



0 500 1,000 1,500 2,000
Feet

KIF_Ash_Recovery_NTC_Environmental_Monitoring_20110121_8x11.pdf

- ▲ Continuous Hydrolab Monitors
- Stationary Air Monitoring Locations
- River Auto Sampler
- + Embayment Sampling Locations
- ⊕ Embayment Auto Sampler
- Monitoring Well Locations

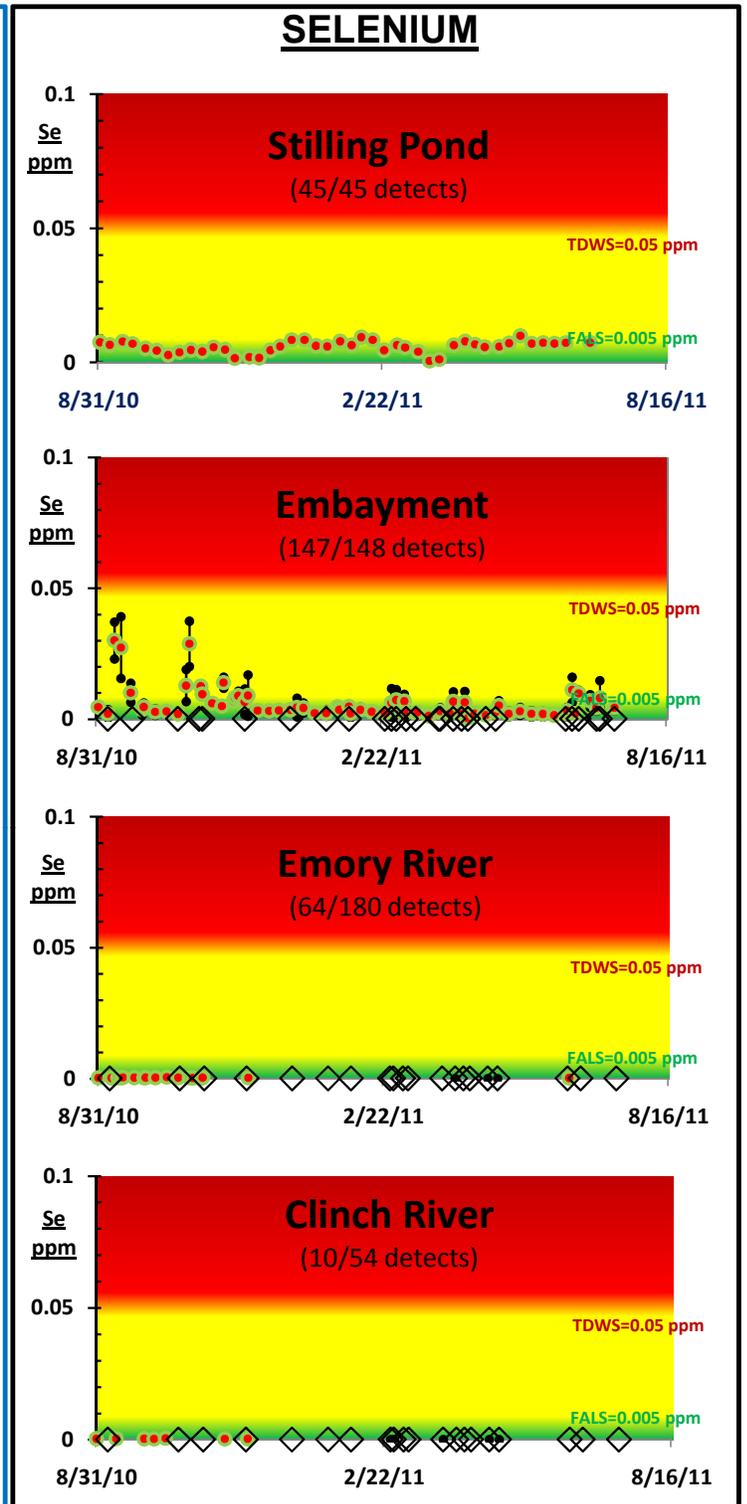
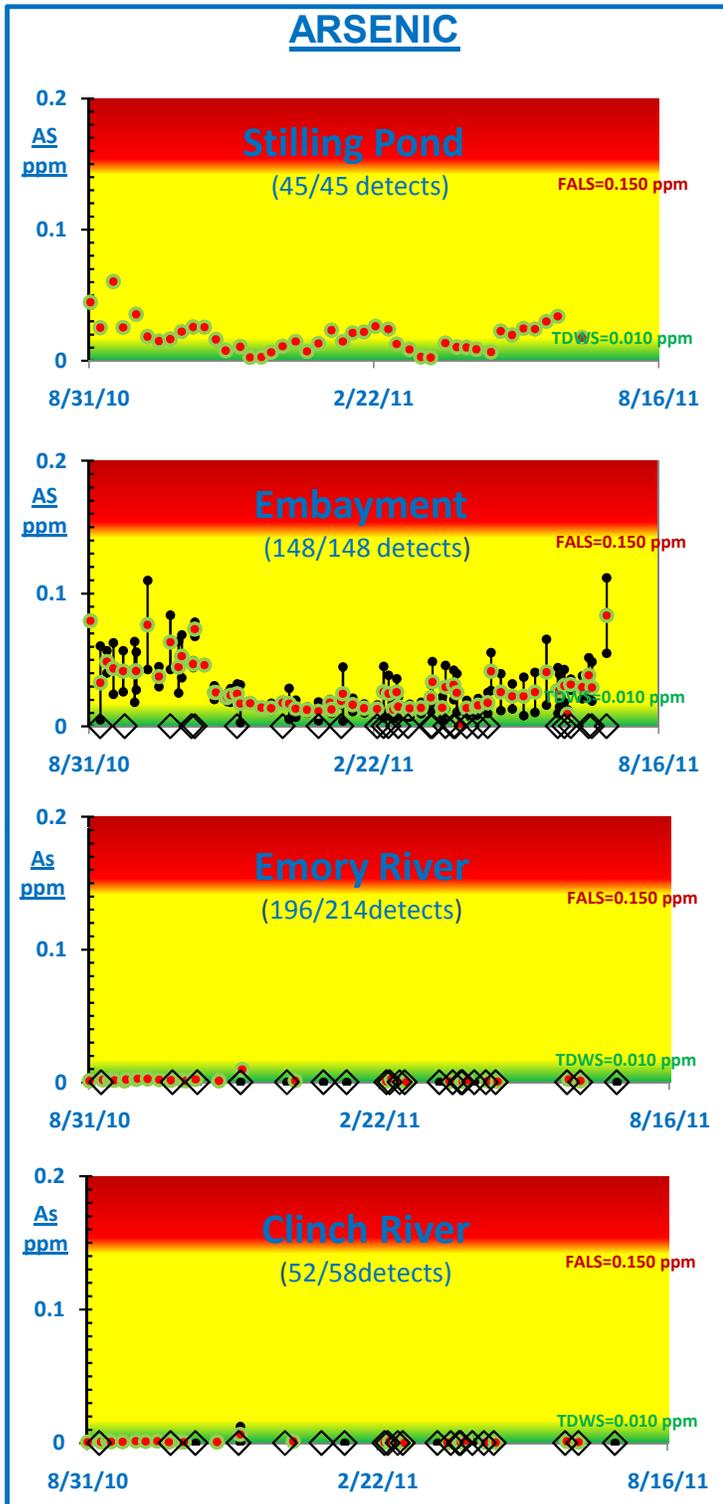
Dates of Photography:
Plant Area: 11/22/2010
Other Area: 02/27/2010

Data current through:
January 18, 2011

Tennessee Valley Authority
Geographic Information & Engineering

Non Time Critical Surface Water Monitoring

August, 2011



The nearest public water intake is 6.5 river miles downstream from the point of release.

