

Appendix G
SCTP Effluent Chemistry and RPA
Sheets

Table G-1. Summary of Effluent Chemistry Results for Salmon Creek WWTP (2011-2015)

Pollutant ¹	Maximum Daily Discharge				Average Daily Discharge				Number of Samples	Analytical Method	ML/MDL ⁵
	Conc. ²	Units	Mass ³	Units	Conc. ⁴	Units	Mass ³	Units			
METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS											
Antimony	0.22	µg/l	0.013	ppd	0.21	µg/l	0.01	ppd	19	EPA 200.8	0.3
Arsenic	1.85	µg/l	0.11	ppd	1.46	µg/l	0.09	ppd	19	EPA 200.8	0.1
Beryllium					0.05	µg/l	0.00	ppd	19	EPA 200.8	0.1
Cadmium					0.03	µg/l	0.00	ppd	19	EPA 200.8	0.1
Chromium	0.56	µg/l	0.034	ppd	0.49	µg/l	0.03	ppd	19	EPA 200.8	0.2
Copper	59.60	µg/l	3.64	ppd	17.60	µg/l	1.07	ppd	19	EPA 200.8	0.4
Iron	57.00	mg/l	3479	ppd	21.00	mg/l	1281.56	ppd	4	EPA 200.7	12.5
Lead	0.27	µg/l	0.02	ppd	0.25	µg/l	14.95	ppd	19	EPA 200.8	0.1
Mercury	2.43	ng/l	0.15	ppd	1.68	ng/l	0.10	ppd	10	EPA 1631E	0.0002
Molybdenum	37.00	µg/l	2.26	ppd	12.82	µg/l	0.78	ppd	19	EPA 200.8	0.1
Nickel	1.49	µg/l	0.09	ppd	1.30	µg/l	0.08	ppd	19	EPA 200.8	0.1
Selenium	0.23	µg/l	0.01	ppd	0.21	µg/l	0.01	ppd	19	EPA 200.8	1
Silver	0.03	µg/l	0.0018	ppd	0.03	µg/l	0.0016	ppd	19	EPA 200.8	0.04
Thallium					0.05	µg/l	0.0027	ppd	19	EPA 200.8	0.09
Zinc	60.00	µg/l	3.66	ppd	44.68	µg/l	2.73	ppd	19	EPA 200.8	0.5
Cyanide										EPA 335.4	5
Total phenolic compounds										EPA 420.1	5
Hardness (as CaCO ₃)	140.00	mg/l	8543.76	ppd	123.00	mg/L	7506.31	ppd	4	SM2340B	200
VOLATILE ORGANIC COMPOUNDS											
Acrolein					2.50	µg/L	0.153	ppd	4	EPA 624	5
Acrylonitrile					0.50	µg/L	0.031	ppd	4	EPA 624	1
Benzene					0.50	µg/L	0.031	ppd	4	EPA 624	1
Bromoform					0.50	µg/L	0.031	ppd	4	EPA 624	1
Bromodichloromethane					0.50	µg/L	0.031	ppd	4	EPA 624	1
Carbon tetrachloride					0.50	µg/L	0.031	ppd	4	EPA 624	1
Chlorobenzene					0.50	µg/L	0.031	ppd	4	EPA 624	1
2-Chloroethylvinyl ether					0.50	µg/L	0.031	ppd	4	EPA 624	1
Chlorethane					0.50	µg/L	0.031	ppd	4	EPA 624	1
Chloroform					0.50	µg/L	0.031	ppd	4	EPA 624	1
Chlorodibromomethane					0.50	µg/L	0.031	ppd	4	EPA 624	1
1,1-Dichloroethane					0.50	µg/L	0.031	ppd	4	EPA 624	1
1,2-Dichloroethane					0.50	µg/L	0.031	ppd	4	EPA 624	1
1,1-Dichloroethylene					0.50	µg/L	0.031	ppd	4	EPA 624	1
1,2-Dichloropropane					0.50	µg/L	0.031	ppd	4	EPA 624	1
1,3-Dichloropropylene					0.50	µg/L	0.031	ppd	4	EPA 624	1
Ethylbenzene					0.50	µg/L	0.031	ppd	4	EPA 624	1
Bromomethane/methyl Bromide					2.50	µg/L	0.153	ppd	4	EPA 624	5
Chloromethane					0.50	µg/L	0.031	ppd	4	EPA 624	1
Methylene chloride					2.50	µg/L	0.153	ppd	4	EPA 624	5
1,1,2,2-Tetrachloroethane					0.95	µg/L	0.058	ppd	4	EPA 624	1.9
Tetrachloroethylene					0.50	µg/L	0.031	ppd	4	EPA 624	1
Toluene	1.12	µg/L	0.068	ppd	0.71	µg/L	0.043	ppd	4	EPA 624	1
1,2-Trans-Dichloroethylene					0.50	µg/L	0.031	ppd	4	EPA 624	1
1,1,1-Trichloroethane					0.50	µg/L	0.031	ppd	4	EPA 624	1
1,1,2-Trichloroethane					0.50	µg/L	0.031	ppd	4	EPA 624	1
Trichloroethylene					0.50	µg/L	0.031	ppd	4	EPA 624	1
Vinyl Chloride					0.50	µg/L	0.031	ppd	4	EPA 624	1
Styrene					12.50	µg/L	0.763	ppd	4	EPA 624	25
Acetone					2.50	µg/L	0.153	ppd	4	EPA 624	5
ACID-EXTRACTABLE COMPOUNDS											
2-chlorophenol					0.50	µg/L	0.031	ppd	4	EPA 625	1
2,4 Dichlorophenol					0.25	µg/L	0.015	ppd	4	EPA 625	0.5
2,4-Dimethylphenol					0.25	µg/L	0.015	ppd	4	EPA 625	0.5
4,6-dinitro-o-cresol					0.50	µg/L	0.031	ppd	4	EPA 625	1
2,4-Dinitrophenol					0.50	µg/L	0.031	ppd	4	EPA 625	1
2-Nitrophenol					0.25	µg/L	0.015	ppd	4	EPA 625	0.5
4-Nitrophenol					0.25	µg/L	0.015	ppd	4	EPA 625	0.5
p-chloro-m-cresol					0.50	µg/L	0.031	ppd	4	EPA 625	1
Pentachlorophenol					0.25	µg/L	0.015	ppd	4	EPA 625	0.5
Phenol					1.00	µg/L	0.061	ppd	4	EPA 625	2
2,4,6-Trichlorophenol					1.00	µg/L	0.061	ppd	4	EPA 625	2

