



**STATE OF TENNESSEE  
DEPARTMENT OF HEALTH  
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL  
Lab Services - Jackson Regional Lab  
Jackson, TN 38301  
731-426-0686

TDH: Lab Services KRL  
Lab Services - Knoxville Regional Lab  
Knoxville, TN 37920  
865-549-5201

TDH: Lab Services NCL  
Lab Services - Nashville Central Lab  
Nashville, TN 37243  
615-262-6300

**Sent To:** Greg Denton  
TDEC-WPC  
6th Floor, L & C Tower Annex  
401 Church Street  
Nashville, TN 37243-1534


Michael Atchley  
TDEC-WPC  
Knoxville FO  
3711 Middlebrook Pike  
Knoxville, TN 37921

**Lab ID:** K00002397  
Knoxville Regional Laboratory

**Sampling Agency:** TDEC: Division of Water Pollution Control

**Billing Code:** 327.34-20

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.

  
Analytical Supervisor

**Lab-Sample Number:** K00002397001  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 12.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 1  
**Station No.:** EMORY012.1RO  
**Date/Time Collected:** 05/21/2009 09:50  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 8.14 pH Units  
**Chlorine, residual:**  
**Conductivity:** 76 uMHO  
**Temperature:** 17.63  
**Dissolved Oxygen:** 9.67 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	17	mg/L	3.8	10	M Chen	5/27/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	21	mg/L	0.7	1	P Leathers	5/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	m/L	0.10	0.10	P Leathers	5/22/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peeples	5/22/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002397002  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 2.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 2  
**Station No.:** EMORY002.1RO  
**Date/Time Collected:** 05/21/2009 10:43  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.37 pH Units  
**Chlorine, residual:**  
**Conductivity:** 67 uMHO  
**Temperature:** 19.27  
**Dissolved Oxygen:** 8.68 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	21	mg/L	3.8	10	M Chen	5/27/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	23	mg/L	0.7	1	P Leathers	5/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	5/22/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	20	mg/L	10	10	A Peoples	5/22/2009

J - Estimated value between MDL and MQL  
 MDL - Method Detection Limit  
 MQL - Method Quantitation Limit  
 U - Undetected

<b>Lab-Sample Number:</b>	K00002397003	<b>Field Determinations</b>	
<b>Project Name:</b>	TVA-Ash Spill	<b>pH:</b>	7.41      pH Units
<b>Sample Description:</b>	Approx 100' downstream from middle dredge pc	<b>Chlorine, residual:</b>	
<b>Sampler Project Name:</b>	TVA ash spill	<b>Conductivity:</b>	92      uMHO
<b>Project Site No.:</b>	2A	<b>Temperature:</b>	19.65
<b>Station No.:</b>	Dredge Plume	<b>Dissolved Oxygen:</b>	8.70      mg/L
<b>Date/Time Collected:</b>	05/21/2009 10:50	<b>Other:</b>	
<b>Sampler's Name:</b>	Geoff Klein	<b>Flow:</b>	CFS
<b>County:</b>	ROANE - 73		
<b>Sample Matrix:</b>	Water		
<b>EFO:</b>	Knoxville		
<b>Sampling Agency:</b>	TDEC-WPC		
<b>Billing Code:</b>	327.34-20		
<b>Send Report To:</b>	TDEC-WPC		
<b>Agency Invoiced:</b>	TDEC-WPC		
<b>Priority Date:</b>			
<b>Date/Time Received:</b>	05/21/2009 13:50		
<b>Received By:</b>	Ken Hitchman		

