

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

NOTE: The data below represents sediment-water interface samples that were collected on June 4, 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 lead. 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 DUKE 1A Left Descending		Transect DUKE 1H Right Descending		Transect FWS 2B Right Descending	
<b>Sample Information</b>								
Sample ID	-		EDEN-DUKE1A-L-BW-20140604		EDEN-DUKE1H-R-BW-20140604		EDEN-FWS2B-R-BW-20140604	
Date	-		6/4/2014		6/4/2014		6/4/2014	
Time	-		1050		1145		1240	
Status	-		Validation Complete		Validation Complete		Validation Complete	
Type	-		Sediment-Water Interface		Sediment-Water Interface		Sediment-Water Interface	
<b>Dissolved metals</b>								
Aluminum	87	µg/L	13	µg/L	14	µg/L	14	µg/L
Antimony	5.6	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Arsenic	10	µg/L	0.45J	µg/L	0.37J	µg/L	0.56J	µg/L
Barium	220	µg/L	17	µg/L	18	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	0.12	mg/L	0.18	mg/L	0.17	mg/L
Cadmium	0.1	µg/L	0.1U	µg/L	0.1U	µg/L	0.1U	µg/L
Calcium	-	-	7300	µg/L	8000	µg/L	8000	µg/L
Chromium	25	µg/L	2U	µg/L	1.1J	µg/L	1.5J	µg/L
Cobalt	3	µg/L	0.4U	µg/L	0.4U	µg/L	0.4U	µg/L
Copper	3	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Iron	1,000	µg/L	120	µg/L	120	µg/L	140	µg/L
Lead	0.59	µg/L	0.3U	µg/L	0.3U	µg/L	0.3U	µg/L
Magnesium	-	-	2900	µg/L	3000	µg/L	3000	µg/L
Manganese	200	µg/L	2.5U	µg/L	2.5U	µg/L	2.5U	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L	0.0002U	mg/L	0.0002U	mg/L
Molybdenum	800	µg/L	0.63J	µg/L	0.52J	µg/L	0.47J	µg/L
Nickel	17	µg/L	1U	µg/L	0.45J	µg/L	1U	µg/L
Potassium	53,000	µg/L	1700	µg/L	1600	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	5600	µg/L	4900	µg/L	5200	µg/L
Thallium	0.24	µg/L	0.2U	µg/L	0.2U	µg/L	0.2U	µg/L
Vanadium	27	µg/L	0.86J	µg/L	1.1	µg/L	1.2J	µg/L
Zinc	39	µg/L	2.9J	µg/L	20U	µg/L	20U	µg/L
<b>Total Dissolved Solids</b>								
Total Dissolved Solids	-	-	76J	mg/L	78J	mg/L	76J	mg/L
<b>Total Suspended Solids</b>								
Total Suspended Solids	-	-	7.5	mg/L	27	mg/L	10	mg/L

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

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>		Transect DUKE 1A Left Descending		Transect DUKE 1H Right Descending		Transect FWS 2B Right Descending	
<b>Sample Information</b>								
Sample ID	-		EDEN-DUKE1A-L-BW-20140604		EDEN-DUKE1H-R-BW-20140604		EDEN-FWS2B-R-BW-20140604	
Date	-		6/4/2014		6/4/2014		6/4/2014	
Time	-		1050		1145		1240	
Status	-		Validation Complete		Validation Complete		Validation Complete	
Type	-		Sediment-Water Interface		Sediment-Water Interface		Sediment-Water Interface	
<b>Total Metals</b>								
Aluminum	2,000	µg/L	100J	µg/L	140J	µg/L	72J	µg/L
Antimony	5.6	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Arsenic	10	µg/L	1U	µg/L	0.37J	µg/L	1U	µg/L
Barium	220	µg/L	20	µg/L	22	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	0.12	mg/L	0.17	mg/L	0.17	mg/L
Cadmium	2	µg/L	0.057J	µg/L	0.1U	µg/L	0.1U	µg/L
Calcium	-	-	7700	µg/L	7900	µg/L	8200	µg/L
Chromium	29	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Cobalt	24	µg/L	0.24J	µg/L	0.36J	µg/L	0.12J	µg/L
Copper	3	µg/L	0.67J	µg/L	0.56J	µg/L	1U	µg/L
Iron	2,300	µg/L	460	µg/L	540	µg/L	280J-	µg/L
Lead	0.6	µg/L	0.22J	µg/L	0.45	µg/L	0.095J	µg/L
Magnesium	-	-	3000	µg/L	2900	µg/L	3100	µg/L
Manganese	200	µg/L	31	µg/L	61	µg/L	9.1	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L	0.0002U	mg/L	0.0002U	mg/L
Molybdenum	-	-	0.46J	µg/L	1U	µg/L	0.45J	µg/L
Nickel	17	µg/L	1U	µg/L	0.41J	µg/L	1U	µg/L
Potassium	53,000	µg/L	1700	µg/L	1600	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	5,700J+	µg/L	4,600J+	µg/L	5200	µg/L
Thallium	0.24	µg/L	0.2U	µg/L	0.2U	µg/L	0.2U	µg/L
Vanadium	27	µg/L	1.3	µg/L	1.5	µg/L	1J	µg/L
Zinc	39	µg/L	20U	µg/L	20U	µg/L	20U	µg/L
<b>Anions</b>								
Bromide	-	-	70	µg/L	98	µg/L	98	µg/L
Chloride	230	mg/L	9.3	mg/L	10	mg/L	10	mg/L
Sulfate	-	-	5.3	mg/L	4.9	mg/L	4.9	mg/L
<b>Wet Chemistry</b>								
Alkalinity, Total (As CaCO <sub>3</sub> )	-	-	25	mg/L	24	mg/L	27	mg/L
Hardness, Calcium/Magnesium (As CaCO <sub>3</sub> )	-	-	31	mg/L	32	mg/L	33	mg/L
Organic Carbon, Dissolved	-	-	0.98J	mg/L	0.98J	mg/L	0.97J	mg/L
pH	6.5 - 9.0		7.61J	SU	7.5J	SU	7.58J	SU

