



**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

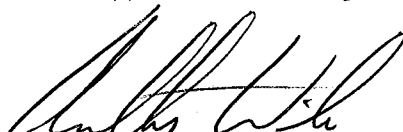
Michael Atchley
TDEC-WPC
Knoxville FO
3711 Middlebrook Pike
Knoxville, TN 37921

Lab ID: K00003024
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: K00003024001
Project Name: TVA-Ash Spill
Sample Description: Trip Blank
Sampler Project Name: TVA Ash Spill
Project Site No.: blank
Station No.: Trip Blank
Date/Time Collected: 10/22/2009 08:59
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/23/2009				M Pattanayek	10/23/2009

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

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	U	µg/L	6.4	10	M Pattanayek	10/23/2009
Antimony	U	µg/L	6.4	10	M Pattanayek	10/23/2009
Arsenic	U	µg/L	6.4	10	M Pattanayek	10/23/2009
Barium	U	µg/L	6.4	10	M Pattanayek	10/23/2009
Beryllium	U	µg/L	6.4	10	M Pattanayek	10/23/2009
Cadmium	U	µg/L	6.4	10	M Pattanayek	10/23/2009
Chromium	U	µg/L	6.4	10	M Pattanayek	10/23/2009
Cobalt	U	µg/L	6.4	10	M Pattanayek	10/23/2009
Copper	U	µg/L	6.4	10	M Pattanayek	10/23/2009
Lead	U	µg/L	6.4	10	M Pattanayek	10/23/2009
Manganese	U	µg/L	6.4	10	M Pattanayek	10/23/2009
Nickel	U	µg/L	6.4	10	M Pattanayek	10/23/2009
Selenium	U	µg/L	6.4	10	M Pattanayek	10/23/2009
Silver	U	µg/L	6.4	10	M Pattanayek	10/23/2009
Thallium	U	µg/L	6.4	10	M Pattanayek	10/23/2009
Vanadium	U	µg/L	6.4	10	M Pattanayek	10/23/2009
Zinc	U	µg/L	6.4	10	M Pattanayek	10/23/2009

Lab-Sample Number: K00003024001
Project Name: TVA-Ash Spill
Sample Description: Trip Blank
Sampler Project Name: TVA Ash Spill
Project Site No.: blank
Station No.: Trip Blank
Date/Time Collected: 10/22/2009 08:59
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.10J	µg/L	0.029	0.2	A Bass	10/27/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00003024002
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: 10/22/2009 11:53
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.59 pH Units
Chlorine, residual:
Conductivity: 27 uMHO
Temperature: 13.85
Dissolved Oxygen: 11.68 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/23/2009				M Pattanayek	10/23/2009

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

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	46	µg/L	6.4	10	M Pattanayek	10/23/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/23/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	10/23/2009
Barium	24	µg/L	2.5	5	M Pattanayek	10/23/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/23/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/23/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/23/2009
Cobalt	0.24J	µg/L	0.04	1	M Pattanayek	10/23/2009
Copper	U	µg/L	0.38	1	M Pattanayek	10/23/2009
Lead	U	µg/L	0.10	1	M Pattanayek	10/23/2009
Manganese	75	µg/L	0.42	1	M Pattanayek	10/23/2009
Nickel	1.1	µg/L	0.25	1	M Pattanayek	10/23/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/23/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/23/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	10/23/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/23/2009
Zinc	U	µg/L	1.9	5	M Pattanayek	10/23/2009

Lab-Sample Number: K00003024002
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: 10/22/2009 11:53
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.59 pH Units
Chlorine, residual:
Conductivity: 27 uMHO
Temperature: 13.85
Dissolved Oxygen: 11.68 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Mercury	0.07J	µg/L	0.029	0.2	A Bass	10/27/2009	