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	32	mg/L	3.8	10	M Chen	5/27/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	29	mg/L	0.7	1	P Leathers	5/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	5/22/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	41	mg/L	10	10	A Peebles	5/22/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002397004  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.9 at underwater weir  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 2B  
**Station No.:** EMORY001.9RO  
**Date/Time Collected:** 05/21/2009 11:00  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.45 pH Units  
**Chlorine, residual:**  
**Conductivity:** 107 uMHO  
**Temperature:** 18.60  
**Dissolved Oxygen:** 9.09 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	69	mg/L	3.8	10	M Chen	5/27/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	61	mg/L	0.7	1	P Leathers	5/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	5/22/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	5/22/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002397005  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.7  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 3  
**Station No.:** EMORY001.7RO  
**Date/Time Collected:** 05/21/2009 11:11  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.39 pH Units  
**Chlorine, residual:**  
**Conductivity:** 97 uMHO  
**Temperature:** 18.61  
**Dissolved Oxygen:** 9.09 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	97	mg/L	3.8	10	M Chen	5/27/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	75	mg/L	0.7	1	P Leathers	5/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	5/22/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	5/22/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002397006  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 05/21/2009 11:20  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.69 pH Units  
**Chlorine, residual:**  
**Conductivity:** 164 uMHO  
**Temperature:** 17.42  
**Dissolved Oxygen:** 10.36 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	100	mg/L	3.8	10	M Chen	5/27/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	87	mg/L	0.7	1	P Leathers	5/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	5/22/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	10	mg/L	10	10	A Peoples	5/22/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002397007  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River mile 2.3  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 5  
**Station No.:** CLINC002.3RO  
**Date/Time Collected:** 05/21/2009 11:30  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.79 pH Units  
**Chlorine, residual:**  
**Conductivity:** 217 uMHO  
**Temperature:** 16.71  
**Dissolved Oxygen:** 10.19 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	110	mg/L	3.8	10	M Chen	5/27/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	86	mg/L	0.7	1	P Leathers	5/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	5/22/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	12	mg/L	10	10	A Peebles	5/22/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002397008  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River TVA discharge point  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 5A  
**Station No.:** KingAshOutF2  
**Date/Time Collected:** 05/21/2009 11:38  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.67 pH Units  
**Chlorine, residual:**  
**Conductivity:** 173 uMHO  
**Temperature:** 19.49  
**Dissolved Oxygen:** 9.45 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	68	mg/L	3.8	10	M Chen	5/27/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	59	mg/L	0.7	1	P Leathers	5/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	5/22/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	12	mg/L	10	10	A Peebles	5/22/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

<b>Lab-Sample Number:</b>	K00002397009	<b>Field Determinations</b>	
<b>Project Name:</b>	TVA-Ash Spill	<b>pH:</b>	7.94      pH Units
<b>Sample Description:</b>	Clinch River mile 4.5 near Sugar Grove Valley R	<b>Chlorine, residual:</b>	
<b>Sampler Project Name:</b>	TVA ash spill	<b>Conductivity:</b>	232      uMHO
<b>Project Site No.:</b>	6	<b>Temperature:</b>	15.61
<b>Station No.:</b>	CLINC004.5RO	<b>Dissolved Oxygen:</b>	10.92      mg/L
<b>Date/Time Collected:</b>	05/21/2009 11:48	<b>Other:</b>	
<b>Sampler's Name:</b>	Geoff Klein	<b>Flow:</b>	CFS
<b>County:</b>	ROANE - 73		
<b>Sample Matrix:</b>	Water		
<b>EFO:</b>	Knoxville		
<b>Sampling Agency:</b>	TDEC-WPC		
<b>Billing Code:</b>	327.34-20		
<b>Send Report To:</b>	TDEC-WPC		
<b>Agency Invoiced:</b>	TDEC-WPC		
<b>Priority Date:</b>			
<b>Date/Time Received:</b>	05/21/2009 13:50		
<b>Received By:</b>	Ken Hitchman		

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	110	mg/L	3.8	10	M Chen	5/27/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	73	mg/L	0.7	1	P Leathers	5/27/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	5/22/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	12	mg/L	10	10	A Peebles	5/22/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**



**STATE OF TENNESSEE  
DEPARTMENT OF HEALTH  
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL  
Lab Services - Jackson Regional Lab  
Jackson, TN 38301  
731-426-0686

TDH: Lab Services KRL  
Lab Services - Knoxville Regional Lab  
Knoxville, TN 37920  
865-549-5201

TDH: Lab Services NCL  
Lab Services - Nashville Central Lab  
Nashville, TN 37243  
615-262-6300

**Sent To:** Greg Denton  
TDEC-WPC  
6th Floor, L & C Tower Annex  
401 Church Street  
Nashville, TN 37243-1534

Michael Atchley  
TDEC-WPC  
Knoxville FO  
3711 Middlebrook Pike  
Knoxville, TN 37921

**Lab ID:** K00002397  
Knoxville Regional Laboratory

**Sampling Agency:** TDEC: Division of Water Pollution Control

**Billing Code:** 327.34-20

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.