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

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

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>	Transect DUKE 1A Left Descending	Transect DUKE 1H Right Descending	Transect FWS 2B Right Descending
<b>Sample Information</b>				
Sample ID	-	EDEN-DUKE1A-L-BW-20140604	EDEN-DUKE1H-R-BW-20140604	EDEN-FWS2B-R-BW-20140604
Date	-	6/4/2014	6/4/2014	6/4/2014
Time	-	1050	1145	1240
Status	-	Validation Complete	Validation Complete	Validation Complete
Type	-	Sediment-Water Interface	Sediment-Water Interface	Sediment-Water Interface

mg/L      milligrams per liter  
 SU        standard units  
 U         Analyte was not detected at the listed reporting limit.

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

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>		Transect FWS 3A Left Descending		Transect EPA 01 Mid-Chanel		Transect FWS SFI1 Left Descending	
<b>Sample Information</b>								
Sample ID	-		EDEN-FWS3A-L-BW-20140604		EDEN-EPA01-C-BW-20140604		EDEN-FWSSFI1-L-BW-20140604	
Date	-		6/4/2014		6/4/2014		6/4/2014	
Time	-		1340		1500		740	
Status	-		Validation Complete		Validation Complete		Validation Complete	
Type	-		Sediment-Water Interface		Sediment-Water Interface		Sediment-Water Interface	
<b>Dissolved metals</b>								
Aluminum	87	µg/L	14	µg/L	16	µg/L	14	µg/L
Antimony	5.6	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Arsenic	10	µg/L	1U	µg/L	0.53J	µg/L	0.59J	µg/L
Barium	220	µg/L	18	µg/L	18	µg/L	21	µg/L
Beryllium	0.66	µg/L	0.4U	µg/L	0.4U	µg/L	0.4U	µg/L
Boron	0.36	mg/L	0.16	mg/L	0.16	mg/L	0.19	mg/L
Cadmium	0.1	µg/L	0.1U	µg/L	0.1U	µg/L	0.1U	µg/L
Calcium	-	-	8000	µg/L	7600	µg/L	8400	µg/L
Chromium	25	µg/L	2U	µg/L	1J	µg/L	1.4J	µg/L
Cobalt	3	µg/L	0.4U	µg/L	0.4U	µg/L	0.4U	µg/L
Copper	3	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Iron	1,000	µg/L	97	µg/L	110	µg/L	110	µg/L
Lead	0.59	µg/L	0.3U	µg/L	0.3U	µg/L	0.3U	µg/L
Magnesium	-	-	3000	µg/L	2900	µg/L	3100	µg/L
Manganese	200	µg/L	2.5U	µg/L	2.5U	µg/L	2.5U	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L	0.0002U	mg/L	0.0002U	mg/L
Molybdenum	800	µg/L	0.5J	µg/L	0.48J	µg/L	0.72J	µg/L
Nickel	17	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Potassium	53,000	µg/L	1700	µg/L	1600	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	5700	µg/L	5100	µg/L	5200	µg/L
Thallium	0.24	µg/L	0.2U	µg/L	0.2U	µg/L	0.2U	µg/L
Vanadium	27	µg/L	0.77J	µg/L	0.95J	µg/L	1.1	µg/L
Zinc	39	µg/L	20U	µg/L	20U	µg/L	20U	µg/L
<b>Total Dissolved Solids</b>								
Total Dissolved Solids	-	-	77J	mg/L	73J	mg/L	72J	mg/L
<b>Total Suspended Solids</b>								
Total Suspended Solids	-	-	12	mg/L	13	mg/L	5.5	mg/L