Total concentrations and detections only are plotted. DRAFT data is not included.

Emory River samples are from ERM 0.3, 1.0, 2.0, and 4.0. Clinch River samples are from CRM 2.0, 2.5, and 4.6.

◇ A diamond identifies 0.5 inch rain events for the Embayment and 1.0 inch events for the rivers.

TDWS = The Tennessee Drinking Water Standards

FALS = The Fish and Aquatic Life Standards

Note: TDWS and FALS limits are used for trending reference only. These limits may not apply.

NON Time Critical Surface Water Monitoring

August, 2011

Comparing Results to Drinking Water Standards for Arsenic and Selenium

	<u>Analyte*</u>	<u>Criteria</u>	<u>Max</u>	<u>Min</u>	<u>Avg</u>	<u>Detects</u>	<u>Samples</u>	<u>Excursions</u>	<u>Percent Exceeding TDWS</u>
Stilling Pond									
	Arsenic	0.01 ppm	0.0604	0.00249	0.01875	45	45	35	77.78%
	Selenium	0.05 ppm	0.00992	0.00052	0.00576	45	45	0	0.00%
Embayment									
	Arsenic	0.01 ppm	0.112	0.00173	0.02740	148	148	124	83.78%
	Selenium	0.05 ppm	0.0392	0.00036	0.00563	147	148	0	0.00%
Emory River									
	Arsenic	0.01 ppm	0.00989	0.00041	0.00203	174	180	0	0.00%
	Selenium	0.05 ppm	0.00093	0.00033	0.00044	64	180	0	0.00%
Clinch River									
	Arsenic	0.01 ppm	0.0125	0.00033	0.00122	53	54	1	1.85%
	Selenium	0.05 ppm	0.00076	0.00034	0.00044	10	54	0	0.00%
Tennessee River									
	Arsenic	0.01 ppm	0.00147	0.00036	0.00084	20	20	0	0.00%
	Selenium	0.05 ppm	0.00055	0.00033	0.00044	4	20	0	0.00%

* Drinking water standards apply to the total fraction ONLY.

NOTE: Statistics and charts in this report do not include raw data in 'Draft' status.

NON Time Critical Surface Water Monitoring

August, 2011

Comparing Results to Fish & Aquatic Life Criteria for Arsenic and Selenium

	<u>Analyte*</u>	<u>Criteria</u>	<u>Max</u>	<u>Min</u>	<u>Avg</u>	<u>Detects</u>	<u>Samples</u>	<u>Excursions</u>	<u>Percent Exceeding F&AL</u>
Stilling Pond									
	Arsenic	0.15 ppm	0.0545	0.00125	0.01698	45	45	0	0.00%
	Selenium	0.005 ppm	0.00992	0.00052	0.00576	45	45	30	66.67%
Embayment									
	Arsenic	0.15 ppm	0.109	0.00149	0.02413	148	148	0	0.00%
	Selenium	0.005 ppm	0.0392	0.00036	0.00563	147	148	48	32.43%
Emory River									
	Arsenic	0.15 ppm	0.00267	0.00034	0.00137	196	214	0	0.00%
	Selenium	0.005 ppm	0.00093	0.00033	0.00044	64	180	0	0.00%
Clinch River									
	Arsenic	0.15 ppm	0.00244	0.00033	0.00076	52	58	0	0.00%
	Selenium	0.005 ppm	0.00076	0.00034	0.00044	10	54	0	0.00%
Tennessee River									
	Arsenic	0.15 ppm	0.0012	0.00035	0.00072	23	24	0	0.00%
	Selenium	0.005 ppm	0.00055	0.00033	0.00044	4	20	0	0.00%

* The standard for selenium applies to the concentration in the total fraction. The standard for arsenic applies to results from the dissolved fraction.

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