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Analytical Supervisor

**Lab-Sample Number:** K00002397001  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 12.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 1  
**Station No.:** EMORY012.1RO  
**Date/Time Collected:** 05/21/2009 09:50  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**

**pH:** 8.14 pH Units  
**Chlorine, residual:**  
**Conductivity:** 76 uMHO  
**Temperature:** 17.63  
**Dissolved Oxygen:** 9.67 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	05/26/2009				S Ufegbu	5/26/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	170	µg/L	2.9	10	A Bass	5/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	140	µg/L	6.4	10	A Wilson	6/2/2009
Antimony	U	µg/L	0.33	1	A Wilson	6/2/2009
Arsenic	U	µg/L	0.93	5	A Wilson	6/2/2009
Barium	29	µg/L	2.5	5	A Wilson	6/2/2009
Beryllium	U	µg/L	0.11	1	A Wilson	6/2/2009
Cadmium	U	µg/L	0.41	1	A Wilson	6/2/2009
Chromium	U	µg/L	2.0	5	A Wilson	6/2/2009
Cobalt	0.25J	µg/L	0.04	1	A Wilson	6/2/2009
Copper	2.1	µg/L	0.38	1	A Wilson	6/2/2009
Lead	0.28J	µg/L	0.10	1	A Wilson	6/2/2009
Manganese	37	µg/L	0.42	1	A Wilson	6/2/2009
Nickel	1.3	µg/L	0.25	1	A Wilson	6/2/2009
Selenium	U	µg/L	1.3	5	A Wilson	6/2/2009
Silver	U	µg/L	0.03	0.25	A Wilson	6/2/2009
Thallium	0.23J	µg/L	0.03	1	A Wilson	6/2/2009
Vanadium	U	µg/L	3.4	5	A Wilson	6/2/2009
Zinc	2.9J	µg/L	1.9	5	A Wilson	6/2/2009

**Lab-Sample Number:** K00002397001  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 12.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 1  
**Station No.:** EMORY012.1RO  
**Date/Time Collected:** 05/21/2009 09:50  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**

**pH:** 8.14 pH Units  
**Chlorine, residual:**  
**Conductivity:** 76 uMHO  
**Temperature:** 17.63  
**Dissolved Oxygen:** 9.67 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Mercury	0.04J	µg/L	0.029	0.2	A Bass	5/27/2009	

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00002397002  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 2.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 2  
**Station No.:** EMORY002.1RO  
**Date/Time Collected:** 05/21/2009 10:43  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.37 pH Units  
**Chlorine, residual:**  
**Conductivity:** 67 uMHO  
**Temperature:** 19.27  
**Dissolved Oxygen:** 8.68 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	05/26/2009				S Ufegbu	5/26/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	470	µg/L	2.9	10	A Bass	5/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	770	µg/L	64.0	100	A Wilson	6/2/2009
Antimony	U	µg/L	0.33	1	A Wilson	6/2/2009
Arsenic	4.3J	µg/L	0.93	5	A Wilson	6/2/2009
Barium	51	µg/L	2.5	5	A Wilson	6/2/2009
Beryllium	0.13J	µg/L	0.11	1	A Wilson	6/2/2009
Cadmium	U	µg/L	0.41	1	A Wilson	6/2/2009
Chromium	U	µg/L	2.0	5	A Wilson	6/2/2009
Cobalt	0.68J	µg/L	0.04	1	A Wilson	6/2/2009
Copper	2.9	µg/L	0.38	1	A Wilson	6/2/2009
Lead	1.3	µg/L	0.10	1	A Wilson	6/2/2009
Manganese	100	µg/L	0.42	1	A Wilson	6/2/2009
Nickel	2.4	µg/L	0.25	1	A Wilson	6/2/2009
Selenium	U	µg/L	1.3	5	A Wilson	6/2/2009
Silver	U	µg/L	0.03	0.25	A Wilson	6/2/2009
Thallium	0.18J	µg/L	0.03	1	A Wilson	6/2/2009
Vanadium	3.8J	µg/L	3.4	5	A Wilson	6/2/2009
Zinc	6.8	µg/L	1.9	5	A Wilson	6/2/2009

