

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P				
1	<b>CALCULATIONS OF ARKANSAS WATER QUALITY-BASED EFFLUENT LIMITATIONS</b>																			
2	The spreadsheet logic will function correctly when ALL yellow cells with "?" have data entered. For an Arkansas River/Stream																			
3	Do not enter data in yellow cells marked "Reserved". White cells marked "Reserved" have comp (Reserved)																			
4	<b>STEP 1:</b>	INPUT TWO LETTER CODE FOR ECOREGION (Use Code at Right)						GC												
5																				
6																				
7	<b>FACILITY</b>																			
8	<b>Codes &amp; TSS for Ecoregions and Large Rivers</b>																			
9	Permittee							EDCC	Ouachita Mts. Eco (OM) =	2.0 mg/l	Arkansas (Ft. Smith to Dardanelle Dam	12.0 mg/l								
10	NPDES Permit No.							AR0000752	Ozark Highlands Eco (OH) =	2.5 mg/l	Arkansas (Dardanelle Dam to Terry L&I	10.5 mg/l								
11	Outfall No.(s)							001	Boston Mts. Eco (BM) =	1.3 mg/l	Arkansas (Terry L&D to L&D No. 5)	8.3 mg/l								
12	Plant Effluent Flow (MGD)							5.09	Ark River Valley Eco (AV) =	3.0 mg/l	Arkansas (L&D No. 5 to Mouth)	9.0 mg/l								
13	Plant Effluent Flow (cfs)							7.88	Gulf Coastal Eco (GC) =	5.5 mg/l	White (Above Beaver Lake)	2.5 mg/l								
14																				
15	<b>RECEIVING STREAM</b>																			
16																				
17	Is this a <b>Large River from the list at right?</b> (enter "1" if yes, "0" if no; make entry as a number)							0									Ouachita (Above Caddo River)	2.0 mg/l		
18	Name of Receiving Stream:							unnamed tributary									Ouachita (Below Caddo River)	5.5 mg/l		
19																				
20	Is this a lake or reservoir? (enter '1' if yes, '0' = no; make entry as a number)							0									Red River	33.0 mg/l		
21	(Reserved)							0									<b>Total Hardness for:</b>			
22	(Reserved)	DO NOT INPUT DATA INTO CELL H22, H23 & H24....LEAVE BLANK→ ?															Arkansas River = 125 mg/l	Red River = 211 mg/l		
23	(Reserved)																Ouachita River = 28 mg/l	St. Francis River = 103 mg/l		
24	(Reserved)							(Reserved)									White River = 116 mg/l			
25	(Reserved)							(Reserved)									Gulf Coastal = 31 mg/l	Ouachita Mount = 31 mg/l		
26	(Reserved)							(Reserved)									Ozark Highlands = 148 mg/l	Ark River Valley = 25 mg/l		
27	(Reserved)							(Reserved)									Boston Mount = 25 mg/l	Delta = 81 mg/l		
28																				
29	Ecoregion TSS (mg/l) (For Large River, See List to Right)							5.50									<b>Large Rivers</b>			
30	Ecoregion Hardness (mg/l) (Reserved)							31.00									Mississippi River, Arkansas River, Red River			
31	Enter 7Q10 (cfs) as the Critical Flow (Reserved)							0.00	(Reserved)									White (Below confluence with Black River)		
32	Long Term Ave / Harmonic Mean Flow (cfs)							0.00	(Reserved)	(Reserved)									Ouachita (Below confluence with Little Miss. River)	
33	Using Diffusers (Yes/No)							no												
34	pH (Avg)							7.00									For industrial and federal facility, use the highest monthly average flow for the past 24 months. For POTWs, use the design flow.			
35	Percent (%) of Critical Flow for Chronic Criteria							0.67												
36	Percent (%) of Critical Flow for Acute Criteria							0.33												
37	Water Effect Ratio (WER)							1.00	These cells									#VALUE! => No violation or Not Applicable		
38	Ave Monthly Limit LTA Multiplier (Ref: page 103 TSD for WQ-Based Toxics Control)							1.55	must be									999999.00 => No EPA/ADEQ Guideline		
39	Max Daily Limit LTA Multiplier (Ref: " " " " )							3.11	unlocked											
40	Max Daily Limit LTA Multiplier for Human Health (Ref: 2009 CPP; Section 5.27.2)							1.64	to change.											

