



**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

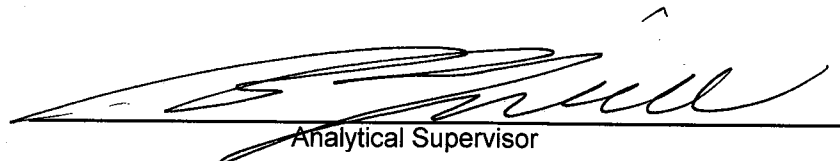
Michael Atchley
TDEC-WPC
Knoxville FO
3711 Middlebrook Pike
Knoxville, TN 37921

Lab ID: K00003143
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: K00003143002
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: 11/19/2009 09:53
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.26 pH Units
Chlorine, residual:
Conductivity: 53 uMHO
Temperature: 11.10
Dissolved Oxygen: 12.94 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	19	mg/L	3.8	10	M Chen	11/24/2009

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	11/23/2009

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	11/20/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	11/20/2009

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

Lab-Sample Number: K00003143003
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: 11/19/2009 10:05
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.26 pH Units
Chlorine, residual:
Conductivity: 55 uMHO
Temperature: 11.11
Dissolved Oxygen: 12.45 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	20	mg/L	3.8	10	M Chen	11/24/2009

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	11/23/2009

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	11/20/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	30	mg/L	10	10	A Peoples	11/20/2009

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

Lab-Sample Number: K00003143004
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: 11/19/2009 10:14
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.20 pH Units
Chlorine, residual:
Conductivity: 53 uMHO
Temperature: 11.02
Dissolved Oxygen: 12.53 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	20	mg/L	3.8	10	M Chen	11/24/2009

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	11/23/2009

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	11/20/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	19	mg/L	10	10	A Peebles	11/20/2009

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

Lab-Sample Number: K00003143005
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: 11/19/2009 10:23
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.23 pH Units
Chlorine, residual:
Conductivity: 54 uMHO
Temperature: 11.22
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	21	mg/L	3.8	10	M Chen	11/24/2009

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	11/23/2009

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	11/20/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	23	mg/L	10	10	A Peoples	11/20/2009

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

Lab-Sample Number: K00003143006
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: 11/19/2009 10:36
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.68 pH Units
Chlorine, residual:
Conductivity: 217 uMHO
Temperature: 13.70
Dissolved Oxygen: 12.04 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	11/24/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	84	mg/L	0.7	1	M Chen	11/23/2009

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	11/20/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	11/20/2009

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

Lab-Sample Number: K00003143007
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: 11/19/2009 11:05
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.70 pH Units
Chlorine, residual:
Conductivity: 219 uMHO
Temperature: 13.72
Dissolved Oxygen: 11.95 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Total Alkalinity	110	mg/L	3.8	10	M Chen	11/24/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Calcium hardness	85	mg/L	0.7	1	M Chen	11/23/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	11/20/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peoples	11/20/2009

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

Lab-Sample Number: K00003143008
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: 11/19/2009 11:17
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.49 pH Units
Chlorine, residual:
Conductivity: 77 uMHO
Temperature: 11.72
Dissolved Oxygen: 13.25 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	27	mg/L	3.8	10	M Chen	11/24/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	29	mg/L	0.7	1	M Chen	11/23/2009

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	11/20/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	13	mg/L	10	10	A Peoples	11/20/2009

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

Lab-Sample Number:	K00003143009	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	7.65 pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	Chlorine, residual:	
Sampler Project Name:	TVA ash spill	Conductivity:	250 uMHO
Project Site No.:	6	Temperature:	14.33
Station No.:	CLINC004.5RO	Dissolved Oxygen:	11.44 mg/L
Date/Time Collected:	11/19/2009 10:50	Other:	
Sampler's Name:	Geoff Klein	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:	11/19/2009 12:45		
Received By:	Ken Hitchman		

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	130	mg/L	3.8	10	M Chen	11/24/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	93	mg/L	0.7	1	M Chen	11/23/2009

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	11/20/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	10	mg/L	10	10	A Peoples	11/20/2009