Table G-1. Summary of Effluent Chemistry Results for Salmon Creek WWTP (2011-2015)

Pollutant ¹	Maximum Daily Discharge				Average Daily Discharge					Analytical Method	ML/MDL ⁵
	Conc. ²	Units	Mass ³	Units	Conc. ⁴	Units	Mass ³	Units	Number of Samples		
BASE-NEUTRAL COMPOUNDS											
Acenaphthene					0.10	µg/L	0.006	ppd	4	EPA 625	0.2
Acenaphthylene					0.15	µg/L	0.009	ppd	4	EPA 625	0.3
Anthracene					0.15	µg/L	0.009	ppd	4	EPA 625	0.3
Benzidine					6.00	µg/L	0.366	ppd	4	EPA 625	12
Benzo (a) Anthracene					0.15	µg/L	0.009	ppd	4	EPA 625	0.3
Benzo (a) Pyrene					0.25	µg/L	0.015	ppd	4	EPA 625	0.5
Benzo (b) fluoroanthene					0.40	µg/L	0.024	ppd	4	EPA 625	0.8
Benzo (ghi) perylene					0.40	µg/L	0.024	ppd	4	EPA 625	0.8
Benzo (k) fluoranthene					0.40	µg/L	0.024	ppd	4	EPA 625	0.8
Bis(2-chloroethoxy) methane					2.65	µg/L	0.162	ppd	4	EPA 625	5.3
Bis (2-chloroethyl)ether					0.15	µg/L	0.009	ppd	4	EPA 625	0.3
Bis(2-chloroisopropyl)ether					0.15	µg/L	0.009	ppd	4	EPA 625	0.3
bis (2-ethylhexyl)phthalate	16.8	ug/L	1.025	ppd	0.05	µg/L	0.003	ppd	4	EPA 625	0.1
4-Bromophenyl phenyl ether					0.10	µg/L	0.006	ppd	4	EPA 625	0.2
Butyl benzyl phthalate					0.15	µg/L	0.009	ppd	4	EPA 625	0.3
2-Chloronaphthalene					0.15	µg/L	0.009	ppd	4	EPA 625	0.3
4-Chlorophenyl phenyl ether					0.15	µg/L	0.009	ppd	4	EPA 625	0.3
Chrysene					0.15	µg/L	0.009	ppd	4	EPA 625	0.3
Dibenzo (a,h) anthracene					0.40	µg/L	0.024	ppd	4	EPA 625	0.8
1,2-Dichlorobenzene					0.50	µg/L	0.031	ppd	4	EPA 625	1
1,3-Dichlorobenzene					0.50	µg/L	0.031	ppd	4	EPA 625	1
1,4-Dichlorobenzene					0.50	µg/L	0.031	ppd	4	EPA 625	1
3,3'-Dichlorobenzidine					0.25	µg/L	0.015	ppd	4	EPA 625	0.5
Diethyl phthalate					0.95	µg/L	0.058	ppd	4	EPA 625	1.9
Dimethyl phthalate					0.80	µg/L	0.049	ppd	4	EPA 625	1.6
Di-n-butyl phtalate					0.25	µg/L	0.015	ppd	4	EPA 625	0.5
2,4-Dinitrotoluene					0.10	µg/L	0.006	ppd	4	EPA 625	0.2