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

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>		Transect FWS 3A Left Descending		Transect EPA 01 Mid-Chanel		Transect FWS SF11 Left Descending	
<b>Sample Information</b>								
Sample ID	-		EDEN-FWS3A-L-BW-20140604		EDEN-EPA01-C-BW-20140604		EDEN-FWSSF11-L-BW-20140604	
Date	-		6/4/2014		6/4/2014		6/4/2014	
Time	-		1340		1500		740	
Status	-		Validation Complete		Validation Complete		Validation Complete	
Type	-		Sediment-Water Interface		Sediment-Water Interface		Sediment-Water Interface	
<b>Total Metals</b>								
Aluminum	2,000	µg/L	91J	µg/L	110J	µg/L	67J	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	20	µg/L	22	µg/L
Beryllium	0.66	µg/L	0.4U	µg/L	0.4U	µg/L	0.4U	µg/L
Boron	0.36	mg/L	0.15	mg/L	0.16	mg/L	0.19	mg/L
Cadmium	2	µg/L	0.1U	µg/L	0.1U	µg/L	0.045J	µg/L
Calcium	-	-	7800	µg/L	7600	µg/L	8200	µg/L
Chromium	29	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Cobalt	24	µg/L	0.22J	µg/L	0.22J	µg/L	0.16J	µg/L
Copper	3	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Iron	2,300	µg/L	410	µg/L	410	µg/L	320	µg/L
Lead	0.6	µg/L	0.24J	µg/L	0.26J	µg/L	0.16J	µg/L
Magnesium	-	-	2900	µg/L	2800	µg/L	3000	µg/L
Manganese	200	µg/L	27	µg/L	27	µg/L	20	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	0.64J	µg/L
Nickel	17	µg/L	1U	µg/L	0.51J	µg/L	1U	µg/L
Potassium	53,000	µg/L	1600	µg/L	1600	µg/L	1600	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	5,400J+	µg/L	4,900J+	µg/L	4,700J+	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	1.1	µg/L	1	µg/L
Zinc	39	µg/L	20U	µg/L	20U	µg/L	20U	µg/L
<b>Anions</b>								
Bromide	-	-	85	µg/L	86	µg/L	100	µg/L
Chloride	230	mg/L	10	mg/L	10	mg/L	11	mg/L
Sulfate	-	-	5.1	mg/L	4.9	mg/L	5.4	mg/L
<b>Wet Chemistry</b>								
Alkalinity, Total (As CaCO <sub>3</sub> )	-	-	27	mg/L	25	mg/L	25	mg/L
Hardness, Calcium/Magnesium (As CaCO <sub>3</sub> )	-	-	31	mg/L	31	mg/L	33	mg/L
Organic Carbon, Dissolved	-	-	0.95J	mg/L	1	mg/L	0.96J	mg/L
pH	6.5 - 9.0		7.6J	SU	7.58J	SU	7.21J	SU

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

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

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>	Transect FWS 3A Left Descending	Transect EPA 01 Mid-Chanel	Transect FWS SFI1 Left Descending
<b>Sample Information</b>				
Sample ID	-	EDEN-FWS3A-L-BW-20140604	EDEN-EPA01-C-BW-20140604	EDEN-FWSSFI1-L-BW-20140604
Date	-	6/4/2014	6/4/2014	6/4/2014
Time	-	1340	1500	740
Status	-	Validation Complete	Validation Complete	Validation Complete
Type	-	Sediment-Water Interface	Sediment-Water Interface	Sediment-Water Interface

mg/L      milligrams per liter  
 SU        standard units  
 U         Analyte was not detected at the listed reporting limit.

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

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>		Transect FWS SFI2 Right Descending		Transect FWS SFI3 Left Descending		Transect FWS SFI4 Left Descending	
<b>Sample Information</b>								
Sample ID	-		EDEN-FWSSFI2-R-BW-20140604		EDEN-FWSSFI3-L-BW-20140604		EDEN-FWSSFI4-L-BW-20140604	
Date	-		6/4/2014		6/4/2014		6/4/2014	
Time	-		835		910		950	
Status	-		Validation Complete		Validation Complete		Validation Complete	
Type	-		Sediment-Water Interface		Sediment-Water Interface		Sediment-Water Interface	
<b>Dissolved metals</b>								
Aluminum	87	µg/L	11	µg/L	11	µg/L	11	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	20	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	0.19	mg/L	0.19	mg/L	0.19	mg/L
Cadmium	0.1	µg/L	0.1U	µg/L	0.1U	µg/L	0.1U	µg/L
Calcium	-	-	8300	µg/L	8300	µg/L	8400	µg/L
Chromium	25	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Cobalt	3	µg/L	0.4U	µg/L	0.4U	µg/L	0.4U	µg/L
Copper	3	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Iron	1,000	µg/L	140	µg/L	95	µg/L	100	µg/L
Lead	0.59	µg/L	0.3U	µg/L	0.3U	µg/L	0.3U	µg/L
Magnesium	-	-	3000	µg/L	3000	µg/L	3000	µg/L
Manganese	200	µg/L	1.8J	µg/L	2.5U	µg/L	2.5U	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L	0.0002U	mg/L	0.0002U	mg/L
Molybdenum	800	µg/L	0.74J	µg/L	0.7J	µg/L	0.78J	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	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	5,400J	µg/L	4900	µg/L	5000	µg/L
Thallium	0.24	µg/L	0.2U	µg/L	0.2U	µg/L	0.2U	µg/L
Vanadium	27	µg/L	0.94J	µg/L	0.94J	µg/L	1	µg/L
Zinc	39	µg/L	20U	µg/L	20U	µg/L	20U	µg/L
<b>Total Dissolved Solids</b>								
Total Dissolved Solids	-	-	180J	mg/L	75J	mg/L	91J	mg/L
<b>Total Suspended Solids</b>								
Total Suspended Solids	-	-	80	mg/L	13	mg/L	11	mg/L

