NOTE: The data below represents sediment samples that were collected on March 11, 2014 by EPA Sample Team 1. Sediment sample measurement is in milligrams per kilogram (mg/Kg). The data is being compared to ecological risk screening levels (ERSLs) to protect aquatic life in the sediments 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 are all below the ERSLs with the exception of aluminum, barium, iron, manganese and vanadium. There were no exceedances of human health screening criteria for sediment. 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 Standards for Sediment[2]		Mud Flats at Kerr Reservoir		Buffalo Creek Point at Kerr Reservoir	
Sample Information						
Sample ID	-		EDEN-MF-C-SD-20140311		EDEN-BCP-C-SD-20140311	
Date	-		03/11/2014		03/11/2014	
Time	-		1115		1115	
Status	-		Validation Complete		Validation Complete	
Type	-		Sediment		Sediment	
Total Metals						
Aluminum	3,200 (bkg)	mg/kg	21,500	mg/kg	3,370	mg/kg
Antimony	2[a]	mg/kg	0.884J-	mg/kg	6.3UJ	mg/kg
Arsenic	9.8	mg/kg	1.2J	mg/kg	6.3U	mg/kg
Barium	60[b]	mg/kg	219	mg/kg	37.6	mg/kg
Beryllium	-	-	1.01J	mg/kg	0.12J	mg/kg
Boron	-	-	55U	mg/kg	32U	mg/kg
Cadmium	0.99	mg/kg	5.53U	mg/kg	3.15U	mg/kg
Calcium	-	-	3,620	mg/kg	794	mg/kg
Chromium	43.4	mg/kg	41.5	mg/kg	5.79	mg/kg
Cobalt	50	mg/kg	18.6	mg/kg	2.55J	mg/kg
Copper	31.6	mg/kg	25.8	mg/kg	4.91	mg/kg
Iron	6,800 (bkg)	mg/kg	37,600	mg/kg	5,350	mg/kg
Lead	35.8	mg/kg	14.5	mg/kg	1.52J	mg/kg
Magnesium	-	-	4,070	mg/kg	1,290	mg/kg
Manganese	460[c]	mg/kg	680	mg/kg	74.8	mg/kg
Mercury	0.18	mg/kg	0.0495J	mg/kg	0.132U	mg/kg
Molybdenum	-	-	0.95J	mg/kg	0.113J	mg/kg
Nickel	22.7	mg/kg	15.9	mg/kg	2.9J	mg/kg
Potassium	-	-	4,060J+	mg/kg	1,120J+	mg/kg
Selenium	2[d]	mg/kg	11.1U	mg/kg	6.3U	mg/kg
Silver	0.733	mg/kg	5.53U	mg/kg	3.15U	mg/kg
Sodium	-	-	110J	mg/kg	94.1J	mg/kg
Thallium	-	mg/kg	1.31J	mg/kg	6.3U	mg/kg
Vanadium	57[c]	mg/kg	65.4	mg/kg	17.7	mg/kg
Zinc	121	mg/kg	95.1	mg/kg	11.9	mg/kg
Physical Properties						
% Moisture	-	-	57.8	%	25.3	%

Notes

[2] MacDonald, D.D.; Ingersoll, C.G.; Smorong, D.E.; Lindskoog, R.A.; Sloane, G; and T. Biernacki. 2003. Development and Evaluation of Numerical Sediment Quality Assessment Guidelines for Florida Inland Waters. Florida Department of Environmental Protection, Tallahassee, FL. Development and Evaluation of Numerical Sediment Quality Assessment Guidelines for Florida Inland Waters.

[a] The screening value for antimony is from Long, Edward R., and Lee G. Morgan. 1991. The Potential for Biological Effects of Sediment-Sorbed Contaminants Tested in the National Status and Trends Program. NOAA Technical Memorandum NOS OMA 52.

[b] The screening value for barium was the probable effect level (PEL) instead of the threshold effect level (TEL) because the TEL was below background

[c] Sediment screening values for manganese and vanadium come from the NOAA SQuIRT. http://response.restoration.noaa.gov/sites/default/files/SQuiRTs.pdf

[d] The screening value for selenium is from Region 3 after Lemley, A.D. 2002. Selenium assessment in aquatic ecosystems. US Forest Service, Blacksburg, VA.