**Lab-Sample Number:** K00002397002  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 2.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 2  
**Station No.:** EMORY002.1RO  
**Date/Time Collected:** 05/21/2009 10:43  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.37 pH Units  
**Chlorine, residual:**  
**Conductivity:** 67 uMHO  
**Temperature:** 19.27  
**Dissolved Oxygen:** 8.68 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	5/27/2009

J - Estimated value between MDL and MQL  
 MDL - Method Detection Limit  
 MQL - Method Quantitation Limit  
 U - Undetected

<b>Lab-Sample Number:</b>	K00002397003	<b>Field Determinations</b>	
<b>Project Name:</b>	TVA-Ash Spill	<b>pH:</b>	7.41      pH Units
<b>Sample Description:</b>	Approx 100' downstream from middle dredge pc	<b>Chlorine, residual:</b>	
<b>Sampler Project Name:</b>	TVA ash spill	<b>Conductivity:</b>	92      uMHO
<b>Project Site No.:</b>	2A	<b>Temperature:</b>	19.65
<b>Station No.:</b>	Dredge Plume	<b>Dissolved Oxygen:</b>	8.70      mg/L
<b>Date/Time Collected:</b>	05/21/2009 10:50	<b>Other:</b>	
<b>Sampler's Name:</b>	Geoff Klein	<b>Flow:</b>	CFS
<b>County:</b>	ROANE - 73		
<b>Sample Matrix:</b>	Water		
<b>EFO:</b>	Knoxville		
<b>Sampling Agency:</b>	TDEC-WPC		
<b>Billing Code:</b>	327.34-20		
<b>Send Report To:</b>	TDEC-WPC		
<b>Agency Invoiced:</b>	TDEC-WPC		
<b>Priority Date:</b>			
<b>Date/Time Received:</b>	05/21/2009 13:50		
<b>Received By:</b>	Ken Hitchman		

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	05/26/2009				S Ufegbu	5/26/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	850	µg/L	2.9	10	A Bass	5/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	1800	µg/L	64.0	100	A Wilson	6/2/2009
Antimony	0.39J	µg/L	0.33	1	A Wilson	6/2/2009
Arsenic	12.0	µg/L	0.93	5	A Wilson	6/2/2009
Barium	82	µg/L	2.5	5	A Wilson	6/2/2009
Beryllium	0.29J	µg/L	0.11	1	A Wilson	6/2/2009
Cadmium	U	µg/L	0.41	1	A Wilson	6/2/2009
Chromium	U	µg/L	2.0	5	A Wilson	6/2/2009
Cobalt	1.2	µg/L	0.04	1	A Wilson	6/2/2009
Copper	4.5	µg/L	0.38	1	A Wilson	6/2/2009
Lead	2.4	µg/L	0.10	1	A Wilson	6/2/2009
Manganese	140	µg/L	0.42	1	A Wilson	6/2/2009
Nickel	3.0	µg/L	0.25	1	A Wilson	6/2/2009
Selenium	U	µg/L	1.3	5	A Wilson	6/2/2009
Silver	U	µg/L	0.03	0.25	A Wilson	6/2/2009
Thallium	0.29J	µg/L	0.03	1	A Wilson	6/2/2009
Vanadium	9.7	µg/L	3.4	5	A Wilson	6/2/2009
Zinc	3.5J	µg/L	1.9	5	A Wilson	6/2/2009

Lab-Sample Number: K00002397003

Project Name: TVA-Ash Spill

Sample Description: Approx 100' downstream from middle dredge pc

Sampler Project Name: TVA ash spill

Project Site No.: 2A

Station No.: Dredge Plume

Date/Time Collected: 05/21/2009 10:50

Sampler's Name: Geoff Klein

County: ROANE - 73

Sample Matrix: Water

EFO: Knoxville

Sampling Agency: TDEC-WPC

Billing Code: 327.34-20

Send Report To: TDEC-WPC

Agency Invoiced: TDEC-WPC

Priority Date:

Date/Time Received: 05/21/2009 13:50

Received By: Ken Hitchman

**Field Determinations**

pH: 7.41 pH Units

Chlorine, residual: Conductivity: 92 uMHO

Temperature: 19.65

Dissolved Oxygen: 8.70 mg/L

Other:

Flow: CFS

TEST: Mercury		METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Mercury	U	µg/L	0.029	0.2	A Bass	5/27/2009	

J - Estimated value between MDL and MQL  
MDL - Method Detection Limit  
MQL - Method Quantitation Limit  
U - Undetected

**Lab-Sample Number:** K00002397004  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.9 at underwater weir  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 2B  
**Station No.:** EMORY001.9RO  
**Date/Time Collected:** 05/21/2009 11:00  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.45 pH Units  
**Chlorine, residual:**  
**Conductivity:** 107 uMHO  
**Temperature:** 18.60  
**Dissolved Oxygen:** 9.09 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	05/26/2009				S Ufegbu	5/26/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	260	µg/L	2.9	10	A Bass	5/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	360	µg/L	6.4	10	A Wilson	6/2/2009
Antimony	0.95J	µg/L	0.33	1	A Wilson	6/2/2009
Arsenic	1.9J	µg/L	0.93	5	A Wilson	6/2/2009
Barium	40	µg/L	2.5	5	A Wilson	6/2/2009
Beryllium	U	µg/L	0.11	1	A Wilson	6/2/2009
Cadmium	U	µg/L	0.41	1	A Wilson	6/2/2009
Chromium	U	µg/L	2.0	5	A Wilson	6/2/2009
Cobalt	0.40J	µg/L	0.04	1	A Wilson	6/2/2009
Copper	3.1	µg/L	0.38	1	A Wilson	6/2/2009
Lead	0.37J	µg/L	0.10	1	A Wilson	6/4/2009
Manganese	62	µg/L	0.42	1	A Wilson	6/2/2009
Nickel	1.8	µg/L	0.25	1	A Wilson	6/2/2009
Selenium	U	µg/L	1.3	5	A Wilson	6/2/2009
Silver	0.059J	µg/L	0.03	0.25	A Wilson	6/2/2009
Thallium	0.19J	µg/L	0.03	1	A Wilson	6/2/2009
Vanadium	U	µg/L	3.4	5	A Wilson	6/2/2009
Zinc	U	µg/L	1.9	5	A Wilson	6/4/2009

**Lab-Sample Number:** K00002397004  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.9 at underwater weir  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 2B  
**Station No.:** EMORY001.9RO  
**Date/Time Collected:** 05/21/2009 11:00  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.45 pH Units  
**Chlorine, residual:**  
**Conductivity:** 107 uMHO  
**Temperature:** 18.60  
**Dissolved Oxygen:** 9.09 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE	
Mercury	0.05J	µg/L	0.029	0.2	A Bass	5/27/2009	

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00002397005  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.7  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 3  
**Station No.:** EMORY001.7RO  
**Date/Time Collected:** 05/21/2009 11:11  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.39 pH Units  
**Chlorine, residual:**  
**Conductivity:** 97 uMHO  
**Temperature:** 18.61  
**Dissolved Oxygen:** 9.09 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	05/26/2009				S Ufegbu	5/26/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	180	µg/L	2.9	10	A Bass	5/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	290	µg/L	64.0	100	A Wilson	6/4/2009
Antimony	U	µg/L	0.33	1	A Wilson	6/2/2009
Arsenic	U	µg/L	0.93	5	A Wilson	6/2/2009
Barium	41	µg/L	2.5	5	A Wilson	6/2/2009
Beryllium	U	µg/L	0.11	1	A Wilson	6/2/2009
Cadmium	U	µg/L	0.41	1	A Wilson	6/2/2009
Chromium	U	µg/L	2.0	5	A Wilson	6/2/2009
Cobalt	0.29J	µg/L	0.04	1	A Wilson	6/2/2009
Copper	2.9	µg/L	0.38	1	A Wilson	6/2/2009
Lead	0.31J	µg/L	0.10	1	A Wilson	6/4/2009
Manganese	49	µg/L	0.42	1	A Wilson	6/2/2009
Nickel	2.0	µg/L	0.25	1	A Wilson	6/2/2009
Selenium	1.3J	µg/L	1.3	5	A Wilson	6/2/2009
Silver	U	µg/L	0.03	0.25	A Wilson	6/2/2009
Thallium	0.042J	µg/L	0.03	1	A Wilson	6/2/2009
Vanadium	U	µg/L	3.4	5	A Wilson	6/2/2009
Zinc	3.6J	µg/L	1.9	5	A Wilson	6/4/2009