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

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>		Transect FWS SFI2 Right Descending		Transect FWS SFI3 Left Descending		Transect FWS SFI4 Left Descending	
<b>Sample Information</b>								
Sample ID	-		EDEN-FWSSFI2-R-BW-20140604		EDEN-FWSSFI3-L-BW-20140604		EDEN-FWSSFI4-L-BW-20140604	
Date	-		6/4/2014		6/4/2014		6/4/2014	
Time	-		835		910		950	
Status	-		Validation Complete		Validation Complete		Validation Complete	
Type	-		Sediment-Water Interface		Sediment-Water Interface		Sediment-Water Interface	
<b>Total Metals</b>								
Aluminum	2,000	µg/L	140J	µg/L	100J	µg/L	110J	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	0.44J	µg/L
Barium	220	µg/L	26	µg/L	24	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	0.18	mg/L	0.19	mg/L	0.19	mg/L
Cadmium	2	µg/L	0.1U	µg/L	0.1U	µg/L	0.1U	µg/L
Calcium	-	-	8100	µg/L	8100	µg/L	8200	µg/L
Chromium	29	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Cobalt	24	µg/L	0.5	µg/L	0.31J	µg/L	0.28J	µg/L
Copper	3	µg/L	0.69J	µg/L	0.55J	µg/L	1U	µg/L
Iron	2,300	µg/L	700	µg/L	430	µg/L	430	µg/L
Lead	0.6	µg/L	0.69	µg/L	0.34	µg/L	0.27J	µg/L
Magnesium	-	-	2900	µg/L	3000	µg/L	3000	µg/L
Manganese	200	µg/L	93	µg/L	56	µg/L	65	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L	0.0002U	mg/L	0.0002U	mg/L
Molybdenum	-	-	1U	µg/L	0.54J	µg/L	0.61J	µg/L
Nickel	17	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Potassium	53,000	µg/L	1600	µg/L	1600	µg/L	1600	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	4,800J+	µg/L	4,700J+	µg/L	4,500J+	µg/L
Thallium	0.24	µg/L	0.2U	µg/L	0.2U	µg/L	0.2U	µg/L
Vanadium	27	µg/L	1.8	µg/L	1.5	µg/L	1.5	µg/L
Zinc	39	µg/L	20U	µg/L	20U	µg/L	20U	µg/L
<b>Anions</b>								
Bromide	-	-	98	µg/L	100	µg/L	110	µg/L
Chloride	230	mg/L	11	mg/L	11	mg/L	11	mg/L
Sulfate	-	-	5.3	mg/L	5.4	mg/L	5.3	mg/L
<b>Wet Chemistry</b>								
Alkalinity, Total (As CaCO <sub>3</sub> )	-	-	26	mg/L	25	mg/L	25	mg/L
Hardness, Calcium/Magnesium (As CaCO <sub>3</sub> )	-	-	32	mg/L	33	mg/L	33	mg/L
Organic Carbon, Dissolved	-	-	0.97J	mg/L	0.92J	mg/L	1.1	mg/L
pH	6.5 - 9.0		7.33J	SU	7.42J	SU	7.45J	SU

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



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

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>	Transect FWS SFI2 Right Descending	Transect FWS SFI3 Left Descending	Transect FWS SFI4 Left Descending
<b>Sample Information</b>				
Sample ID	-	EDEN-FWSSFI2-R-BW-20140604	EDEN-FWSSFI3-L-BW-20140604	EDEN-FWSSFI4-L-BW-20140604
Date	-	6/4/2014	6/4/2014	6/4/2014
Time	-	835	910	950
Status	-	Validation Complete	Validation Complete	Validation Complete
Type	-	Sediment-Water Interface	Sediment-Water Interface	Sediment-Water Interface

mg/L      milligrams per liter  
 SU        standard units  
 U         Analyte was not detected at the listed reporting limit.

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

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>		Transect EPA 03 Left Descending		Transect FWS SF15 Left Descending		Transect DUKE SBD Left Descending	
<b>Sample Information</b>								
Sample ID	-		EDEN-EPA03-L-BW-20140604		EDEN-FWSSF15-L-BW-20140604		EDEN-DUKESBD-L-BW-20140604	
Date	-		6/4/2014		6/4/2014		6/4/2014	
Time	-		1035		1135		1010	
Status	-		Validation Complete		Validation Complete		Validation Complete	
Type	-		Sediment-Water Interface		Sediment-Water Interface		Sediment-Water Interface	
<b>Dissolved metals</b>								
Aluminum	87	µg/L	13	µg/L	13	µg/L	22	µg/L
Antimony	5.6	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Arsenic	10	µg/L	0.46J	µg/L	1U	µg/L	1U	µg/L
Barium	220	µg/L	19	µg/L	19	µg/L	22	µg/L
Beryllium	0.66	µg/L	0.4U	µg/L	0.4U	µg/L	0.4U	µg/L
Boron	0.36	mg/L	0.19	mg/L	0.19	mg/L	0.097J	mg/L
Cadmium	0.1	µg/L	0.1U	µg/L	0.1U	µg/L	0.1U	µg/L
Calcium	-	-	8300	µg/L	8400	µg/L	7900	µg/L
Chromium	25	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Cobalt	3	µg/L	0.4U	µg/L	0.4U	µg/L	0.4U	µg/L
Copper	3	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Iron	1,000	µg/L	110	µg/L	84	µg/L	190	µg/L
Lead	0.59	µg/L	0.3U	µg/L	0.3U	µg/L	0.3U	µg/L
Magnesium	-	-	3100	µg/L	3100	µg/L	2900	µg/L
Manganese	200	µg/L	2.5U	µg/L	2.5U	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	0.9J	µg/L	0.87J	µg/L	1U	µg/L
Nickel	17	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Potassium	53,000	µg/L	1600	µg/L	1700	µg/L	1900	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	5000	µg/L	5000	µg/L	9700	µg/L
Thallium	0.24	µg/L	0.2U	µg/L	0.2U	µg/L	0.2U	µg/L
Vanadium	27	µg/L	0.91J	µg/L	0.93J	µg/L	0.87J	µg/L
Zinc	39	µg/L	20U	µg/L	20U	µg/L	20U	µg/L
<b>Total Dissolved Solids</b>								
Total Dissolved Solids	-	-	77J	mg/L	82J	mg/L	94J	mg/L
<b>Total Suspended Solids</b>								
Total Suspended Solids	-	-	7.5	mg/L	6	mg/L	14	mg/L