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

Lab-Sample Number: K00003024003
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: 10/22/2009 10:06
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.84 pH Units
Chlorine, residual:
Conductivity: 48 uMHO
Temperature: 12.39
Dissolved Oxygen: 10.88 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/23/2009				M Pattanayek	10/23/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	250	µg/L	2.9	10	A Wilson	10/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	100	µg/L	6.4	10	M Pattanayek	10/23/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/23/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	10/23/2009
Barium	26	µg/L	2.5	5	M Pattanayek	10/23/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/23/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/23/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/23/2009
Cobalt	0.23J	µg/L	0.04	1	M Pattanayek	10/23/2009
Copper	U	µg/L	0.38	1	M Pattanayek	10/23/2009
Lead	0.18J	µg/L	0.10	1	M Pattanayek	10/23/2009
Manganese	47	µg/L	0.42	1	M Pattanayek	10/23/2009
Nickel	1.2	µg/L	0.25	1	M Pattanayek	10/23/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/23/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/23/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	10/23/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/23/2009
Zinc	U	µg/L	1.9	5	M Pattanayek	10/23/2009

Lab-Sample Number: K00003024003
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: 10/22/2009 10:06
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.84 pH Units
Chlorine, residual:
Conductivity: 48 uMHO
Temperature: 12.39
Dissolved Oxygen: 10.88 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	10/27/2009

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

Lab-Sample Number:	K00003024004	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	7.60 pH Units
Sample Description:	Approx 100' downstream from middle dredge pc	Chlorine, residual:	
Sampler Project Name:	TVA Ash Spill	Conductivity:	49 uMHO
Project Site No.:	2A	Temperature:	12.53
Station No.:	Dredge Plume	Dissolved Oxygen:	10.71 mg/L
Date/Time Collected:	10/22/2009 10:20	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:	11/01/2009		
Date/Time Received:	10/22/2009 12:55		
Received By:	E McCrary		

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals					M Pattanayek	10/23/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	460	µg/L	2.9	10	A Wilson	10/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	390	µg/L	6.4	10	M Pattanayek	10/23/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/23/2009
Arsenic	4.4J	µg/L	0.93	5	M Pattanayek	10/23/2009
Barium	43	µg/L	2.5	5	M Pattanayek	10/23/2009
Beryllium	0.15J	µg/L	0.11	1	M Pattanayek	10/23/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/23/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/23/2009
Cobalt	0.50J	µg/L	0.04	1	M Pattanayek	10/23/2009
Copper	1.4	µg/L	0.38	1	M Pattanayek	10/23/2009
Lead	0.74J	µg/L	0.10	1	M Pattanayek	10/23/2009
Manganese	45	µg/L	0.42	1	M Pattanayek	10/23/2009
Nickel	1.6	µg/L	0.25	1	M Pattanayek	10/23/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/23/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/23/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	10/23/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/23/2009
Zinc	3.1J	µg/L	1.9	5	M Pattanayek	10/23/2009

Lab-Sample Number:	K00003024004	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	7.60 pH Units
Sample Description:	Approx 100' downstream from middle dredge pc	Chlorine, residual:	
Sampler Project Name:	TVA Ash Spill	Conductivity:	49 uMHO
Project Site No.:	2A	Temperature:	12.53
Station No.:	Dredge Plume	Dissolved Oxygen:	10.71 mg/L
Date/Time Collected:	10/22/2009 10:20	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:	11/01/2009		
Date/Time Received:	10/22/2009 12:55		
Received By:	E McCrary		

TEST: Mercury		METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Mercury	0.05J	µg/L	0.029	0.2	A Bass	10/27/2009	

