

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

Analyte	Ecological Screening Standard for Surface Water Samples ¹		Background sample, approximately 50 yards upstream of old Hwy 87 Bridge		Van Buren Rd Bridge, upstream control sample	
Sample Information						
Sample ID	-		LLB01-0214SW		VBB02-0214SW	
Date	-		02/16/2014		02/16/2014	
Time	-		1130		1228	
Status	-		Validation Complete		Validation Complete	
Media	-		Surface Water		Surface Water	
Dissolved metals						
Aluminum	87	µg/L	250	µg/L	260	µg/L
Antimony	5.6	µg/L	1U	µg/L	1U	µg/L
Arsenic	10	µg/L	1U	µg/L	1U	µg/L
Barium	220	µg/L	20	µg/L	20	µg/L
Beryllium	0.66	µg/L	0.5U	µg/L	0.5U	µg/L
Boron	360	µg/L	150	µg/L	140	µg/L
Cadmium	0.1	µg/L	0.08U	µg/L	0.08U	µg/L
Calcium	-	-	6,000	µg/L	6,300	µg/L
Chromium	25	µg/L	1.1U,J	µg/L	1.1U,J	µg/L
Cobalt	3	µg/L	5U	µg/L	5U	µg/L
Copper	3	µg/L	1U	µg/L	1	µg/L
Iron	1,000	µg/L	320	µg/L	340	µg/L
Lead	0.59	µg/L	0.4U	µg/L	0.4U	µg/L
Magnesium	-	-	2,200	µg/L	2,300	µg/L
Manganese	200	µg/L	14	µg/L	15	µg/L
Mercury	12	ng/L	1.3	ng/L	1	ng/L
Molybdenum	800	µg/L	10U	µg/L	10U	µg/L
Nickel	17	µg/L	10U	µg/L	10U	µg/L
Potassium	53,000	µg/L	1,600	µg/L	1,700	µg/L
Selenium	5	µg/L	2U	µg/L	2U	µg/L
Silver	0.06	µg/L	0.012U,J	µg/L	0.012U,J	µg/L
Sodium	680,000	µg/L	6,400	µg/L	6,800	µg/L
Strontium	1,500	µg/L	42	µg/L	43	µg/L
Thallium	0.24	µg/L	0.2U	µg/L	0.2U	µg/L
Tin	73	µg/L	15U	µg/L	15U	µg/L
Titanium	-	-	11	µg/L	11	µg/L
Vanadium	27	µg/L	5U	µg/L	5U	µg/L
Yttrium	-	-	3U	µg/L	3U	µg/L
Zinc	39	µg/L	10U	µg/L	10U	µg/L

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Time	-		1130		1228	
Status	-		Validation Complete		Validation Complete	
Media	-		Surface Water		Surface Water	
Total Metals						
Aluminum	2,000	µg/L	3,300	µg/L	3,000	µg/L
Antimony	5.6	µg/L	1U	µg/L	1U	µg/L
Arsenic	10	µg/L	1U	µg/L	1U	µg/L
Barium	220	µg/L	37	µg/L	35	µg/L
Beryllium	0.66	µg/L	0.5U	µg/L	0.5U	µg/L
Boron	360	µg/L	140	µg/L	130	µg/L
Cadmium	2	µg/L	0.5U	µg/L	0.5U	µg/L
Calcium	-	-	6,200	µg/L	6,100	µg/L
Chromium	29	µg/L	3.8J,Q-2	µg/L	3.3J,Q-2	µg/L
Cobalt	24	µg/L	5U	µg/L	5U	µg/L
Copper	3	µg/L	3.2	µg/L	3.1	µg/L
Iron	2,300	µg/L	3,100	µg/L	2,800	µg/L
Lead	0.6	µg/L	1.9	µg/L	1.7	µg/L
Magnesium	-	-	2,500	µg/L	2,500	µg/L
Manganese	200	µg/L	65	µg/L	57	µg/L
Mercury	12	ng/L	4.6J,QL-1	ng/L	4.3J,QL-1	ng/L
Molybdenum	-	-	10U	µg/L	10U	µg/L
Nickel	17	µg/L	10U	µg/L	10U	µg/L
Potassium	53,000	µg/L	1,900	µg/L	1,800	µg/L
Selenium	5	µg/L	2U	µg/L	2U	µg/L
Silver	0.06	µg/L	0.012U,J	µg/L	0.012U,J	µg/L
Sodium	680,000	µg/L	6,200	µg/L	6,400	µg/L
Strontium	1,500	µg/L	44	µg/L	43	µg/L
Thallium	0.24	µg/L	0.2U	µg/L	0.2U	µg/L
Tin	73	µg/L	15U	µg/L	15U	µg/L
Titanium	-	-	170	µg/L	160	µg/L
Vanadium	27	µg/L	6.4	µg/L	5.7	µg/L
Yttrium	-	-	3U	µg/L	3U	µg/L
Zinc	39	µg/L	10U	µg/L	10U	µg/L
Classical/Nutrient Analyses						
Total Dissolved Solids	-	-	81	mg/L	82	mg/L
Total Suspended Solids	-	-	49	mg/L	41	mg/L

