

## EDEN NORTH CAROLINA COAL ASH SPILL SEDIMENT-WATER INTERFACE RESULTS

**NOTE:** The data below represents sediment-water interface samples that were collected on April 22, 2014 by EPA START (Team 1) sampling teams. Water sample measurements are in milligrams per liter (mg/L) and/or micrograms per liter (µg/L) for these samples. The data is being compared to EPA ecological risk screening levels (ERSLs) to protect aquatic life in the surface water of the Dan River. Specific qualifiers and footnotes are listed below the summary table. These samples were collected at various locations along the river (refer to map for generalized locations). The detected concentrations in sediment-water interface are all below the EPA ERSLs with the exception of aluminum. When chemical concentrations exceed the screening values it doesn't mean there will be adverse health or ecological effects, but recommends further investigation may be needed.

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>		Transect EPA 04 Left Descending	
<b>Sample Information</b>				
Sample ID	-		EDEN-FWS-4B-L-BW-20140422	
Date	-		04/22/2014	
Time	-		1010	
Status	-		Validation Complete	
Type	-		Sediment-Water Interface	
<b>Dissolved metals</b>				
Aluminum	87	µg/L	130	µg/L
Antimony	5.6	µg/L	1U	µg/L
Arsenic	10	µg/L	1U	µg/L
Barium	220	µg/L	21	µg/L
Beryllium	0.66	µg/L	0.4U	µg/L
Boron	0.36	mg/L	0.073J	mg/L
Cadmium	0.1	µg/L	0.1U	µg/L
Calcium	-	-	6,400	µg/L
Chromium	25	µg/L	1.4J	µg/L
Cobalt	3	µg/L	0.4U	µg/L
Copper	3	µg/L	0.59J	µg/L
Iron	1,000	µg/L	280	µg/L
Lead	0.59	µg/L	0.099J	µg/L
Magnesium	-	-	2,500	µg/L
Manganese	200	µg/L	3.8	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L
Molybdenum	800	µg/L	0.55J	µg/L
Nickel	17	µg/L	1U	µg/L
Potassium	53,000	µg/L	1,500	µg/L
Selenium	5	µg/L	2U	µg/L
Silver	0.06	µg/L	1U	µg/L
Sodium	680,000	µg/L	4,500	µg/L
Thallium	0.24	µg/L	0.2U	µg/L
Vanadium	27	µg/L	4.8	µg/L
Zinc	39	µg/L	20U	µg/L
<b>Total Dissolved Solids</b>				
Total Dissolved Solids	-	-	68	mg/L
<b>Total Suspended Solids</b>				
Total Suspended Solids	-	-	19	mg/L

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Date	-		04/22/2014	
Time	-		1010	
Status	-		Validation Complete	
Type	-		Sediment-Water Interface	
<b>Total Metals</b>				
Aluminum	2,000	µg/L	140	µg/L
Antimony	5.6	µg/L	1U	µg/L
Arsenic	10	µg/L	1U	µg/L
Barium	220	µg/L	24	µg/L
Beryllium	0.66	µg/L	0.4U	µg/L
Boron	0.36	mg/L	0.08J	mg/L
Cadmium	2	µg/L	0.1U	µg/L
Calcium	-	-	6,700	µg/L
Chromium	29	µg/L	1.2J	µg/L
Cobalt	24	µg/L	0.26J	µg/L
Copper	3	µg/L	0.84J	µg/L
Iron	2,300	µg/L	530	µg/L
Lead	0.6	µg/L	0.37	µg/L
Magnesium	-	-	2,600	µg/L
Manganese	200	µg/L	30	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L
Molybdenum	-	-	1U	µg/L
Nickel	17	µg/L	0.5J	µg/L
Potassium	53,000	µg/L	1,600	µg/L
Selenium	5	µg/L	2U	µg/L
Silver	0.06	µg/L	1U	µg/L
Sodium	680,000	µg/L	4,700	µg/L
Thallium	0.24	µg/L	0.2U	µg/L
Vanadium	27	µg/L	6.9	µg/L
Zinc	39	µg/L	20U	µg/L
<b>Anions EPA 300.1</b>				
Bromide	-	-	47	µg/L
<b>Anions</b>				
Bromide	-	-	-	-
Chloride	230	mg/L	6.8	mg/L
Sulfate	-	-	5.7	mg/L
<b>Wet Chemistry</b>				
Alkalinity, Total (As CaCO <sub>3</sub> )	-	-	22	mg/L
Hardness, Calcium/Magnesium (As CaCO <sub>3</sub> )	-	-	28	mg/L
Organic Carbon, Dissolved	-	-	1.4	mg/L
pH	6.5 - 9.0	std	7.42J	std

Notes

<sup>1</sup> Value obtained from the GL Tier 2 Values; National Recommended Water Quality Criteria; Suter and Tsao (1996); Reference condition for EcoRegion XI (25 percentile); NCDENR State Standards for surface water

