Reasonable Potential Analyzer										
Facility Name Los Lunas Wastewater Facility										
NPDES Perm	it Number	NM0020	0303			Outfa	ll Number	001		
Proposed Critic	al Dilution*	71		Appendix C	of Fact Shee	et				
*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										
	VERTEBRATE					INVERTEBRATE				
Date (mm/yyyy)	Lethal NOEC		Lethal TU		Lethal NOEC	I	Lethal TU			
Dec-07	19		5.26		19		5.26			
Jun-08	19		5.26		19		5.26			
Dec-08	19		5.26		19		5.26			
Jun-09	19		5.26		19		5.26			
Dec-09	19		5.26		19		5.26			
Dec-10	19		5.26		19		5.26			
Jun-11	19		5.26		19		5.26			
Dec-11	19		5.20		19		5.20			
	19		5.26		19		5.26			
Count			8			Г	8			
Mean			5.263			F	5.263			
Std. Dev.			0.000				0.000			
CV		[0.6				0.6			
		-			L	-				
RPMF	r		1.9			L	1.9			
1.408 Reasonable Potential Acceptance Criteria										
Vertebrate Lethal 7.100 Reasonable Potential exists, Permit requires WET monitoring and WET limit.										
Invertebrate Lethal 7.100 Reasonable Potential exists, Permit requires WET monitoring and WET lin								nd WET limit.		
	-									
	-									

The EPA Reasonable Potential Analyzer for outfall 001 (Appendix A) indicates that RP exists for *Daphnia pulex* and *Pimephales promelas* but since reasonable potential for an excursion of the narrative criterion to protect the aquatic life against toxicity does not actually exist because lethal (acute test) toxic events were not demonstrated, WET limits will not be established in the proposed permit for the invertebrate or vertebrate species for outfall 001. EPA concludes that this effluent does not cause or contribute to an exceedance of the State water quality standards. Therefore WET limits will not be established in the proposed permit.

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 1Determine the number of total observations ("n") for a particular set of effluentdata (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 4Multiply the highest value from a data set by the value from the table below. Usethis 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.

	10	11	12	13	14	15	16	17	18	19	20
0.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
0.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1
0.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2
0.4	1.5	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.2
0.5	1.6	1.6	1.5	1.5	1.4	1.4	1.4	1.4	1.3	1.3	1.3
0.6	1.7	1.7	1.6	1.6	1.5	1.5	1.5	1.4	1.4	1.4	1.4
0.7	1.9	1.8	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.4
0.8	2	1.9	1.9	1.8	1.7	1.7	1.6	1.6	1.6	1.5	1.5
0.9	2.2	2.1	2	1.9	1.8	1.8	1.7	1.7	1.6	1.6	1.5
1	2.3	2.2	2.1	2	1.9	1.8	1.8	1.7	1.7	1.6	1.6
1.1	2.4	2.3	2.2	2.1	2	1.9	1.9	1.8	1.7	1.7	1.7
1.2	2.6	2.4	2.3	2.2	2.1	2	1.9	1.9	1.8	1.8	1.7
1.3	2.7	2.5	2.4	2.3	2.2	2.1	2	1.9	1.9	1.8	1.8
1.4	2.8	2.7	2.5	2.4	2.3	2.2	2.1	2	1.9	1.9	1.8
1.5	3	2.8	2.6	2.5	2.3	2.2	2.1	2	2	1.9	1.8
1.6	3.1	2.9	2.7	2.5	2.4	2.3	2.2	2.1	2	2	1.9
1.7	3.2	3	2.8	2.6	2.5	2.4	2.3	2.2	2.1	2	1.9
1.8	3.3	3.1	2.9	2.7	2.6	2.4	2.3	2.2	2.1	2	2
1.9	3.4	3.2	3	2.8	2.6	2.5	2.4	2.3	2.2	2.1	2
2	3.6	3.3	3	2.9	2.7	2.5	2.4	2.3	2.2	2.1	2