**Lab-Sample Number:** K00002397005  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.7  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 3  
**Station No.:** EMORY001.7RO  
**Date/Time Collected:** 05/21/2009 11:11  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.39 pH Units  
**Chlorine, residual:**  
**Conductivity:** 97 uMHO  
**Temperature:** 18.61  
**Dissolved Oxygen:** 9.09 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Mercury	0.03J	µg/L	0.029	0.2	A Bass	5/27/2009	

J - Estimated value between MDL and MQL  
 MDL - Method Detection Limit  
 MQL - Method Quantitation Limit  
 U - Undetected

**Lab-Sample Number:** K00002397006  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 05/21/2009 11:20  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.69 pH Units  
**Chlorine, residual:**  
**Conductivity:** 164 uMHO  
**Temperature:** 17.42  
**Dissolved Oxygen:** 10.36 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Digestion Metals	05/26/2009				S Ufegbu	5/26/2009	

TEST: ICP		METHOD: EPA 200.7					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Iron	160	µg/L	2.9	10	A Bass	5/29/2009	

TEST: ICP-MS		METHOD: EPA 200.8					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Aluminum	210	µg/L	64.0	100	A Wilson	6/4/2009	
Antimony	U	µg/L	0.33	1	A Wilson	6/2/2009	
Arsenic	U	µg/L	0.93	5	A Wilson	6/2/2009	
Barium	38	µg/L	2.5	5	A Wilson	6/2/2009	
Beryllium	U	µg/L	0.11	1	A Wilson	6/2/2009	
Cadmium	U	µg/L	0.41	1	A Wilson	6/2/2009	
Chromium	U	µg/L	2.0	5	A Wilson	6/2/2009	
Cobalt	0.23J	µg/L	0.04	1	A Wilson	6/2/2009	
Copper	3.2	µg/L	0.38	1	A Wilson	6/2/2009	
Lead	0.36J	µg/L	0.10	1	A Wilson	6/4/2009	
Manganese	38	µg/L	0.42	1	A Wilson	6/2/2009	
Nickel	1.7	µg/L	0.25	1	A Wilson	6/2/2009	
Selenium	U	µg/L	1.3	5	A Wilson	6/2/2009	
Silver	U	µg/L	0.03	0.25	A Wilson	6/2/2009	
Thallium	U	µg/L	0.03	1	A Wilson	6/2/2009	
Vanadium	U	µg/L	3.4	5	A Wilson	6/2/2009	
Zinc	3.6J	µg/L	1.9	5	A Wilson	6/4/2009	

**Lab-Sample Number:** K00002397006  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 05/21/2009 11:20  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.69 pH Units  
**Chlorine, residual:**  
**Conductivity:** 164 uMHO  
**Temperature:** 17.42  
**Dissolved Oxygen:** 10.36 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.03J	µg/L	0.029	0.2	A Bass	5/27/2009

J - Estimated value between MDL and MQL  
 MDL - Method Detection Limit  
 MQL - Method Quantitation Limit  
 U - Undetected

**Lab-Sample Number:** K00002397007  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River mile 2.3  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 5  
**Station No.:** CLINC002.3RO  
**Date/Time Collected:** 05/21/2009 11:30  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.79 pH Units  
**Chlorine, residual:**  
**Conductivity:** 217 uMHO  
**Temperature:** 16.71  
**Dissolved Oxygen:** 10.19 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	05/26/2009				S Ufegbu	5/26/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	200	µg/L	2.9	10	A Bass	5/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	270	µg/L	64.0	100	A Wilson	6/4/2009
Antimony	U	µg/L	0.33	1	A Wilson	6/2/2009
Arsenic	U	µg/L	0.93	5	A Wilson	6/2/2009
Barium	39	µg/L	2.5	5	A Wilson	6/2/2009
Beryllium	U	µg/L	0.11	1	A Wilson	6/2/2009
Cadmium	U	µg/L	0.41	1	A Wilson	6/2/2009
Chromium	U	µg/L	2.0	5	A Wilson	6/2/2009
Cobalt	0.28J	µg/L	0.04	1	A Wilson	6/2/2009
Copper	1.7	µg/L	0.38	1	A Wilson	6/2/2009
Lead	0.31J	µg/L	0.10	1	A Wilson	6/4/2009
Manganese	40	µg/L	0.42	1	A Wilson	6/2/2009
Nickel	1.6	µg/L	0.25	1	A Wilson	6/2/2009
Selenium	U	µg/L	1.3	5	A Wilson	6/2/2009
Silver	U	µg/L	0.03	0.25	A Wilson	6/2/2009
Thallium	U	µg/L	0.03	1	A Wilson	6/2/2009
Vanadium	U	µg/L	3.4	5	A Wilson	6/2/2009
Zinc	U	µg/L	1.9	5	A Wilson	6/4/2009

