

For the purpose of determining whether effluent monitoring should be required in the absence of RP (via the POT worksheet), this worksheet computes an alternative reasonable potential according to the procedure outlined in section 3.3.2 of the Technical Support Document for Water Quality-Based Toxics Control (TSD). The TSD method accounts for the uncertainty in the C95 estimate due to the size of the effluent data set. The smaller the data set, the greater the degree of uncertainty. Agricultural mineral calculations are found in the Ag tab.

OWQScreen-S

Version
3.35

Reasonable Potential (for Monitoring)

GLENPOOL PIPELINE BREAKOUTSTATION

Outfall	Instream Pollutant Conc [C _a] and Potential to Exceed OWQS Numerical Criteria (for Effluent Monitoring)														
Parameter	Units	Eqn 2 Aesthetics	PPWS		F&WP		Fish Consump Eqn 9 Human Hlth Fish Flesh	C _a > OWQS Criteria? *						RP FLAG	
			Eqn 3 Raw Water	Eqn 4 Human Hlth FF & Water	Aquatic Toxicity			A E S	R A W	F F W	A A	C C	F F		
PART A															
Ammonia															
PART B															
Color															
Fluoride (at 90 deg F)	mg/l														
Nitrate-Nitrite (as N)	mg/l														
Phosphorus (as P) (Scenic Rivers only)	mg/l														
Barium, total	mg/l														
Manganese, total															
METALS and CYANIDE															
Antimony, total															
Arsenic, total	ug/l														
Beryllium, total															
Cadmium, total	ug/l														
Chromium, total	ug/l														
Copper, total	ug/l														
Lead, total	ug/l			N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	
Mercury, total	ug/l														
Nickel, total	ug/l														
Selenium, total	ug/l														
Silver, total	ug/l														
Thallium, total	ug/l														
Zinc, total	ug/l			63.31		0.04	4.62			NO		NO		NO	
Cyanide, total	ug/l														
DIOXINS															
2,3,7,8-Tetrachlorodibenzo-P Dioxin	ug/l														
GC/MS FRACTION - VOLATILE COMPOUNDS															
Acrolein	ug/l														
Acrylonitrile	ug/l														
Benzene	ug/l														
Bromoform															
Carbon Tetrachloride	ug/l														
Chlorobenzene															
Chlorodibromomethane															
Chloroethane															
2-Chloroethylvinyl Ether															
Chloroform	ug/l														
Dichlorobromomethane	ug/l														
1,1-Dichloroethane															
1,2-Dichloroethane															
1,1-Dichloroethylene															
1,2-Dichloropropane															
1,3-Dichloropropylene															
Ethylbenzene	ug/l														
Methyl Bromide															
Methyl Chloride															
Methylene Chloride															
1,1,2,2-Tetrachloroethane															
Tetrachloroethylene	ug/l														
Toluene	ug/l														
1,2-Trans-dichloroethene															
1,1,1-Trichloroethane	ug/l														
1,1,1,2-Trichloroethane															
Trichloroethylene															
Vinyl Chloride															
GC/MS FRACTION - ACID COMPOUNDS															
2-Chlorophenol															
2,4-Dichlorophenol															
2,4-Dimethylphenol															
4,6-Dinitro-o-cresol															
2,4-Dinitrophenol															
2-Nitrophenol															
4-Nitrophenol															
p-Chloro-m-cresol															
Pentachlorophenol	ug/l														
Phenol	ug/l														
2,4,6-Trichlorophenol															
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
Acenaphthene															

