

RED AND VERA

Item	Location ok? (y/n)	TCEQ Frequency	WF Frequency	Frequency Ok? (y/n)	Comments
TCEQ-3J: End WW DZ 1 (end of RR WWTP effluent transmission line at Cypress 2008 MF/RO SWTP's Flow Control Vault & prior to existing 12-inch gate valve)					
1. Total chlorine residual (mg/L)	HPSC sample 2.34	15-min			LOC OK
2. Monochloramine residual (mg/L)	AT 1 Q46 1.91	15-min			↓
3. Free chlorine residual (mg/L)	C 1.08	15-min			
4. Free ammonia level (mg/L)	Q46 1.41	15-min			
5. pH level at monochloramine monitoring tap	8.02	15-min			
6. Water temperature at monochloramine monitoring tap (oC)		15-min			
TCEQ-4J: 2008 MF/RO SWTP's Static Mixers and Coagulant Addition (at Cypress 2008 MF/RO SWTP's Flow Control Vault)					
1. Influent alkalinity level (mg/L)	Y	4-hrs	grab		SCADA AT
2. Influent water temperature (oC) (from TCEQ-3J-6)	Y	4-hrs			
3. Coagulant dosage (mg/L)	✓	4-hrs			
4. Quantity of coagulant used (gpd)		1/day			
5. Escherichia coli (E. coli) enumeration	↓	PCR: once per day & EPA 1623: start up, 30 day, end			
6. Giardia (cysts/L)		PCR: once per day & EPA 1623: start up, 30 day, end			
7. Cryptosporidium (oocysts/L)		PCR: once per day & EPA 1623: start up, 30 day, end			
TCEQ-5J: Begin WW DZ 2 (at 2008 MF/RO SWTP's radial flow clarifier's flocculator with chlorine and ammonia injection)					
1. Influent flow rate (gpm) (from TCEQ-1J-1)	online ✓	15-min			2 locations From WW
2. Free chlorine dosage (mg/L)	✓	4-hrs	grab		
3. Ammonia dosage (mg/L)	✓	4-hrs			
4. Total chlorine residual, after ammonia injection (mg/L)	✓	4-hrs			grab
5. Monochloramine residual, after ammonia injection (mg/L)	✓	4-hrs			
6. Free chlorine residual, after ammonia injection (mg/L)	✓	4-hrs			
7. Free ammonia level, after ammonia injection (mg/L)	✓	4-hrs			

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8. pH level at monochloramine residual monitoring tap	Y	4-hrs			
9. Water temperature at monochloramine residual monitoring tap (oC)	Y	4-hrs			
10. Quantity of chlorine used (ppd)	Y	1/day			
11. Quantity of ammonia used (ppd)	Y	1/day			metering pump

TCEQ-6J: 2008 MF/RO SWTP Radial Flow Clarifier (flocculation & clarification)

1. Effluent flow rate (gpm) (clarifier influent flow rate minus blowdown flow rate)	✓ ww	15-min	~~etc~~		calculated ^{not} pump station ^{not} standard pumps ^{not} in them
2. Settled water turbidity level (NTU)		2-hrs	grab		
3. Effluent pH level		4-hrs			
4. Calculated flocculator hydraulic detention time (Based on influent flow rate, mins.)	3518539 influent	1/day and any time flow changes			
5. Calculated clarifier surface overflow rate (gpm/sf)	sent by WWTP	1/day and any time flow changes			
6. Effluent TOC (mg/L) (to be conducted on-site)	✓	1/7 days			grab
7. Effluent DOC (mg/L)	✓	1/7 days			grab

TCEQ-7J: End WW DZ 2 (at 2008 MF/RO SWTP's radial flow clarifier's effluent pipe)

