

Reasonable Potential Analyzer

Facility Name **City of Aztec WWTP**
 NPDES Permit Number **NM0020168** Outfall Number **001**
 Proposed Critical Dilution* **25** %

*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
Jan-16	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Apr-16	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Jul-16	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Oct-16	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Jan-17	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Apr-17	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Jul-17	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Oct-17	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Jan-18	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Apr-18	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Jul-18	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Oct-18	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Jan-19	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Apr-19	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Jul-19	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Oct-19	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Jan-20	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Apr-20	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Jul-20	11.2	11.2	8.93	8.93	11.2	11.2	8.93	8.93
Oct-20	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
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#N/A	#N/A
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4 Reasonable Potential Acceptance Criteria
 Vertebrate Lethal

#N/A

 #N/A Reasonable Potential exists, Permit requires WET monitoring and WET lir
 Vertebrate Sublethal

#N/A

 #N/A Reasonable Potential exists, Permit requires WET monitoring and WET lir
 Invertebrate Lethal

#N/A

 #N/A Reasonable Potential exists, Permit requires WET monitoring and WET lir
 Invertebrate Sublethal

#N/A

 #N/A Reasonable Potential exists, Permit requires WET monitoring and WET lir

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 $n > 10$, the CV is calculated 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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