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
41	<b>STEP 2:</b>	INPUT AMBIENT AND EFFLUENT DATA														
42		CALCULATE IN-STREAM WASTE CONCENTRATIONS														
43																
44	DATA INPUT	For less than 20 data points enter geometric mean concentration as micro-gram per liter (ug/l or ppb).														
45		For 20 or more data points in set enter highest concentration as micro-gram per liter (ug/l or ppb).														
46																
47		Effluent value reported as "< detection level" (DL) but the DL is greater than MQL, the 1/2 DL is used.														
48		Effluent value reported as "< detection level" (DL) and the DL is smaller than MQL, "0" is used.														
49		If a firm value is reported, even less than MQL, the reported value is used.														
50																
51		The following formulae is used to calculate the Instream Waste Concentration (IWC)														
52		(Please refer to CPP for detail)														
53		$IWC = [(F*Qa*Cb) + (Qe*2.13*Ce)] / (F*Qa + Qe)$														
54		Where:														
55		IWC = Instream Waste Concentration														
56		F = Fraction of stream allowed for mixing														
57		Ce = Reported concentration in effluent														
58		Cb = Ambient stream concentration upstream of discharge														
59		Qe = Plant effluent flow														
60		Qb = Critical low flow of stream at discharge point expressed as the 7Q10 or harmonic mean flow for human health criteria														
61		Upstream Flow (Qb)= (% of 7Q10) X 7Q10 for Chronic and Acute														
62																
63		The following formulae convert metals reported in total form to dissolved form if criteria are in dissolved form														
64																
65		$Kp = Kpo * (TSS**a)$					Kp = Linear partition coefficient; Kpo and a can be found in table below									
66		$C/Ct = 1 / (1 + Kp*TSS* 10^{-6})$					TSS = Total suspended solids concentration found in receiving stream (or in effluent for intermittent stream)									
67		Total Metal Criteria (Ct) = Cr / (C/Ct)					C/Ct = Fraction of metal dissolved; and Cr = Dissolved criteria value									
68																
69		<b>*Stream Linear Partition Coefficient (Insert "Dissolved" Conc in Column B to convert to "Total")</b>							<b>Lake Linear Partition Coefficient</b>							
70	Total Metals	Dissolved Value in Stream	Kpo	alpha (a)	Kp	C/Ct	Total Value	Kpo	alpha (a)	Kp	C/Ct	Total Value				
71																
73	Cadmium		4000000	-1.13	582706.889	0.237818469	0.00	3520000.00	-0.92	733514.98	0.1986361	0				
74	Chromium(3)		3360000	-0.93	688338.365	0.208948818	0.00	2170000.00	-0.27	1369499.28	0.1172024	0				
75	Copper		1040000	-0.74	294554.016	0.381672529	0.00	2850000.00	-0.9	614495.12	0.2283249	0				
76	Lead		2800000	-0.8	715925.58	0.202527926	0.00	2040000.00	-0.53	826490.64	0.1803199	0				
77	Mercury		2900000	-1.14	415321.613	0.30448177	0.00	1970000.00	-1.17	268066.09	0.4041443	0				
78	Nickel		490000	-0.57	185433.992	0.495077211	0.00	2210000.00	-0.76	604946.03	0.2310962	0				
79	Zinc		1250000	-0.7	379014.766	0.324193117	0.00	3340000.00	-0.68	1047851.74	0.1478593	0				
80	Silver		2400000	-1.03	414607.994	0.30484608	0.00	2400000.00	-1.03	414607.99	0.3048461	0				
81		<i>*Note: Use this section to convert lab concentrations shown as "dissolved" to "total"</i>														
82								Dissolved	Total							



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
127	The following formulas are used to calculate the instream waste concentration (IWC) for each pollutant:															
128																
129	IWC = [ (Frac X Critical Flow X Cb) + (2.13 X Ce X Qd) ] / [Frac X Critical Flow + Qd] where the critical flow is the 7Q10 except for lakes with the Jet Stream Model.															
130	Use EPA Statistical Factor of 2.13 for less than 20 Ce data points with the Geometric Mean of the Ce's; use 1 for more than 20 data points with the maximum Ce.															