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

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>		Transect EPA 03 Left Descending		Transect FWS SF15 Left Descending		Transect DUKE SBD Left Descending	
<b>Sample Information</b>								
Sample ID	-		EDEN-EPA03-L-BW-20140604		EDEN-FWSSF15-L-BW-20140604		EDEN-DUKESBD-L-BW-20140604	
Date	-		6/4/2014		6/4/2014		6/4/2014	
Time	-		1035		1135		1010	
Status	-		Validation Complete		Validation Complete		Validation Complete	
Type	-		Sediment-Water Interface		Sediment-Water Interface		Sediment-Water Interface	
<b>Total Metals</b>								
Aluminum	2,000	µg/L	75J	µg/L	650J	µg/L	98J	µg/L
Antimony	5.6	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Arsenic	10	µg/L	1U	µg/L	0.43J	µg/L	1U	µg/L
Barium	220	µg/L	22	µg/L	26	µg/L	25	µg/L
Beryllium	0.66	µg/L	0.4U	µg/L	0.4U	µg/L	0.4U	µg/L
Boron	0.36	mg/L	0.19	mg/L	0.18	mg/L	0.096J	mg/L
Cadmium	2	µg/L	0.081J	µg/L	0.1U	µg/L	0.1U	µg/L
Calcium	-	-	8300	µg/L	8100	µg/L	7800	µg/L
Chromium	29	µg/L	2U	µg/L	1.4J	µg/L	2U	µg/L
Cobalt	24	µg/L	0.22J	µg/L	0.63	µg/L	0.26J	µg/L
Copper	3	µg/L	1U	µg/L	1.2	µg/L	1U	µg/L
Iron	2,300	µg/L	350	µg/L	1,300J-	µg/L	510	µg/L
Lead	0.6	µg/L	0.21J	µg/L	0.82	µg/L	0.26J	µg/L
Magnesium	-	-	3000	µg/L	3100	µg/L	2900	µg/L
Manganese	200	µg/L	42	µg/L	71	µg/L	78	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L	0.0002U	mg/L	0.0002U	mg/L
Molybdenum	-	-	0.7J	µg/L	0.78J	µg/L	1U	µg/L
Nickel	17	µg/L	1U	µg/L	0.78J	µg/L	0.46J	µg/L
Potassium	53,000	µg/L	1600	µg/L	1700	µg/L	1900	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	4,600J+	µg/L	4800	µg/L	9,200J+	µg/L
Thallium	0.24	µg/L	0.2U	µg/L	0.2U	µg/L	0.2U	µg/L
Vanadium	27	µg/L	1.3	µg/L	3.1	µg/L	1.3	µg/L
Zinc	39	µg/L	20U	µg/L	2.8J	µg/L	3.1J	µg/L
<b>Anions</b>								
Bromide	-	-	100	µg/L	98	µg/L	140	µg/L
Chloride	230	mg/L	11	mg/L	11	mg/L	14	mg/L
Sulfate	-	-	5.4	mg/L	5.4	mg/L	5.5	mg/L
<b>Wet Chemistry</b>								
Alkalinity, Total (As CaCO <sub>3</sub> )	-	-	25	mg/L	24	mg/L	27	mg/L
Hardness, Calcium/Magnesium (As CaCO <sub>3</sub> )	-	-	33	mg/L	33	mg/L	31	mg/L
Organic Carbon, Dissolved	-	-	1	mg/L	1.1	mg/L	1.2	mg/L
pH	6.5 - 9.0		7.56J	SU	7.58J	SU	7.62J	SU

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

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

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>	Transect EPA 03 Left Descending	Transect FWS SFI5 Left Descending	Transect DUKE SBD Left Descending
<b>Sample Information</b>				
Sample ID	-	EDEN-EPA03-L-BW-20140604	EDEN-FWSSF15-L-BW-20140604	EDEN-DUKESBD-L-BW-20140604
Date	-	6/4/2014	6/4/2014	6/4/2014
Time	-	1035	1135	1010
Status	-	Validation Complete	Validation Complete	Validation Complete
Type	-	Sediment-Water Interface	Sediment-Water Interface	Sediment-Water Interface

mg/L      milligrams per liter  
 SU      standard units  
 U      Analyte was not detected at the listed reporting limit.

