Reasonable Potential Analyzer - Fact Sheet Appendix B

Facility Name: Village of Bosque Farms WWTP
NPDES Permit Number: NM0030279
Outfall Number: 001
Proposed Critical Dilution*: 8

***Critical Dilution in draft permit, do not use % sign.**
Enter data in yellow shaded cells only. Fifty percent should be entered as 50, not 50%.

Test Data

Date (mm/yyyy)	VERTEBRATE Lethal NOEC		VERTEBRATE Lethal TU		INVERTEBRATE Lethal NOEC		INVERTEBRATE Lethal TU	
Feb-07	11		9.09		11		9.09	
May-07	11		9.09		11		9.09	
Aug-07	11		9.09		11		9.09	
Dec-07	11		9.09		11		9.09	
Feb-08	11		9.09		11		9.09	
May-08	11		9.09		11		9.09	
Aug-08	11		9.09		11		9.09	
Nov-08	11		9.09		11		9.09	
Nov-09	11		9.09		11		9.09	
Nov-10	11		9.09		11		9.09	
	11	0	9.09		11	0	9.09	
Count			10				10	
Mean			9.091				9.091	
Std. Dev.			0.000				0.000	
CV			0.0				0	
RPMF			#N/A				#N/A	

	12.5	Reasonable Potential Acceptance Criteria
Vertebrate Lethal	#N/A	#N/A
		No Reasonable Potential exists. Permit requires WET monitoring, but no V
Invertebrate Lethal	#N/A	#N/A
		No Reasonable Potential exists. Permit requires WET monitoring, but no V

Determining "Reasonable Potential" for Excursions Above Ambient Criteria Using Effluent Data Only

EPA recommends finding that a permittee has "reasonable potential" to exceed a receiving water quality standard if it cannot be demonstrated with a high confidence level that the upper bound of the lognormal distribution of effluent concentrations is below the receiving water criteria at specified low-flow conditions.

Step 1 Determine the number of total observations ("n") for a particular set of effluent data (concentration or toxic units [TUs]), and determine the highest value from that data set.

Step 2 Determine the coefficient of variation for the data set. For a data set where n<10, the coefficient of variation (CV) is estimated to equal 0.6, or the CV is calculated from data obtained from a discharger. For a data set where n>0, the CV is calculate as standard deviation/mean. For less than 10 items of data, the uncertainty in the CV is too large to calculate a standard deviation or mean with sufficient confidence.

Step 3 Determine the appropriate ratio from the table below.

Step 4 Multiply the highest value from a data set by the value from the table below. Use this value with the appropriate dilution to project a maximum receiving water concentration (RWC).

VET limi

Step 5 Compare the projected maximum RWC to the applicable standard (criteria maximum concentration, criteria continuous concentration [CCC], or reference ambient concentration). EPA recommends that permitting authorities find reasonable potential when the projected RWC is greater than an ambient criterion.

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