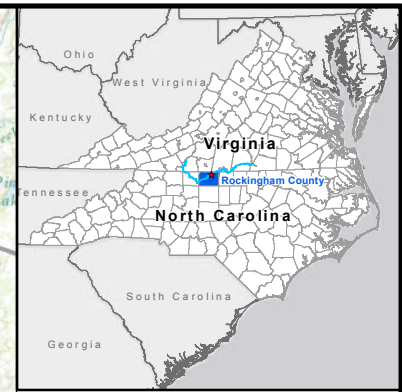
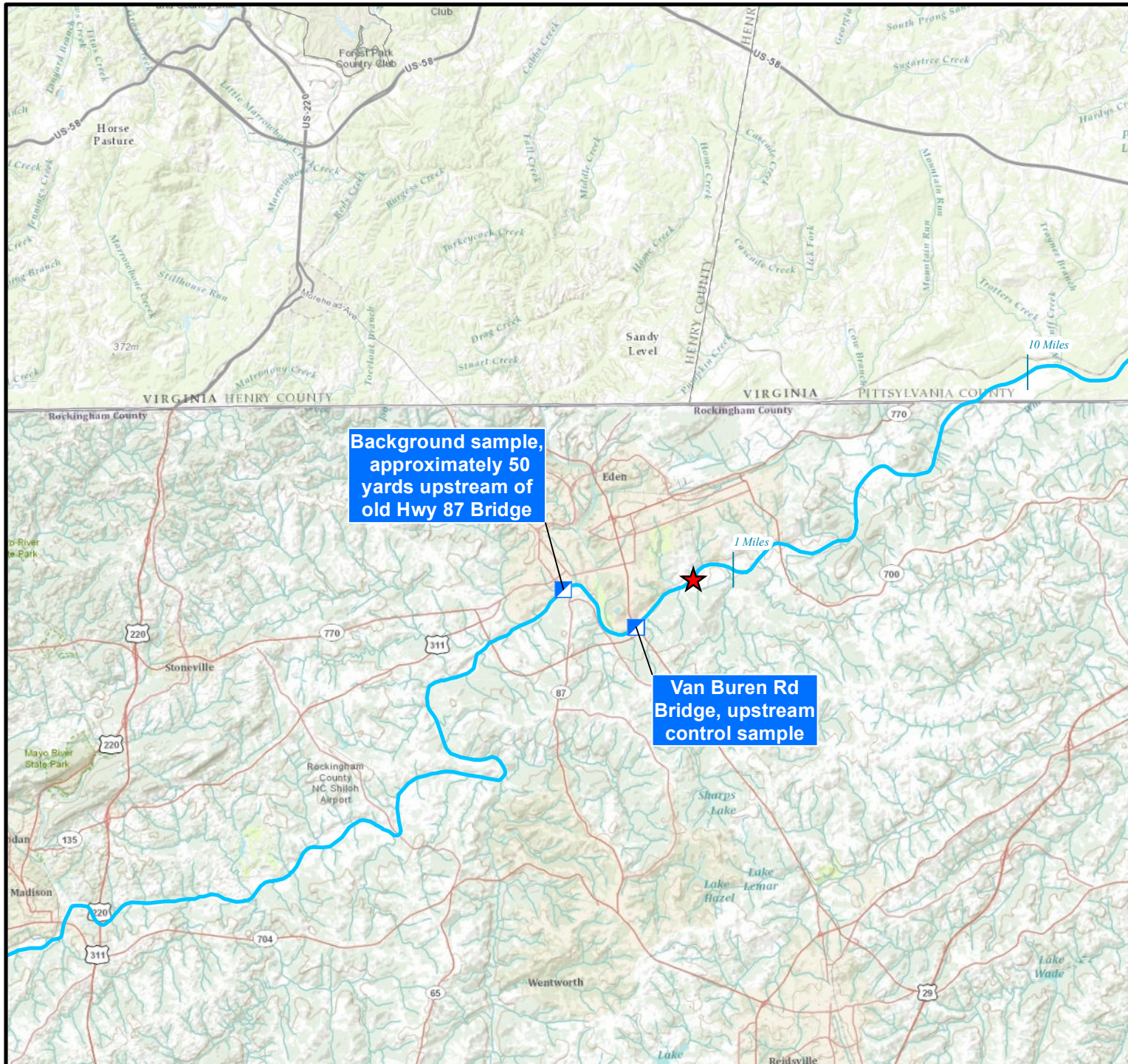
Notes