1. Total chlorine residual (mg/L)	Q46 0.87	15-min			loc ok
2. Monochloramine residual (mg/L)	0.77	15-min			
3. Free chlorine residual (mg/L)	0.20	15-min			
4. Free ammonia level (mg/L)	1.87	15-min			
5. pH level at monochloramine monitoring tap	8.09	15-min			
6. Water temperature (oC) at monochloramine monitoring tap		15-min			

TCEQ-8J: Begin WW DZ 3 (at MF membrane units' feed trough)

1. Free chlorine dosage rate (mg/L)	✓	4-hrs			
2. Ammonia dosage rate (mg/L)		4-hrs			
3. Total chlorine residual, after ammonia injection (mg/L)		4-hrs			
4. Monochloramine residual, after ammonia injection (mg/L)		4-hrs			
5. Free chlorine residual, after ammonia injection (mg/L)		4-hrs			
6. Free ammonia level, after ammonia injection (mg/L)		4-hrs			
7. Water temperature at monochloramine residual monitoring tap (oC)		4-hrs			
8. pH level at monochloramine residual monitoring tap	✓	4-hrs			
9. Quantity of chlorine used (ppd)	52	1/day			

what time of day read? beginning? end
in SOP
each shift 128
8 4 4 12

Item	Location ok? (y/n)	TCEQ Frequency	WF Frequency	Frequency Ok? (y/n)	Comments
10. Quantity of ammonia used (ppd)	116	1/day			
TCEQ-9J: Selected MF Membrane Unit (at influent to selected MF units' feed trough/tank)					
1. Inlet pressure, head on bottom of membranes' feed side (psi)		15-min			mi. SCADA
2. Influent silt density index (SDI) <i>off site grab</i>		1/day			
TCEQ-10J: Selected MF Membrane Unit Filtrate Quality (after vacuum pump & prior to blending with any other MF filtrate)					
1. Effluent turbidity (mNTU) <i>#4 0.08, 0.025</i>		5-min			<i>17205</i>
3. Outlet pressure, vacuum (psi) <i>16.55</i>		15-min			<i>online control room</i>
4. Selected MF unit's effluent flow rate (gpm) <i>grab</i>		15-min			
5. Temperature (oC) (from TCEQ-11J-6)		15-min			
6. pH level (from TCEQ-11J-5)		15-min			
7. Calculated average transmembrane pressure (TMP, psi)		4-hrs			SCADA
8. Calculated average flux rate (gallons per square-foot per day, gfd)		4-hrs			SCADA
9. Calculated average specific flux rate (gfd/psi) at measured temperature <i>flux/TMP</i>		4-hrs			excal
10. Calculated average specific flux (gfd/psi) normalized to 20o C <i>grab</i>		4-hrs			excal
11. SDI		1/day			
12. Alkalinity (mg/L) (to be conducted on-site)		1/7 days			onsite + offsite?
13. TOC (mg/L) (to be conducted on-site)		1/7 days			" "
14. DOC (mg/L)		1/7 days			off site
15. Escherichia coli (E. coli) enumeration		day & EPA 1623: start up,			off site
16. Giardia (cysts/L) enumeration		PCR: once per day & EPA 1623: start up, 30 day, end			off site
17. Cryptosporidium (oocysts/L)		PCR: once per day & EPA 1623: start up, 30 day, end			off site
18. Total culturable viruses (MPN/L)		PCR: once per day & EPA 1623: start up, 30 day, end			off site
TCEQ-11J: End WW DZ 3 (at combined MF filtrate pipe)					
1. Total chlorine residual (mg/L) <i>0</i>		15-min			log ok

