contribute to exceedance(s) of the Texas water quality standards and narrative criterion established for the protection of aquatic life.

6. WET Limits

Because SJRA's discharge has the reasonable potential to cause, and in fact causes, non-attainment of the State's narrative WQS, EPA has developed WET limits for the discharge based on 40 CFR § 122.44(d)(1)(v) and the Texas water quality standards. WET limits are required in order to ensure compliance with the State's narrative criterion for the protection of aquatic life. The Texas WQS provide that a toxicity reduction evaluation (TRE) should be conducted prior to imposition of a WET limit, however the standards, at 30 TAC §307.6(e)(2)(D), do not restrict a permittee from performing a self-imposed TRE at any time, nor do they preclude additional TRE activities during a compliance schedule to meet a limit based on effluent toxicity.

> If toxicity biomonitoring results indicate that a discharge is exceeding the restrictions on total toxicity in this section, then the permittee shall conduct a toxicity identification evaluation and toxicity reduction evaluation in accordance with permitting procedures of the commission. As a result of a toxicity reduction evaluation, additional conditions may be established in the permit. Such conditions may include total toxicity limits, chemical specific limits, and/or best management practices designed to reduce or eliminate toxicity. Where sufficient to attain and maintain applicable numeric and narrative state water quality standards, a chemical specific limit rather than a total toxicity limit may be established in the permit. Where conditions may be necessary to prevent or reduce effluent toxicity, permits shall include a reasonable schedule for achieving compliance with such additional conditions.

The facility has performed toxicity reduction and identification evaluations, but has not identified a specific toxicant that causes the test failures. EPA is providing a three-year compliance schedule to allow for any additional evaluations of process modifications that may be appropriate prior to the WET limit becoming enforceable. EPA believes that a compliance schedule, including time to identify and reduce sources of toxicity from the effluent, would be consistent with both the Texas WQS and EPA regulations.

WET limits are expressed simply as toxicity limits, and the narrative criterion is mathematically interpreted as the effluent critical low-flow dilution (7Q2), 78%, as presented elsewhere in this fact sheet. Based on the reasonable potential analysis performed (Appendix G) the WET limit in this permit is based on sub-lethal effects demonstrated to the *Ceriodaphnia dubia* tests species.

7. WET Testing Frequency

Because the permit includes WET limits to ensure compliance with the narrative criterion to protect aquatic life, the WET monitoring frequency for the *Ceriodaphnia dubia* test species is being reduced from once per month to once per quarter. However, if the WET limit is violated,

the testing frequency will automatically increase to once per month until the effluent demonstrates no significant toxic effects for three consecutive months. The testing frequency for the fathead minnow (*Pimephales promelas*) shall be once per quarter for the first year with allowance to reduce the testing frequency based on performance.

8. Compliance Schedule

A three-year compliance schedule is being provided to allow the SJRA additional opportunity to identify and correct toxicity. Should the specific toxicant be identified and controlled prior to the effective date of the WET limit, the SJRA may request that the permit be modified to substitute a chemical-specific limit in lieu of the WET limit. Specific proof and confirmation of the identified toxicant and demonstration that the control works (twelve monthly tests with no significant lethal or sub-lethal effects demonstrated after toxicant confirmation) will be required.

9. Violation of Permit Limits

The Clean Water Act (CWA), at § 309, specifies that any violation of a permit limitation is subject to enforcement. It is EPA policy that every permit limit violation is a violation, and that a single violation is actionable and subject to an escalating enforcement response. However, per clarification of that policy by EPA memo dated August 14, 1995 (See Appendix H):

> "EPA does not recommend that the initial response to a single exceedance of a WET limit, causing no known harm, be a formal enforcement action with a civil penalty."

The permit includes standard language that would require an increase in the required monitoring frequency after any test failure for lethal or sub-lethal toxicity, assuming the test met the appropriate test acceptability criteria. Monitoring would increase to once per month until effluent testing shows no lethal or sub-lethal toxicity for three consecutive months.