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00003024005
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: 10/22/2009 10:32
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.37 pH Units
Chlorine, residual:
Conductivity: 50 uMHO
Temperature: 12.82
Dissolved Oxygen: 10.69 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/23/2009				M Pattanayek	10/23/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	320	µg/L	2.9	10	A Wilson	10/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	290	µg/L	6.4	10	M Pattanayek	10/23/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/23/2009
Arsenic	1.9J	µg/L	0.93	5	M Pattanayek	10/23/2009
Barium	33	µg/L	2.5	5	M Pattanayek	10/23/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/23/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/23/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/23/2009
Cobalt	0.42J	µg/L	0.04	1	M Pattanayek	10/23/2009
Copper	0.90J	µg/L	0.38	1	M Pattanayek	10/23/2009
Lead	0.56J	µg/L	0.10	1	M Pattanayek	10/23/2009
Manganese	46	µg/L	0.42	1	M Pattanayek	10/23/2009
Nickel	1.5	µg/L	0.25	1	M Pattanayek	10/23/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/23/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/23/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	10/23/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/23/2009
Zinc	2.7J	µg/L	1.9	5	M Pattanayek	10/23/2009

Lab-Sample Number: K00003024005
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: 10/22/2009 10:32
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.37 pH Units
Chlorine, residual:
Conductivity: 50 uMHO
Temperature: 12.82
Dissolved Oxygen: 10.69 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.08J	µg/L	0.029	0.2	A Bass	10/27/2009

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

Lab-Sample Number: K00003024006
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: 10/22/2009 10:44
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.31 pH Units
Chlorine, residual:
Conductivity: 50 uMHO
Temperature: 13.18
Dissolved Oxygen: 10.74 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Digestion Metals	10/23/2009				M Pattanayek	10/23/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Iron	380	µg/L	2.9	10	A Wilson	10/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Aluminum	460	µg/L	6.4	10	M Pattanayek	10/23/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/23/2009
Arsenic	4.8J	µg/L	0.93	5	M Pattanayek	10/23/2009
Barium	43	µg/L	2.5	5	M Pattanayek	10/23/2009
Beryllium	0.15J	µg/L	0.11	1	M Pattanayek	10/23/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/23/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/23/2009
Cobalt	0.60J	µg/L	0.04	1	M Pattanayek	10/23/2009
Copper	1.9	µg/L	0.38	1	M Pattanayek	10/23/2009
Lead	0.95J	µg/L	0.10	1	M Pattanayek	10/23/2009
Manganese	47	µg/L	0.42	1	M Pattanayek	10/23/2009
Nickel	1.9	µg/L	0.25	1	M Pattanayek	10/23/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/23/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/23/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	10/23/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/23/2009
Zinc	3.3J	µg/L	1.9	5	M Pattanayek	10/23/2009

Lab-Sample Number: K00003024006
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: 10/22/2009 10:44
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.31 pH Units
Chlorine, residual:
Conductivity: 50 uMHO
Temperature: 13.18
Dissolved Oxygen: 10.74 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.07J	µg/L	0.029	0.2	A Bass	10/27/2009

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

Lab-Sample Number: K00003024007
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 4FB
Station No.: EMORY000.1RO
Date/Time Collected: 10/22/2009 10:56
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals					M Pattanayek	10/23/2009

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

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	U	µg/L	6.4	10	M Pattanayek	10/23/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/23/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	10/23/2009
Barium	U	µg/L	2.5	5	M Pattanayek	10/23/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/23/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/23/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/23/2009
Cobalt	U	µg/L	0.04	1	M Pattanayek	10/23/2009
Copper	U	µg/L	0.38	1	M Pattanayek	10/23/2009
Lead	U	µg/L	0.10	1	M Pattanayek	10/23/2009
Manganese	U	µg/L	0.42	1	M Pattanayek	10/23/2009
Nickel	U	µg/L	0.25	1	M Pattanayek	10/23/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/23/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/23/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	10/23/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/23/2009
Zinc	U	µg/L	1.9	5	M Pattanayek	10/23/2009

Lab-Sample Number: K00003024007
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 4FB
Station No.: EMORY000.1RO
Date/Time Collected: 10/22/2009 10:56
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.07J	µg/L	0.029	0.2	A Bass	10/27/2009

