

EDEN NORTH CAROLINA COAL ASH SPILL SURFACE WATER RESULTS

NOTE: The data below represents surface water samples that were collected on June 5, 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 surface water 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 ¹		Leaksville Boat Access Dock		DRSS Boat Ramp		Mid-Channel River Duke Outfall B (48" RCP)	
Sample Information								
Sample ID	-		EDEN-LBA-R-SW-20140605		EDEN-DUKE-L-SW-20140605		EDEN-48OUTFL-C-SW-20140605	
Date	-		06/05/2014		06/05/2014		06/05/2014	
Time	-		1330		1246		1215	
Status	-		Validation Complete		Validation Complete		Validation Complete	
Type	-		Surface Water		Surface Water		Surface Water	
Dissolved metals								
Aluminum	87	µg/L	18	µg/L	120	µg/L	20	µg/L
Antimony	5.6	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Arsenic	10	µg/L	0.38J	µg/L	1U	µg/L	1U	µg/L
Barium	220	µg/L	20	µg/L	20	µg/L	18	µg/L
Beryllium	0.66	µg/L	0.4U	µg/L	0.4U	µg/L	0.4U	µg/L
Boron	0.36	mg/L	0.27	mg/L	0.13	mg/L	0.13	mg/L
Cadmium	0.1	µg/L	0.1U	µg/L	0.1U	µg/L	0.1U	µg/L
Calcium	-	-	8900	µg/L	7,900J+	µg/L	7,600J+	µg/L
Chromium	25	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Cobalt	3	µg/L	0.4U	µg/L	0.26J	µg/L	0.5J	µg/L
Copper	3	µg/L	1U	µg/L	0.73J	µg/L	1U	µg/L
Iron	1,000	µg/L	110	µg/L	460	µg/L	160	µg/L
Lead	0.59	µg/L	0.3U	µg/L	0.29J	µg/L	0.064J	µg/L
Magnesium	-	-	3100	µg/L	3000	µg/L	2900	µg/L
Manganese	200	µg/L	3	µg/L	33J	µg/L	14	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L	0.0002U	mg/L	0.0002U	mg/L
Molybdenum	800	µg/L	1U	µg/L	1U	µg/L	0.72J	µg/L
Nickel	17	µg/L	1U	µg/L	-	-	0.44J	µg/L
Potassium	53,000	µg/L	1600	µg/L	1800	µg/L	1800	µg/L
Selenium	5	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Silver	0.06	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Sodium	680,000	µg/L	4000	µg/L	6200	µg/L	5500	µg/L
Thallium	0.24	µg/L	0.2U	µg/L	0.2U	µg/L	0.2U	µg/L
Vanadium	27	µg/L	0.78J	µg/L	1.3	µg/L	0.93J	µg/L
Zinc	39	µg/L	20U	µg/L	20U	µg/L	20U	µg/L
Total Dissolved Solids								
Total Dissolved Solids	-	-	82	mg/L	71	mg/L	70	mg/L
Total Suspended Solids								
Total Suspended Solids	-	-	9	mg/L	11	mg/L	11	mg/L