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
µg/L micrograms per liter
mg/L milligrams per liter

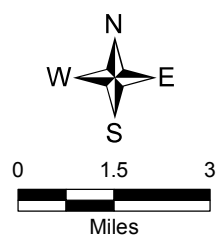
DATA QUALIFIER DEFINITIONS

B-2	Reporting level elevated due to trace amounts of analyte present in the method blank
B-3	Level in blank does not impact data quality
B-4	Level in blank impacts MRLs
B-5	Qualitative evidence of contamination in the blank at a concentration less than the MDL
C-2	Improper sample container used
H-1	Recommended holding time exceeded
J	The identification of the analyte is acceptable; the reported value is an estimate
MRL-1	MRL verification for Potable Water matrix (Drinking Water)
MRL-2	MRL verification for Non-Potable Water matrix
MRL-3	MRL verification for Soil matrix
MRL-6	MRL verification for Waste matrix
N	There is presumptive evidence that the analyte is present; the analyte is reported as a tentative identification
NA-5	Not Analyzed. Cannot exceed TCLP regulatory levels based on Total Scan analyses
NA-9	Not Analyzed. No sample container received.
NJ	Presumptive evidence that the analyte is present; reported as a tentative identification with an estimated value
P-6	Incorrect reagent or technique used to preserve sample
Q-2	Result greater than MDL but less than MRL
QC-1	Analyte concentration low in continuing calibration verification standard
QC-2	Analyte concentration high in continuing calibration verification standard
QC-5	Calibration check standard less than method control limits
QC-6	Calibration check standard greater than method control limits
QI-1	Internal standard was outside of method control limits
QL-1	Laboratory Control Spike Recovery less than method control limits
QL-2	Laboratory Control Spike Recovery greater than method control limits
QL-3	Laboratory Control Spike Precision outside of method control limits
QM-1	Matrix Spike Recovery less than method control limits
QM-2	Matrix Spike Recovery greater than method control limits
QM-3	Matrix Spike Precision outside method control limits
QR-1	MRL verification recovery less than lower control limits
QR-2	MRL verification recovery greater than upper control limits
TIC	Tentatively Identified Compound - AN analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.
U	The analyte was not detected at or above the reporting limit
XD-2	Duplicate results less than 5X MRL
XM-1	Sample background/spike ratio higher than method evaluation criteria



Legend

-  River Miles Downstream from 48" Outfall
-  Surface Water Sample Location
-  Approximate Spill Location
-  Dan River



Map Source: ArcGIS Online World Map Topo, 2014

**Surface Water
Sample Locations
February 16, 2014**

