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: K00002177
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 pratices and in accordance with federal or state approved methodologies.

Analytical Supervisor

Lab-Sample Number:	K00002177001
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:	02/19/2009 10:30
Sampler's Name:	Justin Fisher
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:	02/19/2009 15:35
Received By:	E McCrary

Field Determinations

pH:	7.99	pH Units
Chlorine, residual:		
Conductivity:	56	uMHO
Temperature:	7.82	
Dissolved Oxygen:	12.69	mg/L
Other:		
Flow:		CFS

TEST: Alkalinity, Total — **METHOD: EPA 310.2**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	11	mg/L	3.8	10	M Chen	2/24/2009

TEST: Hardness, Calcium — **METHOD: SM 3500-Ca D**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	14	mg/L	0.7	1	M Chen	2/24/2009

TEST: Residue, Settleable — **METHOD: SM 2540F**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	<0.1	ml/L	0.10	0.10	P Leathers	2/20/2009

TEST: Residue, Suspended — **METHOD: SM 2540D**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	10	mg/L	10	10	A Peeples	2/20/2009

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

Lab-Sample Number:	K00002177002
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:	02/19/2009 09:55
Sampler's Name:	Justin Fisher
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:	02/19/2009 15:35
Received By:	E McCrary

Field Determinations		
pH:	6.37	pH Units
Chlorine, residual:		
Conductivity:	68	uMHO
Temperature:	6.98	
Dissolved Oxygen:	12.73	mg/L
Other:		
Flow:		CFS

TEST: Alkalinity, Total — **METHOD: EPA 310.2**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	15	mg/L	3.8	10	M Chen	2/24/2009

TEST: Hardness, Calcium — **METHOD: SM 3500-Ca D**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	20	mg/L	0.7	1	M Chen	2/24/2009

TEST: Residue, Settleable — **METHOD: SM 2540F**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	0.5	ml/L	0.10	0.10	P Leathers	2/20/2009

TEST: Residue, Suspended — **METHOD: SM 2540D**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	130	mg/L	10	10	A Peeples	2/20/2009

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

Lab-Sample Number:	K00002177003
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:	02/19/2009 10:10
Sampler's Name:	Justin Fisher
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:	02/19/2009 15:35
Received By:	E McCrary

Field Determinations		
pH:	7.33	pH Units
Chlorine, residual:		
Conductivity:	70	uMHO
Temperature:	7.06	
Dissolved Oxygen:	12.50	mg/L
Other:		
Flow:		CFS

TEST: Alkalinity, Total — **METHOD: EPA 310.2**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	15	mg/L	3.8	10	M Chen	2/24/2009

TEST: Hardness, Calcium — **METHOD: SM 3500-Ca D**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	19	mg/L	0.7	1	M Chen	2/24/2009

TEST: Residue, Settleable — **METHOD: SM 2540F**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	<0.1	ml/L	0.10	0.10	P Leathers	2/20/2009

TEST: Residue, Suspended — **METHOD: SM 2540D**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	40	mg/L	10	10	A Peeples	2/20/2009

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

Lab-Sample Number:	K00002177004
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:	02/19/2009 10:20
Sampler's Name:	Justin Fisher
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:	02/19/2009 15:35
Received By:	E McCrary

Field Determinations		
pH:	7.26	pH Units
Chlorine, residual:		
Conductivity:	68	uMHO
Temperature:	7.22	
Dissolved Oxygen:	12.24	mg/L
Other:		
Flow:		CFS

TEST: Alkalinity, Total — **METHOD: EPA 310.2**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	16	mg/L	3.8	10	M Chen	2/24/2009

TEST: Hardness, Calcium — **METHOD: SM 3500-Ca D**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	17	mg/L	0.7	1	M Chen	2/24/2009

TEST: Residue, Settleable — **METHOD: SM 2540F**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	<0.1	ml/L	0.10	0.10	P Leathers	2/20/2009

TEST: Residue, Suspended — **METHOD: SM 2540D**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	24	mg/L	10	10	A Peeples	2/20/2009

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

Lab-Sample Number:	K00002177005
Project Name:	TVA-Ash Spill
Sample Description:	Clinch River mile 2.3 near Hwy 70 bridge
Sampler Project Name:	TVA Ash Spill
Project Site No.:	5
Station No.:	CLINC002.3RO
Date/Time Collected:	02/19/2009 10:35
Sampler's Name:	Justin Fisher
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:	02/19/2009 15:35
Received By:	E McCrary