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Analyte	Ecological Screening Standard for Surface Water Samples ¹		Leaksville Boat Access Dock		DRSS Boat Ramp		Mid-Channel River Duke Outfall B (48" RCP)	
Sample Information								
Sample ID	-		EDEN-LBA-R-SW-20140605		EDEN-DUKE-L-SW-20140605		EDEN-48OUTFL-C-SW-20140605	
Date	-		06/05/2014		06/05/2014		06/05/2014	
Time	-		1330		1246		1215	
Status	-		Validation Complete		Validation Complete		Validation Complete	
Type	-		Surface Water		Surface Water		Surface Water	
Total Metals								
Aluminum	2,000	µg/L	150	µg/L	130	µg/L	170	µg/L
Antimony	5.6	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Arsenic	10	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Barium	220	µg/L	21	µg/L	19	µg/L	19	µg/L
Beryllium	0.66	µg/L	0.4U	µg/L	0.4U	µg/L	0.4U	µg/L
Boron	0.36	mg/L	0.26J-	mg/L	0.12J-	mg/L	0.12J-	mg/L
Cadmium	2	µg/L	0.1U	µg/L	0.1U	µg/L	0.1U	µg/L
Calcium	-	-	8900	µg/L	7700	µg/L	7200	µg/L
Chromium	29	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Cobalt	24	µg/L	0.19J	µg/L	0.17J	µg/L	0.27J	µg/L
Copper	3	µg/L	1U	µg/L	0.64J	µg/L	0.65J	µg/L
Iron	2,300	µg/L	450	µg/L	430	µg/L	530	µg/L
Lead	0.6	µg/L	0.22J	µg/L	0.17J	µg/L	0.29J	µg/L
Magnesium	-	-	3,100J-	µg/L	3,000J-	µg/L	2,800J-	µg/L
Manganese	200	µg/L	26	µg/L	14J	µg/L	32	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L	0.0002U	mg/L	0.0002U	mg/L
Molybdenum	-	-	1U	µg/L	0.49J	µg/L	1U	µg/L
Nickel	17	µg/L	1U	µg/L	1U	µg/L	0.56J	µg/L
Potassium	53,000	µg/L	1500	µg/L	1800	µg/L	1700	µg/L
Selenium	5	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Silver	0.06	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Sodium	680,000	µg/L	3,800J-	µg/L	6,000J-	µg/L	5,400J-	µg/L
Thallium	0.24	µg/L	0.2U	µg/L	0.2U	µg/L	0.2U	µg/L
Vanadium	27	µg/L	1.2	µg/L	1.3	µg/L	1.5	µg/L
Zinc	39	µg/L	20U	µg/L	20U	µg/L	20U	µg/L
Anions								
Bromide	-	-	150	µg/L	66	µg/L	62	µg/L
Chloride	230	mg/L	13	mg/L	9.4	mg/L	9	mg/L
Sulfate	-	-	5.1	mg/L	5.9	mg/L	5.3	mg/L
Wet Chemistry								
Alkalinity, Total (As CaCO ₃)	-	-	22	mg/L	24	mg/L	26	mg/L
Hardness, Calcium/Magnesium (As CaCO ₃)	-	-	35	mg/L	32	mg/L	30	mg/L
Organic Carbon, Dissolved	-	-	0.87J	mg/L	0.94J	mg/L	1	mg/L
pH	6.5 - 9.0	SU	7.37J	SU	7.36J	SU	7.43J	SU

Notes

¹ 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

SU standard units

U Analyte was not detected at the listed reporting limit.

**EDEN NORTH CAROLINA COAL ASH SPILL
SURFACE WATER RESULTS**

Analyte	Ecological Screening Standard for Surface Water Samples ¹		Mid-Channel River Duke Outfall B (48" RCP)		Mid-Channel River Duke Outfall C (36" RCP)		Hwy 700	
Sample Information								
Sample ID	-		EDEN-48OUTFL-C-SW-20140605-DUP		EDEN-36OUTFL-C-SW-20140605		EDEN-HW700-C-SW-20140605	
Date	-		06/05/2014		06/05/2014		06/05/2014	
Time	-		1220		1223		1122	
Status	-		Validation Complete		Validation Complete		Validation Complete	
Type	-		Surface Water		Surface Water		Surface Water	
Dissolved metals								
Aluminum	87	µg/L	18	µg/L	18	µg/L	28	µg/L
Antimony	5.6	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Arsenic	10	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Barium	220	µg/L	18	µg/L	17	µg/L	19	µg/L
Beryllium	0.66	µg/L	0.4U	µg/L	0.4U	µg/L	0.4U	µg/L
Boron	0.36	mg/L	0.13	mg/L	0.13	mg/L	0.15J	mg/L
Cadmium	0.1	µg/L	0.062J	µg/L	0.1U	µg/L	0.1U	µg/L
Calcium	-	-	7,500J+	µg/L	7,400J+	µg/L	8,100J+	µg/L
Chromium	25	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Cobalt	3	µg/L	0.36J	µg/L	0.71J	µg/L	0.42	µg/L
Copper	3	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Iron	1,000	µg/L	160	µg/L	150	µg/L	190	µg/L
Lead	0.59	µg/L	0.3U	µg/L	0.3U	µg/L	0.085J	µg/L
Magnesium	-	-	2800	µg/L	2800	µg/L	3000	µg/L
Manganese	200	µg/L	14	µg/L	14	µg/L	7.7	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L	0.0002U	mg/L	0.0002U	mg/L
Molybdenum	800	µg/L	0.53J	µg/L	0.46J	µg/L	0.48J	µg/L
Nickel	17	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Potassium	53,000	µg/L	1700	µg/L	1700	µg/L	1,900J	µg/L
Selenium	5	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Silver	0.06	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Sodium	680,000	µg/L	5600	µg/L	5300	µg/L	5800	µg/L
Thallium	0.24	µg/L	0.2U	µg/L	0.2U	µg/L	0.2U	µg/L
Vanadium	27	µg/L	0.84J	µg/L	0.93J	µg/L	0.96J	µg/L
Zinc	39	µg/L	20U	µg/L	20U	µg/L	2.9J	µg/L
Total Dissolved Solids								
Total Dissolved Solids	-	-	65	mg/L	65	mg/L	72	mg/L
Total Suspended Solids								
Total Suspended Solids	-	-	9.5	mg/L	10	mg/L	14	mg/L