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

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>		Transect EPA 06 Mid-Channel		Transect EPA 07 Left Descending		Transect EPA 08 Right Descending	
<b>Sample Information</b>								
Sample ID	-		EDEN-EPA06-C-BW-20140604		EDEN-EPA07-L-BW-20140604		EDEN-EPA08-R-BW-20140604	
Date	-		6/4/2014		6/4/2014		6/4/2014	
Time	-		1140		1331		1500	
Status	-		Validation Complete		Validation Complete		Validation Complete	
Type	-		Sediment-Water Interface		Sediment-Water Interface		Sediment-Water Interface	
<b>Dissolved metals</b>								
Aluminum	87	µg/L	13	µg/L	14	µg/L	17	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	0.39J	µg/L
Barium	220	µg/L	21	µg/L	23	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	0.14	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	-	-	8100	µg/L	8000	µg/L	8200	µg/L
Chromium	25	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Cobalt	3	µg/L	0.4U	µg/L	0.4U	µg/L	0.4U	µg/L
Copper	3	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Iron	1,000	µg/L	96	µg/L	130	µg/L	110	µg/L
Lead	0.59	µg/L	0.3U	µg/L	0.3U	µg/L	0.3U	µg/L
Magnesium	-	-	3000	µg/L	3000	µg/L	3100	µg/L
Manganese	200	µg/L	2.5U	µg/L	2.5U	µg/L	2.5U	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L	0.0002U	mg/L	0.0002U	mg/L
Molybdenum	800	µg/L	0.5J	µg/L	0.51J	µg/L	0.49J	µg/L
Nickel	17	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Potassium	53,000	µg/L	2000	µg/L	2100	µg/L	2100	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	11000	µg/L	11000	µg/L	11000	µg/L
Thallium	0.24	µg/L	0.2U	µg/L	0.2U	µg/L	0.2U	µg/L
Vanadium	27	µg/L	0.87J	µg/L	0.94J	µg/L	1	µg/L
Zinc	39	µg/L	20U	µg/L	20U	µg/L	20U	µg/L
<b>Total Dissolved Solids</b>								
Total Dissolved Solids	-	-	94J	mg/L	98J	mg/L	87J	mg/L
<b>Total Suspended Solids</b>								
Total Suspended Solids	-	-	9	mg/L	14	mg/L	14	mg/L

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

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>		Transect EPA 06 Mid-Channel		Transect EPA 07 Left Descending		Transect EPA 08 Right Descending	
<b>Sample Information</b>								
Sample ID	-		EDEN-EPA06-C-BW-20140604		EDEN-EPA07-L-BW-20140604		EDEN-EPA08-R-BW-20140604	
Date	-		6/4/2014		6/4/2014		6/4/2014	
Time	-		1140		1331		1500	
Status	-		Validation Complete		Validation Complete		Validation Complete	
Type	-		Sediment-Water Interface		Sediment-Water Interface		Sediment-Water Interface	
<b>Total Metals</b>								
Aluminum	2,000	µg/L	190J	µg/L	100J	µg/L	110J	µg/L
Antimony	5.6	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Arsenic	10	µg/L	0.46J	µg/L	0.39J	µg/L	1U	µg/L
Barium	220	µg/L	23	µg/L	26	µg/L	26	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	0.12	mg/L	0.13	mg/L
Cadmium	2	µg/L	0.1U	µg/L	0.1U	µg/L	0.1U	µg/L
Calcium	-	-	8000	µg/L	7700	µg/L	8300	µg/L
Chromium	29	µg/L	2U	µg/L	2U	µg/L	2U	µg/L
Cobalt	24	µg/L	0.22J	µg/L	0.25J	µg/L	0.23J	µg/L
Copper	3	µg/L	1U	µg/L	1U	µg/L	1U	µg/L
Iron	2,300	µg/L	480J-	µg/L	490	µg/L	410	µg/L
Lead	0.6	µg/L	0.25J	µg/L	0.33	µg/L	0.31	µg/L
Magnesium	-	-	3000	µg/L	2900	µg/L	3100	µg/L
Manganese	200	µg/L	17	µg/L	47	µg/L	39	µg/L
Mercury	0.00012	mg/L	0.0002U	mg/L	0.0002U	mg/L	0.0002U	mg/L
Molybdenum	-	-	0.71J	µg/L	1U	µg/L	1U	µg/L
Nickel	17	µg/L	0.46J	µg/L	1U	µg/L	1U	µg/L
Potassium	53,000	µg/L	2000	µg/L	1900	µg/L	2000	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	11000	µg/L	10,000J+	µg/L	11,000J+	µg/L
Thallium	0.24	µg/L	0.2U	µg/L	0.2U	µg/L	0.2U	µg/L
Vanadium	27	µg/L	1.6	µg/L	1.4	µg/L	1.4	µg/L
Zinc	39	µg/L	20U	µg/L	20U	µg/L	20U	µg/L
<b>Anions</b>								
Bromide	-	-	210	µg/L	190	µg/L	190	µg/L
Chloride	230	mg/L	18	mg/L	18	mg/L	18	mg/L
Sulfate	-	-	5.6	mg/L	5.6	mg/L	5.6	mg/L
<b>Wet Chemistry</b>								
Alkalinity, Total (As CaCO <sub>3</sub> )	-	-	26	mg/L	29	mg/L	38	mg/L
Hardness, Calcium/Magnesium (As CaCO <sub>3</sub> )	-	-	33	mg/L	31	mg/L	33	mg/L
Organic Carbon, Dissolved	-	-	1.1	mg/L	1.1	mg/L	1.1	mg/L
pH	6.5 - 9.0	SU	7.52J	SU	7.42J	SU	7.52J	SU