HACH CL17 rate 0.6 0.64 → pH 6.95

Item	Location ok? (y/n)	TCEQ Frequency	WF Frequency	Frequency Ok? (y/n)	Comments
2. Monochloramine residual (mg/L)	1.16	15-min			14.11.17.20.5
3. Free chlorine residual (mg/L)	0.27	15-min			loc OK
4. Free ammonia level (mg/L)	8.98	15-min			
5. pH level at monochloramine residual monitoring tap	5.97	15-min			
6. Water temperature at monochloramine residual monitoring tap (oC)		15-min			
7. Combined MF units' effluent flow rate (gpm)	Sum of MF's	15-min			
TCEQ-12J: Sodium Bisulfite Feed System					
1. Sodium bisulfite dosage (mg/L)		4-hrs			grab off metering
2. Quantity of sodium bisulfite used (ppd)		1/day			
TCEQ-13J: Break Tank (RO membrane feed water tank)					
1. Effluent flow rate (gpm)	RO feed	15-min			SCADA
2. Water level (feet)		4-hrs			side-SCADA
3. Calculated hydraulic detention time (using effluent flow rate, mins.)	min daily level	1/day and any time flow changes			
4. Effluent free chlorine residual (mg/L)		4-hrs			2 to past end of grate
5. Effluent total chlorine residual (mg/L)		4-hrs			
6. SDI		1/day			
TCEQ-14J: Sulfuric Acid Feed System					
1. Sulfuric acid dosage (mg/L)		4-hrs			
3. Quantity of sulfuric acid used (gpd)		1/day			
TCEQ-15J: Antiscalant Feed System					
1. Antiscalant dosage (mg/L)		4-hrs			metering pump
2. Quantity of antiscalant used (gpd)		1/day			
TCEQ-16J: Selected RO Membrane Unit Feed Water (after selected RO unit feed pump & prior to selected RO unit)					
1. Influent flow rate (gpm)		15-min			
2. Influent turbidity (mNTU)		15-min			
3. Inlet pressure (psi)		4-hrs			
4. Temperature (o C)		4-hrs			
5. Nitrate (mg/L)		4-hrs, split sample at start up, every 30 days and end.			
6. TDS (mg/L)		4-hrs			
7. TSS (mg/L)		4-hrs			
8. SDI		1/day			
9. pH level		1/day			
10. Hardness as calcium carbonate (mg/L)		1/day			
11. Alkalinity (mg/L) (to be conducted on-site)		1/day			
12. TOC (mg/L) (to be conducted on-site)		1/7 days			onsite
13. DOC (mg/L)		1/7 days			shipped

Item	Location ok? (y/n)	TCEQ Frequency	WF Frequency	Frequency Ok? (y/n)	Comments
14. Nitrite (mg/L)		Start up, 30 days, end			
15. Silica (mg/L)		Start up, 30 days, end			
TCEQ-17J: First Stage RO Membranes <i>off panel salt reject</i>					
1. Temperature (oC)		1/day			
2. Flow rate (gpm) at measured temperature		1/day			
3. Calculated total flux rate (gfd) at measured temperature		1/day			
4. Calculated maximum (or average) net driving pressure (psi)		1/day			
5. Calculated specific flux rate (gfd/psi) normalized to 20o C		1/day			
TCEQ-18J: Second Stage RO Membranes <i>off panel salt reject</i>					
1. Temperature (oC)		1/day			
2. Flow rate (gpm) at measured temperature		1/day			
3. Calculated total flux rate (gfd) at measured temperature		1/day			
4. Calculated maximum (or average) net driving pressure (psi)		1/day			
5. Calculated specific flux rate (gfd/psi) normalized to 20o C		1/day			
TCEQ-19J: Selected RO Membrane Unit Reject Water Quality (at effluent of RO unit's concentrate piping) <i>off panel</i>					
1. Flow rate (gpm)		15-min			
2. Pressure (psi)		15-min			
3. TDS (mg/L)		1/day			
4. Free ammonia (mg/L)		1/day			
5. Nitrate (mg/L)		1/day			
6. pH level		Twice/week			
7. Turbidity (NTU)		Twice/week			
8. Temperature (oC)		Twice/week			
9. CBOD5 (mg/L)		Twice/week			
10. Full metal scan (mg/L, arsenic, barium, cadmium, chromium, copper, lead, manganese, mercury, nickel, selenium, silver, zinc)		Twice/week			
TCEQ-20J: Selected RO Membrane Unit Permeate Quality (at selected RO unit permeate piping & prior to blending with other RO units' permeate) <i>off panel</i>					
1. Flow rate per unit (gpm)		15-min			
2. TDS (mg/L)		15-min			
3. Effluent pressure (psi)		15-min			
4. Temperature (oC)		4-hrs			
5. pH level		4-hrs			