C. TECHNOLOGY BASED VERSUS WATER QUALITY STANDARDS BASED EFFLUENT LIMITATIONS AND CONDITIONS

Pursuant to regulations promulgated at 40 CFR §§122.44(l)(2)(ii), 122.44(d), and 130.32(b)(6), the modified draft permit limits are based on either technology-based effluent limits, pursuant to 40 CFR §122.44(a), on the results of State Water Quality Management Plans, on State Water Quality Standards and requirements pursuant to 40 CFR §122.44(d), the previous NPDES permit, or on the results of an established and EPA approved Total Maximum Daily Load (TMDL), whichever are more stringent.

Water quality-based limits have been placed in the modified permit for E. coli bacteria. Monitoring and WET limits, after a compliance schedule, have also been placed in the modified permit.

D. FINAL EFFLUENT LIMITATIONS

See the draft permit modifications for limits and conditions. Due to the need to create a separate Outfall 002 permit table and the change of previously non-contested permit limitations as a result of a change in the water quality management plan, all pollutants for the facility are shown in the permit. Those previously agreed pollutants are however not subject to comment in this public notice. They are included only to show the entirety of permit conditions.

E. MONITORING FREQUENCY

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity and to assure compliance with permit limitations. 40 CFR §§ 122.44(i)(1), 122.48(b). The monitoring frequencies are based on the nature of the facility, similar facilities and, if applicable, the existing and/or previous permit. The draft permit modification will propose that E. coli bacteria shall be sampled and monitored daily. Report requirements for copper are established at twice per month with samples to be taken at least 10-days apart. WET monitoring and limit frequencies are discussed above.

XI. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at the US Fish and Wildlife Service (USFWS), Southwest Region 2 website, http://ifw2es.fws.gov/EndangeredSpecies/lists/, one species in Montgomery County is listed as endangered or threatened. The lone species is the endangered red-cockaded woodpecker *(Picoides borealis)*. The American bald eagle (*Haliaeetus leucocephalus*) was previously listed in Montgomery County; however, the USFWS, removed the American bald eagle in the lower 48 states from the Federal List of Endangered and Threatened Wildlife Federal Register, July 9, 2007, (Volume 72, Number 130). Based on the following factors, EPA has determined that the modifications to the permit will have *no effect* on either the species or their habitat.

1. Permit limitations for E. coli have been added to the permit.

2. No additions have been made to the USFWS list of threatened and endangered species and critical habitat designation in the area of the discharge since prior to the issuance of the permit.

3. During the permit reissuance process, EPA made a "no effect" determination which has not changed since the issuance of the permit on September 28, 2007.

XII. CERTIFICATION

Pursuant to 40 CFR § 124.53, the permit modifications are being reviewed by TCEQ for certification. The draft permit modifications and draft public notice will be sent to the District

Engineer, Corps of Engineers; to the Regional Director of the USFWS and the National Marine Fisheries Service prior to the publication of the notice.

XIII. FINAL DETERMINATION

The public notice describes the procedures for the formulation of final determinations.

XIV. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit modifications:

A. APPLICATION(S), CURRENT/PREVIOUS PERMIT

EPA Application received June 8, 2006.
NPDES Permit TX0054186, issued September 29, 2007.

B. 40 CFR CITATIONS

Sections 122, 124, 125, 133, 136

C. CLEAN WATER ACT CITATIONS

CWA §308

D. MISCELLANEOUS REFERENCES

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10 (21 Tex. Reg. 9765, August 17, 2000).

"Procedures to Implement the Texas Surface Water Quality Standards," Texas Commission on Environmental Quality, January 2003.

EPA Region 6 "Response to Comments of the Draft Permit" September 28, 2007.

E. LETTERS/MEMORANDA/RECORDS OF COMMUNICATION, ETC.

Memorandum from Jeffrey G. Miller, Deputy Administrative Administrator for Water Enforcement, EPA Headquarters, to Regional Permit Branch Chiefs, February 14, 1977, "Fecal Coliform Bacteria Limits."

E-mail from Kenda Smith, TCEQ WQAS, March 6, 2008, to Larry Giglio, EPA, providing corrected critical conditions.

F. WET SECTION

Technical Support Document for Water Quality-based Toxics Control (TSD) EPA/505/2-09-001, March, 1991, 2nd printing.

Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, EPA-821-R-02-013, at 37 (4th ed. Oct. 2002).

Clean Water Act - §§ 301(b)(1)(C), 402(a)(2), 33 U.S.C. §§ 1311(b)(1)(C), 1342(a)(2).

"Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the National Pollutant Discharge Elimination System", EPA 833-R-00-003, June 2000.

EPA Region 6 Whole Effluent Toxicity Permitting Strategy, May 2005.

"Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)", EPA 821-B-00-004, July 2000.

"Understanding and Accounting for Method Variability in WET Applications Under the NPDES Program", EPA 833-R-00-003, June 2000.

TEXTOX MENU #3 - PERENNIAL STREAM OR RIVER

The water quality-based effluent limitations demonstrated below are calculated using:

Table 1, 1997 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life
Table 3, 2000 Texas Surface Water Quality Standards for Human Health
Procedures to Implement the Texas Surface Water Quality Standards, Texas Commission on Environmental Quality, January 2003.

PERMITTEE INFORMATION

Permittee Name:	SJRA RUN #1 revised March 2008, REVISED data from TCEQ WQAS
TPDES Permit No.:	TX0054186
Outfall No.:	001
Prepared by:	LEG
Date	March 7, 2008

DISCHARGE INFORMATION

Immediate Receiving Waterbody:	Panther Creek
Segment No.:	1008
TSS:	13
pH:	6.7
Hardness:	30
Chloride:	53
Effluent Flow for Aquatic Life (MGD):	7.8
Critical Low Flow [7Q2] (cfs):	3.32
Chronic Effluent % for Aquatic Life:	78.43
Acute Effluent % for Aquatic Life:	93.57
Effluent Flow for Human Health (MGD):	7.8
Harmonic Mean Flow (cfs):	11.43
Human Health Effluent %:	51.36
Public Water Supply Use?:	No

CALCULATE TOTAL/DISSOLVED RATIO:

Stream/River Metal	*Intercept (b)*	*Slope (m)*	*Partitioning Coefficient (Kpo)*	*Dissolved Fraction (Cd/Ct)*		*Water Effects Ratio (WER)*	
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	73590.43	0.51		1.00	Assumed
Cadmium	6.6	-1.13	219403.73	0.26		1.00	Assumed
Chromium (Total)	6.52	-0.93	304812.44	0.20		1.00	Assumed
Chromium (+3)	6.52	-0.93	304812.44	0.20		1.00	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.02	-0.74	156921.31	0.33		1.00	Assumed
Lead	6.45	-0.8	362114.00	0.18		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	5.69	-0.57	113514.75	0.40		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	170859.19	0.31		1.00	Assumed
Zinc	6.1	-0.7	209044.94	0.27		1.00	Assumed

AQUATIC LIFE
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	*Acute Standard (ug/L)*	*Chronic Standard (ug/L)*	*WLAa*	*WLAc*	*LTAa*	*LTAc*	*Daily Avg. (ug/L)*	*Daily Max. (ug/L)*
Aldrin	3.000	N/A	3.21	N/A	1.84	N/A	2.70	5.71
Aluminum (d)	991.000	N/A	1059.16	N/A	606.90	N/A	892.14	1887.45
Arsenic (d)	360.000	190.000	752.85	474.04	431.38	365.01	536.57	1135.19
Cadmium (d)	8.664	0.441	35.67	2.16	20.44	1.67	2.45	5.18
Carbaryl	2.000	N/A	2.14	N/A	1.22	N/A	1.80	3.81
Chlordane	2.400	0.004	2.57	0.01	1.47	0.00	0.01	0.01
Chlorpyrifos	0.083	0.041	0.09	0.05	0.05	0.04	0.06	0.13
Chromium (+3) (d)	647.799	77.214	3435.84	488.59	1968.73	376.22	553.04	1170.03
Chromium (+6) (d)	16.000	11.000	17.10	14.03	9.80	10.80	14.40	30.47
Copper (d)	6.173	4.574	20.06	17.73	11.49	13.65	16.89	35.74
Cyanide (free)	45.780	10.690	48.93	13.63	28.04	10.50	15.43	32.64
4,4'-DDT	1.100	0.001	1.18	0.00	0.67	0.00	0.00	0.00
Dementon	N/A	0.100	N/A	0.13	N/A	0.10	0.14	0.31
Dicofol	59.300	19.800	63.38	25.25	36.32	19.44	28.58	60.46
Dieldrin	2.500	0.002	2.67	0.00	1.53	0.00	0.00	0.01
Diuron	210.000	70.000	224.44	89.26	128.61	68.73	101.03	213.74
Endosulfan I (alpha)	0.220	0.056	0.24	0.07	0.13	0.05	0.08	0.17
Endosulfan II (beta)	0.220	0.056	0.24	0.07	0.13	0.05	0.08	0.17
Endosulfan sulfate	0.220	0.056	0.24	0.07	0.13	0.05	0.08	0.17
Endrin	0.180	0.002	0.19	0.00	0.11	0.00	0.00	0.01
Guthion	N/A	0.010	N/A	0.01	N/A	0.01	0.01	0.03
Heptachlor	0.520	0.004	0.56	0.00	0.32	0.00	0.01	0.01
Hexachlorocyclohexane (Lindane)	2.000	0.080	2.14	0.10	1.22	0.08	0.12	0.24
Lead (d)	17.632	0.687	107.56	5.00	61.63	3.85	5.66	11.97
Malathion	N/A	0.010	N/A	0.01	N/A	0.01	0.01	0.03
Mercury	2.400	1.300	2.57	1.66	1.47	1.28	1.88	3.97
Methoxychlor	N/A	0.030	N/A	0.04	N/A	0.03	0.04	0.09
Mirex	N/A	0.001	N/A	0.00	N/A	0.00	0.00	0.00
Nickel (d)	512.148	56.935	1355.12	179.73	776.48	138.39	203.44	430.40
Parathion (ethyl)	0.065	0.013	0.07	0.02	0.04	0.01	0.02	0.04
Pentachlorophenol	6.709	4.235	7.17	5.40	4.11	4.16	6.04	12.78
Phenanthrene	30.000	30.000	32.06	38.25	18.37	29.45	27.01	57.14
Polychlorinated Biphenyls (PCBs)	2.000	0.014	2.14	0.02	1.22	0.01	0.02	0.04
Selenium	20.000	5.000	21.38	6.38	12.25	4.91	7.22	15.27
Silver, (free ion)	0.920	N/A	14.57	N/A	8.35	N/A	12.27	25.96
Toxaphene	0.7800	0.0002	0.83	0.00	0.48	0.00	0.00	0.00
Tributlytin (TBT)	0.130	0.024	0.14	0.03	0.08	0.02	0.03	0.07
2,4,5 Trichlorophenol	136.000	64.000	145.35	81.61	83.29	62.84	92.37	195.42
Zinc (d)	42.344	38.215	168.25	181.15	96.40	139.49	141.71	299.82

HUMAN HEALTH
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	*Water and FW Fish (ug/L)*	*FW Fish Only (ug/L)*	*WLAh*	*LTAh*	*Daily Avg. (ug/L)*	*Daily Max. (ug/L)*
Acrylonitrile	1.28	10.9	21.22	19.74	29.01	61.38
Aldrin	0.00408	0.00426	0.01	0.01	0.01	0.02
Arsenic (d)	50	N/A	N/A	N/A	N/A	N/A
Barium (d)	2000	N/A	N/A	N/A	N/A	N/A
Benzene	5	106	206.39	191.95	282.16	596.95
Benzidine	0.00106	0.00347	0.01	0.01	0.01	0.02
Benzo(a)anthracene	0.099	0.81	1.58	1.47	2.16	4.56
Benzo(a)pyrene	0.099	0.81	1.58	1.47	2.16	4.56
Bis(chloromethyl)ether	0.00462	0.0193	0.04	0.03	0.05	0.11
Cadmium (d)	5	N/A	N/A	N/A	N/A	N/A

Carbon Tetrachloride	3.76	8.4	16.36	15.21	22.36	47.31
Chlordane	0.021	0.0213	0.04	0.04	0.06	0.12
Chlorobenzene	776	1380	2687.01	2498.92	3673.41	7771.63
Chloroform	100	1292	2515.66	2339.57	3439.16	7276.05
Chromiumd	100	3320	6464.40	6011.89	8837.48	18696.97
Chrysene	0.417	8.1	15.77	14.67	21.56	45.62
Cresols	3313	13116	25538.26	23750.58	34913.36	73864.31
Cyanide (free)	200	N/A	N/A	N/A	N/A	N/A
4,4'-DDD	0.0103	0.01	0.02	0.02	0.03	0.06
4,4'-DDE	0.0073	0.007	0.01	0.01	0.02	0.04
4,4'-DDT	0.0073	0.007	0.01	0.01	0.02	0.04
2,4'-D	70	N/A	N/A	N/A	N/A	N/A
Danitol	0.709	0.721	1.40	1.31	1.92	4.06
Dibromochloromethane	9.2	71.6	139.41	129.65	190.59	403.22
1,2-Dibromoethane	0.014	0.335	0.65	0.61	0.89	1.89
1,3-Dichloropropene (1,3- Dichloropropylene)	22.8	161	313.48	291.54	428.56	906.69
Dieldrin	0.00171	0.002	0.00	0.00	0.01	0.01
p-Dichlorobenzene	75	N/A	N/A	N/A	N/A	N/A
1,2-Dichloroethane	5	73.9	143.89	133.82	196.71	416.18
1,1-Dichloroethylene	1.63	5.84	11.37	10.58	15.55	32.89
Dicofol	0.215	0.217	0.42	0.39	0.58	1.22
Dioxins/Furans (TCDD Equivalents)	1.34E-07	1.40E-07	2.73E-07	2.54E-07	3.73E-07	7.88E-07
Endrin	1.27	1.34	2.61	2.43	3.57	7.55
Fluoride	4000	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.0026	0.00265	0.01	0.00	0.01	0.01
Heptachlor Epoxide	0.159	1.1	2.14	1.99	2.93	6.19
Hexachlorobenzene	0.0194	0.0198	0.04	0.04	0.05	0.11
Hexachlorobutadiene	2.99	3.6	7.01	6.52	9.58	20.27
Hexachlorocyclohexane (alpha)	0.163	0.413	0.80	0.75	1.10	2.33
Hexachlorocyclohexane (beta)	0.57	1.45	2.82	2.63	3.86	8.17
Hexachlorocyclohexane (gamma) (Lindane)	0.2	2	3.89	3.62	5.32	11.26
Hexachloroethane	84.2	278	541.30	503.41	740.01	1565.59
Hexachlorophene	0.0531	0.053	0.10	0.10	0.14	0.30
Lead (d)	4.98	25.3	49.26	45.81	67.35	142.48
Mercury	0.0122	0.0122	0.02	0.02	0.03	0.07
Methoxyclor	2.21	2.22	4.32	4.02	5.91	12.50
Methyl Ethyl Ketone	5.29E+04	9.94E+06	1.94E+07	1.80E+07	2.65E+07	5.60E+07
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	37.3	233	453.68	421.92	620.22	1312.17
N-Nitrosodiethylamine	0.0382	7.68	14.95	13.91	20.44	43.25
N-Nitroso-di-n-Butylamine	1.84	13.5	26.29	24.45	35.94	76.03
PCB's (Polychlorinated Biphenyls)	0.0013	0.0013	0.00	0.00	0.00	0.01
Pentachlorobenzene	6.1	6.68	13.01	12.10	17.78	37.62
Pentachlorophenol	1	135	262.86	244.46	359.36	760.27
Pyridine	88.1	13333	25960.78	24143.53	35490.99	75086.37
Selenium	50	N/A	N/A	N/A	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.241	0.243	0.47	0.44	0.65	1.37
Tetrachloroethylene	5	323	628.92	584.89	859.79	1819.01
Toxaphene	0.005	0.014	0.03	0.03	0.04	0.08
2,4,5-TP (Silvex)	47	50.3	97.94	91.08	133.89	283.27
2,4,5-Trichlorophenol	953	1069	2081.46	1935.76	2845.56	6020.20
Trichloroethylene	5	612	1191.63	1108.22	1629.08	3446.55
1,1,1-Trichloroethane	200	12586	24506.29	22790.85	33502.55	70879.55
TTHM (Sum of Total Trihalomethanes)	100	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	2	415	808.05	751.49	1104.68	2337.12

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS

Parameter	*70%*	*85%*
Aquatic Life		
Aldrin	1.891	2.296
Aluminum	624.496	758.317
Arsenic	375.598	456.083
Cadmium	1.715	2.083
Carbaryl	1.260	1.530
Chlordane	0.004	0.005
Chlorpyrifos	0.041	0.050
Chromium (+3)	387.126	470.082
Chromium (+6)	10.083	12.243
Copper	11.826	14.360
Cyanide (free)	10.800	13.114
4,4'-DDT	0.001	0.001
Dementon	0.101	0.123
Dicofol	20.004	24.291
Dieldrin	0.002	0.002
Diuron	70.721	85.876
Endosulfan (alpha)	0.057	0.069
Endosulfan (beta)	0.057	0.069
Endosulfan sulfate	0.057	0.069
Endrin	0.002	0.003
Guthion	0.010	0.012
Heptachlor	0.004	0.005
Hexachlorocyclohexane (Lindane)	0.081	0.098
Lead	3.962	4.811
Malathion	0.010	0.012
Mercury	1.313	1.595
Methoxychlor	0.030	0.037
Mirex	0.001	0.001
Nickel	142.406	172.921
Parathion (ethyl)	0.013	0.016
Pentachlrophenol	4.228	5.134
Phenanthrene	18.905	22.956
Polychlorinated Biphenyls (PCBs)	0.014	0.017
Selenium	5.052	6.134
Silver, (free ion)	8.588	10.428
Toxaphene	0.000	0.000
Tributlytin (TBT)	0.024	0.029
2,4,5 Trichlorophenol	64.659	78.515
Zinc	99.200	120.457
Human Health		
Acrylonitrile	20.310	24.662
Aldrin	0.008	0.010
Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	197.512	239.836
Benzidine	0.006	0.008
Benzo(a)anthracene	1.509	1.833
Benzo(a)pyrene	1.509	1.833
Bis(chloromethyl)ether	0.036	0.044
Cadmium	N/A	N/A
Carbon Tetrachloride	15.652	19.006
Chlordane	0.040	0.048
Chlorobenzene	2571.386	3122.398
Chloroform	2407.414	2923.288
Chromiumd	6186.234	7511.855
Chrysene	15.093	18.327

Cresols	24439.3	29676.4
Cyanide (free)	N/A	N/A
4,4'-DDD	0.019	0.023
4,4'-DDE	0.013	0.016
4,4'-DDT	0.013	0.016
2,4'-D	N/A	N/A
Danitol	1.343	1.631
Dibromochloromethane	133.414	162.003
1,2-Dibromoethane	0.624	0.758
1,3-Dichloropropene (1,3- Dichloropropylene)	299.995	364.280
Dieldrin	0.004	0.005
p-Dichlorobenzene	N/A	N/A
1,2-Dichloroethane	137.700	167.207
1,1-Dichloroethylene	10.882	13.214
Dicofol	0.404	0.491
Dioxins/Furans (TCDD Equivalents)	2.61E-07	3.17E-07
Endrin	2.497	3.032
Fluoride	N/A	N/A
Heptachlor	0.005	0.006
Heptachlor Epoxide	2.050	2.489
Hexachlorobenzene	0.037	0.045
Hexachlorobutadiene	6.708	8.145
Hexachlorocyclohexane (alpha)	0.770	0.934
Hexachlorocyclohexane (beta)	2.702	3.281
Hexachlorocyclohexane (gamma) (Lindane)	3.727	4.525
Hexachloroethane	518.004	629.005
Hexachlorophene	0.099	0.120
Lead	47.142	57.244
Mercury	0.023	0.028
Methoxyclor	4.137	5.023
Methyl Ethyl Ketone	1.85E+07	2.25E+07
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	434.154	527.187
N-Nitrosodiethylamine	14.310	17.377
N-Nitroso-di-n-Butylamine	25.155	30.545
PCB's (Polychlorinated Biphenyls)	0.002	0.003
Pentachlorobenzene	12.447	15.114
Pentachlorophenol	251.549	305.452
Pyridine	24843.7	30167.3
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.453	0.550
Tetrachloroethylene	601.853	730.822
Toxaphene	0.026	0.032
2,4,5-TP (Silvex)	93.725	113.809
2,4,5-Trichlorophenol	1991.893	2418.727
Trichloroethylene	1140.354	1384.715
1,1,1-Trichloroethane	23451.8	28477.2
TTHM (Sum of Total Trihalomethanes)	N/A	N/A
Vinyl Chloride	773.279	938.982

Appendix G

Facility Name San Jacinto River Authority Woodlalnds Plant #1

NPDES Permit Number TX0054186 Outfall number 001

Proposed Critical Dilution 78 * Critical Dilution in draft permit, do not use % sign.

Enter data in yellow shaded cells only. Fifty percent should be entered as 50.

TEST DATA	Vertebrate				Invertebrate			
	Lethal NOEC	Sublethal NOEC	Lethal TU	Sublethal TU	Lethal NOEC	Sublethal NOEC	Lethal TU	Sublethal TU
	86	86	1.16	1.16	86	86	1.16	1.16
	86	86	1.16	1.16	86	86	1.16	1.16
	86	62	1.16	1.61	86	86	1.16	1.16
	86	86	1.16	1.16	86	86	1.16	1.16
	86	32	1.16	3.13	86	86	1.16	1.16
	86	86	1.16	1.16	86	86	1.16	1.16
	86	86	1.16	1.16	86	86	1.16	1.16
	86	86	1.16	1.16	86	86	1.16	1.16
	86	86	1.16	1.16	86	86	1.16	1.16
	86	86	1.16	1.16	86	86	1.16	1.16
	86	86	1.16	1.16	86	86	1.16	1.16
	86	86	1.16	1.16	86	86	1.16	1.16
	86	86	1.16	1.16	86	86	1.16	1.16
	86	86	1.16	1.16	86	86	1.16	1.16
	85	85	1.18	1.18	86	86	1.16	1.16
	85	85	1.18	1.18	86	86	1.16	1.16
	85	85	1.18	1.18	86	22	1.16	4.55
	85	85	1.18	1.18	86	62	1.16	1.61
	85	85	1.18	1.18	86	62	1.16	1.61
	92	92	1.09	1.09	86	86	1.16	1.16
	92	92	1.09	1.09	86	86	1.16	1.16
					86	86	1.16	1.16
					86	86	1.16	1.16
					86	86	1.16	1.16
					86	86	1.16	1.16
					86	86	1.16	1.16
					86	86	1.16	1.16
					86	86	1.16	1.16
					86	55	1.16	1.82
					86	55	1.16	1.82
					86	86	1.16	1.16
					86	86	1.16	1.16
					86	86	1.16	1.16
					86	62	1.16	1.61
					85	48	1.18	2.08
					85	85	1.18	1.18
					85	62	1.18	1.61
					85	26	1.18	3.85
					85	62	1.18	1.61
					85	85	1.18	1.18
					85	85	1.18	1.18
					85	85	1.18	1.18
					85	85	1.18	1.18
					85	85	1.18	1.18
					85	85	1.18	1.18
					85	85	1.18	1.18
					85	85	1.18	1.18
					85	85	1.18	1.18
					85	85	1.18	1.18

Enter data in yellow shaded cells only. Fifty percent should be entered as 50.

TEST DATA	Vertebrate Lethal NOEC	Vertebrate Sublethal NOEC	Vertebrate Lethal TU	Vertebrate Sublethal TU	Invertebrate Lethal NOEC	Invertebrate Sublethal NOEC	Invertebrate Lethal TU	Invertebrate Sublethal TU
					85	85	1.18	1.18
					85	85	1.18	1.18
					85	48	1.18	2.08
					85	45	1.18	2.22
					85	85	1.18	1.18
					92	92	1.09	1.09
					85	85	1.18	1.18
					92	69	1.09	1.45
					92	52	1.09	1.92
					92	92	1.09	1.09
Min Observed NOEC	85	32			85	22		
Max Observed TU			1.18	3.13			1.18	4.55
		Count	21	21		Count	58	58
		Mean	1.159	1.274		Mean	1.162	1.398
		Std. Dev.	0.006	0.468		Std. Dev.	0.153	0.626
		CV	0	0.4		CV	0.1	0.4
		RPMF	1.1	1.2			1.1	1.1
		1.000	Reasonable Potential Acceptance Criteria based on proposed critical dilution.					
Vertebrate Lethal		1.009	Reasonable Potential exists, Permit requires WET monitoring and WET limit.					
Vertebrate Sublethal		2.925	Reasonable Potential exists, Permit requires WET monitoring and WET limit.					
Invertebrate Lethal		1.009	Reasonable Potential exists, Permit requires WET monitoring and WET limit.					
Invertebrate Sublethal		3.900	Reasonable Potential exists, Permit requires WET monitoring and WET limit.					

NOTES:

The reasonable potential calculation based on sub-lethal toxicity to C. dubia is: **(4.55 TUc X 1.1 X 0.78) = 3.90 TUc,** a value greater than both 1.00 TUc (ambient), and considering dilution - 78% (1.27 TUc (100 / 78). Reasonable potential for the discharge to cause or contribute to an exceedance of the State water quality standard for aquatic life protection has been demonstrated.

Data from one C. dubia test (12/02/05) was omitted because the analysis was questionable. The two sublethal test failures for P. promelas (12/03 and 03/04) both occurred almost five years prior to this evaluation, with over sixteen passing tests performed since. BPJ - override the finding of reasonable potential for this species at this time.

Where toxicity was so great that all effluent dilutions failed and the result was reported as less than the lowest concentration of effluent tested (e.g. "<28"), the calculation was performed substituting the next lower whole number (e.g. 27). This results in a slight bias in favor of the permittee.

SJRA, TX0054186, WET TEST DATES and DATA

DATE	Vertebrate NOECs		Invertebrate NOECs		
	Lethal	SubLethal	Lethal	SubLethal	
04/08/03			86	86	
05/06/03			86	86	
06/10/03	86	86	86	86	
07/15/03			86	86	
08/12/03			86	86	
09/16/03	86	86	86	86	
10/14/03			86	86	
11/11/03			86	86	
12/09/03	86	62	86	86	62% not used
01/06/04	86	86	86	86	
02/03/04			86	86	
03/09/04	86	32	86	86	32% not used
04/06/04	86	86	86	86	
05/04/04			86	86	
06/08/04	86	86	86	86	
07/13/04			86	86	
08/03/04			86	22	
09/14/04	86	86	86	62	
10/12/04			86	62	
11/16/04			86	86	
12/14/04	86	86	86	86	
01/04/05			86	86	
02/08/05			86	86	
03/08/05	86	86	86	86	
04/05/05			86	86	
05/03/05			86	86	
06/07/05	86	86	86	86	
07/12/05			86	86	
08/09/05			86	55	
09/13/05	86	86	86	55	
10/04/05			86	86	
11/08/05			86	86	
12/02/05	86	86	86	62	62% not used
01/10/06	86	86	86	86	
02/07/06	86	86	86	62	
03/07/06	85	85	85	48	
04/11/06			85	85	
05/09/06			85	62	
06/06/06	85	85	85	26	
07/11/06			85	62	
08/30/06			85	85	
09/30/06			85	85	
10/30/06			85	85	
11/30/06			85	85	
12/31/06			85	85	
01/31/07			85	85	
02/28/07			85	85	
03/30/07					No Data
04/30/07			85	85	
05/30/07			85	85	
06/30/07			85	85	
07/30/07			85	85	
08/30/07			85	85	
09/30/07			85	48	
10/30/07			85	45	
11/30/07			85	85	
12/30/07			85	85	
01/30/08			85	85	
02/28/08	92	92	92	92	
06/30/08	92	92	92	59	
06/30/08			92	92	