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

Lab-Sample Number: K00003143010
Project Name: TVA-Ash Spill
Sample Description: Clinch River mile 4.5 near Sugar Grove Valley R
Sampler Project Name: TVA ash spill
Project Site No.: 6 dup
Station No.: CLINC004.5RO-FD
Date/Time Collected: 11/19/2009 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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.65 pH Units
Chlorine, residual:
Conductivity: 250 uMHO
Temperature: 14.33
Dissolved Oxygen: 11.44 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	120	mg/L	3.8	10	M Chen	11/24/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	95	mg/L	0.7	1	M Chen	11/23/2009

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	11/20/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peoples	11/20/2009

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



**STATE OF TENNESSEE
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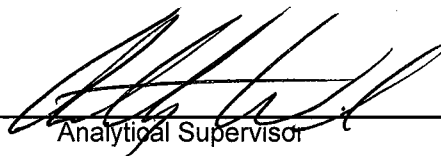
Michael Atchley
TDEC-WPC
Knoxville FO
3711 Middlebrook Pike
Knoxville, TN 37921

Lab ID: K00003143
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: K00003143001
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: 11/19/2009 11:40
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.64 pH Units
Chlorine, residual:
Conductivity: 27 uMHO
Temperature: 11.56
Dissolved Oxygen: 13.02 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/20/2009				M Pattanayek	11/20/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	170	µg/L	2.9	10	A Wilson	11/20/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	48	µg/L	6.4	10	M Pattanayek	11/20/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	11/20/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	11/20/2009
Barium	22	µg/L	2.5	5	M Pattanayek	11/20/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	11/20/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	11/20/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	11/20/2009
Cobalt	0.18J	µg/L	0.04	1	M Pattanayek	11/20/2009
Copper	U	µg/L	0.38	1	M Pattanayek	11/20/2009
Lead	U	µg/L	0.10	1	M Pattanayek	11/20/2009
Manganese	54	µg/L	0.42	1	M Pattanayek	11/20/2009
Nickel	0.93J	µg/L	0.25	1	M Pattanayek	11/20/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	11/20/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	11/20/2009
Thallium	0.09J	µg/L	0.03	1	M Pattanayek	11/20/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	11/20/2009
Zinc	U	µg/L	1.9	5	M Pattanayek	11/20/2009

Lab-Sample Number: K00003143001
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: 11/19/2009 11:40
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.64 pH Units
Chlorine, residual:
Conductivity: 27 uMHO
Temperature: 11.56
Dissolved Oxygen: 13.02 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	11/24/2009

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

Lab-Sample Number: K00003143002
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: 11/19/2009 09:53
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.26 pH Units
Chlorine, residual:
Conductivity: 53 uMHO
Temperature: 11.10
Dissolved Oxygen: 12.94 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/20/2009				M Pattanayek	11/20/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	260	µg/L	2.9	10	A Wilson	11/20/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	140	µg/L	6.4	10	M Pattanayek	11/20/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	11/20/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	11/20/2009
Barium	27	µg/L	2.5	5	M Pattanayek	11/20/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	11/20/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	11/20/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	11/20/2009
Cobalt	0.23J	µg/L	0.04	1	M Pattanayek	11/20/2009
Copper	U	µg/L	0.38	1	M Pattanayek	11/20/2009
Lead	0.24J	µg/L	0.10	1	M Pattanayek	11/20/2009
Manganese	66	µg/L	0.42	1	M Pattanayek	11/20/2009
Nickel	1.1	µg/L	0.25	1	M Pattanayek	11/20/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	11/20/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	11/20/2009
Thallium	0.07J	µg/L	0.03	1	M Pattanayek	11/20/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	11/20/2009
Zinc	U	µg/L	1.9	5	M Pattanayek	11/20/2009

Lab-Sample Number: K00003143002
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: 11/19/2009 09:53
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.26 pH Units
Chlorine, residual:
Conductivity: 53 uMHO
Temperature: 11.10
Dissolved Oxygen: 12.94 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	11/24/2009