131	IWC = (DF X Ce) + Cb for lakes with Jet Stream Model.															
132	POLLUTANTS	Number of Data points	MLL	EPA Statistical Factor	Background Conc. Cb ug/l	Effluent Conc. Ce ug/l	Domestic Supply IWC ug/l	Acute Aquatic IWC ug/l	Chronic Aquatic IWC ug/l	Bioacc. IWC ug/l	[Reserved]	Arkansas Acute Aquatic ug/l	Arkansas Chronic Aquatic ug/l	Arkansas Bioacc. ug/l	EPA Bioacc. ug/l	
133			ug/l	Factor	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l		ug/l	ug/l	ug/l	ug/l	
137	<b>METALS AND CYANIDE</b>															
138	1. Antimony Total	1	60	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999.00	9999999.00	9999999	6*	
139	2. Arsenic Total	1	0.5	2.13	0	5.8	12.35	12.35	12.35	12.35	9999999	9999999.00	9999999.00	9999999	1.4	
140	3. Beryllium Total	1	0.5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999.00	9999999.00	4	4	
141	4. Cadmium Total	1	1	2.13	0	0	0.00	0.00	0.00	0.00	9999999	4.37	1.82	9999999	5*	
142	6. Chromium (Tri)	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	1006.35	326.45	9999999	100*	
143	7. Chromium (hex)	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	15.71	10.58	9999999	100*	
144	8. Copper Total	5	0.5	2.13	0	5.21	11.10	11.10	11.10	11.10	9999999	14.79	10.93	9999999	13,000	
145	9. Lead Total	1	0.5	2.13	0	0.52	1.11	1.11	1.11	1.11	9999999	87.29	3.40	9999999	50	
146	10. Mercury Total	1	0.005	2.13	0	0	0.00000	0.00000	0.00000	0.00000	9999999	6.70	0.012	9999999	2*	
147	12. Nickel Total	1	0.5	2.13	0	5.5	11.72	11.72	11.72	11.72	9999999	1061.45	117.88	9999999	46,000	
148	13. Selenium Total	1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	20.00	5.00	9999999	42,000	
149	14. Silver Total	1	0.5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	1.51	9999999.00	9999999	-	
150	15. Thallium Total	1	0.5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999.00	9999999.00	9999999	4.7	
151	16. Zinc Total	3	20	2.13	0	224.81	478.85	478.85	478.85	478.85	9999999	130.87	119.50	9999999	260,000	
152	129. Phenols, Total	1	5	2.13	0	20	42.60	42.60	42.60	42.60	9999999	9999999.00	9999999.00	9999999	-	
153	17. Cyanide Total	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	22.36	5.2	9999999	4,000	
156	<b>DIOXIN</b>															
157	18. 2-3-7-8-TCDD	1	0.00001	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	1.00E-06	5.10E-08	
159	<b>VOLATILE COMPOUNDS</b>															
160	19. Acrolein	1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	4,000	
161	20. Acrylonitrile	1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	70	
162	21. Benzene	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999		
163	22. Bromoform	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	1,200	
164	23. Carbon Tetrachloride	1	2	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	5*	
165	24. Chlorobenzene	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	100*	
166	25. Chlorodibromomethane	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	210	
167	26. Chloroethane	1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999		
168	27. 2-Chloroethylvinyl ether	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999		
169	28. Chloroform	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	20,000	
170	29. Dichlorobromomethane	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	270	
171	30. 1-1-Dichloroethane	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999		
172	31. 1-2-Dichloroethane	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	5*	
173	32. 1-1-Dichloroethylene	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	7*	
174	33. 1,2 Dichloropropane	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	310	
175	34. 1,3 Dichloropropylene	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999		
176	35. Ethylbenzene	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	700*	
177	37. Methyl Chloride	1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999		
178	36. Methyl bromide	1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	100,000	
179	38. Methylene chloride	1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	10,000	
180	39. 1-1-2-2-Tetrachloroethane	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	30	
181	40. Tetrachloroethylene	1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	5*	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
182	41. Toluene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	1,000*
183	42. 1,2-trans-dichloroethyler		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	40,000
184	44. 1-1-2-Trichloroethane		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	5*
185	43. 1-1-1-Trichloroethane		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	200*
186	45. Trichloroethylene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	5*
187	46. Vinyl Chloride		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	2*
189	<b>ACID COMPOUNDS</b>															
190	47. 2-Chlorophenol		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	8,000
191	48. 2,4-Dichlorophenol		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	600
192	49. 2,4-Dimethylphenol		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	30,000
193	50. 4,6-Dinitro-o-Cresol		1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
194	51. 2,4-Dinitrophenol		1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	3,000
195	52.-53. Nitrophenols		1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
196	54. 4 Chloro-3-methylpheno		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
197	55. Pentachlorophenol		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	8.72	6.69	9999999	0.4
