.030506757
Toluene	9.3825	5.6295	0.000025	0.00059631	0.000985163	5.62890369	0.93825	8.443264838	0.371975291	0.364822297
Benzene	1.0008	0.60048	0.00025	0.0059631	0.009851625	0.5945169	0.10008	0.890868375	0.039287508	0.038493243
1,1,1-Trichloroethane	20.85	12.51	0.00025	0.0059631	0.009851625	12.5040369	2.085	18.75514838	0.826305266	0.810385135
Ethylbenzene	2.78	1.668	0.00025	0.0059631	0.009851625	1.6620369	0.278	2.492148375	0.109832517	0.107682432
Carbon Tetrachloride	0.70612	0.42367	0.00025	0.0059631	0.009851625	0.4177089	0.070612	0.625656375	0.027603491	0.027033784
Chloroform	14.76875	8.86125	0.0033	0.07871292	0.13004145	8.78253708	1.476875	13.16183355	0.580377097	0.568705405
Tetrachloroethylene	6.9086475	4.14519	0.00025	0.0059631	0.009851625	4.1392254	0.69086475	6.207931125	0.273532762	0.268236486
Trichloroethylene	7.81875	4.69125	0.00025	0.0059631	0.009851625	4.6852869	0.781875	7.027023375	0.309618187	0.303628378
1,2 trans Dichloroethylene	0.670178571	0.40211	0.00025	0.0059631	0.009851625	0.396144043	0.067017857	0.593309089	0.026178418	0.0256361
Methylene Chloride	5.2125	3.1275	0.00045	0.01073358	0.017732925	3.11676642	0.52125	4.673517075	0.205965524	0.201936486
Phenols, Total	16.46052632	9.87632	0.04433	1.057376892	1.746890145	8.818938897	1.646052632	13.06758354	0.582782642	0.564632987
Naphthalene	1.303125	0.78188	0.002	0.0477048	0.078813	0.7341702	0.1303125	1.0939995	0.048516228	0.04727027
Phthalates, Total	18.01104911	10.8066	0.03867	0.922372308	1.523849355	9.884257156	1.801104911	14.68609484	0.653182153	0.634566718