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

Lab-Sample Number: K00003024008
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: 10/22/2009 10:56
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.34 pH Units
Chlorine, residual:
Conductivity: 73 uMHO
Temperature: 14.07
Dissolved Oxygen: 10.08 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/23/2009				M Pattanayek	10/23/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	270	µg/L	2.9	10	A Wilson	10/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	240	µg/L	6.4	10	M Pattanayek	10/23/2009
Antimony	0.49J	µg/L	0.33	1	M Pattanayek	10/23/2009
Arsenic	2.9J	µg/L	0.93	5	M Pattanayek	10/23/2009
Barium	37	µg/L	2.5	5	M Pattanayek	10/23/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/23/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/23/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/23/2009
Cobalt	0.37J	µg/L	0.04	1	M Pattanayek	10/23/2009
Copper	0.90J	µg/L	0.38	1	M Pattanayek	10/23/2009
Lead	0.56J	µg/L	0.10	1	M Pattanayek	10/23/2009
Manganese	39	µg/L	0.42	1	M Pattanayek	10/23/2009
Nickel	1.6	µg/L	0.25	1	M Pattanayek	10/23/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/23/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/23/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	10/23/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/23/2009
Zinc	U	µg/L	1.9	5	M Pattanayek	10/23/2009

Lab-Sample Number: K00003024008
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: 10/22/2009 10:56
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.34 pH Units
Chlorine, residual:
Conductivity: 73 uMHO
Temperature: 14.07
Dissolved Oxygen: 10.08 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	10/27/2009	

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

Lab-Sample Number: K00003024009
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: 10/22/2009 10:22
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.60 pH Units
Chlorine, residual:
Conductivity: 185 uMHO
Temperature: 14.66
Dissolved Oxygen: 9.33 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/23/2009				M Pattanayek	10/23/2009

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

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	180	µg/L	6.4	10	M Pattanayek	10/23/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/23/2009
Arsenic	2.3J	µg/L	0.93	5	M Pattanayek	10/23/2009
Barium	43	µg/L	2.5	5	M Pattanayek	10/23/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/23/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/23/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/23/2009
Cobalt	0.30J	µg/L	0.04	1	M Pattanayek	10/23/2009
Copper	0.67J	µg/L	0.38	1	M Pattanayek	10/23/2009
Lead	0.40J	µg/L	0.10	1	M Pattanayek	10/23/2009
Manganese	42	µg/L	0.42	1	M Pattanayek	10/23/2009
Nickel	1.7	µg/L	0.25	1	M Pattanayek	10/23/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/23/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/23/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	10/23/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/23/2009
Zinc	U	µg/L	1.9	5	M Pattanayek	10/23/2009

Lab-Sample Number: K00003024009
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: 10/22/2009 10:22
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.60 pH Units
Chlorine, residual:
Conductivity: 185 uMHO
Temperature: 14.66
Dissolved Oxygen: 9.33 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Mercury	0.12J	µg/L	0.029	0.2	A Bass	10/27/2009	

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00003024010
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: 10/22/2009 11:28
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.54 pH Units
Chlorine, residual:
Conductivity: 65 uMHO
Temperature: 13.69
Dissolved Oxygen: 10.47 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/23/2009				M Pattanayek	10/23/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	320	µg/L	2.9	10	A Wilson	10/22/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	380	µg/L	6.4	10	M Pattanayek	10/23/2009
Antimony	0.64J	µg/L	0.33	1	M Pattanayek	10/23/2009
Arsenic	11	µg/L	0.93	5	M Pattanayek	10/23/2009
Barium	44	µg/L	2.5	5	M Pattanayek	10/23/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/23/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/23/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/23/2009
Cobalt	0.40J	µg/L	0.04	1	M Pattanayek	10/23/2009
Copper	2.3	µg/L	0.38	1	M Pattanayek	10/23/2009
Lead	0.58J	µg/L	0.10	1	M Pattanayek	10/23/2009
Manganese	41	µg/L	0.42	1	M Pattanayek	10/23/2009
Nickel	1.4	µg/L	0.25	1	M Pattanayek	10/23/2009
Selenium	2.8J	µg/L	1.3	5	M Pattanayek	10/23/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/23/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	10/23/2009
Vanadium	14	µg/L	3.4	5	M Pattanayek	10/23/2009
Zinc	2.1J	µg/L	1.9	5	M Pattanayek	10/23/2009