Field Determinations		
pH:	7.75	pH Units
Chlorine, residual:		
Conductivity:	216	uMHO
Temperature:	8.48	
Dissolved Oxygen:	12.55	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	2/24/2009

TEST: Hardness, Calcium — **METHOD: SM 3500-Ca D**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	76	mg/L	0.7	1	M Chen	2/24/2009

TEST: Residue, Settleable — **METHOD: SM 2540F**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	<0.1	ml/L	0.10	0.10	P Leathers	2/20/2009

TEST: Residue, Suspended — **METHOD: SM 2540D**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peeples	2/20/2009

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

Lab-Sample Number:	K00002177006	**Field Determinations**	
Project Name:	TVA-Ash Spill	**pH:** 7.85	pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	**Chlorine, residual:**	
Sampler Project Name:	TVA Ash Spill	**Conductivity:** 257	uMHO
Project Site No.:	6	**Temperature:** 8.39	
Station No.:	CLINC004.5RO	**Dissolved Oxygen:** 12.68	mg/L
Date/Time Collected:	02/19/2009 10:45	**Other:**	
Sampler's Name:	Justin Fisher	**Flow:**	CFS
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:	02/19/2009 15:35		
Received By:	E McCrary		

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	2/24/2009

TEST: Hardness, Calcium — **METHOD: SM 3500-Ca D**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	87	mg/L	0.7	1	M Chen	2/24/2009

TEST: Residue, Settleable — **METHOD: SM 2540F**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	<0.1	ml/L	0.10	0.10	P Leathers	2/20/2009

TEST: Residue, Suspended — **METHOD: SM 2540D**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peeples	2/20/2009

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: K00002177
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 pratices and in accordance with federal or state approved methodologies.

Analytical Supervisor

Lab-Sample Number:	K00002177001
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:	02/19/2009 10:30
Sampler's Name:	Justin Fisher
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:	02/19/2009 15:35
Received By:	E McCrary

Field Determinations		
pH:	7.99	pH Units
Chlorine, residual:		
Conductivity:	56	uMHO
Temperature:	7.82	
Dissolved Oxygen:	12.69	mg/L
Other:		
Flow:		CFS

TEST: Digestion Metals **METHOD: EPA 200.2**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	02/20/2009				M Pattanayek	2/20/2009

TEST: ICP **METHOD: EPA 200.7**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	380	µg/L	2.9	10	A Bass	2/24/2009

TEST: ICP-MS **METHOD: EPA 200.8**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	280	µg/L	12.8	20	M Pattanayek	2/23/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	2/23/2009
Arsenic	0.96J	µg/L	0.93	5	M Pattanayek	2/23/2009
Barium	24	µg/L	2.5	5	M Pattanayek	2/23/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	2/23/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	2/23/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	2/23/2009
Cobalt	0.42J	µg/L	0.04	1	M Pattanayek	2/23/2009
Copper	0.52J	µg/L	0.38	1	M Pattanayek	2/23/2009
Lead	0.32J	µg/L	0.10	1	M Pattanayek	2/23/2009
Manganese	35	µg/L	0.42	1	M Pattanayek	2/23/2009
Nickel	1.3	µg/L	0.25	1	M Pattanayek	2/23/2009
Selenium	3.4J	µg/L	1.3	5	M Pattanayek	2/23/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	2/23/2009
Thallium	0.41J	µg/L	0.03	1	M Pattanayek	2/23/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	2/23/2009
Zinc	3.9J	µg/L	1.9	5	M Pattanayek	2/23/2009

Lab-Sample Number:	K00002177001
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:	02/19/2009 10:30
Sampler's Name:	Justin Fisher
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:	02/19/2009 15:35
Received By:	E McCrary

Field Determinations		
pH:	7.99	pH Units
Chlorine, residual:		
Conductivity:	56	uMHO
Temperature:	7.82	
Dissolved Oxygen:	12.69	mg/L
Other:		
Flow:		CFS

TEST: Mercury **METHOD: EPA 245.1**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.13	0.2	A Wilson	2/23/2009