EDEN NORTH CAROLINA COAL ASH SPILL SURFACE WATER RESULTS

Analyte	Ecological Screening Standard for Surface Water Samples ¹		Mid-Channel River Duke Outfall B (48" RCP)		Mid-Channel River Duke Outfall C (36" RCP)		Hwy 700	
Sample Information								
Sample ID	-		EDEN-48OUTFL-C-SW-20140605-DUP		EDEN-36OUTFL-C-SW-20140605		EDEN-HW700-C-SW-20140605	
Date	-		06/05/2014		06/05/2014		06/05/2014	
Time	-		1220		1223		1122	
Status	-		Validation Complete		Validation Complete		Validation Complete	
Type	-		Surface Water		Surface Water		Surface Water	
Total Metals								
Aluminum	2,000	µg/L	190	µg/L	200	µg/L	410	µg/L
Antimony	5.6	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Arsenic	10	µg/L	1U	µg/L	1U	µg/L	0.4J	µg/L
Barium	220	µg/L	19	µg/L	19	µg/L	23	µg/L
Beryllium	0.66	µg/L	0.4U	µg/L	0.4U	µg/L	0.4U	µg/L
Boron	0.36	mg/L	0.12J-	mg/L	0.12J-	mg/L	0.13J	mg/L
Cadmium	2	µg/L	0.1U	µg/L	0.1U	µg/L	0.1U	µg/L
Calcium	-	-	7200	µg/L	7200	µg/L	7500	µg/L
Chromium	29	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Cobalt	24	µg/L	0.26J	µg/L	0.27J	µg/L	0.41	µg/L
Copper	3	µg/L	0.7J	µg/L	0.64J	µg/L	1.3	µg/L
Iron	2,300	µg/L	560	µg/L	590	µg/L	930	µg/L
Lead	0.6	µg/L	0.29J	µg/L	0.3	µg/L	0.57	µg/L
Magnesium	-	-	2,800J-	µg/L	2,800J-	µg/L	2,900J-	µg/L
Manganese	200	µg/L	32	µg/L	31	µg/L	37	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L	0.0002U	mg/L	0.0002U	mg/L
Molybdenum	-	-	1U	µg/L	1U	µg/L	1U	µg/L
Nickel	17	µg/L	0.55J	µg/L	0.41J	µg/L	0.69J	µg/L
Potassium	53,000	µg/L	1700	µg/L	1600	µg/L	1,700J	µg/L
Selenium	5	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Silver	0.06	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Sodium	680,000	µg/L	5,300J-	µg/L	5,000J-	µg/L	5,300J-	µg/L
Thallium	0.24	µg/L	0.2U	µg/L	0.2U	µg/L	0.2U	µg/L
Vanadium	27	µg/L	1.5	µg/L	1.6	µg/L	2.1	µg/L
Zinc	39	µg/L	20U	µg/L	20U	µg/L	3.4J	µg/L
Anions								
Bromide	-	-	63	µg/L	66	µg/L	76	µg/L
Chloride	230	mg/L	9	mg/L	9	mg/L	9.4	mg/L
Sulfate	-	-	5.3	mg/L	5.1	mg/L	5.1	mg/L
Wet Chemistry								
Alkalinity, Total (As CaCO ₃)	-	-	34	mg/L	22	mg/L	26	mg/L
Hardness, Calcium/Magnesium (As CaCO ₃)	-	-	29	mg/L	29	mg/L	30	mg/L
Organic Carbon, Dissolved	-	-	1	mg/L	1	mg/L	1.1	mg/L
pH	6.5 - 9.0		7.43J	SU	7.41J	SU	7.37J	SU