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

Lab-Sample Number: K00003143003
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: 11/19/2009 10:05
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.26 pH Units
Chlorine, residual:
Conductivity: 55 uMHO
Temperature: 11.11
Dissolved Oxygen: 12.45 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/20/2009				M Pattanayek	11/20/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	620	µg/L	2.9	10	A Wilson	11/20/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	460	µg/L	6.4	10	M Pattanayek	11/20/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	11/20/2009
Arsenic	3.2J	µg/L	0.93	5	M Pattanayek	11/20/2009
Barium	41	µg/L	2.5	5	M Pattanayek	11/20/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	11/20/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	11/20/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	11/20/2009
Cobalt	0.54J	µg/L	0.04	1	M Pattanayek	11/20/2009
Copper	0.92J	µg/L	0.38	1	M Pattanayek	11/20/2009
Lead	1.0	µg/L	0.10	1	M Pattanayek	11/20/2009
Manganese	93	µg/L	0.42	1	M Pattanayek	11/20/2009
Nickel	1.7	µg/L	0.25	1	M Pattanayek	11/20/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	11/20/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	11/20/2009
Thallium	0.10J	µg/L	0.03	1	M Pattanayek	11/20/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	11/20/2009
Zinc	4.7J	µg/L	1.9	5	M Pattanayek	11/20/2009

Lab-Sample Number:	K00003143003	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	7.26 pH Units
Sample Description:	Approx 100' downstream from middle dredge pc	Chlorine, residual:	
Sampler Project Name:	TVA ash spill	Conductivity:	55 uMHO
Project Site No.:	2A	Temperature:	11.11
Station No.:	Dredge Plume	Dissolved Oxygen:	12.45 mg/L
Date/Time Collected:	11/19/2009 10:05	Other:	
Sampler's Name:	Geoff Klein	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:	11/19/2009 12:45		
Received By:	Ken Hitchman		

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	11/24/2009

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

Lab-Sample Number: K00003143004
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: 11/19/2009 10:14
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.20 pH Units
Chlorine, residual:
Conductivity: 53 uMHO
Temperature: 11.02
Dissolved Oxygen: 12.53 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/20/2009				M Pattanayek	11/20/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	470	µg/L	2.9	10	A Wilson	11/20/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	300	µg/L	6.4	10	M Pattanayek	11/20/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	11/20/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	11/20/2009
Barium	30	µg/L	2.5	5	M Pattanayek	11/20/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	11/20/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	11/20/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	11/20/2009
Cobalt	0.35J	µg/L	0.04	1	M Pattanayek	11/20/2009
Copper	0.41J	µg/L	0.38	1	M Pattanayek	11/20/2009
Lead	0.59J	µg/L	0.10	1	M Pattanayek	11/20/2009
Manganese	67	µg/L	0.42	1	M Pattanayek	11/20/2009
Nickel	1.3	µg/L	0.25	1	M Pattanayek	11/20/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	11/20/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	11/20/2009
Thallium	0.06J	µg/L	0.03	1	M Pattanayek	11/20/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	11/20/2009
Zinc	2.9J	µg/L	1.9	5	M Pattanayek	11/20/2009

Lab-Sample Number: K00003143004
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: 11/19/2009 10:14
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.20 pH Units
Chlorine, residual:
Conductivity: 53 uMHO
Temperature: 11.02
Dissolved Oxygen: 12.53 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	11/24/2009

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

Lab-Sample Number: K00003143005
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: 11/19/2009 10:23
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.23 pH Units
Chlorine, residual:
Conductivity: 54 uMHO
Temperature: 11.22
Dissolved Oxygen: 12.55 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/20/2009				M Pattanayek	11/20/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	650	µg/L	2.9	10	A Wilson	11/20/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	480	µg/L	6.4	10	M Pattanayek	11/20/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	11/20/2009
Arsenic	2.4J	µg/L	0.93	5	M Pattanayek	11/20/2009
Barium	38	µg/L	2.5	5	M Pattanayek	11/20/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	11/20/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	11/20/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	11/20/2009
Cobalt	0.53J	µg/L	0.04	1	M Pattanayek	11/20/2009
Copper	0.88J	µg/L	0.38	1	M Pattanayek	11/20/2009
Lead	0.96J	µg/L	0.10	1	M Pattanayek	11/20/2009
Manganese	84	µg/L	0.42	1	M Pattanayek	11/20/2009
Nickel	1.7	µg/L	0.25	1	M Pattanayek	11/20/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	11/20/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	11/20/2009
Thallium	0.07J	µg/L	0.03	1	M Pattanayek	11/20/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	11/20/2009
Zinc	4.1J	µg/L	1.9	5	M Pattanayek	11/20/2009

Lab-Sample Number: K00003143005
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: 11/19/2009 10:23
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.23 pH Units
Chlorine, residual:
Conductivity: 54 uMHO
Temperature: 11.22
Dissolved Oxygen: 12.55 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	11/24/2009

