

Appendix C - Title 22+ Sampling Data

Summary of Title 22 Plus Analyses

Median values: all phases, LP and MP combined

Compound Name	Units	Secondary Effluent	UF Permeate	MBR Permeate	UF-RO Permeate	MBR-RO Permeate	UF-RO-AOP Product	MBR-RO-AOP Product
Inorganic Sampling (General Physical and Mineral)								
Apparent Color	ACU	55.0	45.0	30.0	< 3.0	< 3.0	< 3.0	< 3.0
Odor at 60 C (TON)	TON	200.0	200.0	200.0	< 1.0	< 1.0	< 1.0	< 1.0
Turbidity	NTU	2.4	0.1	0.1	< 0.1	0.1	< 0.1	0.1
Bicarb. Alkalinity as HCO ₃ calc	mg/L	450.0	440.0	130.0	23.5	7.6	17.0	4.8
Carbonate as CO ₃ , Calculated	mg/L	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Alkalinity in CaCO ₃ units	mg/L	370.0	360.0	110.0	19.0	6.1	14.0	3.9
Calcium Total ICAP	mg/L	66.5	65.0	66.5	< 1.0	< 1.0	< 1.0	< 1.0
Cyanide	mg/L				< 0.1	< 0.0	< 0.0	< 0.0
Bromide	ug/L	1600.0	1550.0	1650.0	31.5	79.0	48.0	85.0
Chloride	mg/L	470.0	490.0	460.0	6.8	4.0	9.1	6.1
Fluoride	mg/L	1.2	1.1	1.7	0.1	0.1	0.1	0.1
Surfactants	mg/L	0.2	0.2	0.2	< 0.05	< 0.05	< 0.05	< 0.05
Magnesium Total ICAP	mg/L	23.0	21.0	24.0	< 0.1	< 0.1	< 0.1	< 0.1
Ammonia Nitrogen	mg/L	39.5	38.0	< 0.1	1.3	0.3	1.3	0.2
Nitrate as NO ₃ (calc)	mg/L	< 0.3	< 0.2	180.0	< 0.2	9.9	0.7	15.0
Nitrate as Nitrogen by IC	mg/L	< 0.1	< 0.1	41.0	< 0.1	2.3	0.2	3.3
Nitrite Nitrogen by IC	mg/L	< 0.0	< 0.0	< 0.1	< 0.0	< 0.1	< 0.0	< 0.1
Total Nitrate, Nitrite-N, CALC	mg/L	< 0.1	< 0.1	41.0	< 0.1	2.3	0.2	3.3
Perchlorate- Low Level	ug/L	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
PH (H3=past HT not compliant)	Units	7.4	7.5	7.5	5.7	5.8	5.6	6.2
Total phosphorus as P	mg/L	0.5	0.2	0.2	< 0.0	< 0.0	< 0.0	< 0.0
Potassium Total ICAP	mg/L	21.5	20.0	20.5	< 1.0	< 1.0	< 1.0	< 1.0
Sodium Total ICAP	mg/L	390.0	375.0	390.0	10.0	9.1	11.0	11.0
Sulfate	mg/L	220.0	230.0	220.0	< 0.5	< 0.5	< 0.5	< 0.5
Specific Conductance, 25 C	umho/cm	2650.0	2700.0	2500.0	71.0	39.0	72.0	60.0
Total Dissolved Solids (TDS)	mg/L	1400.0	1400.0	1500.0	25.5	24.0	30.0	37.0
Total Hardness as CaCO ₃ by ICl	mg/L	260.0	245.0	265.0	< 3.0	< 3.0	< 3.0	< 3.0
Asbestos by TEM - >10 microns	MFL	< 3.1	< 6.2	< 0.2	< 6.2	< 0.2	< 6.4	< 0.2
Inorganic Sampling (Trace Metals)								
Aluminum Total ICAP/MS	ug/L	23.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Antimony Total ICAP/MS	ug/L	2.7	2.4	3.3	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic Total ICAP/MS	ug/L	2.6	2.9	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Barium Total ICAP/MS	ug/L	130.0	110.0	115.0	< 2.0	< 2.0	< 2.0	< 2.0
Beryllium Total ICAP/MS	ug/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Boron Total ICAP	mg/L	0.9	0.9	0.9	0.6	0.5	0.6	0.6
Cadmium Total ICAP/MS	ug/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium Total ICAP/MS	ug/L	< 1.3	1.3	< 2.9	< 1.0	< 1.0	< 1.0	< 1.0
Hexavalent chromium(Dissolved)	ug/L	< 0.1	< 0.0	< 0.1	< 0.1	< 0.0	0.1	0.1
Copper Total ICAP/MS	ug/L	< 2.0	< 2.2	< 2.0	< 2.0	< 2.0	27.0	3.5
Iron Total ICAP	mg/L	1.4	0.1	0.1	< 0.0	< 0.0	< 0.0	< 0.0
Lead Total ICAP/MS	ug/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.7	< 0.5
Manganese Total ICAP/MS	ug/L	98.0	88.5	25.4	< 2.0	< 2.0	< 2.0	< 2.0
Mercury	ug/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Nickel Total ICAP/MS	ug/L	9.9	11.0	9.1	< 5.0	< 5.0	< 5.0	< 5.0
Selenium Total ICAP/MS	ug/L	< 9.5	10.5	8.6	< 5.0	< 5.0	< 5.0	< 5.0
Silver Total ICAP/MS	ug/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Thallium Total ICAP/MS	ug/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium Total ICAP/MS	ug/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Zinc Total ICAP/MS	ug/L	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Radiological								
Gross Alpha (Subbed)	pCi/L	< 2.1	3.0		< 2.0	< 1.2	< 1.7	< 1.5
Gross Beta (Subbed)	pCi/L	11.3	7.6	11.5	< 1.9	< 1.5	< 2.1	< 1.7
Radium 226	pCi/L	< 0.8	< 0.4	< 0.6	< 0.5	< 0.7	< 0.8	< 1.0
Radium 228	pCi/L	< 1.0	< 1.0	< 1.0	< 0.9	< 1.0	< 0.8	< 1.0
Radon 222	pCi/L	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0
Strontium 90 (sub)	pCi/L	< 0.9	< 0.8	< 0.8	< 0.6	< 0.7	< 0.6	< 0.6
Tritium	pCi/L	< 224.5	< 224.0	< 225.0	< 201.0	< 224.5	< 203.0	< 222.0
Uranium by ICPMS as pCi/L	pCi/L	1.3	1.3	2.3	< 0.7	< 0.7	< 0.7	< 0.7

Median values: all phases, LP and MP combined

Compound Name	Units	Secondary	UF	MBR	UF-RO	MBR-RO	UF-RO-AOP	MBR-RO-AOP
		Effluent	Permeate	Permeate	Permeate	Permeate	Product	Product
phenol	ug/L	< 0.3	< 0.2	< 0.3	< 0.2	< 0.2	< 0.2	< 0.2
Trithion	ug/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Captan	ug/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chloropicrin	ug/L	< 0.5	< 0.5	< 0.5	< 0.6	< 0.5	< 0.5	< 0.5
t-Butyl Alcohol	ug/L	8.0	9.2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Carbon disulfide	ug/L	1.7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorate by IC	ug/L	< 29.5	615.0	< 10.0	12.5	< 10.0	< 10.0	< 10.0
Ethylene Glycol by GCMS	ug/L	< 40.0	< 40.0	< 40.0	< 40.0	< 40.0	< 40.0	< 40.0
HMX	ug/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
<i>Isopropylbenzene - see VOCs</i>								
<i>n-propylbenzene - see VOCs</i>								
RDX	ug/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trinitrotoluene (TNT)	ug/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Industrial EDCs								
2244 tetrabromodiphenyl ether	ug/L	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
22445 pentabromodiphenyl ether	ug/L	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
224455 hexabromobiphenyl(HBE)	ug/L	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
224455 hexabromodiphenyl ethe	ug/L	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
22446 pentabromodiphenyl ether	ug/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
LACSD Analytes								
1,4-Dioxane	ug/L	8.6	8.1	8.5	< 0.4	< 0.4	< 0.4	< 0.4
NDEA	ng/L	125.0	275.0	700.0	30.5	111.5	3.2	17.5
NDMA	ng/L	370.0	370.0	380.0	225.0	215.0	6.2	< 4.4
NDBA	ng/L	145.0	175.0	69.0	< 2.0	< 2.0	< 2.0	< 2.0
NMEA	ng/L	< 2.0	< 3.4	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
NDPA	ng/L	< 1280.0	2450.0	< 19.0	12.1	< 2.0	< 2.4	< 2.0
NPIP	ng/L	320.0	295.0	58.0	< 2.0	< 2.0	< 2.0	< 2.0
NPYR	ng/L	< 8.6	13.5	< 2.3	< 2.0	< 2.0	< 2.0	< 2.0
4-Nonylphenol (tech mix)	ng/L	1150.0	475.0	< 179.0	< 25.0	< 25.0	< 25.0	< 25.0
4-tert Octylphenol	ng/L	624.0	305.0	36.8	< 5.0	< 5.0	< 5.0	< 5.0
Acetaminophen	ng/L	< 20.0	23.0	23.5	< 10.0	< 10.0	< 10.0	< 10.0
Azithromycin	ng/L	933.5	937.0	620.5	< 10.0	< 10.0	< 10.0	< 10.0
Bisphenol A	ng/L	284.0	34.5	< 21.0	< 25.0	< 10.0	< 25.0	< 10.0
Caffeine	ng/L	453.5	394.5	245.5	< 10.0	< 10.0	< 10.0	< 10.0
DEET	ng/L	506.0	476.0	273.0	< 10.0	< 10.0	< 10.0	< 10.0
Dilantin	ng/L	309.0	314.5	313.0	< 25.0	< 10.0	< 25.0	< 10.0
Estrone	ng/L	24.5	13.5	< 5.6	< 2.0	< 1.3	< 2.0	< 0.5
Gemfibrozil	ng/L	1195.0	1120.0	242.5	< 10.0	< 10.0	< 10.0	< 10.0
Iopromide	ng/L	942.0	882.0	928.5	< 30.0	< 30.0	< 30.0	< 30.0
Meprobamate	ng/L	390.5	385.0	438.0	< 10.0	< 10.0	< 10.0	< 10.0
Nonylphenol diethoxylate	ng/L	8050.0	7600.0	696.5	< 25.0	< 25.0	< 25.0	< 25.0
Nonylphenol monoethoxylate	ng/L	2972.5	1850.0	345.5	< 25.0	< 25.0	< 25.0	< 25.0
Octylphenol diethoxylate	ng/L	3692.5	4472.5	< 93.8	< 25.0	< 25.0	< 25.0	< 25.0
Octylphenol monoethoxylate	ng/L	1122.5	1072.5	< 93.8	< 25.0	< 25.0	< 25.0	< 25.0
Progesterone	ng/L	< 5.0	< 3.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
Sucralose	ng/L	20900.0	19850.0	25700.0	< 40.0	< 40.0	< 40.0	< 40.0
Sulfamethoxazole	ng/L	968.0	711.5	1515.0	< 10.0	< 10.0	< 10.0	< 10.0
TCEP	ng/L	407.0	380.5	438.5	< 10.0	< 10.0	< 10.0	< 10.0
Triclosan	ng/L	493.5	348.0	71.5	< 25.0	< 10.0	< 25.0	< 10.0
17-Alpha Ethinylestradiol	ng/L	< 6.0	< 6.0	< 5.6	< 2.0	< 1.3	< 2.0	< 0.5
17-Beta Estradiol	ng/L	< 10.0	< 7.2	< 5.6	< 2.0	< 1.3	< 2.0	< 0.5
Carbamazepine	ng/L	< 10.0	< 10.0	< 121.0	< 10.0	< 10.0	< 10.0	< 10.0
Ibuprofen	ng/L	< 10.0	< 12.0	< 15.0	< 10.0	< 10.0	< 10.0	< 10.0
Total Chlorine Residual	mg/L	< 0.1	4.4	< 0.1	4.1	2.6	0.5	0.5
Dissolved Organic Carbon	mg/L	13.1	11.9	9.2	< 0.5	< 0.5	< 0.6	< 0.5
Total Organic Carbon	mg/L	15.5	12.2	9.4	< 0.5	< 0.5	< 0.5	< 0.5
Organic Nitrogen	mg/L	2.6	1.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
UV Transmittance at 254 nm	%	41.0	57.4	58.3	96.6	97.0	99.0	99.5
1,2-Diphenylhydrazine	ug/L	< 1.0	< 1.0	< 3.0	< 1.0	< 1.0	< 1.0	< 1.0
2,4,6-Trichlorophenol	ug/L	< 10.0	< 10.0	< 30.0	< 10.0	< 10.0	< 10.0	< 10.0
2,4-Dichlorophenol	ug/L	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0
2,4-Dinitrophenol	ug/L	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0

Median values: all phases, LP and MP combined

Compound Name	Units	Secondary	UF	MBR	UF-RO	MBR-RO	UF-RO-AOP	MBR-RO-AOP
		Effluent	Permeate	Permeate	Permeate	Permeate	Product	Product
Dimethoate	ug/L	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Terbufos sulfone	ug/L	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
2-methylphenol	ug/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
O-Phenyl phenol	ug/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
pentachlorophenol	ug/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloropropanone	ug/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloropropanone	ug/L	< 0.5	1.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloroacetonitrile	ug/L	< 0.5	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dibromoacetonitrile	ug/L	< 0.5	4.0	< 0.5	< 0.5	< 0.6	< 0.5	< 0.5
Dichloroacetonitrile	ug/L	< 0.5	1.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroacetonitrile	ug/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Acetaldehyde	ug/L	7.4	10.5	6.1	< 1.0	< 1.2	1.7	1.9
Benzaldehyde	ug/L				< 1.0			
Butanal	ug/L				< 1.0			
Crotonaldehyde	ug/L				< 1.0			
Cyclohexanone	ug/L				< 1.0			
Decanal	ug/L				< 1.0			
Glyoxal	ug/L				< 10.0			
Heptanal	ug/L				< 1.0			
Hexanal	ug/L				< 1.0			
Methyl glyoxal	ug/L				< 10.0			
Nonanal	ug/L				< 1.0			
Octanal	ug/L				< 1.0			
Pentanal	ug/L				< 1.0			
Propanal	ug/L				< 1.0			

Standards

Toluene-d8	%	105.0	104.5	100.0	106.5	105.5	103.0	104.0
C12-2,3,7,8-TCDD	%	0.0	88.0	47.0	93.0	81.5	89.0	92.0
Tetrachlorometaxylene	%	88.0	96.0	85.0	100.0	90.5	95.0	95.0
2,4-Dichlorophenyl acetic acid	%	103.0	105.0	98.5	112.0	98.0	116.0	97.0
4,4-Dibromooctafluorobiphenyl	%	94.0	95.5	109.5	89.0	107.5	89.0	131.0
1,2-Dichloroethane-d4	%	101.0	100.0	100.5	102.5	100.0	98.0	98.0
4-Bromofluorobenzene	%	98.0	101.0	101.5	98.0	102.0	107.0	102.0
Toluene-d8	%	102.0	97.5	101.5	96.5	100.0	102.0	98.0
1,2-Dichloroethane-d4	%	109.0	108.0	105.0	111.0	108.0	112.0	110.0
4-Bromofluorobenzene	%	93.0	100.0	98.0	98.0	98.0	96.0	90.0
Toluene-d8	%	97.0	96.0	100.0	94.0	98.0	94.0	94.0
1,3-Dimethyl-2-nitrobenzene	%	102.5	99.0	102.0	99.5	101.0	98.0	100.0
Acenaphthene-d10	%	84.0	85.5	99.0	83.5	102.0	104.0	102.0
Chrysene-d12	%	71.0	84.0	90.5	78.5	95.0	106.0	87.0
Perylene-d12	%	93.5	96.5	91.5	80.0	84.0	83.0	83.0
Phenanthrene-d10	%	85.5	89.5	102.0	86.5	106.0	110.0	105.0
Triphenylphosphate	%	106.0	103.0	99.0	104.0	105.0	109.0	106.0
1,3-dimethyl-2-nbenz(70-130)	%	91.5	117.5	101.0	114.0	105.5	115.5	96.0
Acenaphthene-d10(50-150)	%	112.0	103.0	101.0	98.5	107.5	101.5	117.0
Chrysene-d12(50-150)	%	105.0	94.5	92.5	95.0	107.0	99.0	119.0
Perylene-d12(70-130)	%	77.0	90.0	85.0	91.0	90.0	90.0	85.0
Phenanthrene-d10(50-150)	%	110.0	102.0	99.0	95.5	106.5	99.5	116.0
Triphenylphosphate(70-130)	%	76.0	94.0	87.5	103.0	99.0	100.5	95.5
2,4-Dimethylphenol-d3	%	95.0	93.0	93.5	91.5	96.0	97.0	97.0
2-Chlorophenol-d4	%	83.5	86.0	79.0	91.5	94.0	101.0	97.0
4-Bromo-3,5-dimethylphenyl-N-r	%	114.0	117.5	92.5	118.5	102.0	124.0	103.0
Carbazole	%	105.5	115.0	106.0	100.0	87.5	98.0	97.0
Monuron	%	112.0	120.0	111.5	113.0	101.0	108.0	107.0
1,2-Dibromopropane	%	102.5	114.5	106.0	106.0	103.5	104.0	108.0
4-Bromofluorobenzene	%	103.0	108.0	99.0	101.0	98.5	100.0	103.0
1,2-Dibromopropane	%	96.5	96.0	99.0	100.5	100.5	101.0	100.0
2,3,5,6-Tetrafluorobenzaldehyde	%	111.0	116.5	99.0	110.5	106.5	106.0	97.0