198	56. Phenol		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	3,000,000
199	57. 2-4-6-Trichlorophenol		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	28
201						Ambient Background Conc.	Effluent Conc.	Domestic Supply	Acute Aquatic	Chronic Aquatic	Human Health	[Reserved]	Acute Aquatic Criteria	Chronic Aquatic Criteria	Human Health Criteria	
202	<b>BASE/NEUTRAL COMPOUNDS</b>				2.13	Cb	Ce	IWC	IWC	IWC	IWC		ug/l	ug/l	ug/l	
203	58. Acenaphthene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	900
204	59. Acenaphthylene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
205	60. Anthracene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	4,000
206	61. Benzidine		1	50	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.11
207	62. Benzo(a) anthracene		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.013
208	63. Benzo(a) pyrene		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.0013
209	64. 3,4-benzoflouranthene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.013
210	65. Benzo(g,h,i)perylene		1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
211	66. Benzo(k) fluoranthene		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.13
212	67. Bis(2-chloroethoxy)meth		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
213	68. Bis(2-chloroethyl) Ether		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	22
214	69. Bis(2-Chloroisopropyl) e		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
215	70. Bis(2-ethylhexyl)phthalai		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	3.7
216	71. 4-Bromophenyl phenyl e		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
217	72. Butylbenzy phthalate		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	1
218	73. 2-chloronapthalene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	10,000
219	74. 4-chlorophenyl phenyl e		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
220	75. Chrysene		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	1.3
221	76. Dibenzo(a,h)anthracene		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.0013
222	77-79. Dichlorobenzene(1,2		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	9,000
223	80. 3,3' Dichlorobenzidine		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	1.5
224	81. Diethyl Phthalate		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	6,000
225	82. Dimethyl phthalate		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	20,000
226	83. Di-n-Butyl phthalate		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	300
227	84. 2,4-Dinitrotoluene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	17
228	85. 2,6-Dinitrotoluene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
229	86. Di-n-octyl phthalate		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	
230	87. 1,2-diphenylhydrazine		1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	2
231	88. Fluoranthene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	200
232	89. Fluorene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	700
233	90. Hexachlorobenzene		1	5	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.00079
234	91. Hexachlorobutadiene		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	0.1
235	92. Hexachlorocyclopentadi		1	10	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	40
236	93. Hexachloroethane		1	20	2.13	0	0	0.00	0.00	0.00	0.00	9999999	9999999	9999999	9999999	1



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
279	STEP 3:	APPLICABLE WATER QUALITY-BASED LIMITS															
280																	
281																	
282								ADEQ HUMAN HEALTH CRITERIA									
283	POLLUTANTS	Permit Daily Maximum	Permit Monthly Average	Permit Daily Maximum	Permit Monthly Average			Permit Daily Maximum	Permit Monthly Average	Permit Daily Maximum	Permit Monthly Average						
284		ug/l	ug/l	lb/day	lb/day			ug/l	ug/l	lb/day	lb/day						
285	Alpha-BHC	NO	NO	NO	NO			NO	NO	NO	NO						
286	Beta-BHC	NO	NO	NO	NO												
287	Gamma-BHC	NO	NO	NO	NO												
288	Delta-BHC	NO	NO	NO	NO												
289	Pentachlorophenol	NO	NO	NO	NO												
290	Aldrin	NO	NO	NO	NO												
291	Chlordane	NO	NO	NO	NO			NO	NO	NO	NO						
292	4,4'-DDT	NO	NO	NO	NO												
293	4,4'-DDE	NO	NO	NO	NO												
294	4,4'-DDD	NO	NO	NO	NO												
295	Dieldrin	NO	NO	NO	NO			NO	NO	NO	NO						
296	Alpha-endosulfan	NO	NO	NO	NO												
297	Beta-endosulfan	NO	NO	NO	NO												
298	Endosulfan sulfate	NO	NO	NO	NO												
299	Endrin	NO	NO	NO	NO												
300	Endrin aldehyde	NO	NO	NO	NO												
301	Heptachlor	NO	NO	NO	NO												
302	Heptachlor epoxide	NO	NO	NO	NO												
303	Toxaphene	NO	NO	NO	NO			NO	NO	NO	NO						
304	Chlorpyrifos	NO	NO	NO	NO												
305	Cadmium Total	NO	NO	NO	NO												
306	Chromium (hex)	NO	NO	NO	NO												
307	Copper Total	24.4794	12.2003	1.0397767	0.5182167												
308	Lead Total	NO	NO	NO	NO												
309	Mercury Total	NO	NO	NO	NO												
310	Nickel Total	NO	NO	NO	NO												
311	Selenium Total	NO	NO	NO	NO												
312	Silver Total	NO	NO	NO	NO												
313	Zinc Total	231.9893	115.6217	9.8538914	4.91110343												
314	Chromium (Tri)	NO	NO	NO	NO												
315	Cyanide Total	NO	NO	NO	NO												
316	Beryllium Total	NO	NO	NO	NO			NO	NO	NO	NO						
317	PCB-1242	NO	NO	NO	NO			NO	NO	NO	NO						
318	PCB-1254	NO	NO	NO	NO			NO	NO	NO	NO						
319	PCB-1221	NO	NO	NO	NO			NO	NO	NO	NO						
320	PCB-1232	NO	NO	NO	NO			NO	NO	NO	NO						
321	PCB-1248	NO	NO	NO	NO			NO	NO	NO	NO						
322	PCB-1260	NO	NO	NO	NO			NO	NO	NO	NO						
323	PCB-1016	NO	NO	NO	NO			NO	NO	NO	NO						
324	2-3-7-8-TCDD	NO	NO	NO	NO			NO	NO	NO	NO						