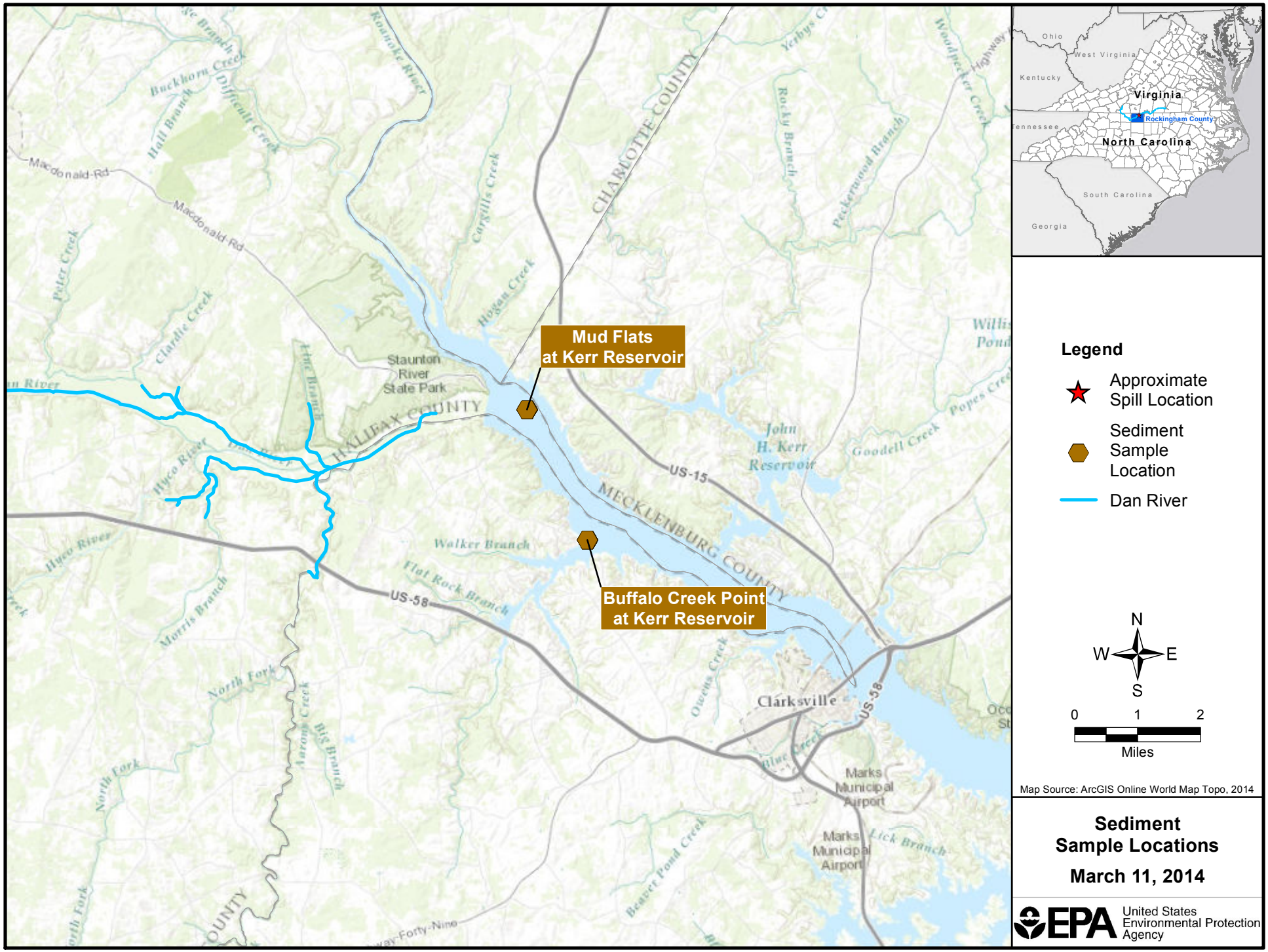
[e] Cadmium from diet

[f] Chromium (VI)

[g] Methyl Mercury

[h] Thallium Chloride

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
U	Analyte was not detected at the listed reporting limit.
UJ	Analyte was not detected at the listed reporting limit, which is an estimated quantitation.



Sediment Sample Locations

March 11, 2014

United States Environmental Protection Agency

File: C:\GIS_Workspace\Eden_Coal_Ash\Projects\mxd\Reporting\EPA_START\031114\SedimentSampleLocations_031114.mxd