EPA U.S. Environmental Protection Agency

J Value is estimated

J+ Value is estimated with a possible high bias

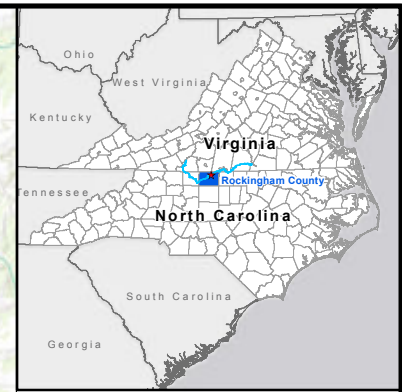
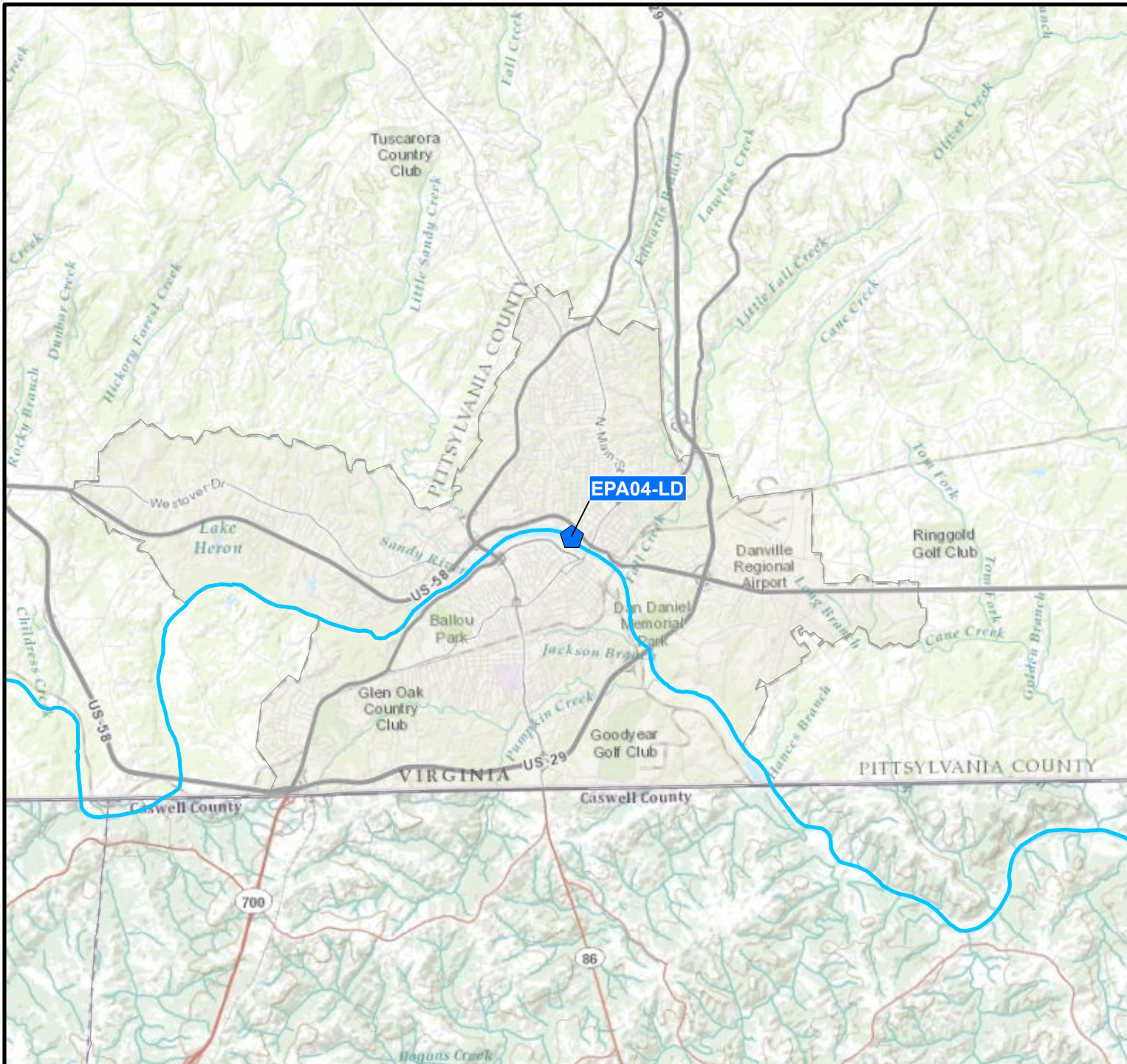
J- Value is estimated with a possible low bias

µg/L micrograms per liter




mg/L milligrams per liter

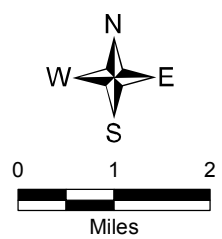
mS/cm milliSiemens per centimeter

U Analyte was not detected at the listed reporting limit.



**Legend**

-  Approximate Spill Location
-  Sediment-Water Interface Sample Location
-  Dan River



Map Source: ArcGIS Online World Map Topo, 2014

**Sediment-Water Interface Sample Locations**  
**April 22, 2014**