2,6-Dinitrotoluene					0.10	µg/L	0.006	ppd	4	EPA 625	0.2
Di-n-octyl phthalate					0.15	µg/L	0.009	ppd	4	EPA 625	0.3
1,2 Diphenylhydrazine (as Azobenzene)					2.50	µg/L	0.153	ppd	4	EPA 625	5
Flouranthene					0.15	µg/L	0.009	ppd	4	EPA 625	0.3
Fluorene					0.15	µg/L	0.009	ppd	4	EPA 625	0.3
Hexachlorobenzene					0.15	µg/L	0.009	ppd	4	EPA 625	0.3
Hexachlorobutadiene					0.25	µg/L	0.015	ppd	4	EPA 625	0.5
Hexachlorocyclopentadiene					0.25	µg/L	0.015	ppd	4	EPA 625	0.5
Hexachloroethane					0.25	µg/L	0.015	ppd	4	EPA 625	0.5
Ideno (1,2,3-cd) Pyrene					0.25	µg/L	0.015	ppd	4	EPA 625	0.5
Isophorone					0.25	µg/L	0.015	ppd	4	EPA 625	0.5
Napthalene					0.15	µg/L	0.009	ppd	4	EPA 625	0.3
Nitrobenzene					0.25	µg/L	0.015	ppd	4	EPA 625	0.5
N-Nitrosodimethylamine					1.00	µg/L	0.061	ppd	4	EPA 625	2
N-Nitrosodi-n-Propylamine					0.25	µg/L	0.015	ppd	4	EPA 625	0.5
N-Nitrosodiphenylamine					0.25	µg/L	0.015	ppd	4	EPA 625	0.5
Phenanthrene					0.15	µg/L	0.009	ppd	4	EPA 625	0.3
Pyrene					0.15	µg/L	0.009	ppd	4	EPA 625	0.3
1,2,4-Trichlorobenzene					0.15	µg/L	0.009	ppd	4	EPA 625	0.3
ORGANOCHLORIDE PESTICIDES AND PCBS											
Aldrin					0.01	µg/L	0.001	ppd	4	EPA 608	0.025
alpha-BHC					0.01	µg/L	0.001	ppd	4	EPA 608	0.025
beta-BHC	0.02	µg/L	0.001	ppd	0.02	µg/L	0.001	ppd	4	EPA 608	0.025
delta-BHC					0.01	µg/L	0.001	ppd	4	EPA 608	0.025
gamma-BHC (Lindane)					0.01	µg/L	0.001	ppd	4	EPA 608	0.025
Chlordane (tech)					0.01	µg/L	0.001	ppd	4	EPA 608	0.025
4,4'-DDD					0.01	µg/L	0.001	ppd	4	EPA 608	0.025
4,4'-DDE					0.01	µg/L	0.001	ppd	4	EPA 608	0.025
4,4'-DDT					0.01	µg/L	0.001	ppd	4	EPA 608	0.025
Dieldrin					0.01	µg/L	0.001	ppd	4	EPA 608	0.025
Endosulfan I					0.01	µg/L	0.001	ppd	4	EPA 608	0.025
Endosulfan II					0.01	µg/L	0.001	ppd	4	EPA 608	0.025
Endosulfan Sulfate					0.01	µg/L	0.001	ppd	4	EPA 608	0.025
Endrin					0.01	µg/L	0.001	ppd	4	EPA 608	0.025