Lab-Sample Number: K00003024010
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: 10/22/2009 11:28
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.54 pH Units
Chlorine, residual:
Conductivity: 65 uMHO
Temperature: 13.69
Dissolved Oxygen: 10.47 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.09J	µg/L	0.029	0.2	A Bass	10/27/2009

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

Lab-Sample Number:	K00003024011	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	7.58 pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	Chlorine, residual:	
Sampler Project Name:	TVA Ash Spill	Conductivity:	242 uMHO
Project Site No.:	6	Temperature:	14.79
Station No.:	CLINC004.5RO	Dissolved Oxygen:	8.69 mg/L
Date/Time Collected:	10/22/2009 11:06	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:	11/01/2009		
Date/Time Received:	10/22/2009 12:55		
Received By:	E McCrary		

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/23/2009				M Pattanayek	10/23/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	94	µg/L	2.9	10	A Wilson	10/29/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	59	µg/L	6.4	10	M Pattanayek	10/23/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/23/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	10/23/2009
Barium	33	µg/L	2.5	5	M Pattanayek	10/23/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/23/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/23/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/23/2009
Cobalt	0.18J	µg/L	0.04	1	M Pattanayek	10/23/2009
Copper	U	µg/L	0.38	1	M Pattanayek	10/23/2009
Lead	0.17J	µg/L	0.10	1	M Pattanayek	10/23/2009
Manganese	34	µg/L	0.42	1	M Pattanayek	10/23/2009
Nickel	1.4	µg/L	0.25	1	M Pattanayek	10/23/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/23/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/23/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	10/23/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/23/2009
Zinc	U	µg/L	1.9	5	M Pattanayek	10/23/2009

Lab-Sample Number:	K00003024011	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	7.58 pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	Chlorine, residual:	
Sampler Project Name:	TVA Ash Spill	Conductivity:	242 uMHO
Project Site No.:	6	Temperature:	14.79
Station No.:	CLINC004.5RO	Dissolved Oxygen:	8.69 mg/L
Date/Time Collected:	10/22/2009 11:06	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:	11/01/2009		
Date/Time Received:	10/22/2009 12:55		
Received By:	E McCrary		

TEST: Mercury		METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Mercury	0.10J	µg/L	0.029	0.2	A Bass	10/27/2009	

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

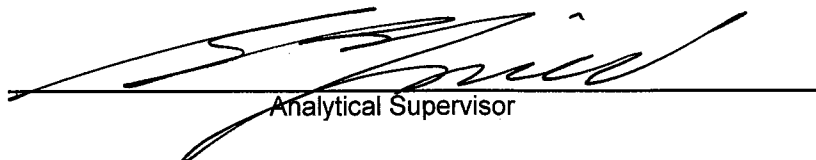
Michael Atchley
TDEC-WPC
Knoxville FO
3711 Middlebrook Pike
Knoxville, TN 37921

Lab ID: K00003024
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: K00003024001
Project Name: TVA-Ash Spill
Sample Description: Trip Blank
Sampler Project Name: TVA Ash Spill
Project Site No.: blank
Station No.: Trip Blank
Date/Time Collected: 10/22/2009 08:59
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Total Alkalinity	U	mg/L	3.8	10	M Chen	10/28/2009	

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Calcium hardness	U	mg/L	0.7	1	M Chen	10/27/2009	

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

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

Lab-Sample Number: K00003024002
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: 10/22/2009 11:53
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.59 pH Units
Chlorine, residual:
Conductivity: 27 uMHO
Temperature: 13.85
Dissolved Oxygen: 11.68 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	10/28/2009

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	10/27/2009

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	10/23/2009

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

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

Lab-Sample Number: K00003024003
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: 10/22/2009 10:06
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.84 pH Units
Chlorine, residual:
Conductivity: 48 uMHO
Temperature: 12.39
Dissolved Oxygen: 10.88 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	11/10/2009

Total Alkalinity - Analyzed beyond the Priority Date
 Total Alkalinity - Analyzed beyond the Holding Time

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	10/27/2009

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	10/23/2009

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

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

Lab-Sample Number:	K00003024004	Field Determinations	
Project Name:	TVA-Ash Spill	pH:	7.60 pH Units
Sample Description:	Approx 100' downstream from middle dredge pc	Chlorine, residual:	
Sampler Project Name:	TVA Ash Spill	Conductivity:	49 uMHO
Project Site No.:	2A	Temperature:	12.53
Station No.:	Dredge Plume	Dissolved Oxygen:	10.71 mg/L
Date/Time Collected:	10/22/2009 10:20	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:	11/01/2009		
Date/Time Received:	10/22/2009 12:55		
Received By:	E McCrary		

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	13	mg/L	3.8	10	M Chen	10/28/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	16	mg/L	0.7	1	M Chen	10/27/2009

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	10/23/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	41	mg/L	10	10	A Peebles	10/23/2009

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

Lab-Sample Number: K00003024005
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: 10/22/2009 10:32
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.37 pH Units
Chlorine, residual:
Conductivity: 50 uMHO
Temperature: 12.82
Dissolved Oxygen: 10.69 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	10/28/2009

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	10/27/2009

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	10/23/2009

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

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

Lab-Sample Number: K00003024006
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: 10/22/2009 10:44
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.31 pH Units
Chlorine, residual:
Conductivity: 50 uMHO
Temperature: 13.18
Dissolved Oxygen: 10.74 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	10/28/2009	

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	10/27/2009	

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	10/23/2009	

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

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

Lab-Sample Number: K00003024007
Project Name: TVA-Ash Spill
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 4FB
Station No.: EMORY000.1RO
Date/Time Collected: 10/22/2009 10:56
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Total Alkalinity	U	mg/L	3.8	10	M Chen	10/28/2009	

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Calcium hardness	U	mg/L	0.7	1	M Chen	10/27/2009	

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

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

Lab-Sample Number: K00003024008
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: 10/22/2009 10:56
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.34 pH Units
Chlorine, residual:
Conductivity: 73 uMHO
Temperature: 14.07
Dissolved Oxygen: 10.08 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Total Alkalinity	56	mg/L	3.8	10	M Chen	10/28/2009	

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Calcium hardness	34	mg/L	0.7	1	M Chen	10/27/2009	

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	10/23/2009	

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

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

Lab-Sample Number: K00003024009
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: 10/22/2009 10:22
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.60 pH Units
Chlorine, residual:
Conductivity: 185 uMHO
Temperature: 14.66
Dissolved Oxygen: 9.33 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	83	mg/L	3.8	10	M Chen	10/28/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	72	mg/L	0.7	1	M Chen	10/27/2009

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	10/23/2009

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

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

Lab-Sample Number: K00003024010
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: 10/22/2009 11:28
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.54 pH.Units
Chlorine, residual:
Conductivity: 65 uMHO
Temperature: 13.69
Dissolved Oxygen: 10.47 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	10/28/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	36	mg/L	0.7	1	M Chen	10/27/2009

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	10/23/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	15	mg/L	10	10	A Peeples	10/23/2009

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

Lab-Sample Number: K00003024011
Project Name: TVA-Ash Spill
Sample Description: Clinch River mile 4.5 near Sugar Grove Valley F
Sampler Project Name: TVA Ash Spill
Project Site No.: 6
Station No.: CLINC004.5RO
Date/Time Collected: 10/22/2009 11:06
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: 11/01/2009
Date/Time Received: 10/22/2009 12:55
Received By: E McCrary

Field Determinations
pH: 7.58 pH Units
Chlorine, residual:
Conductivity: 242 uMHO
Temperature: 14.79
Dissolved Oxygen: 8.69 mg/L
Other:
Flow: CFS

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	10/28/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	100	mg/L	0.7	1	M Chen	10/27/2009

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	10/23/2009

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

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