Item	Location ok? (y/n)	TCEQ Frequency	WF Frequency	Frequency Ok? (y/n)	Comments
6. Maximum daily TDS (mg/L)		1/day			
7. Calculated average flux rate (gfd) at measured temperature		1/day			
8. Calculated average net driving pressure (psi)		1/day			
9. Calculated average specific flux rate (gfd/psi) normalized to 20o C		1/day			
10. Nitrate (mg/L)		1/day, also split sample to lab Startup, 30 day and end			
11. Nitrite (mg/L) if nitrite is detected in RO membrane feed water		1/day, also split sample to lab Startup, 30 day and end			
12. Escherichia coli (E. coli) enumeration		PCR: once per day & EPA 1623: start up, 30 day, end			
13. Giardia (cysts/L)		PCR: once per day & EPA 1623: start up, 30 day, end			
14. Cryptosporidium (oocysts/L)		PCR: once per day & EPA 1623: start up, 30 day, end			
15. Alkalinity (mg/L) (to be conducted on-site)		1/7 days			
16. TOC (mg/L) (to be conducted on-site)		1/7 days			
17. DOC (mg/L)		1/7 days			
18. TTHM (ug/L)		1/7 days			
19. HAA5 (ug/L)		1/7 days			
20. Bromide (mg/L)		1/7 days			
21. Chemicals listed in §290.106(b) Inorganic Chemicals 3		Start up, 30 days ,end			
22. Chemicals listed in §290.107(b) Organic Chemicals 3		Start up, 30 days ,end			
23. Chemicals listed in §290.108(b)(1) and §290.108(b)(2) & 40 CFR §141.66(d)		Start up, 30 days ,end			
24. Chemicals listed in §290.118(b) Secondary Chemicals		Start up, 30 days ,end			

Item	Location ok? (y/n)	TCEQ Frequency	WF Frequency	Frequency Ok? (y/n)	Comments
25. Total culturable viruses		Start up, 30 days ,end			
35. Perchlorate (ug/L)		Start up, 30 days ,end			
36. Chlorite (mg/L)		1/day			
TCEQ-22J: Temporary RO Permeate Lagoon Effluent (at waste Lagoon No. 3 recycle pump station & before blending with Secondary Reservoir source water)					
1. Flow rate (gpm)		15-min			AB 679.97 <i>off pump outside</i>
2. Turbidity (NTU)		4-hrs			<i>scada</i>
3. pH level		4-hrs			
4. Temperature (oC)		4-hrs			
5. Nitrate (mg/L)		1/day, also split sample to lab Startup, 30 day and end			<i>grab</i>
6. Free ammonia level (mg/L)		1/day			
8. TOC (mg/L)		1/7 days			
9. DOC (mg/L)		1/7 days			
Simulated CT for 10.0-MG GST					
TCEQ-41J: Begin Temporary Blended DZ 6 (no disinfectant injection, includes Cypress 10.0-MG GST)					
1. Collect water sample at effluent of 2010 clearwell		8-hrs			<i>215 minute bath</i>
2. 2010 clearwell transfer pumps' flow rate (gpm)		8-hrs			
3. Calculate hydraulic detention time of 10.0 MG GST at 50% capacity		8-hrs			
4. Calculate T10 using a baffling factor of 0.3 (mins)		8-hrs			
TCEQ-42J: End Temporary Blended DZ 6 (at Cypress high service pumps' discharge header)					
1. Water temperature of sample after holding sample for calculated T10 (oC)		8-hrs			<i>215 minute bath</i>
2. pH level of sample after holding sample for calculated T10		8-hrs			
3. Monochloramine residual of sample after holding sample for calculated T10 (mg/L)		8-hrs			
4. Record 2010 clearwell transfer pumps' 8-hr. flow rate result that corresponds to the lowest virus and Giardia inactivation on Full-Scale Verification Test SWMOR (gpm)		end of three 8-hour shifts			
5. Record water sample temperature for the 8-hr. result that corresponds to the lowest virus and Giardia inactivation on Full-Scale Verification Test SWMOR (oC)		end of three 8-hour shifts			

