

Location: Sutton Plant on Cape Fear River

Date: 10/5/2018, DWR Total Metals Samples

Sample Fraction	Parameter	Units	Freshwater WQS	SUTTON_UP	SUTTON_LK_BREACH_3	SUTTON_DOWN
Total	Hardness (calculated)	mg/L	NA	25	15	24
Total	Silver (Ag)	µg/L	NA	1.0 U	1.0 U	1.0 U
Total	Aluminum (Al)	µg/L	NA	390	250	410
Total	Antimony (Sb)	µg/L	NA	10 U	10 U	10 U
Total	Arsenic (As)	µg/L	10	2.0 U	6.0	2.0 U
Total	Boron (B)	µg/L	NA	50 U	50 U	50 U
Total	Barium (Ba)	µg/L	NA	34	20	34
Total	Beryllium (Be)	µg/L	NA	5.0 U	5.0 U	5.0 U
Total	Cadmium (Cd)	µg/L	NA	0.50 U	0.50 U	0.50 U
Total	Cobalt (Co)	µg/L	NA	50 U	50 U	50 U
Total	Chromium (Cr)	µg/L	NA	5.0 U	5.0 U	5.0 U
Total	Copper (Cu)	µg/L	NA	2.0 U	2.9	2.0 U
Total	Iron (Fe)	µg/L	NA	1500	720	1700
Total	Potassium (K)	mg/L	NA	4.5	4.4	4.3
Total	Manganese (Mn)	µg/L	NA	160	130	180
Total	Molybdenum (Mo)	µg/L	NA	10 U	10 U	10 U
Total	Sodium (Na)	mg/L	NA	8.7	2.6	8.1
Total	Nickel (Ni)	µg/L	NA	2.0 U	2.0 U	2.0 U
Total	Lead (Pb)	µg/L	NA	2.0 U	2.0 U	2.0 U
Total	Selenium (Se)	µg/L	5	1.0 U	1.0 U	1.0 U
Total	Strontium (Sr)	µg/L	NA	34	32	34
Total	Thallium (Tl)	µg/L	NA	2.0 U	2.0 U	2.0 U
Total	Titanium (Ti)	µg/L	NA	10 U	10 U	10 U
Total	Vanadium (V)	µg/L	NA	10 U	10 U	10 U
Total	Zinc (Zn)	µg/L	NA	10 U	10 U	10 U

- Results below DWR laboratory detection limits (non-detects) are shown with the analytical practical quantitation limit (PQL) and a U qualifier.
- Water Quality Standards (WQS) provided for screening purposes, as some WQS require multiple metals sampling events to fully evaluate compliance.
- All sampling locations are classified as fresh water.

Location: Sutton Plant on Cape Fear River

Date: 10/5/2018, DWR Dissolved Metals Samples

Sample Fraction	Parameter	Units	Acute WQS (hardness=15)	Acute WQS (hardness=24)	Acute WQS (hardness=25)	Chronic WQS (hardness=15)	Chronic WQS (hardness=24)	Chronic WQS (hardness=25)	SUTTON_UP Rep-1	SUTTON_UP Rep-2	SUTTON_LK_BREACH_3 Rep-1	SUTTON_LK_BREACH_3 Rep-2	SUTTON_DOWN Rep-1	SUTTON_DOWN Rep-2
Total	Hardness	mg/L	15	24	25	15	24	25						
Dissolved	Silver (Ag)	µg/L	0.12	0.28	0.30	0.06	0.06	0.06	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dissolved	Aluminum (Al)	µg/L	NA	NA	NA	NA	NA	NA	200	180	160	190	200	240
Dissolved	Antimony (Sb)	µg/L	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U
Dissolved	Arsenic (As)	µg/L	340	340	340	150	150	150	2.0 U	2.0 U	5.3	5.8	2.0 U	2.0 U
Dissolved	Boron (B)	µg/L	NA	NA	NA	NA	NA	NA	50 U	50 U	50 U	50 U	50 U	50 U
Dissolved	Barium (Ba)	µg/L	NA	NA	NA	NA	NA	NA	30	30	17	19	30	31
Dissolved	Beryllium (Be)	µg/L	65	65	65	6.5	6.5	6.5	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dissolved	Cadmium (Cd)	µg/L	0.52	0.79	0.82	0.10	0.14	0.15	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dissolved	Cobalt (Co)	µg/L	NA	NA	NA	NA	NA	NA	50 U	50 U	50 U	50 U	50 U	50 U
Dissolved	Chromium (Cr)	µg/L	16	16	16	11	11	11	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dissolved	Copper (Cu)	µg/L	2.2	3.5	3.6	1.8	2.6	2.7	2.0 U	2.0 U	2.5	2.6	2.0 U	2.0 U
Dissolved	Iron (Fe)	µg/L	NA	NA	NA	NA	NA	NA	710	650	400	510	670	1000
Dissolved	Potassium (K)	mg/L	NA	NA	NA	NA	NA	NA	4.3	4.2	3.7	4.2	4.3	4.4
Dissolved	Manganese (Mn)	µg/L	NA	NA	NA	NA	NA	NA	120	120	99	120	140	150
Dissolved	Molybdenum (Mo)	µg/L	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U
Dissolved	Sodium (Na)	mg/L	NA	NA	NA	NA	NA	NA	8.5	8.5	2.3	2.6	8.2	8.2
Dissolved	Nickel (Ni)	µg/L	94	140	145	10.4	15.5	16.1	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dissolved	Lead (Pb)	µg/L	7.8	13.3	13.9	0.3	0.5	0.5	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dissolved	Selenium (Se)	µg/L	NA	NA	NA	NA	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dissolved	Strontium (Sr)	µg/L	NA	NA	NA	NA	NA	NA	33	34	27	30	34	32
Dissolved	Thallium (Tl)	µg/L	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dissolved	Titanium (Ti)	µg/L	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U
Dissolved	Vanadium (V)	µg/L	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U
Dissolved	Zinc (Zn)	µg/L	23	35	36	24	35	36	10 U	10 U	10 U	10 U	10 U	10 U

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- Water Quality Standards (WQS) provided for screening purposes, as some WQS require multiple metals sampling events to fully evaluate compliance.
- Some metals WQS vary based on water hardness. See total metals results table for hardness at each sampling location.
- Chromium results represent dissolved total chromium. WQS shown are for hexavalent chromium VI.