Using the implementation criteria in OAC 785:46 and 252:690, pollutants are screened to determine if there is reasonable potential (RP) for the effluent to exceed any applicable numerical water quality criteria (see "CRIT" worksheet). Wasteload allocations are then calculated for each pollutant and all applicable criteria if there is RP for any of the pollutant's applicable criteria to be exceeded (see "WLA" worksheet). **If PCS data for a parameter limited in the previous permit indicates any monthly avg or daily max limit violations, then water quality-based limits must be retained in the new permit for that parameter, regardless of whether RP is exhibited. Agricultural mineral calculations are found in the Ag tab.**

OWQScreen-S Version 3.35

Reasonable Potential (for Limits)

GLENPOOL PIPELINE BREAKOUTSTATION

Outfall | **Instream Pollutant Conc [C_d] and Potential to Exceed OWQS Numerical Criteria (for Effluent Limits)**

Parameter	Units	Eqn 2 Aesthetics	PPWS Eqn 3 Raw Water	PPWS Eqn 4 Human Hlth FF & Water	F&WP Aquatic Toxicity Eqn 5 Acute	F&WP Aquatic Toxicity Eqns 6 - 8 Chronic	Fish Consump Eqn 9 Human Hlth Fish Flesh	C_d > OWQS Criteria? * A E S	R A W	F F W	A	C	F F	RP FLAG
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		11.70	7.62	0.01	0.85	7.62		NO	YES	NO	NO	NO	◄
Mercury, total	ug/l													
Nickel, total	ug/l													
Selenium, total	ug/l													
Silver, total	ug/l													
Thallium, total	ug/l													
Zinc, total	ug/l		32.44		0.02	2.37			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													
1,1,2-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														
Acenapthene														

Outfall	Instream Pollutant Conc [C_d] and Potential to Exceed OWQS Numerical Criteria (for Effluent Limits)														
			PPWS		F&WP		Fish Consump	C_d > OWQS Criteria? *							
			Eqn 3	Eqn 4	Aquatic Toxicity		Eqn 9	A	R	F				RP
		Eqn 2	Raw	Human Hlth	Eqn 5	Eqns 6 - 8	Human Hlth	E	A	F	A	C	F	FLAG
Parameter	Units	Aesthetics	Water	FF & Water	Acute	Chronic	Fish Flesh	S	W	W				◄
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 Limits)														
			PPWS		F&WP		Fish Consump	C_d > OWQS Criteria? *							
			Eqn 3	Eqn 4	Aquatic Toxicity		Eqn 9	A	R	F					RP
		Eqn 2	Raw	Human Hlth	Eqn 5	Eqns 6 - 8	Human Hlth	E	A	F			F		FLAG
Parameter	Units	Aesthetics	Water	FF & Water	Acute	Chronic	Fish Flesh	S	W	W	A	C	F		
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	$C_d = (C_{95}\ Q^* + C_b) / (1 + Q^*)$
Raw Water		Eqn 3	$C_d = (C_{95}\ Q^{***} + C_b) / (1 + Q^{***})$
HH / Fish Flesh and Water		Eqn 4	$C_d = (C_{95}\ Q^{**} + C_b) / (1 + Q^{**})$
Acute Toxicity		Eqn 5	$C_d = C_b + Q_e(C_{95} - C_b) / 64.63$
Chronic Toxicity	$Q^* <= 0.1823$	Eqn 6	$C_d = C_b + 1.94\ Q^*(C_{95} - C_b) / (1 + Q^*)$
	$0.1823 < Q^* < 0.3333$	Eqn 7	$C_d = C_b + (C_{95} - C_b) / (6.17 - 15.51\ Q^*)$
	$Q^* >= 0.3333$	Eqn 8	$C_d = C_{95}$
HH / Fish Flesh		Eqn 9	$C_d = (C_{95}\ Q^{**} + C_b) / (1 + Q^{**})$
*** 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	