Table G-1. Summary of Effluent Chemistry Results for Salmon Creek WWTP (2011-2015)

Pollutant ¹	Maximum Daily Discharge				Average Daily Discharge					Analytical Method	ML/MDL ⁵
	Conc. ²	Units	Mass ³	Units	Conc. ⁴	Units	Mass ³	Units	Number of Samples		
Endrin Aldehyde					0.01	µg/L	0.001	ppd	4	EPA 608	0.025
Heptachlor	0.019	µg/L	0.001	ppd	0.01	µg/L	0.001	ppd	4	EPA 608	0.025
Heptachlor Epoxide					0.01	µg/L	0.001	ppd	4	EPA 608	0.025
Toxaphene					0.12	µg/L	0.007	ppd	4	EPA 608	0.24
Aroclor 1016					0.07	µg/L	0.004	ppd	4	EPA 608	0.13
Aroclor 1221					0.13	µg/L	0.008	ppd	4	EPA 608	0.25
Aroclor 1232					0.13	µg/L	0.008	ppd	4	EPA 608	0.25
Arclor 1242					0.13	µg/L	0.008	ppd	4	EPA 608	0.25
Arclor 1248					0.13	µg/L	0.008	ppd	4	EPA 608	0.25
Aroclor 1254					0.13	µg/L	0.008	ppd	4	EPA 608	0.25
Aroclor 1260					0.07	µg/L	0.004	ppd	4	EPA 608	0.13
AMMONIA											
Ammonia (Dry Season; 2000-2004)	31.7	mg/L	1,937	ppd		mg/L		ppd		SM4500NH3-G	0.02
Ammonia (Wet Season; 2000-2004)	32.5	mg/L	1,986	ppd		mg/L		ppd		SM4500NH3-G	0.02
Ammonia (Dry Season; 2010)	23.7	mg/L	1,446	ppd		mg/L		ppd		SM4500NH3-G	0.02
Ammonia (Wet Season; 2010)	24.5	mg/L	1,495	ppd		mg/L		ppd		SM4500NH3-G	0.02
Ammonia (Dry Season; 2011-2015)	11.0	mg/L	671	ppd		mg/L		ppd		SM4500NH3-G	0.02
Ammonia (Wet Season; 2011-2015)	9.4	mg/L	574	ppd		mg/L		ppd		SM4500NH3-G	0.02
<p>NOTES</p> <p>1. Pollutants in bold are specified on Form 2A of NPDES permit application.</p> <p>2. For the maximum concentration, only compounds with results above the MDL are considered</p> <p>3. The average daily flow rate of 7.32 mgd is used for mass determination</p> <p>4. Half the detection limit is used for all non-detectible data to determine the average concentration and mass</p> <p>5. If available the MDL is reported. If MDL is not provided then ML is used. Both ML and MDL are from the protocols used as required by permit.</p>											