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

Lab-Sample Number: K00003143006
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: 11/19/2009 10:36
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.68 pH Units
Chlorine, residual:
Conductivity: 217 uMHO
Temperature: 13.70
Dissolved Oxygen: 12.04 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/20/2009				M Pattanayek	11/20/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	170	µg/L	2.9	10	A Wilson	11/20/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	120	µg/L	6.4	10	M Pattanayek	11/20/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	11/20/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	11/20/2009
Barium	39	µg/L	2.5	5	M Pattanayek	11/20/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	11/20/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	11/20/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	11/20/2009
Cobalt	0.20J	µg/L	0.04	1	M Pattanayek	11/20/2009
Copper	U	µg/L	0.38	1	M Pattanayek	11/20/2009
Lead	0.26J	µg/L	0.10	1	M Pattanayek	11/20/2009
Manganese	38	µg/L	0.42	1	M Pattanayek	11/20/2009
Nickel	1.5	µg/L	0.25	1	M Pattanayek	11/20/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	11/20/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	11/20/2009
Thallium	0.03J	µg/L	0.03	1	M Pattanayek	11/20/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	11/20/2009
Zinc	U	µg/L	1.9	5	M Pattanayek	11/20/2009

Lab-Sample Number: K00003143006
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: 11/19/2009 10:36
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.68 pH Units
Chlorine, residual:
Conductivity: 217 uMHO
Temperature: 13.70
Dissolved Oxygen: 12.04 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	11/24/2009

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

Lab-Sample Number: K00003143007
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: 11/19/2009 11:05
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.70 pH Units
Chlorine, residual:
Conductivity: 219 uMHO
Temperature: 13.72
Dissolved Oxygen: 11.95 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Digestion Metals	11/20/2009				M Pattanayek	11/20/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Iron	180	µg/L	2.9	10	A Wilson	11/20/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Aluminum	130	µg/L	6.4	10	M Pattanayek	11/20/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	11/20/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	11/20/2009
Barium	40	µg/L	2.5	5	M Pattanayek	11/20/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	11/20/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	11/20/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	11/20/2009
Cobalt	0.23J	µg/L	0.04	1	M Pattanayek	11/20/2009
Copper	U	µg/L	0.38	1	M Pattanayek	11/20/2009
Lead	0.33J	µg/L	0.10	1	M Pattanayek	11/20/2009
Manganese	44	µg/L	0.42	1	M Pattanayek	11/20/2009
Nickel	1.5	µg/L	0.25	1	M Pattanayek	11/20/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	11/20/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	11/20/2009
Thallium	0.03J	µg/L	0.03	1	M Pattanayek	11/20/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	11/20/2009
Zinc	2.8J	µg/L	1.9	5	M Pattanayek	11/20/2009

Lab-Sample Number: K00003143007
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: 11/19/2009 11:05
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.70 pH Units
Chlorine, residual:
Conductivity: 219 uMHO
Temperature: 13.72
Dissolved Oxygen: 11.95 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	11/24/2009	

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

Lab-Sample Number: K00003143008
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: 11/19/2009 11:17
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.49 pH Units
Chlorine, residual:
Conductivity: 77 uMHO
Temperature: 11.72
Dissolved Oxygen: 13.25 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/20/2009				M Pattanayek	11/20/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	400	µg/L	2.9	10	A Wilson	11/20/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	340	µg/L	6.4	10	M Pattanayek	11/20/2009
Antimony	0.73J	µg/L	0.33	1	M Pattanayek	11/20/2009
Arsenic	3.5J	µg/L	0.93	5	M Pattanayek	11/20/2009
Barium	48	µg/L	2.5	5	M Pattanayek	11/20/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	11/20/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	11/20/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	11/20/2009
Cobalt	0.40J	µg/L	0.04	1	M Pattanayek	11/20/2009
Copper	1.7	µg/L	0.38	1	M Pattanayek	11/20/2009
Lead	0.62J	µg/L	0.10	1	M Pattanayek	11/20/2009
Manganese	120	µg/L	0.42	1	M Pattanayek	11/20/2009
Nickel	1.4	µg/L	0.25	1	M Pattanayek	11/20/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	11/20/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	11/20/2009
Thallium	0.11J	µg/L	0.03	1	M Pattanayek	11/20/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	11/20/2009
Zinc	2.7J	µg/L	1.9	5	M Pattanayek	11/20/2009