Notes

¹ 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

SU standard units

U Analyte was not detected at the listed reporting limit.

**EDEN NORTH CAROLINA COAL ASH SPILL
SURFACE WATER RESULTS**

Analyte	Ecological Screening Standard for Surface Water Samples ¹		Hwy 880		Abreu-Grogan Park Boat Dock		Hwy 58	
Sample Information								
Sample ID	-		EDEN-BHB-C-SW-20140605		EDEN-DANIN-R-SW-20140605		EDEN-HW58-C-SW-20140605	
Date	-		06/05/2014		06/05/2014		06/05/2014	
Time	-		1055		1019		0835	
Status	-		Validation Complete		Validation Complete		Validation Complete	
Type	-		Surface Water		Surface Water		Surface Water	
Dissolved metals								
Aluminum	87	µg/L	75J	µg/L	22	µg/L	27	µg/L
Antimony	5.6	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Arsenic	10	µg/L	1U	µg/L	0.38J	µg/L	1U	µg/L
Barium	220	µg/L	26	µg/L	21	µg/L	18	µg/L
Beryllium	0.66	µg/L	0.4U	µg/L	0.4U	µg/L	0.4U	µg/L
Boron	0.36	mg/L	0.14	mg/L	0.19	mg/L	0.15J	mg/L
Cadmium	0.1	µg/L	0.051J	µg/L	0.1U	µg/L	0.1U	µg/L
Calcium	-	-	8,800J+	µg/L	8,600J+	µg/L	7,700J+	µg/L
Chromium	25	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Cobalt	3	µg/L	0.21J	µg/L	0.46J	µg/L	0.71J	µg/L
Copper	3	µg/L	0.89J	µg/L	1U	µg/L	1U	µg/L
Iron	1,000	µg/L	390J	µg/L	200	µg/L	170	µg/L
Lead	0.59	µg/L	0.32J	µg/L	0.071J	µg/L	0.066J	µg/L
Magnesium	-	-	3300	µg/L	3100	µg/L	2,900J	µg/L
Manganese	200	µg/L	25J	µg/L	34	µg/L	13	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L	0.0002U	mg/L	0.0002U	mg/L
Molybdenum	800	µg/L	1U	µg/L	0.54J	µg/L	1U	µg/L
Nickel	17	µg/L	0.52J	µg/L	0.42J	µg/L	0.42J	µg/L
Potassium	53,000	µg/L	2200	µg/L	1800	µg/L	1,700J	µg/L
Selenium	5	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Silver	0.06	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Sodium	680,000	µg/L	12000	µg/L	5800	µg/L	4,800J	µg/L
Thallium	0.24	µg/L	0.2U	µg/L	0.2U	µg/L	0.2U	µg/L
Vanadium	27	µg/L	1.4J	µg/L	1.1	µg/L	0.86J	µg/L
Zinc	39	µg/L	20U	µg/L	20U	µg/L	20U	µg/L
Total Dissolved Solids								
Total Dissolved Solids	-	-	92	mg/L	78	mg/L	69	mg/L
Total Suspended Solids								
Total Suspended Solids	-	-	13	mg/L	11	mg/L	9.5	mg/L