Outfall		Instream Pollutant Conc [C _a] and Potential to Exceed OWQS Numerical Criteria (for Effluent Monitoring)													RP
Parameter	Units	Eqn 2 Aesthetics	PPWS		F&WP		Fish Consump Eqn 9 Human Hlth Fish Flesh	C _a > OWQS Criteria? *						RP FLAG	
			Eqn 3 Raw Water	Eqn 4 Human Hlth FF & Water	Aquatic Toxicity			A E S	R A W	F W	A	C	F F		
					Eqn 5 Acute	Eqns 6 - 8 Chronic									
Acenaphthylene															
Anthracene															
Benzidine	ug/l														
Benzo (a) Anthracene															
Benzo (a) Pyrene															
3,4-Benzofluoranthene															
Benzo (ghi) Perylene															
Benzo (k) Fluoranthene															
Bis (2-Chloroethoxy) Methane															
Bis (2-Chloroethyl) Ether															
Bis (2-Chloroisopropyl) Ether															
Bis (2-Ethylhexyl) Phthalate	ug/l														
4-Bromophenyl Phenyl Ether															
Butylbenzyl Phthalate	ug/l														
2-Chloronaphthalene															
4-Chlorophenyl Phenyl Ether															
Chrysene															
Dibenzo (a,h) Anthracene															
1,2-Dichlorobenzene															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
3,3'-Dichlorobenzidine															
Diethyl Phthalate	ug/l														
Dimethyl Phthalate	ug/l														
Di-n-butyl Phthalate	ug/l														
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Di-n-octyl Phthalate															
1,2-Diphenylhydrazine (as Azobenzene)															
Fluoranthene															
Fluorene															
Hexachlorobenzene	ug/l														
Hexachlorobutadiene															
Hexachlorocyclopentadiene															
Hexachloroethane															
Indeno (1,2,3-cd) Pyrene															
Isophorone															
Naphthalene															
Nitrobenzene															
n-Nitrosodimethylamine															
n-Nitrosodi-n-propylamine															
n-Nitrosodiphenylamine															
Phenanthrene															
Pyrene															
1,2,4-Trichlorobenzene															
GC/MS FRACTION - PESTICIDES															
Aldrin	ug/l														
alpha-BHC															
beta-BHC															
gamma-BHC	ug/l														
delta-BHC															
Chlordane	ug/l														
4,4'-DDT	ug/l														
4,4'-DDE															
4,4'-DDD	ug/l														
Dieldrin	ug/l														
Endosulfan, total (α + β)	ug/l														
Endosulfan Sulfate															
Endrin	ug/l														
Endrin Aldehyde															
Heptachlor	ug/l														
Heptachlor Epoxide															
PCB-1242															
PCB-1254															
PCB-1221															
PCB-1232															
PCB-1248															
PCB-1260															
PCB-1016															
Toxaphene	ug/l														
ADDITIONAL PARAMETERS															
Chlorides															See AG Worksheet
Sulfates															See AG Worksheet
Total Dissolved Solids (TDS)															See AG Worksheet
2,4,5-TP	ug/l														
2,4,6-Trinitotoluene	ug/l														
2,4-D	ug/l														

Outfall		Instream Pollutant Conc [C _d] and Potential to Exceed OWQS Numerical Criteria (for Effluent Monitoring)												
Parameter	Units	Eqn 2 Aesthetics	PPWS		F&WP		Fish Consump Eqn 9 Human Hlth Fish Flesh	C _d > OWQS Criteria? *						RP FLAG
			Eqn 3 Raw Water	Eqn 4 Human Hlth FF & Water	Aquatic Toxicity			A E S	R A W	F F W	A	C	F F	
					Eqn 5 Acute	Eqns 6 - 8 Chronic								
Bis-chloromethyl ether														
Chlorpyrifos (Dursban)	ug/l													
Demeton	ug/l													
Detergents, total	mg/l													
Diazinon	ug/l													
Dinitrophenols														
Guthion	ug/l													
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	ug/l													
Malathion	ug/l													
Methoxychlor	ug/l													
Methylene Blue Active Substances	ug/l													
Mirex	ug/l													
n-Nitrosodibutylamine														
n-Nitrosodiethylamine														
n-Nitrosopyrrolidine														
Nonylphenol (mixed isomers)	ug/l													
Parathion	ug/l													
PCB's, total	ug/l													
Pentachlorobenzene														
Perchlorate	ug/l													
Phthalate Esters (except Butylbenzyl)	ug/l													
1,2,4,5-Tetrachlorobenzene														
2,4,5-Trichlorophenol														

Equations Used to Calculate Instream Pollutant Concentrations after Mixing (C _d)		
Criterion	Eqn No.	C _d Equation
Aesthetics	Eqn 2	$C_d = (C_{95} Q^* + C_U) / (1 + Q^*)$
Raw Water	Eqn 3	$C_d = (C_{95} Q^{***} + C_U) / (1 + Q^{***})$
HH / Fish Flesh and Water	Eqn 4	$C_d = (C_{95} Q^{**} + C_U) / (1 + Q^{**})$
Acute Toxicity	Eqn 5	$C_d = C_U + Q_{95}(C_{95} - C_U) / 64.63$
Chronic Toxicity	$Q^* \leq 0.1823$	Eqn 6
	$0.1823 < Q^* < 0.3333$	Eqn 7
	$Q^* \geq 0.3333$	Eqn 8
HH / Fish Flesh	Eqn 9	$C_d = (C_{95} Q^{**} + C_U) / (1 + Q^{**})$

* Based on background levels in EBDATA worksheet. Impact of zero background levels assessed in BTC worksheet.

Flow Data (and applicable screens)		Q* (AES)	Q* (Chronic)	Q** (FFW, FF)	Q*** (RAW)	Qe (Acute)	Note: Q** = Q*** for municipal dischargers only.
Type Facility:	INDUS	0.0297	0.0297	1.0000	3.3000	0.0297	