Item	Location Ok? (y/n)	TCEQ Frequency	WF Frequency	Frequency Ok? (y/n)	Comments
6. Record water sample pH level for the 8-hr. result that corresponds to the lowest virus and Giardia inactivation on Full-Scale Verification Test SWMOR		end of three 8-hour shifts			
7. Record monochloramine residual for the 8-hr. result that corresponds to the lowest virus and Giardia inactivation on Full-Scale Verification Test SWMOR (mg/L)		end of three 8-hour shifts			

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Item	Location ok? (y/n)	TCEQ Frequency	WF Frequency	Frequency Ok? (y/n)	Comments
TCEQ-23J Raw Secondary Reservoir Source Water Quality (prior to chlorine dioxide injection)					
1. Flow rate (gpm)		15-min			
2. Turbidity (NTU) <i>20.013</i>		4-hrs			<i>Heft 1720</i>
3. Temperature (°C)		1/day			
4. pH		1/day			
5. TDS (mg/L)		1/day			
6. TSS (mg/L)		1/day			
7. Daily flow rate (gpd)		1/day			
8. Nitrate (mg/L)		1/day also split sample to lab Startup, 30 day and end			
9. Alkalinity (mg/L) (to be conducted on-site)		1/ 7 days			
10. TOC (mg/L) (to be conducted on-site)		1/ 7 days			
11. DOC (mg/L)		1/ 7 days			
12. Bromide (mg/L)		1/ 7 days			
13. Chemicals listed in §290.106(b) Inorganic Chemicals 3		Start up, 30 days , end			
14. Chemicals listed in §290.107(b) Organic Chemicals 3		Start up, 30 days , end			
15. Chemicals listed in §290.108(b)(1) and §290.108(b)(2) & 40 CFR §141.66(d)		Start up, 30 days , end			
16. Chemicals listed in §290.118(b), Secondary Chemicals		Start up, 30 days , end			
17. Escherichia coli (E. coli) enumeration		PCR: once per day & EPA 1623: start up, 30 day, end			
18. Giardia (cysts/L)		PCR: once per day & EPA 1623: start up, 30 day, end			
19. Cryptosporidium (oocysts/L)		PCR: once per day & EPA 1623: start up, 30 day, end			
20. Total culturable viruses (MPN/L)		Start up, 30 days , end			
30. Perchlorate (ug/L)		Start up, 30 days , end			
TCEQ-24J Begin Secondary Reservoir raw water (RW) DZ 1 (at chlorine dioxide injection point on Secondary Reservoir raw water transmission pipe)					
1. Chlorine dioxide dosage (mg/L)		4-hrs			
2. pH level (from TCEQ-23J-4)		1/day			