EDEN NORTH CAROLINA COAL ASH SPILL SURFACE WATER RESULTS

Analyte	Ecological Screening Standard for Surface Water Samples ¹		Hwy 880		Abreu-Grogan Park Boat Dock		Hwy 58	
Sample Information								
Sample ID	-		EDEN-BHB-C-SW-20140605		EDEN-DANIN-R-SW-20140605		EDEN-HW58-C-SW-20140605	
Date	-		06/05/2014		06/05/2014		06/05/2014	
Time	-		1055		1019		0835	
Status	-		Validation Complete		Validation Complete		Validation Complete	
Type	-		Surface Water		Surface Water		Surface Water	
Total Metals								
Aluminum	2,000	µg/L	20J	µg/L	170	µg/L	270	µg/L
Antimony	5.6	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Arsenic	10	µg/L	0.44J	µg/L	0.47J	µg/L	1U	µg/L
Barium	220	µg/L	24	µg/L	23	µg/L	20	µg/L
Beryllium	0.66	µg/L	0.4U	µg/L	0.4U	µg/L	0.4U	µg/L
Boron	0.36	mg/L	0.13J-	mg/L	0.18J-	mg/L	0.13J-	mg/L
Cadmium	2	µg/L	0.1U	µg/L	0.08J	µg/L	0.1U	µg/L
Calcium	-	-	8200	µg/L	8400	µg/L	6,700J	µg/L
Chromium	29	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Cobalt	24	µg/L	0.23J	µg/L	0.29J	µg/L	0.28J	µg/L
Copper	3	µg/L	0.55J	µg/L	0.67J	µg/L	0.53J	µg/L
Iron	2,300	µg/L	170J	µg/L	550	µg/L	660	µg/L
Lead	0.6	µg/L	0.074J	µg/L	0.31	µg/L	0.37	µg/L
Magnesium	-	-	3,100J-	µg/L	3,100J-	µg/L	2,600J-	µg/L
Manganese	200	µg/L	7.6J	µg/L	44	µg/L	30	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L	0.0002U	mg/L	0.0002U	mg/L
Molybdenum	-	-	0.45J	µg/L	0.49J	µg/L	1U	µg/L
Nickel	17	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Potassium	53,000	µg/L	2100	µg/L	1700	µg/L	1,500J	µg/L
Selenium	5	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Silver	0.06	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Sodium	680,000	µg/L	12,000J-	µg/L	5,400J	µg/L	4,000J-	µg/L
Thallium	0.24	µg/L	0.2U	µg/L	0.2U	µg/L	0.2U	µg/L
Vanadium	27	µg/L	1.1J	µg/L	1.6	µg/L	1.6	µg/L
Zinc	39	µg/L	20U	µg/L	20U	µg/L	20U	µg/L
Anions								
Bromide	-	-	210	µg/L	97	µg/L	77	µg/L
Chloride	230	mg/L	20	mg/L	11	mg/L	9	mg/L
Sulfate	-	-	5.9	mg/L	5.1	mg/L	4.5	mg/L
Wet Chemistry								
Alkalinity, Total (As CaCO ₃)	-	-	29	mg/L	27	mg/L	23	mg/L
Hardness, Calcium/Magnesium (As CaCO ₃)	-	-	33	mg/L	34	mg/L	27	mg/L
Organic Carbon, Dissolved	-	-	1.3	mg/L	1	mg/L	1	mg/L
pH	6.5 - 9.0	SU	7.47J	SU	7.39J	SU	7.37J	SU

Notes

¹ 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

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µg/L micrograms per liter

mg/L milligrams per liter

SU standard units

U Analyte was not detected at the listed reporting limit.