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

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

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>	Transect EPA 06 Mid-Channel	Transect EPA 07 Left Descending	Transect EPA 08 Right Descending
<b>Sample Information</b>				
Sample ID	-	EDEN-EPA06-C-BW-20140604	EDEN-EPA07-L-BW-20140604	EDEN-EPA08-R-BW-20140604
Date	-	6/4/2014	6/4/2014	6/4/2014
Time	-	1140	1331	1500
Status	-	Validation Complete	Validation Complete	Validation Complete
Type	-	Sediment-Water Interface	Sediment-Water Interface	Sediment-Water Interface

mg/L      milligrams per liter  
 SU      standard units  
 U      Analyte was not detected at the listed reporting limit.

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

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>		Transect EPA 08 Right Descending	
<b>Sample Information</b>				
Sample ID	-		EDEN-EPA08-R-BW-20140604-DUP	
Date	-		6/4/2014	
Time	-		1505	
Status	-		Validation Complete	
Type	-		Sediment-Water Interface	
<b>Dissolved metals</b>				
Aluminum	87	μg/L	18	μg/L
Antimony	5.6	μg/L	1U	μg/L
Arsenic	10	μg/L	1U	μg/L
Barium	220	μg/L	23	μg/L
Beryllium	0.66	μg/L	0.4U	μg/L
Boron	0.36	mg/L	0.13	mg/L
Cadmium	0.1	μg/L	0.1U	μg/L
Calcium	-	-	8200	μg/L
Chromium	25	μg/L	2U	μg/L
Cobalt	3	μg/L	0.4U	μg/L
Copper	3	μg/L	1U	μg/L
Iron	1,000	μg/L	120	μg/L
Lead	0.59	μg/L	0.061J	μg/L
Magnesium	-	-	3100	μg/L
Manganese	200	μg/L	1.7J	μg/L
Mercury	0.000012	mg/L	0.0002U	mg/L
Molybdenum	800	μg/L	0.5J	μg/L
Nickel	17	μg/L	1U	μg/L
Potassium	53,000	μg/L	2100	μg/L
Selenium	5	μg/L	2U	μg/L
Silver	0.06	μg/L	1U	μg/L
Sodium	680,000	μg/L	11000	μg/L
Thallium	0.24	μg/L	0.2U	μg/L
Vanadium	27	μg/L	0.93J	μg/L
Zinc	39	μg/L	20U	μg/L
<b>Total Dissolved Solids</b>				
Total Dissolved Solids	-	-	130J	mg/L
<b>Total Suspended Solids</b>				
Total Suspended Solids	-	-	17	mg/L



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

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>		Transect EPA 08 Right Descending	
<b>Sample Information</b>				
Sample ID	-		EDEN-EPA08-R-BW-20140604-DUP	
Date	-		6/4/2014	
Time	-		1505	
Status	-		Validation Complete	
Type	-		Sediment-Water Interface	
<b>Total Metals</b>				
Aluminum	2,000	µg/L	180J	µg/L
Antimony	5.6	µg/L	1U	µg/L
Arsenic	10	µg/L	1U	µg/L
Barium	220	µg/L	27	µg/L
Beryllium	0.66	µg/L	0.4U	µg/L
Boron	0.36	mg/L	0.13	mg/L
Cadmium	2	µg/L	0.1U	µg/L
Calcium	-	-	8200	µg/L
Chromium	29	µg/L	2U	µg/L
Cobalt	24	µg/L	0.27J	µg/L
Copper	3	µg/L	0.51J	µg/L
Iron	2,300	µg/L	540J-	µg/L
Lead	0.6	µg/L	0.37	µg/L
Magnesium	-	-	3100	µg/L
Manganese	200	µg/L	50	µg/L
Mercury	0.000012	mg/L	0.0002U	mg/L
Molybdenum	-	-	1U	µg/L
Nickel	17	µg/L	0.4J	µg/L
Potassium	53,000	µg/L	2100	µg/L
Selenium	5	µg/L	2U	µg/L
Silver	0.06	µg/L	1U	µg/L
Sodium	680,000	µg/L	11000	µg/L
Thallium	0.24	µg/L	0.2U	µg/L
Vanadium	27	µg/L	1.7	µg/L
Zinc	39	µg/L	20U	µg/L
<b>Anions</b>				
Bromide	-	-	200	µg/L
Chloride	230	mg/L	18	mg/L
Sulfate	-	-	5.7	mg/L
<b>Wet Chemistry</b>				
Alkalinity, Total (As CaCO <sub>3</sub> )	-	-	29	mg/L
Hardness, Calcium/Magnesium (As CaCO <sub>3</sub> )	-	-	33	mg/L
Organic Carbon, Dissolved	-	-	1.2	mg/L
pH	6.5 - 9.0	SU	7.48J	SU

