

TEXTTOX MENU #1 - INTERMITTENT STREAM

The water quality-based effluent limitations developed below are calculated using:

Table 1, 2014 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life
 "Procedures to Implement the Texas Surface Water Quality Standards," TCEQ, June 2010

PERMIT INFORMATION

Permittee Name:	CINDY BARTLETT LEASE
TPDES Permit No:	TX0134059
Outfall No:	001
Prepared By:	Maria Okpala
Date:	April 27, 2018

DISCHARGE INFORMATION

Intermittent Receiving Waterbody:	Goose Creek
Segment No:	2107
TSS (mg/L):	13
pH (Standard Units):	13
Hardness (mg/L as CaCO ₃):	130
Chloride (mg/L):	242
Effluent Flow for Aquatic Life (MGD):	0.00252
Critical Low Flow [7Q2] (cfs):	0
% Effluent for Acute Aquatic Life:	100

CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE):

<i>Stream/River Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partition Coefficient (Kp)</i>	<i>Dissolved Fraction (Cd/Ct)</i>	<i>Water Effect Ratio (WER)</i>		
Aluminum	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Arsenic	5.68	-0.73	73590.43	0.51		1	Assumed
Cadmium	6.60	-1.13	219403.73	0.26		1	Assumed
Chromium (Total)	6.52	-0.93	304812.44	0.20		1	Assumed
Chromium (+3)	6.52	-0.93	304812.44	0.20		1	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Copper	6.02	-0.74	156921.31	0.33		1	Assumed
Lead	6.45	-0.80	362114.00	0.18		1	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Nickel	5.69	-0.57	113514.75	0.40		1	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Silver	6.38	-1.03	170859.19	0.31		1	Assumed
Zinc	6.10	-0.70	209044.94	0.27		1	Assumed

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

<i>Parameter</i>	<i>FW Acute Criterion</i>			<i>Daily Avg. (ug/L)</i>	<i>Daily Max. (ug/L)</i>
	<i>(ug/L)</i>	<i>WLAa</i>	<i>LTAa</i>		
Aldrin	3.0	3	1.72	2.53	5.35
Aluminum	991	991	568	835	1766
Arsenic	340	665.26971	381.1995437	560.36333	1185.5306
Cadmium	11.075232	42.664546	24.44678503	35.936774	76.029501
Carbaryl	2.0	2	1.15	1.68	3.56
Chlordane	2.4	2.4	1.38	2.02	4.28
Chlorpyrifos	0.083	0.083	0.048	0.070	0.148
Chromium (+3)	706.340665	3505.2591	2008.513472	2952.5148	6246.4769
Chromium (+6)	15.7	15.7	9.00	13.2	28.0
Copper	18.1844888	55.280428	31.67568504	46.563257	98.51138
Cyanide (free)	45.8	45.8	26.2	38.6	81.6
4,4'-DDT	1.1	1.1	0.630	0.927	1.96
Demeton	N/A	N/A	N/A	N/A	N/A
Diazinon	0.17	0.17	0.097	0.143	0.303
Dicofol	59.3	59.3	34.0	49.9	106

Dieldrin	0.24	0.24	0.138	0.202	0.428
Diuron	210	210	120	177	374
Endosulfan I (alpha)	0.22	0.22	0.126	0.185	0.392
Endosulfan II (beta)	0.22	0.22	0.126	0.185	0.392
Endosulfan sulfate	0.22	0.22	0.126	0.185	0.392
Endrin	0.086	0.086	0.049	0.072	0.153
Guthion	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.52	0.52	0.298	0.438	0.927
Hexachlorocyclohexane (Lindane)	1.126	1.126	0.645	0.948	2.01
Lead	85.830827	489.8779	280.700038	412.62906	872.97712
Malathion	N/A	N/A	N/A	N/A	N/A
Mercury	2.4	2.4	1.38	2.02	4.28
Methoxychlor	N/A	N/A	N/A	N/A	N/A
Mirex	N/A	N/A	N/A	N/A	N/A
Nickel	584.602508	1447.2956	829.3003731	1219.0715	2579.1242
Nonylphenol	28	28	16.0	23.6	49.9
Parathion (ethyl)	0.065	0.065	0.037	0.055	0.116
Pentachlorophenol	3626.41559	3626.4156	2077.936	3054.566	6462.381
Phenanthrene	30	30	17.2	25.3	53.5
Polychlorinated Biphenyls (PCBs)	2.0	2	1.15	1.68	3.56
Selenium	20	20	11.5	16.8	35.6
Silver	0.8	28.693658	16.44146582	24.168955	51.132959
Toxaphene	0.78	0.78	0.447	0.657	1.39
Tributyltin (TBT)	0.13	0.13	0.074	0.110	0.232
2,4,5 Trichlorophenol	136	136	77.9	115	242
Zinc	146.352242	544.07678	311.7559942	458.28131	969.56114

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS:

Aquatic Life

Parameter	70%	85%
Aldrin	1.77	2.15
Aluminum	584	710
Arsenic	392.254	476.309
Cadmium	25.156	30.546
Carbaryl	1.18	1.43
Chlordane	1.42	1.72
Chlorpyrifos	0.049	0.059
Chromium (+3)	2066.76	2509.64
Chromium (+6)	9.26	11.2
Copper	32.594	39.579
Cyanide (free)	27.0	32.8
4,4'-DDT	0.649	0.788
Demeton	N/A	N/A
Diazinon	0.100	0.122
Dicofol	35.0	42.5
Dieldrin	0.142	0.172
Diuron	124	150
Endosulfan I (alpha)	0.130	0.158
Endosulfan II (beta)	0.130	0.158
Endosulfan sulfate	0.130	0.158
Endrin	0.051	0.062
Guthion	N/A	N/A
Heptachlor	0.307	0.372
Hexachlorocyclohexane (Lindane)	0.664	0.806
Lead	288.840	350.735
Malathion	N/A	N/A
Mercury	1.42	1.72
Methoxychlor	N/A	N/A
Mirex	N/A	N/A

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Nickel	853.35	1036.21
Nonylphenol	16.5	20.0
Parathion (ethyl)	0.038	0.047
Pentachlorophenol	2138.1963	2596.3812
Phenanthrene	17.7	21.5
Polychlorinated Biphenyls (PCBs)	1.18	1.43
Selenium	11.8	14.3
Silver	16.918	20.544
Toxaphene	0.460	0.558
Tributyltin (TBT)	0.077	0.093
2,4,5 Trichlorophenol	80.2	97.4
Zinc	320.797	389.539