Item	Location ok? (y/n)	TCEQ Frequency	WF Frequency	Frequency Ok? (y/n)	Comments
3. Temperature (°C) (from TCEQ-23J-3)		1/day			
4. Quantity of chlorine dioxide used (ppd)		1/day			
TCEQ-25J: End RW DZ 1 (at 1st monitoring point on raw Secondary Reservoir transmission pipe 400 feet from chlorine dioxide injection point)					
1. Chlorine dioxide residual (mg/L)		4-hrs			
2. pH level		4-hrs			
3. Temperature (°C)		4-hrs			
TCEQ-26J: End RW DZ 2 (begins at end of RW DZ 1 and ends at 2nd monitoring point on raw Secondary Reservoir transmission pipe 900 feet from chlorine dioxide injection point)					
1. Chlorine dioxide residual (mg/L)		4-hrs			
2. pH level		4-hrs			
3. Temperature (°C)		4-hrs			
TCEQ-27J: End RW DZ 3 (begins at end of RW DZ 2 & ends prior to tee for blending waste Lagoon No. 3 effluent at 3rd monitoring point on raw Secondary Reservoir transmission pipe 6,500 feet from chlorine dioxide injection point)					
1. Flow rate (gpm)	✓	15-min			loc OK
2. Chlorine dioxide residual (mg/L)	✓	4-hrs			
3. pH level	✓	4-hrs			
4. Temperature (°C)	✓	4-hrs			
5. Turbidity (NTU)	✓	4-hrs			
6. Total alkalinity (mg/L as CaCO ₃)	✓	1/day			
7. Nitrate (mg/L)	✓	1/day			
8. Chlorite (mg/L)	✓	1/day			
TCEQ-28J: Cypress Splitter Box Effluent (blended partially treated RR WWTP effluent from waste Lagoon No. 3 with Secondary Reservoir source water)					
1. Combined flow rate (gpm)		4-hrs			
2. Turbidity (NTU)		4-hrs			
3. pH		4-hrs			
4. Temperature (°C)		4-hrs			
5. E. coli enumeration		PCR: once per day & EPA 1623: start up, 30 day, end			
6. Giardia (cysts/L)		PCR: once per day & EPA 1623: start up, 30 day, end			
7. Cryptosporidium (oocysts/L)		PCR: once per day & EPA 1623: start up, 30 day, end			
8. Nitrate (mg/L)		1/day also split sample to lab Startup, 30 day and end			
9. Water color		1/day			
10. Odor (threshold odor number)		1/day			

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11. TOC (mg/L) (to be conducted on-site)		1/ 7 days			
12. DOC (mg/L)		1/ 7 days			
13. TTHM (mg/L)		1/ 7 days			
14. HAA5 (mg/L)		1/ 7 days			
15. Bromide (mg/L)		1/ 7 days			
16. Chemicals listed in §290.106(b) Inorganic Chemicals 3		Start up, 30 days , end			
17. Chemicals listed in §290.107(b) Organic Chemicals 3		Start up, 30 days , end			
18. Chemicals listed in §290.108(b)(1) radionuclides		Start up, 30 days , end			
19. Chemicals listed in §290.108(b)(2) & 40 CFR §141.66(d) manmade radionuclides		Start up, 30 days , end			
20. Chemicals listed in §290.118(b) Secondary Chemicals		Start up, 30 days , end			
21. Total culturable viruses (MPN/L)		Start up, 30 days , end			
24. Chlorite (mg/L)		1/day			
TCEQ-30J: Begin Blended partial treated RR W/WTP & Secondary Reservoir waters (Blended) DZ 4 (at chlorine & ammonia injection after Cypress Splitter Box and before 2010 Rapid Mix) <i>picture</i>					
1. Free chlorine dosage (mg/L)		4-hrs			
2. Ammonia dosage (mg/L)		4-hrs			
3. Total chlorine residual, after ammonia injection (mg/L)		4-hrs			
4. Monochloramine residual, after ammonia injection (mg/L)		4-hrs			
5. Free chlorine residual, after ammonia injection (mg/L)		4-hrs			
6. Free ammonia residual, after ammonia injection (mg/L)		4-hrs			
7. pH level at monochloramine residual monitoring tap		4-hrs			
8. Water temperature at monochloramine monitoring tap (oC)		4-hrs			
9. Quantity of chlorine used (ppd)		1/day			
10. Quantity of ammonia used (ppd)		1/day			
TCEQ-31J: Conventional 2010 SWTP Rapid Mix and Coagulant Addition <i>picture</i>					
1. Influent alkalinity level (mg/L)		4-hrs			