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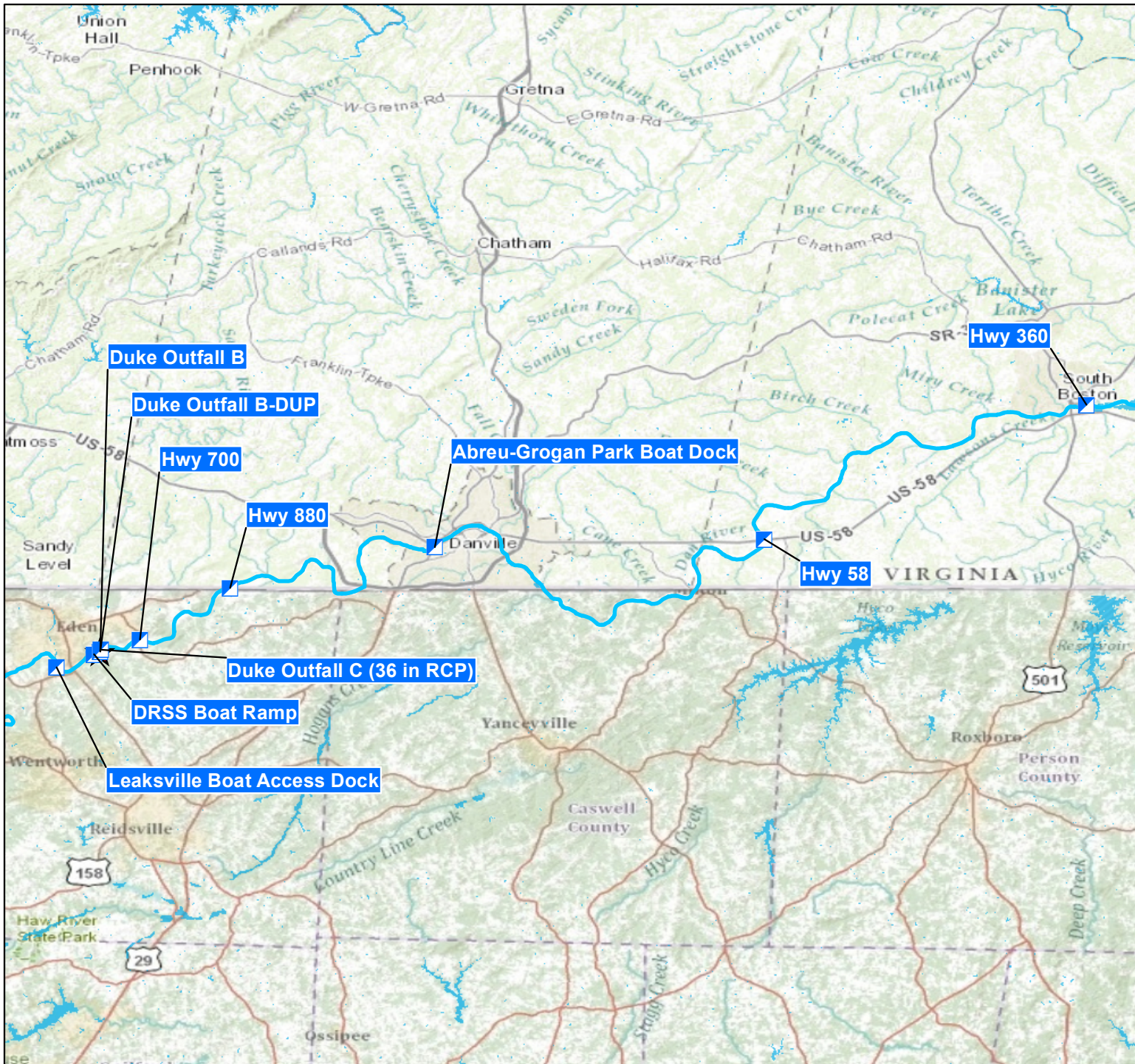
Analyte	Ecological Screening Standard for Surface Water Samples ¹		Hwy 360	
Sample Information				
Sample ID	-		EDEN-HW360-C-SW-20140605	
Date	-		06/05/2014	
Time	-		0911	
Status	-		Validation Complete	
Type	-		Surface Water	
Dissolved metals				
Aluminum	87	µg/L	46	µg/L
Antimony	5.6	µg/L	0.64J	µg/L
Arsenic	10	µg/L	0.39J	µg/L
Barium	220	µg/L	22	µg/L
Beryllium	0.66	µg/L	0.4U	µg/L
Boron	0.36	mg/L	0.15J	mg/L
Cadmium	0.1	µg/L	0.1U	µg/L
Calcium	-	-	8,100J+	µg/L
Chromium	25	µg/L	2U	µg/L
Cobalt	3	µg/L	0.44	µg/L
Copper	3	µg/L	0.77J	µg/L
Iron	1,000	µg/L	220	µg/L
Lead	0.59	µg/L	0.25J	µg/L
Magnesium	-	-	2900	µg/L
Manganese	200	µg/L	4.5	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L
Molybdenum	800	µg/L	0.71J	µg/L
Nickel	17	µg/L	0.49J	µg/L
Potassium	53,000	µg/L	2300	µg/L
Selenium	5	µg/L	2U	µg/L
Silver	0.06	µg/L	1U	µg/L
Sodium	680,000	µg/L	14000	µg/L
Thallium	0.24	µg/L	0.2U	µg/L
Vanadium	27	µg/L	1.3	µg/L
Zinc	39	µg/L	20U	µg/L
Total Dissolved Solids				
Total Dissolved Solids	-	-	100	mg/L
Total Suspended Solids				
Total Suspended Solids	-	-	25	mg/L