**Lab-Sample Number:** K00002397007  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River mile 2.3  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 5  
**Station No.:** CLINC002.3RO  
**Date/Time Collected:** 05/21/2009 11:30  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.79 pH Units  
**Chlorine, residual:**  
**Conductivity:** 217 uMHO  
**Temperature:** 16.71  
**Dissolved Oxygen:** 10.19 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	5/27/2009

J - Estimated value between MDL and MQL  
 MDL - Method Detection Limit  
 MQL - Method Quantitation Limit  
 U - Undetected

**Lab-Sample Number:** K00002397008  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River TVA discharge point  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 5A  
**Station No.:** KingAshOutF2  
**Date/Time Collected:** 05/21/2009 11:38  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**  
**pH:** 7.67 pH Units  
**Chlorine, residual:**  
**Conductivity:** 173 uMHO  
**Temperature:** 19.49  
**Dissolved Oxygen:** 9.45 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	05/26/2009				S Ufegbu	5/26/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	360	µg/L	2.9	10	A Bass	5/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	550	µg/L	64.0	100	A Wilson	6/4/2009
Antimony	U	µg/L	0.33	1	A Wilson	6/2/2009
Arsenic	2.2J	µg/L	0.93	5	A Wilson	6/2/2009
Barium	47	µg/L	2.5	5	A Wilson	6/2/2009
Beryllium	U	µg/L	0.11	1	A Wilson	6/2/2009
Cadmium	U	µg/L	0.41	1	A Wilson	6/2/2009
Chromium	U	µg/L	2.0	5	A Wilson	6/2/2009
Cobalt	0.46J	µg/L	0.04	1	A Wilson	6/2/2009
Copper	4.7	µg/L	0.38	1	A Wilson	6/2/2009
Lead	0.53J	µg/L	0.10	1	A Wilson	6/4/2009
Manganese	57	µg/L	0.42	1	A Wilson	6/2/2009
Nickel	1.8	µg/L	0.25	1	A Wilson	6/2/2009
Selenium	U	µg/L	1.3	5	A Wilson	6/2/2009
Silver	U	µg/L	0.03	0.25	A Wilson	6/2/2009
Thallium	0.051J	µg/L	0.03	1	A Wilson	6/2/2009
Vanadium	U	µg/L	3.4	5	A Wilson	6/4/2009
Zinc	2.5J	µg/L	1.9	5	A Wilson	6/4/2009

**Lab-Sample Number:** K00002397008  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River TVA discharge point  
**Sampler Project Name:** TVA ash spill  
**Project Site No.:** 5A  
**Station No.:** KingAshOutF2  
**Date/Time Collected:** 05/21/2009 11:38  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 05/21/2009 13:50  
**Received By:** Ken Hitchman

**Field Determinations**

**pH:** 7.67 pH Units  
**Chlorine, residual:**  
**Conductivity:** 173 uMHO  
**Temperature:** 19.49  
**Dissolved Oxygen:** 9.45 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	5/27/2009

J - Estimated value between MDL and MQL  
 MDL - Method Detection Limit  
 MQL - Method Quantitation Limit  
 U - Undetected

