Reasonable Potential Analyzer

Facility Name: **City of Aztec WWTP**

NPDES Permit Number: **NM0020168**   Outfall Number: **001**

Proposed Critical Dilution*: **8.4** %

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				INVERTEBRATE			
	Lethal NOEC	Sublethal NOEC	Lethal TU	Sublethal TU	Lethal NOEC	Sublethal NOEC	Lethal TU	Sublethal TU
Feb-10	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
May-10	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Aug-10	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Nov-10	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Feb-11	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
May-11	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Aug-11	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Nov-11	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Feb-12	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
May-12	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Aug-12	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Nov-12	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Feb-13	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
May-13	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Aug-13	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Nov-13	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Feb-14	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
May-14	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Aug-14	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Nov-14	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Count			20	20			20	20
Mean			8.929	8.929			8.929	8.929
Std. Dev.			0.000	0.000			0.000	0.000
CV			0.0	0			0	0
RPMF			#N/A	#N/A			#N/A	#N/A

11.905 Reasonable Potential Acceptance Criteria

Vertebrate Lethal   #N/A   #N/A

No Reasonable Potential exists. Permit requires WET monitoring, but no W

Vertebrate Sublethal   #N/A   #N/A

No Reasonable Potential exists. Permit requires WET monitoring, but no W

Invertebrate Lethal   #N/A   #N/A

No Reasonable Potential exists. Permit requires WET monitoring, but no W

Invertebrate Sublethal   #N/A   #N/A

No Reasonable Potential exists. Permit requires WET monitoring, but no W

Reasonable Potential Analyzer

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).

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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