EDEN NORTH CAROLINA COAL ASH SPILL SURFACE WATER RESULTS



Analyte	Ecological Screening Standard for Surface Water Samples ¹		Hwy 360	
Sample Information				
Sample ID	-		EDEN-HW360-C-SW-20140605	
Date	-		06/05/2014	
Time	-		0911	
Status	-		Validation Complete	
Type	-		Surface Water	
Total Metals				
Aluminum	2,000	µg/L	460	µg/L
Antimony	5.6	µg/L	0.59J	µg/L
Arsenic	10	µg/L	0.6J	µg/L
Barium	220	µg/L	27	µg/L
Beryllium	0.66	µg/L	0.4U	µg/L
Boron	0.36	mg/L	0.13J-	mg/L
Cadmium	2	µg/L	0.1U	µg/L
Calcium	-	-	7700	µg/L
Chromium	29	µg/L	1.1J	µg/L
Cobalt	24	µg/L	0.43	µg/L
Copper	3	µg/L	1.8	µg/L
Iron	2,300	µg/L	980	µg/L
Lead	0.6	µg/L	1.3	µg/L
Magnesium	-	-	2,900J-	µg/L
Manganese	200	µg/L	48	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L
Molybdenum	-	-	0.58J	µg/L
Nickel	17	µg/L	0.78J	µg/L
Potassium	53,000	µg/L	2200	µg/L
Selenium	5	µg/L	2U	µg/L
Silver	0.06	µg/L	1U	µg/L
Sodium	680,000	µg/L	13,000J-	µg/L
Thallium	0.24	µg/L	0.2U	µg/L
Vanadium	27	µg/L	2.6	µg/L
Zinc	39	µg/L	4.9J	µg/L
Anions				
Bromide	-	-	240	µg/L
Chloride	230	mg/L	22	mg/L
Sulfate	-	-	6.1	mg/L
Wet Chemistry				
Alkalinity, Total (As CaCO ₃)	-	-	27	mg/L
Hardness, Calcium/Magnesium (As CaCO ₃)	-	-	31	mg/L
Organic Carbon, Dissolved	-	-	1.5	mg/L
pH	6.5 - 9.0	SU	7.45J	SU

Notes

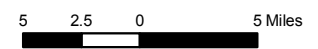
- ¹ Value obtained from the GL Tier 2 Values; National Recommended Water Quality Criteria; Suter and Tsao (1996); Reference condition for EcoRegion XI (25 percentile); NCDENR State Standards for surface water
- EPA U.S. Environmental Protection Agency
- J Value is estimated
- J+ Value is estimated with a possible high bias
- J- Value is estimated with a possible low bias
- µg/L micrograms per liter
- mg/L milligrams per liter
- SU standard units
- U Analyte was not detected at the listed reporting limit.



Legend

-  Approximate Spill Location
-  Surface Water Sample Location

Imagery Source:
ESRI, USGS Mapping Service, 2013



Eden Coal Ash Spill
Eden, North Carolina

Surface Water
Sample Locations
June 05, 2014