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

Lab-Sample Number:	K00002177002
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:	02/19/2009 09:55
Sampler's Name:	Justin Fisher
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:	02/19/2009 15:35
Received By:	E McCrary

Field Determinations

pH:	6.37	pH Units
Chlorine, residual:		
Conductivity:	68	uMHO
Temperature:	6.98	
Dissolved Oxygen:	12.73	mg/L
Other:		
Flow:		CFS

TEST: Digestion Metals — **METHOD: EPA 200.2**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	02/20/2009				M Pattanayek	2/20/2009

TEST: ICP — **METHOD: EPA 200.7**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	1100	µg/L	2.9	10	A Bass	2/24/2009

TEST: ICP-MS — **METHOD: EPA 200.8**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	340	µg/L	12.8	20	M Pattanayek	2/23/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	2/23/2009
Arsenic	1.3J	µg/L	0.93	5	M Pattanayek	2/23/2009
Barium	33	µg/L	2.5	5	M Pattanayek	2/23/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	2/23/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	2/23/2009
Chromium	3.0J	µg/L	2.0	5	M Pattanayek	2/23/2009
Cobalt	1.5	µg/L	0.04	1	M Pattanayek	2/23/2009
Copper	1.5	µg/L	0.38	1	M Pattanayek	2/23/2009
Lead	2.0	µg/L	0.10	1	M Pattanayek	2/23/2009
Manganese	98	µg/L	0.42	1	M Pattanayek	2/23/2009
Nickel	2.5	µg/L	0.25	1	M Pattanayek	2/23/2009
Selenium	3.0J	µg/L	1.3	5	M Pattanayek	2/23/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	2/23/2009
Thallium	0.17J	µg/L	0.03	1	M Pattanayek	2/23/2009
Vanadium	4.8J	µg/L	3.4	5	M Pattanayek	2/23/2009
Zinc	7.3	µg/L	1.9	5	M Pattanayek	2/23/2009

Lab-Sample Number:	K00002177002
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:	02/19/2009 09:55
Sampler's Name:	Justin Fisher
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:	02/19/2009 15:35
Received By:	E McCrary

Field Determinations		
pH:	6.37	pH Units
Chlorine, residual:		
Conductivity:	68	uMHO
Temperature:	6.98	
Dissolved Oxygen:	12.73	mg/L
Other:		
Flow:		CFS

TEST: Mercury **METHOD: EPA 245.1**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.13	0.2	A Wilson	2/23/2009

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

Lab-Sample Number:	K00002177003
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:	02/19/2009 10:10
Sampler's Name:	Justin Fisher
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:	02/19/2009 15:35
Received By:	E McCrary

Field Determinations		
pH:	7.33	pH Units
Chlorine, residual:		
Conductivity:	70	uMHO
Temperature:	7.06	
Dissolved Oxygen:	12.50	mg/L
Other:		
Flow:		CFS

TEST: Digestion Metals — **METHOD: EPA 200.2**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	02/20/2009				M Pattanayek	2/20/2009

TEST: ICP — **METHOD: EPA 200.7**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	520	µg/L	2.9	10	A Bass	2/24/2009

TEST: ICP-MS — **METHOD: EPA 200.8**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	270	µg/L	12.8	20	M Pattanayek	2/23/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	2/23/2009
Arsenic	3.3J	µg/L	0.93	5	M Pattanayek	2/23/2009
Barium	30	µg/L	2.5	5	M Pattanayek	2/23/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	2/23/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	2/23/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	2/23/2009
Cobalt	0.64J	µg/L	0.04	1	M Pattanayek	2/23/2009
Copper	1.5	µg/L	0.38	1	M Pattanayek	2/23/2009
Lead	1.0	µg/L	0.10	1	M Pattanayek	2/23/2009
Manganese	73	µg/L	0.42	1	M Pattanayek	2/23/2009
Nickel	2.2	µg/L	0.25	1	M Pattanayek	2/23/2009
Selenium	3.3J	µg/L	1.3	5	M Pattanayek	2/23/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	2/23/2009
Thallium	0.05J	µg/L	0.03	1	M Pattanayek	2/23/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	2/23/2009
Zinc	11	µg/L	1.9	5	M Pattanayek	2/23/2009

Lab-Sample Number:	K00002177003
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:	02/19/2009 10:10
Sampler's Name:	Justin Fisher
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:	02/19/2009 15:35
Received By:	E McCrary

Field Determinations

pH:	7.33	pH Units
Chlorine, residual:		
Conductivity:	70	uMHO
Temperature:	7.06	
Dissolved Oxygen:	12.50	mg/L
Other:		
Flow:		CFS

TEST: Mercury **METHOD: EPA 245.1**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.13	0.2	A Wilson	2/23/2009

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

Lab-Sample Number:	K00002177004
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:	02/19/2009 10:20
Sampler's Name:	Justin Fisher
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:	02/19/2009 15:35
Received By:	E McCrary

Field Determinations		
pH:	7.26	pH Units
Chlorine, residual:		
Conductivity:	68	uMHO
Temperature:	7.22	
Dissolved Oxygen:	12.24	mg/L
Other:		
Flow:		CFS

TEST: Digestion Metals **METHOD: EPA 200.2**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	02/20/2009				M Pattanayek	2/20/2009

TEST: ICP **METHOD: EPA 200.7**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	420	µg/L	2.9	10	A Bass	2/24/2009

TEST: ICP-MS **METHOD: EPA 200.8**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	210	µg/L	12.8	20	M Pattanayek	2/23/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	2/23/2009
Arsenic	1.3J	µg/L	0.93	5	M Pattanayek	2/23/2009
Barium	29	µg/L	2.5	5	M Pattanayek	2/23/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	2/23/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	2/23/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	2/23/2009
Cobalt	0.47J	µg/L	0.04	1	M Pattanayek	2/23/2009
Copper	1.3	µg/L	0.38	1	M Pattanayek	2/23/2009
Lead	0.55J	µg/L	0.10	1	M Pattanayek	2/23/2009
Manganese	75	µg/L	0.42	1	M Pattanayek	2/23/2009
Nickel	1.5	µg/L	0.25	1	M Pattanayek	2/23/2009
Selenium	3.3J	µg/L	1.3	5	M Pattanayek	2/23/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	2/23/2009
Thallium	0.07J	µg/L	0.03	1	M Pattanayek	2/23/2009
Vanadium	5.4	µg/L	3.4	5	M Pattanayek	2/23/2009
Zinc	4.5J	µg/L	1.9	5	M Pattanayek	2/23/2009

Lab-Sample Number:	K00002177004	**Field Determinations**	
Project Name:	TVA-Ash Spill	**pH:** 7.26	pH Units
Sample Description:	Emory River mile 0.1	**Chlorine, residual:**	
Sampler Project Name:	TVA Ash Spill	**Conductivity:** 68	uMHO
Project Site No.:	4	**Temperature:** 7.22	
Station No.:	EMORY000.1RO	**Dissolved Oxygen:** 12.24	mg/L
Date/Time Collected:	02/19/2009 10:20	**Other:**	
Sampler's Name:	Justin Fisher	**Flow:**	CFS
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:	02/19/2009 15:35		
Received By:	E McCrary		

TEST: Mercury **METHOD: EPA 245.1**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.13	0.2	A Wilson	2/23/2009

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

Lab-Sample Number:	K00002177005	**Field Determinations**	
Project Name:	TVA-Ash Spill	**pH:** 7.75	pH Units
Sample Description:	Clinch River mile 2.3 near Hwy 70 bridge	**Chlorine, residual:**	
Sampler Project Name:	TVA Ash Spill	**Conductivity:** 216	uMHO
Project Site No.:	5	**Temperature:** 8.48	
Station No.:	CLINC002.3RO	**Dissolved Oxygen:** 12.55	mg/L
Date/Time Collected:	02/19/2009 10:35	**Other:**	
Sampler's Name:	Justin Fisher	**Flow:**	CFS
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:	02/19/2009 15:35		
Received By:	E McCrary		

TEST: Digestion Metals **METHOD: EPA 200.2**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	02/20/2009				M Pattanayek	2/20/2009

TEST: ICP **METHOD: EPA 200.7**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	150	µg/L	2.9	10	A Bass	2/24/2009

