Attachment A: Reasonable Potential Analysis for Lead

Daily Maximum Concentration Derivation		
uy = Avg of Nat. Log of daily discharge *(ug/l)* =	0.02063	
sy = Std Dev. of Nat Log of daily discharge =	0.18223	
S (yi - *uy)2* =	0.02597	
k = number of daily samples =	78	
sy2 = estimated variance = (S[(yi - *uy)2])* / (k-1) =	0.00034	
Daily Max Concentration = exp (uy + 2.326*sy)		
Daily Max Concentration=	**1.56**	**ug/L**
(Log normal distribution, 99th percentile)		
Average Monthly Concentration Derivation		
Number of samples per month, n =	1.00	
E(x) = Daily Avg = exp(uy + 0.5 sy2) =	1.02102	
V(x) = Daily Variance = exp(2uy + sy2) * [exp(sy2) - 1] =	0.00035	
E(Xn) = E(x)	1.02102	
V(Xn) = V(x)/n	0.00035	
Monthly Average Concentration = E(Xn) + 1.645[V(Xn)]^(1/2)		
Monthly Avg Concentration =	**1.05**	**ug/L**
(Log normal distribution, 95th percentile)		

Attachment B: Reasonable Potential Analysis for Aluminum

Daily Maximum Concentration Derivation		
uy = Avg of Nat. Log of daily discharge *(ug/l)* =	4.62690	
sy = Std Dev. of Nat Log of daily discharge =	0.09236	
S (yi - *uy)2* =	0.65678	
k = number of daily samples =	78	
sy2 = estimated variance = (S[(yi - *uy)2])* / (k-1) =	0.00853	
Daily Max Concentration = exp (uy + 2.326*sy)		
Daily Max Concentration=	**126.69**	**ug/L**
(Log normal distribution, 99th percentile)		
Average Monthly Concentration Derivation		
Number of samples per month, n =	1.00	
E(x) = Daily Avg = exp(uy + 0.5 sy2) =	102.63335	
V(x) = Daily Variance = exp(2uy + sy2) * [exp(sy2) - 1] =	90.23158	
E(Xn) = E(x)	102.63335	
V(Xn) = V(x)/n	90.23158	
Monthly Average Concentration = E(Xn) + 1.645[V(Xn)]^(1/2)		
Monthly Avg Concentration =	**118.26**	**ug/L**
(Log normal distribution, 95th percentile)		

Attachment C: Reasonable Potential Analysis for Zinc

Daily Maximum Concentration Derivation		
uy = Avg of Nat. Log of daily discharge *(ug/l)* =	4.08765	
sy = Std Dev. of Nat Log of daily discharge =	0.89167	
S (yi - *uy)2* =	61.22023	
k = number of daily samples =	78	
sy2 = estimated variance = (S[(yi - *uy)2])* / (k-1) =	0.79507	
Daily Max Concentration = exp (uy + 2.326*sy)		
Daily Max Concentration =	**474.22**	**ug/L**
(Log normal distribution, 99th percentile)		
Average Monthly Limit Derivation		
Number of samples per month, n =	1.00	
E(x) = Daily Avg = exp(uy + 0.5 sy2) =	88.69334	
V(x) = Daily Variance = exp(2uy + sy2) * [exp(sy2) - 1] =	9554.59555	
E(Xn) = E(x)	88.69334	
V(Xn) = V(x)/n	9554.59555	
Monthly Average Concentration = E(Xn) + 1.645[V(Xn)]^(1/2)		
Monthly Avg Concentration =	**249.49**	**ug/L**
(Log normal distribution, 95th percentile)		