Preliminary Surface Water Discharge Limits for VOCs in Sites 1 10 Groundwater
Based on a Treatment Plant Discharge of 300 gpm

7Q10 Flow (cfs) = 117.48
Plant Discharge Flow (MGD) = 0.432
Plant Discharge Flow (cfs) = 0.668 0.66836
Plant Discharge Flow (gpm) = 300

"B1" River Use Classification

Constituent	Water Quality Standard (µg/L)	Allowable(lb/dy)	IWC [1]	% of Allow	WLA(lb/dy)	AMC (µg/l)	DM (µg/l)
Ammonium Perchlorate	32	20.32	0.57	5%	1.13	314	471

"A" River Use Classification

Constituent	Water Quality Standard (µg/L)	Allowable(lb/dy)	IWC [1]	% of Allow	WLA(lb/dy)	AMC (µg/l)	DM (µg/l)
Ammonium Perchlorate	32	20.32	0.57	20%	4.18	1,160	1,740

Allowable = 7Q10(WQS-RiverBackground Concentration)/0.185 where WQS and Background Concentration units are milligrams per liter

IWC = Instream Waste Concentration = Discharge Flow/(Discharge Flow+7Q10 Flow)x100 where flow unit is cfs

% of Allow = For IWCs less than 1%, a WLA will be derived based on 5% of the river's assimilative capacity for "B1", and 20% for "A".

WLA = Waste Load Allocation = Discharge Flow(WQS)8.34+(0.05xAllowable) where flow unit is MGD, WQS unit is milligrams per liter, and Allowable unit is lb/day

AMC = Average Monthly Discharge Concentration = WLA/[8.34xDischarge Flow] where flow unit is MGD

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TABLE 1
VOC - RISK ASSESSMENT DISCHARGE LIMITS

Constituents	Water Quality Standard (µg/L)	Allowable (lb/dy)	Percent of Allowable	WLA (lb/dy)	AMC (µg/l)	BAT Effluent Limitation (µg/L)	Discharge Limit (µg/L)
1,1-Dichloroethane	0.001	0.0006	20%	0.0001	0.05	22.00	0.05
1,2-Dichloroethene(Tot)	2.000	1.27	20%	0.26	98	25.00	25.00
Methylene Chloride	39.000	24.77	20%	5.06	1,913	36.00	36.00
Toluene	1.000	0.64	20%	0.13	49	28.00	28.00
1,1,1-Trichloroethane	0.200	0.13	20%	0.03	9.81	22.00	9.81
Vinyl Chloride	0.500	0.32	20%	0.06	25	97.00	25.00