TEST: ICP-MS **METHOD: EPA 200.8**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	120	µg/L	6.4	10	M Pattanayek	2/23/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	2/23/2009
Arsenic	1.1J	µg/L	0.93	5	M Pattanayek	2/23/2009
Barium	34	µg/L	2.5	5	M Pattanayek	2/23/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	2/23/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	2/23/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	2/23/2009
Cobalt	0.24J	µg/L	0.04	1	M Pattanayek	2/23/2009
Copper	0.95J	µg/L	0.38	1	M Pattanayek	2/23/2009
Lead	0.25J	µg/L	0.10	1	M Pattanayek	2/23/2009
Manganese	40	µg/L	0.42	1	M Pattanayek	2/23/2009
Nickel	1.4	µg/L	0.25	1	M Pattanayek	2/23/2009
Selenium	3.6J	µg/L	1.3	5	M Pattanayek	2/23/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	2/23/2009
Thallium	0.05J	µg/L	0.03	1	M Pattanayek	2/23/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	2/23/2009
Zinc	2.3J	µg/L	1.9	5	M Pattanayek	2/23/2009

Lab-Sample Number:	K00002177005	**Field Determinations**	
Project Name:	TVA-Ash Spill	**pH:** 7.75	pH Units
Sample Description:	Clinch River mile 2.3 near Hwy 70 bridge	**Chlorine, residual:**	
Sampler Project Name:	TVA Ash Spill	**Conductivity:** 216	uMHO
Project Site No.:	5	**Temperature:** 8.48	
Station No.:	CLINC002.3RO	**Dissolved Oxygen:** 12.55	mg/L
Date/Time Collected:	02/19/2009 10:35	**Other:**	
Sampler's Name:	Justin Fisher	**Flow:**	CFS
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:	02/19/2009 15:35		
Received By:	E McCrary		

TEST: Mercury **METHOD: EPA 245.1**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.13	0.2	A Wilson	2/23/2009

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

Lab-Sample Number:	K00002177006	**Field Determinations**		
Project Name:	TVA-Ash Spill	**pH:**	7.85	pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	**Chlorine, residual:**		
Sampler Project Name:	TVA Ash Spill	**Conductivity:**	257	uMHO
Project Site No.:	6	**Temperature:**	8.39	
Station No.:	CLINC004.5RO	**Dissolved Oxygen:**	12.68	mg/L
Date/Time Collected:	02/19/2009 10:45	**Other:**		
Sampler's Name:	Justin Fisher	**Flow:**		CFS
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:	02/19/2009 15:35			
Received By:	E McCrary			

TEST: Digestion Metals **METHOD: EPA 200.2**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	02/20/2009				M Pattanayek	2/20/2009

TEST: ICP **METHOD: EPA 200.7**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	140	µg/L	2.9	10	A Bass	2/24/2009

TEST: ICP-MS **METHOD: EPA 200.8**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	130	µg/L	6.4	10	M Pattanayek	2/23/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	2/23/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	2/23/2009
Barium	34	µg/L	2.5	5	M Pattanayek	2/23/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	2/23/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	2/23/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	2/23/2009
Cobalt	0.19J	µg/L	0.04	1	M Pattanayek	2/23/2009
Copper	1.6	µg/L	0.38	1	M Pattanayek	2/23/2009
Lead	0.28J	µg/L	0.10	1	M Pattanayek	2/23/2009
Manganese	34	µg/L	0.42	1	M Pattanayek	2/23/2009
Nickel	1.9	µg/L	0.25	1	M Pattanayek	2/23/2009
Selenium	3.6J	µg/L	1.3	5	M Pattanayek	2/23/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	2/23/2009
Thallium	0.04J	µg/L	0.03	1	M Pattanayek	2/23/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	2/23/2009
Zinc	3.6J	µg/L	1.9	5	M Pattanayek	2/23/2009

Lab-Sample Number:	K00002177006	**Field Determinations**	
Project Name:	TVA-Ash Spill	**pH:** 7.85	pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	**Chlorine, residual:**	
Sampler Project Name:	TVA Ash Spill	**Conductivity:** 257	uMHO
Project Site No.:	6	**Temperature:** 8.39	
Station No.:	CLINC004.5RO	**Dissolved Oxygen:** 12.68	mg/L
Date/Time Collected:	02/19/2009 10:45	**Other:**	
Sampler's Name:	Justin Fisher	**Flow:**	CFS
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:	02/19/2009 15:35		
Received By:	E McCrary		

TEST: Mercury **METHOD: EPA 245.1**

ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.13	0.2	A Wilson	2/23/2009

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