



## Plant Branch

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# Monthly Dewatering Results<sup>1</sup>

April 2019

Parameter	Units	Effluent Concentration		Permit Limits	
		Minimum	Maximum	Daily Avg	Daily Max
Flow	MGD	0	1.60	***	***
pH	SU	6.5	8.5	6.0 - 9.0	
Total Suspended Solids	mg/L	ND <sup>2</sup>	10.0	30.0	100.0
Oil and Grease	mg/L	ND	9.4	15.0	20.0

Parameter	Units	Measured Effluent Concentration			
		4/3/2019	4/8/2019	4/15/2019	4/23/2019
Turbidity	NTU	2.9	1.9	2.5	5.3
Total Dissolved Solids	mg/L	290	313	301	310
Ammonia	mg/L	0.12	ND	ND	ND
Total Kjeldahl Nitrogen	mg/L	0.68	0.63	ND	ND
Nitrate-Nitrite	mg/L	0.13	ND	ND	0.07
Organic Nitrogen	mg/L	0.56	0.59	ND	ND
Phosphorus	mg/L	ND	ND	ND	ND
Ortho-Phosphorus	mg/L	ND	ND	ND	ND
Biological Oxygen Demand	mg/L	ND	ND	ND	ND
Hardness	mg/L	178	179	181	196

Parameter	Units	Effluent Concentration <sup>3</sup>				Calculated Lake Value <sup>3</sup>				Water Quality Standard <sup>4</sup>
		4/3/2019	4/8/2019	4/15/2019	4/23/2019	4/3/2019	4/8/2019	4/15/2019	4/23/2019	
Arsenic	μg/L	5.8	5.2	ND	6.4	1.78	1.49	***	3.21	340
Cadmium	μg/L	ND	ND	ND	ND	***	***	***	***	1
Chromium <sup>5</sup>	μg/L	ND	ND	ND	ND	***	***	***	***	16
Copper	μg/L	ND	ND	ND	ND	***	***	***	***	7
Lead	μg/L	ND	ND	ND	ND	***	***	***	***	30
Nickel	μg/L	ND	ND	ND	ND	***	***	***	***	260
Selenium <sup>6</sup>	μg/L	7.8	5.3	ND	ND	3.91	2.65	***	***	5
Zinc	μg/L	ND	ND	ND	ND	***	***	***	***	65
Mercury	ng/L	1.19	1.89	2.53	1.08	0.17	0.28	0.37	0.54	1400

<sup>1</sup> Tetra Tech verifies the correct laboratory analysis methods were used, any applicable permit limits have been met and other results are protective of Georgia EPD's water quality standards.

<sup>2</sup> ND = Not Detected.

<sup>3</sup> Calculated Lake Value shows what the total effluent concentration looks like once it has fully mixed in the receiving waterbody. This value is calculated as a dissolved concentration for an appropriate comparison to the numeric water quality criteria, which are also in the dissolved form. Consistent with Georgia EPD, non-detectable effluent concentrations are not translated into calculated lake values.

<sup>4</sup> Numeric Water Quality Criteria is the maximum concentration of a parameter (calculated at a default hardness of 50 mg/L as calcium carbonate) established for the receiving waterbody that will be protective of the designated use per Georgia EPD's rules and regulations. Calculated Lake Values less than these criteria are protective of the waterbody.

<sup>5</sup> Numeric water quality criterion shown is for Hexavalent Chromium.

<sup>6</sup> The numeric water quality criterion shown is the chronic (long-term) water quality criterion for selenium since this parameter does not have an acute (short-term) water quality criterion. The selenium water quality criterion is compared to the average in lake concentration, which for April was calculated as 1.64 ug/L.

\*\*\* = Not Applicable

mg/L = milligrams per liter = parts per million; μg/L = micrograms per liter = parts per billion; ng/L = nanograms per liter = parts per trillion; SU = Standard Units; MGD = Million Gallons Day



# Plant Branch

## Monthly Instream Results<sup>1</sup>



April 2019

Parameter <sup>3</sup>	Units	Lake Sinclair <sup>2</sup>			
		4/3/2019 UpStream	4/3/2019 DownStream	4/15/2019 UpStream	4/15/2019 DownStream
pH	SU	7.85	8.14	6.86	7.41
TSS	mg/L	13.5	7.5	ND	8.3
O&G	mg/L	14.4	ND	ND	ND
Turbidity	NTU	25.2	7.8	17.7	6.3
TDS	mg/L	66	66	60	45
BOD	mg/L	2.2	ND	ND	ND
Arsenic	µg/L	ND	ND	ND	ND
Cadmium	µg/L	ND	ND	ND	ND
Chromium	µg/L	ND	ND	ND	ND
Copper	µg/L	ND	ND	ND	ND
Lead	µg/L	ND	ND	ND	ND
Mercury	ng/L	2.4	2.0	3.1	3.4
Nickel	µg/L	ND	ND	ND	ND
Selenium	µg/L	ND	ND	ND	ND
Zinc	µg/L	ND	ND	ND	ND
Ammonia	mg/L	ND	ND	ND	ND
TKN	mg/L	0.45	ND	0.54	0.50
Nitrate-Nitrite	mg/L	0.27	0.41	0.14	0.29
Organic Nitrogen	mg/L	ND	ND	0.54	0.50
Phosphorus	mg/L	ND	ND	ND	ND
Ortho-phosphorus	mg/L	ND	ND	ND	ND
Hardness	mg/L	20.3	25.8	20.2	24.2

1 Tetra Tech verifies the correct laboratory analysis methods were used.

2 Lake Sinclair measured upstream near latitude 33.196636 and downstream near longitude -83.295389.

3 Metals results are total recoverable.

4 ND = Non-detect

mg/L = milligrams per liter = parts per million; µg/L = micrograms per liter = parts per billion;

ng/L = nanograms per liter = parts per trillion; SU = Standard Units; MGD = Million Gallons Day