Notes

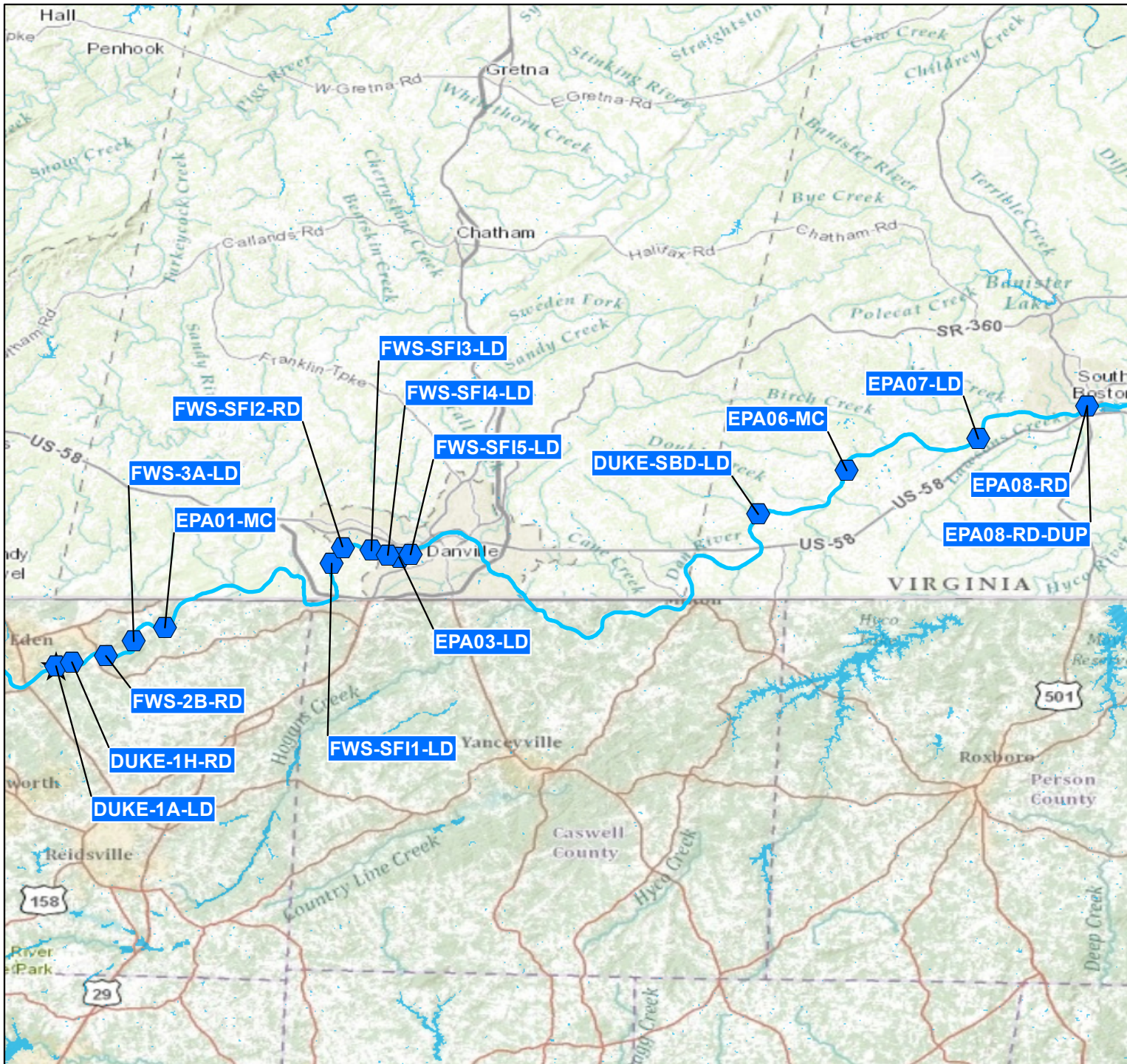
<sup>1</sup> Value obtained from the GL Tier 2 Values; National Recommended Water Quality Criteria; Suter and Tsao (1996); Reference condition for EcoRegion XI (25 percentile); NCDENR State Standards for surface water

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



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

Analyte	Ecological Screening Standard for Surface Water Samples <sup>1</sup>	Transect EPA 08 Right Descending
<b>Sample Information</b>		
Sample ID	-	EDEN-EPA08-R-BW-20140604-DUP
Date	-	6/4/2014
Time	-	1505
Status	-	Validation Complete
Type	-	Sediment-Water Interface

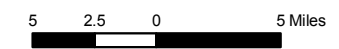
mg/L      milligrams per liter  
 SU        standard units  
 U         Analyte was not detected at the listed reporting limit.



Legend

-  Approximate Spill Location
-  Sediment-Water Interface Sample Location

Imagery Source:  
ESRI, USGS Mapping Service, 2013



Eden Coal Ash Spill  
Eden, North Carolina

Sediment-Water Interface  
Sample Locations  
June 04, 2014