Item	Location ok? (y/n)	TCEQ Frequency	WF Frequency	Frequency OK? (y/n)	Comments
2. Coagulant dosage (mg/L)		4-hrs			
3. Quantity of coagulant used (gpd)		1/day			
TCEQ-32J: Conventional 2010 SWTP Flocculation & Clarification (Accelerator solids-contact flocculation and clarification) <i>picture</i>					
1. Effluent flow rate (gpm) (clarifier influent flow rate minus blowdown flow rate)		15-min			
2. Settled water turbidity (NTU)		2-hrs			
3. Cationic polymer dosage (mg/L)		4-hrs			
4. Lime feed rate (gpm)		4-hrs			
5. Quantity of cationic polymer		1/day			
6. Quantity of lime used (ppd)		1/day			
7. Calculated flocculator hydraulic detention time (mins.)		1/day and anytime flow changes			
8. Calculated clarifier surface overflow rate (gpm/sf)		1/day and anytime flow changes			
9. Effluent TOC (mg/L) (to be conducted on-site)		1/7 days			
10. Effluent DOC (mg/L)		1/7 days			
TCEQ-33J: Conventional 2010 SWTP Recarbonation Basin <i>top of filter picture</i>					
1. Carbon dioxide dosage (mg/L)		1/day			
2. Effluent pH level		1/day			
3. Quantity of carbon dioxide used (ppd)		1/day			
TCEQ-34J: Blended Phosphate Addition System (after Conventional 2010 SWTP Recarbonation Basin and prior to gravity media filters)					
1. Blended phosphate dosage (mg/L)		1/day			
2. Quantity of blended phosphate used (gpd)		1/day			
TCEQ-35J: Selected Conventional 2010 SWTP Gravity Media Filter (selected individual filter effluent (IFE))					
1. Selected individual filter's effluent (IFE) turbidity level (NTU)	<i>#3 & #4</i> 0.07	15-min	0.08		<i>MAX 170E</i>
2. Selected IFE flow rate (gpm)	1.93	4-hrs	1.97		
4. Calculated selected IFE hydraulic loading rate for selected filter (gpm/sf)	<i>daily</i> <i>MAX</i>	1/day and anytime flow changes			

Item	Location ok? (y/n)	TCEQ Frequency	WF Frequency	Frequency Ok? (y/n)	Comments
TCEQ-36J: End Blended DZ 4 (after Conventional 2010 SWTP combined filter effluent (CFE) and prior to downstream chlorine injection point)					
1. Total chlorine residual (mg/L)	3.44	15-min			
2. Monochloramine residual (mg/L)	3.11	15-min			
3. Free chlorine residual (mg/L)	0.30	15-min			
4. Free ammonia level (mg/L)	00	15-min			
5. pH level at monochloramine residual monitoring tap	9.67	15-min			
6. Water temperature (°C) at monochloramine residual monitoring tap		15-min			
7. Combined filters' effluent (CFE) water flow rate (gpm)		4-hrs			
TCEQ-37J: Fluoride Adjustment System (after Conventional 2010 SWTP filters and prior to chlorine injection point)					
1. Fluoride level, pre-fluosilicic injection (mg/L) (can be monitored at TCEQ-36J monitoring location)		1/day			
2. Fluosilicic acid dosage (mg/L)		1/day			
3. Quantity of fluosilicic acid used (gpd)		1/day			
TCEQ-38J: Begin Blended DZ 5 (at chlorine injection prior to Conventional 2010 SWTP Clearwell)					
1. Free chlorine dosage (mg/L)		4-hrs			
2. Ammonia dosage (mg/L)		4-hrs			
3. Total chlorine residual, after ammonia injection (mg/L)		4-hrs			
4. Monochloramine residual, after ammonia injection (mg/L)		4-hrs			
5. Free chlorine residual, after ammonia injection (mg/L)		4-hrs			
6. Free ammonia level, after ammonia injection (mg/L)		4-hrs			
7. pH level at monochloramine residual monitoring tap (from TCEQ-36J-5)		4-hrs			
8. Water temperature at monochloramine residual monitoring tap (°C) (from TCEQ-36J-6)		4-hrs			