Table G-2. Summary of SCTP Effluent Ammonia (mg/L)

<i>Post-nitrification</i>			
	<u>Average</u>	<u>Maximum</u>	<u>No. Samples</u>
Jun-10	0.80	2.80	13
Jul-10	1.68	4.00	13
Aug-10	1.24	6.80	13
Sep-10	2.92	8.50	13
Oct-10	1.86	7.60	13
Nov-10	1.21	5.10	13
Dec-10	1.51	3.80	13
Jan-11	3.01	7.50	13
Feb-11	2.48	4.60	12
Mar-11	3.11	4.60	12
Apr-11	3.13	4.50	13
May-11	0.93	2.20	13
Jun-11	1.02	2.40	13
Jul-11	0.75	1.60	13
Aug-11	1.01	5.60	13
Sep-11	0.69	2.50	13
Oct-11	0.88	2.60	13
Nov-11	3.47	6.90	13
Dec-11	3.35	7.40	13
Jan-12	1.49	5.20	13
Feb-12	2.66	4.10	12
Mar-12	2.64	3.80	12
Apr-12	1.63	3.30	13
May-12	0.68	1.30	13
Jun-12	0.72	1.50	13
Jul-12	0.51	1.10	13
Aug-12	2.11	6.30	13
Sep-12	0.35	0.70	13
Oct-12	2.43	5.20	13
Nov-12	0.62	1.70	13
Dec-12	1.79	3.50	13
Jan-13	3.22	6.10	13
Feb-13	3.71	9.40	12
Mar-13	1.38	2.00	12
Apr-13	1.32	2.20	13
May-13	1.39	2.80	13
Jun-13	1.44	4.30	13
Jul-13	3.24	7.20	13
Aug-13	0.33	0.60	13
Sep-13	0.40	1.10	13
Oct-13	0.35	1.10	13
Nov-13	0.79	2.20	13
Dec-13	1.02	2.70	13
Jan-14	3.76	8.50	13
Feb-14	3.58	5.00	12
Mar-14	4.78	5.70	12
Apr-14	3.21	6.20	13
May-14	1.82	3.80	13
Jun-14	0.32	0.50	13
Jul-14	0.33	0.50	13
Aug-14	2.60	11.00	13
Sep-14	0.60	1.70	13
Oct-14	0.34	0.60	13
Nov-14	1.17	4.40	13
Dec-14	0.81	2.80	13
Jan-15	1.39	3.10	13
Feb-15	2.45	6.80	12
Mar-15	1.30	3.70	12
Apr-15	0.96	2.00	13
May-15	0.84	1.70	13
Jun-15	0.94	3.00	13
	1.69	11.00	783
	Average	Maximum	Total no.
Dry Avg.	1.17	11.00	Dry Max.
Wet Avg.	2.23	9.40	Wet Max.