<b>Lab-Sample Number:</b>	K00002397009	<b>Field Determinations</b>	
<b>Project Name:</b>	TVA-Ash Spill	<b>pH:</b>	7.94      pH Units
<b>Sample Description:</b>	Clinch River mile 4.5 near Sugar Grove Valley R	<b>Chlorine, residual:</b>	
<b>Sampler Project Name:</b>	TVA ash spill	<b>Conductivity:</b>	232      uMHO
<b>Project Site No.:</b>	6	<b>Temperature:</b>	15.61
<b>Station No.:</b>	CLINC004.5RO	<b>Dissolved Oxygen:</b>	10.92      mg/L
<b>Date/Time Collected:</b>	05/21/2009 11:48	<b>Other:</b>	
<b>Sampler's Name:</b>	Geoff Klein	<b>Flow:</b>	CFS
<b>County:</b>	ROANE - 73		
<b>Sample Matrix:</b>	Water		
<b>EFO:</b>	Knoxville		
<b>Sampling Agency:</b>	TDEC-WPC		
<b>Billing Code:</b>	327.34-20		
<b>Send Report To:</b>	TDEC-WPC		
<b>Agency Invoiced:</b>	TDEC-WPC		
<b>Priority Date:</b>			
<b>Date/Time Received:</b>	05/21/2009 13:50		
<b>Received By:</b>	Ken Hitchman		

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	05/26/2009				S Ufegbu	5/26/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	300	µg/L	2.9	10	A Bass	5/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	440	µg/L	64.0	100	A Wilson	6/4/2009
Antimony	1.1	µg/L	0.33	1	A Wilson	6/2/2009
Arsenic	U	µg/L	0.93	5	A Wilson	6/2/2009
Barium	35	µg/L	2.5	5	A Wilson	6/2/2009
Beryllium	U	µg/L	0.11	1	A Wilson	6/2/2009
Cadmium	U	µg/L	0.41	1	A Wilson	6/2/2009
Chromium	3.1J	µg/L	2.0	5	A Wilson	6/2/2009
Cobalt	0.33J	µg/L	0.04	1	A Wilson	6/2/2009
Copper	1.9	µg/L	0.38	1	A Wilson	6/2/2009
Lead	0.61J	µg/L	0.10	1	A Wilson	6/4/2009
Manganese	46	µg/L	0.42	1	A Wilson	6/2/2009
Nickel	1.7	µg/L	0.25	1	A Wilson	6/2/2009
Selenium	U	µg/L	1.3	5	A Wilson	6/2/2009
Silver	U	µg/L	0.03	0.25	A Wilson	6/2/2009
Thallium	0.15J	µg/L	0.03	1	A Wilson	6/2/2009
Vanadium	5.8	µg/L	3.4	5	A Wilson	6/4/2009
Zinc	4.8J	µg/L	1.9	5	A Wilson	6/4/2009

<b>Lab-Sample Number:</b>	K00002397009	<b>Field Determinations</b>	
<b>Project Name:</b>	TVA-Ash Spill	<b>pH:</b>	7.94      pH Units
<b>Sample Description:</b>	Clinch River mile 4.5 near Sugar Grove Valley R	<b>Chlorine, residual:</b>	
<b>Sampler Project Name:</b>	TVA ash spill	<b>Conductivity:</b>	232      uMHO
<b>Project Site No.:</b>	6	<b>Temperature:</b>	15.61
<b>Station No.:</b>	CLINC004.5RO	<b>Dissolved Oxygen:</b>	10.92      mg/L
<b>Date/Time Collected:</b>	05/21/2009    11:48	<b>Other:</b>	
<b>Sampler's Name:</b>	Geoff Klein	<b>Flow:</b>	CFS
<b>County:</b>	ROANE - 73		
<b>Sample Matrix:</b>	Water		
<b>EFO:</b>	Knoxville		
<b>Sampling Agency:</b>	TDEC-WPC		
<b>Billing Code:</b>	327.34-20		
<b>Send Report To:</b>	TDEC-WPC		
<b>Agency Invoiced:</b>	TDEC-WPC		
<b>Priority Date:</b>			
<b>Date/Time Received:</b>	05/21/2009    13:50		
<b>Received By:</b>	Ken Hitchman		

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.03J	µg/L	0.029	0.2	A Bass	5/27/2009

J - Estimated value between MDL and MQL  
MDL - Method Detection Limit  
MQL - Method Quantitation Limit  
U - Undetected