Item	Location ok? (y/n)	TCEQ Frequency	WF Frequency	Frequency Ok? (y/n)	Comments
9. Quantity of chlorine used (ppd)		1/day			
10. Quantity of ammonia used (ppd)		1/day			
TCEQ-39J: End Temporary Blended DZ 5 (at Conventional 2010 SWTP Clearwell's transfer pumps)					
1. Total chlorine residual (mg/L)	4.42	15-min			
2. Monochloramine residual (mg/L)	0.34	15-min			
3. Free chlorine residual (mg/L)	0.30	15-min			
4. Free ammonia level (mg/L)	0.49	15-min			
5. pH level at monochloramine residual monitoring tap	8.63	15-min			
6. Water temperature at monochloramine residual monitoring tap (oC)		15-min			
TCEQ-40J: Conventional 2010 SWTP Clearwell Effluent Water Quality (after 2010 clearwell transfer pumps and prior to GSTs)					
1. Flow rate (gpm)		15-min			
2. Turbidity (NTU) (the City has selected this turbidity monitoring method at this sample site)	0.16	15-min			online
4. Nitrate (mg/L)	0.6	15-min			online
5. TDS (mg/L)		15-min			
6. E. coli enumeration		PCR: once per day & EPA 1623: start up, 30 day, end			
7. Giardia (cysts/L)		PCR: once per day & EPA 1623: start up, 30 day, end			
8. Cryptosporidium (oocysts/L)		PCR: once per day & EPA 1623: start up, 30 day, end			
9. Fluoride (mg/L) (*Should not be over 2.0 Enclosure D #5 and 6)	0.46	1/day, also split sample to lab Startup, 30 day and end			
Enclosure D 1. Fluoride system in operation?					
D 2. Fluoride conform with ANSI/NSF					
D 3 and 4. Day tank provided and spill containment for bulk and day tank.					
D 5. Amount of Fluorisilic acid, and dosage		1/day			
10. Daily quantity of water treated (MGD)		1/day			

Item	Location ok? (y/n)	TCEQ Frequency	WF Frequency	Frequency Ok? (y/n)	Comments
11. Chlorine dioxide (mg/L)		1/day			
12. Chlorite (mg/L)		1/day			
13. Color (color units)		1/day			
14. Odor (threshold odor number)		1/day			
15. Alkalinity (mg/L)		1/ 7 days			
16. Hardness as calcium carbonate (mg/L)		1/ 7 days			
17. Calculated Langelier saturation index (LSI)		1/ 7 days			
18. Chemicals listed in §290.106(b) Inorganic Chemicals 3		Start up, 30 days , end			
19. Chemicals listed in §290.107(b) Organic Chemicals 3		Start up, 30 days , end			
20. Chemicals listed in §290.108(b)(1) (radium 226, radium 228, uranium, gross alpha activity)		Start up, 30 days , end			
21. Chemicals listed in §290.108(b)(2) & 40 CFR §141.66(d)		Start up, 30 days , end			
(gross beta particle and photon radioactivity, tritium, strontium 90)		Start up, 30 days , end			
22. Chemicals listed in §290.118(b) Secondary Chemicals		Start up, 30 days , end			
23. TTHM (ug/L)		1/7 days			
24. HAA5 (ug/L)		1/7 days			
25. Lead (mg/L)		Start up, 30 days , end			
26. Total culturable viruses (MPN/L)		Start up, 30 days , end			
36. Perchlorate (ug/L)		Start up, 30 days , end			
37. Bromate (mg/L) (TCEQ added disinfection by-product)		1/7 days			