Reasonable Potential Calculation

Facility	Salmon Creek TP
Water Body Type	Freshwater
Rec. Water Hardness	Acute=63, Chronic=60.6 mg/L

Dilution Factors:		Acute	Chronic
Aquatic Life		21.0	139.0
Human Health Carcinogenic			142.0
Human Health Non-Carcinogenic			156.0

Pollutant, CAS No. & NPDES Application Ref. No.		AMMONIA, Criteria as Total NH3	ARSENIC (dissolved) 7440382 2M	ANTIMONY (INORGANIC) 7440360 1M	CADMIUM - 7440439 4M Hardness dependent	CHROMIUM(TRI) - 16065831 5M Hardness dependent	COPPER - 744058 6M Hardness dependent	LEAD - 7439921 7M Dependent on hardness	MERCURY 7439976 8M	NICKEL - 7440020 9M - Dependent on hardness	SELENIUM 7782492 10M	SILVER - 7740224 11M dependent on hardness.	
		Effluent Data	# of Samples (n)	264	19	19	19	19	19	19	10	19	19
	Coeff of Variation (Cv)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
	Effluent Concentration, ug/L (Max. or 95th Percentile)	11,000	1.85	0.22	0.03	0.56	59.6	0.47	0.0024	1.5	0.2	0.03	
	Calculated 50th percentile Effluent Conc. (when n>10)			0.22			59.6			1.5	0.2		
Receiving Water Data	90th Percentile Conc., ug/L	20	1.24		0.1	0.44	0.8	0.13	0.0068	0.83	0.5	0.01	
	Geo Mean, ug/L			0.1			0.8		0.0068	0.83	0.5		
Water Quality Criteria	Aquatic Life Criteria, Acute ug/L	2,310	360	-	2,2436	375.859	11,0104	38.9173	2.1	957.47	20	1,5584	
		Chronic	473	190	-	0.712	118.144	7.40105	1.45352	0.012	102.93	5	-
	WQ Criteria for Protection of Human Health, ug/L	-	-	14	-	-	1300	-	0.14	610	170	-	
	Metal Criteria Acute Translator, decimal	-	1	-	0.943	0.316	0.996	0.466	0.85	0.998	-	0.85	
		Chronic	-	1	-	0.943	0.86	0.996	0.466	-	0.997	-	-
	Carcinogen?	N	Y	N	N	N	N	N	N	N	N	N	

Aquatic Life Reasonable Potential

Effluent percentile value		0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
s	$s^2 = \ln(CV^2 + 1)$	0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555	0.555
Pn	$Pn = (1 - \text{confidence level})^{1/n}$	0.989	0.854	0.854	0.854	0.854	0.854	0.854	0.741	0.854	0.854	0.854
Multiplier		1.00	1.39	1.39	1.39	1.39	1.39	1.39	1.74	1.39	1.39	1.39
Max concentration (ug/L) at edge of...	Acute	543	1.303	0.097	0.431	4.684	0.138	0.007	0.889	0.489	0.011	
	Chronic	99	1.250	0.100	0.442	1.387	0.131	0.007	0.839	0.498	0.010	
Reasonable Potential? Limit Required?		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

Aquatic Life Limit Calculation

# of Compliance Samples Expected per month		
LTA Coeff. Var. (CV), decimal		
Permit Limit Coeff. Var. (CV), decimal		
Waste Load Allocations, ug/L	Acute	
	Chronic	
Long Term Averages, ug/L	Acute	
	Chronic	
Limiting LTA, ug/L		
Metal Translator or 1?		
Average Monthly Limit (AML), ug/L		
Maximum Daily Limit (MDL), ug/L		

Human Health Reasonable Potential

s	$s^2 = \ln(CV^2 + 1)$	0.55451	0.55451	0.5545	0.5545	0.5545
Pn	$Pn = (1 - \text{confidence level})^{1/n}$	0.854	0.854	0.741	0.854	0.854
Multiplier		0.55731	0.55731	0.6986	0.5573	0.5573
Dilution Factor		156	156	156	156	156
Max Conc. at edge of Chronic Zone, ug/L		0.10077	1.2E+00	0.0068	0.8343	0.4981
Reasonable Potential? Limit Required?		NO	NO	NO	NO	NO

Human Health Limit Calculation

# of Compliance Samples Expected per month	
Average Monthly Effluent Limit, ug/L	
Maximum Daily Effluent Limit, ug/L	

Comments/Notes:

References:

WAC 173-201A,

Technical Support Document for Water Quality-based Toxics Control, US EPA, March 1991, EPA/505/2-90-001, pages 56/99

Reasonable Potential Calculation - Page 2

Facility	Salmon Creek TP
Water Body Type	Freshwater
Rec. Water Hardness	Acute=63, Chronic=60.6 mg/L

Dilution Factors:		Acute	Chronic
Aquatic Life		21.0	139.0
Human Health Carcinogenic			142.0
Human Health Non-Carcinogenic			156.0

Pollutant, CAS No. & NPDES Application Ref. No.		THALLIUM 7440280 12M	ZINC- 7440666 13M hardness dependent	CYANIDE 57125 14M	BIS(2-ETHYLHEXYL) PHTHALATE 117917 13B	BHC - BETA 319857 3P	HEPTACHLOR 76448 16P	TOLUENE 108883 25V				
		Effluent Data	# of Samples (n)	19	19	4	4	4	4	4		
	Coeff of Variation (Cv)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
	Effluent Concentration, ug/L (Max. or 95th Percentile)		60	5	16.8	0.2	0.019	1.1				
	Calculated 50th percentile Effluent Conc. (when n>10)	0.05										
Receiving Water Data	90th Percentile Conc., ug/L		4.5	0			0					
	Geo Mean, ug/L	0.01		0	0	0	0	0				
Water Quality Criteria	Aquatic Life Criteria, Acute ug/L	-	77.373	22	-	-	0.52	-				
	Chronic ug/L	-	68.388	5.2	-	-	0.0038	-				
	WQ Criteria for Protection of Human Health, ug/L	1.7	-	700	1.8	0.014	0.00021	6800				
	Metal Criteria Acute Translator, decimal	-	0.996	-	-	-	-	-				
	Chronic	-	0.996	-	-	-	-	-				
	Carcinogen?	N	N	N	Y	Y	Y	N				

Aquatic Life Reasonable Potential

Effluent percentile value		0.950	0.950		0.950
s	$s^2 = \ln(CV^2 + 1)$	0.555	0.555		0.555
Pn	$Pn = (1 - \text{confidence level})^{1/n}$	0.854	0.473		0.473
Multiplier		1.39	2.59		2.59
Max concentration (ug/L) at edge of...	Acute	8.234	0.616		0.002
	Chronic	5.064	0.093		0.000
Reasonable Potential? Limit Required?		NO	NO		NO

Aquatic Life Limit Calculation

# of Compliance Samples Expected per month	
LTA Coeff. Var. (CV), decimal	
Permit Limit Coeff. Var. (CV), decimal	
Waste Load Allocations, ug/L	Acute
	Chronic
Long Term Averages, ug/L	Acute
	Chronic
Limiting LTA, ug/L	
Metal Translator or 1?	
Average Monthly Limit (AML), ug/L	
Maximum Daily Limit (MDL), ug/L	

Human Health Reasonable Potential

s	$s^2 = \ln(CV^2 + 1)$	0.5545	0.55451	0.5545	0.55451	0.55451	0.55451
Pn	$Pn = (1 - \text{confidence level})^{1/n}$	0.854	0.473	0.473	0.473	0.473	0.473
Multiplier		0.5573	1.03846	1.0385	1.03846	1.03846	1.03846
Dilution Factor		156	156	142	142	142	156
Max Conc. at edge of Chronic Zone, ug/L		0.0103	0.03328	0.1229	0.00146	1.4E-04	7.3E-03
Reasonable Potential? Limit Required?		NO	NO	NO	NO	NO	NO

Human Health Limit Calculation

# of Compliance Samples Expected per month	
Average Monthly Effluent Limit, ug/L	
Maximum Daily Effluent Limit, ug/L	

Comments/Notes:

References:

WAC 173-201A,

Technical Support Document for Water Quality-based Toxics Control, US EPA, March 1991, EPA/505/2-90-001, pages 56/99