Lab-Sample Number: K00003143008
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: 11/19/2009 11:17
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: 11/19/2009 12:45
Received By: Ken Hitchman

Field Determinations
pH: 7.49 pH Units
Chlorine, residual:
Conductivity: 77 uMHO
Temperature: 11.72
Dissolved Oxygen: 13.25 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	11/24/2009

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

Lab-Sample Number:	K00003143009	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	7.65 pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	Chlorine, residual:	
Sampler Project Name:	TVA ash spill	Conductivity:	250 uMHO
Project Site No.:	6	Temperature:	14.33
Station No.:	CLINC004.5RO	Dissolved Oxygen:	11.44 mg/L
Date/Time Collected:	11/19/2009 10:50	Other:	
Sampler's Name:	Geoff Klein	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:	11/19/2009 12:45		
Received By:	Ken Hitchman		

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Digestion Metals	11/20/2009				M Pattanayek	11/20/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Iron	100	µg/L	2.9	10	A Wilson	11/20/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Aluminum	61	µg/L	6.4	10	M Pattanayek	11/20/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	11/20/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	11/20/2009
Barium	39	µg/L	2.5	5	M Pattanayek	11/20/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	11/20/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	11/20/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	11/20/2009
Cobalt	0.16J	µg/L	0.04	1	M Pattanayek	11/20/2009
Copper	U	µg/L	0.38	1	M Pattanayek	11/20/2009
Lead	0.20J	µg/L	0.10	1	M Pattanayek	11/20/2009
Manganese	37	µg/L	0.42	1	M Pattanayek	11/20/2009
Nickel	1.4	µg/L	0.25	1	M Pattanayek	11/20/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	11/20/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	11/20/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	11/20/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	11/20/2009
Zinc	U	µg/L	1.9	5	M Pattanayek	11/20/2009

Lab-Sample Number:	K00003143009	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	7.65 pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	Chlorine, residual:	
Sampler Project Name:	TVA ash spill	Conductivity:	250 uMHO
Project Site No.:	6	Temperature:	14.33
Station No.:	CLINC004.5RO	Dissolved Oxygen:	11.44 mg/L
Date/Time Collected:	11/19/2009 10:50	Other:	
Sampler's Name:	Geoff Klein	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:	11/19/2009 12:45		
Received By:	Ken Hitchman		

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	11/24/2009

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

Lab-Sample Number:	K00003143010	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	7.65 pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	Chlorine, residual:	
Sampler Project Name:	TVA ash spill	Conductivity:	250 uMHO
Project Site No.:	6 dup	Temperature:	14.33
Station No.:	CLINC004.5RO-FD	Dissolved Oxygen:	11.44 mg/L
Date/Time Collected:	11/19/2009 10:50	Other:	
Sampler's Name:	Geoff Klein	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:	11/19/2009 12:45		
Received By:	Ken Hitchman		

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/20/2009				M Pattanayek	11/20/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	120	µg/L	2.9	10	A Wilson	12/20/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	83	µg/L	6.4	10	M Pattanayek	11/20/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	11/20/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	11/20/2009
Barium	45	µg/L	2.5	5	M Pattanayek	11/20/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	11/20/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	11/20/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	11/20/2009
Cobalt	0.21J	µg/L	0.04	1	M Pattanayek	11/20/2009
Copper	U	µg/L	0.38	1	M Pattanayek	11/20/2009
Lead	0.30J	µg/L	0.10	1	M Pattanayek	11/20/2009
Manganese	50	µg/L	0.42	1	M Pattanayek	11/20/2009
Nickel	1.5	µg/L	0.25	1	M Pattanayek	11/20/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	11/20/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	11/20/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	11/20/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	11/20/2009
Zinc	2.3J	µg/L	1.9	5	M Pattanayek	11/20/2009

Lab-Sample Number:	K00003143010	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	7.65 pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	Chlorine, residual:	
Sampler Project Name:	TVA ash spill	Conductivity:	250 uMHO
Project Site No.:	6 dup	Temperature:	14.33
Station No.:	CLINC004.5RO-FD	Dissolved Oxygen:	11.44 mg/L
Date/Time Collected:	11/19/2009 10:50	Other:	
Sampler's Name:	Geoff Klein	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:	11/19/2009 12:45		
Received By:	Ken Hitchman		

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	11/24/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected