



**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

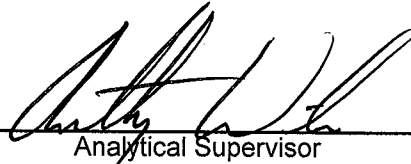
Michael Atchley
TDEC-WPC
Knoxville FO
3711 Middlebrook Pike
Knoxville, TN 37921

Lab ID: K00002739
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: K00002739001
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: 08/13/2009 12:21
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: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.74 pH Units
Chlorine, residual:
Conductivity: 91 uMHO
Temperature: 26.65
Dissolved Oxygen: 7.55 mg/L
Other:
Flow: CFS

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 08/17/2009 | | | | S Ufegbu | 8/17/2009 |

| TEST: ICP | | METHOD: EPA 200.7 | | | | |
|-----------|--------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Iron | 210 | µg/L | 2.9 | 10 | A Bass | 8/18/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|------|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Aluminum | 45 | µg/L | 6.4 | 10 | M Pattanayek | 8/17/2009 |
| Antimony | U | µg/L | 0.33 | 1 | M Pattanayek | 8/17/2009 |
| Arsenic | U | µg/L | 0.93 | 5 | M Pattanayek | 8/17/2009 |
| Barium | 28 | µg/L | 2.5 | 5 | M Pattanayek | 8/17/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 8/17/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 8/17/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 8/17/2009 |
| Cobalt | 0.27J | µg/L | 0.04 | 1 | M Pattanayek | 8/17/2009 |
| Copper | 4.6 | µg/L | 0.38 | 1 | M Pattanayek | 8/17/2009 |
| Lead | 0.13J | µg/L | 0.10 | 1 | M Pattanayek | 8/17/2009 |
| Manganese | 62 | µg/L | 0.42 | 1 | M Pattanayek | 8/17/2009 |
| Nickel | U | µg/L | 0.25 | 1 | M Pattanayek | 8/17/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 8/17/2009 |
| Silver | 0.030J | µg/L | 0.03 | 0.25 | M Pattanayek | 8/17/2009 |
| Thallium | 0.28J | µg/L | 0.03 | 1 | M Pattanayek | 8/17/2009 |
| Vanadium | U | µg/L | 3.4 | 5 | M Pattanayek | 8/17/2009 |
| Zinc | 3.1J | µg/L | 1.9 | 5 | M Pattanayek | 8/17/2009 |

Lab-Sample Number: K00002739001
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: 08/13/2009 12:21
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: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.74 pH Units
Chlorine, residual:
Conductivity: 91 uMHO
Temperature: 26.65
Dissolved Oxygen: 7.55 mg/L
Other:
Flow: CFS

| TEST: Mercury | | METHOD: EPA 245.1 | | | | |
|---------------|--------|-------------------|-------|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Mercury | 0.03J | µg/L | 0.029 | 0.2 | A Bass | 8/19/2009 |

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002739002
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: 08/13/2009 10:00
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.69 pH Units
Chlorine, residual:
Conductivity: 106 uMHO
Temperature: 27.42
Dissolved Oxygen: 7.53 mg/L
Other:
Flow: CFS

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 08/17/2009 | | | | S Ufegbu | 8/17/2009 |

| TEST: ICP | | METHOD: EPA 200.7 | | | | |
|-----------|--------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Iron | 400 | µg/L | 2.9 | 10 | A Bass | 8/18/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|------|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Aluminum | 620 | µg/L | 6.4 | 10 | M Pattanayek | 8/17/2009 |
| Antimony | U | µg/L | 0.33 | 1 | M Pattanayek | 8/17/2009 |
| Arsenic | 7.2 | µg/L | 0.93 | 5 | M Pattanayek | 8/17/2009 |
| Barium | 53 | µg/L | 2.5 | 5 | M Pattanayek | 8/17/2009 |
| Beryllium | 0.13J | µg/L | 0.11 | 1 | M Pattanayek | 8/17/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 8/17/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 8/17/2009 |
| Cobalt | 0.56J | µg/L | 0.04 | 1 | M Pattanayek | 8/17/2009 |
| Copper | 2.3 | µg/L | 0.38 | 1 | M Pattanayek | 8/17/2009 |
| Lead | 0.84J | µg/L | 0.10 | 1 | M Pattanayek | 8/17/2009 |
| Manganese | 72 | µg/L | 0.42 | 1 | M Pattanayek | 8/17/2009 |
| Nickel | 0.92J | µg/L | 0.25 | 1 | M Pattanayek | 8/17/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 8/17/2009 |
| Silver | U | µg/L | 0.03 | 0.25 | M Pattanayek | 8/17/2009 |
| Thallium | 0.18J | µg/L | 0.03 | 1 | M Pattanayek | 8/17/2009 |
| Vanadium | 5.0 | µg/L | 3.4 | 5 | M Pattanayek | 8/17/2009 |
| Zinc | 4.0J | µg/L | 1.9 | 5 | M Pattanayek | 8/17/2009 |

Lab-Sample Number: K00002739002
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: 08/13/2009 10:00
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations

pH: 7.69 pH Units
Chlorine, residual:
Conductivity: 106 uMHO
Temperature: 27.42
Dissolved Oxygen: 7.53 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 | 8/19/2009 |

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

Lab-Sample Number: K00002739003
Project Name: TVA-Ash Spill
Sample Description: Approx. 100' d/s from middle dredge point
Sampler Project Name: TVA Ash Spill
Project Site No.: 2A
Station No.: Dredge Plume
Date/Time Collected: 08/13/2009 10:15
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: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.52 pH Units
Chlorine, residual:
Conductivity: 204 uMHO
Temperature: 24.17
Dissolved Oxygen: 7.27 mg/L
Other:
Flow: CFS

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 08/17/2009 | | | | S Ufegbu | 8/17/2009 |

| TEST: ICP | | METHOD: EPA 200.7 | | | | |
|-----------|--------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Iron | 270 | µg/L | 2.9 | 10 | A Bass | 8/18/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|------|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Aluminum | 320 | µg/L | 6.4 | 10 | M Pattanayek | 8/17/2009 |
| Antimony | U | µg/L | 0.33 | 1 | M Pattanayek | 8/17/2009 |
| Arsenic | 2.5J | µg/L | 0.93 | 5 | M Pattanayek | 8/17/2009 |
| Barium | 48 | µg/L | 2.5 | 5 | M Pattanayek | 8/17/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 8/17/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 8/17/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 8/17/2009 |
| Cobalt | 0.40J | µg/L | 0.04 | 1 | M Pattanayek | 8/17/2009 |
| Copper | 2.9 | µg/L | 0.38 | 1 | M Pattanayek | 8/17/2009 |
| Lead | 0.48J | µg/L | 0.10 | 1 | M Pattanayek | 8/17/2009 |
| Manganese | 62 | µg/L | 0.42 | 1 | M Pattanayek | 8/17/2009 |
| Nickel | 0.82J | µg/L | 0.25 | 1 | M Pattanayek | 8/17/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 8/17/2009 |
| Silver | U | µg/L | 0.03 | 0.25 | M Pattanayek | 8/17/2009 |
| Thallium | 0.083J | µg/L | 0.03 | 1 | M Pattanayek | 8/17/2009 |
| Vanadium | U | µg/L | 3.4 | 5 | M Pattanayek | 8/17/2009 |
| Zinc | 5.6 | µg/L | 1.9 | 5 | M Pattanayek | 8/17/2009 |

Lab-Sample Number: K00002739003
Project Name: TVA-Ash Spill
Sample Description: Approx. 100' d/s from middle dredge point
Sampler Project Name: TVA Ash Spill
Project Site No.: 2A
Station No.: Dredge Plume
Date/Time Collected: 08/13/2009 10:15
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: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.52 pH Units
Chlorine, residual:
Conductivity: 204 uMHO
Temperature: 24.17
Dissolved Oxygen: 7.27 mg/L
Other:
Flow: CFS

| TEST: Mercury | | METHOD: EPA 245.1 | | | | |
|---------------|--------|-------------------|-------|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Mercury | 0.03J | µg/L | 0.029 | 0.2 | A Bass | 8/19/2009 |

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

Lab-Sample Number: K00002739004
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: 08/13/2009 10:31
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: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations

pH: 7.73 pH Units
Chlorine, residual:
Conductivity: 157 uMHO
Temperature: 25.70
Dissolved Oxygen: 8.12 mg/L
Other:
Flow: CFS

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 08/17/2009 | | | | S Ufegbu | 8/17/2009 |

| TEST: ICP | | METHOD: EPA 200.7 | | | | |
|-----------|--------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Iron | 220 | µg/L | 2.9 | 10 | A Bass | 8/18/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|------|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Aluminum | 220 | µg/L | 6.4 | 10 | M Pattanayek | 8/17/2009 |
| Antimony | U | µg/L | 0.33 | 1 | M Pattanayek | 8/17/2009 |
| Arsenic | 2.4J | µg/L | 0.93 | 5 | M Pattanayek | 8/17/2009 |
| Barium | 40 | µg/L | 2.5 | 5 | M Pattanayek | 8/17/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 8/17/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 8/17/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 8/17/2009 |
| Cobalt | 0.29J | µg/L | 0.04 | 1 | M Pattanayek | 8/17/2009 |
| Copper | 2.7 | µg/L | 0.38 | 1 | M Pattanayek | 8/17/2009 |
| Lead | 0.31J | µg/L | 0.10 | 1 | M Pattanayek | 8/17/2009 |
| Manganese | 59 | µg/L | 0.42 | 1 | M Pattanayek | 8/17/2009 |
| Nickel | U | µg/L | 0.25 | 1 | M Pattanayek | 8/17/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 8/17/2009 |
| Silver | U | µg/L | 0.03 | 0.25 | M Pattanayek | 8/17/2009 |
| Thallium | 0.063J | µg/L | 0.03 | 1 | M Pattanayek | 8/17/2009 |
| Vanadium | U | µg/L | 3.4 | 5 | M Pattanayek | 8/17/2009 |
| Zinc | 5.8 | µg/L | 1.9 | 5 | M Pattanayek | 8/17/2009 |

Lab-Sample Number: K00002739004
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: 08/13/2009 10:31
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: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.73 pH Units
Chlorine, residual:
Conductivity: 157 uMHO
Temperature: 25.70
Dissolved Oxygen: 8.12 mg/L
Other:
Flow: CFS

| TEST: Mercury | | METHOD: EPA 245.1 | | | | | |
|---------------|--------|-------------------|-------|-----|--------------|-----------|--|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE | |
| Mercury | 0.03J | µg/L | 0.029 | 0.2 | A Bass | 8/19/2009 | |

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

Lab-Sample Number: K00002739005
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: 08/13/2009 10:42
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: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.63 pH Units
Chlorine, residual:
Conductivity: 256 uMHO
Temperature: 22.48
Dissolved Oxygen: 7.49 mg/L
Other:
Flow: CFS

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 08/17/2009 | | | | S Ufegbu | 8/17/2009 |

| TEST: ICP | | METHOD: EPA 200.7 | | | | |
|-----------|--------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Iron | 210 | µg/L | 2.9 | 10 | A Bass | 8/18/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|------|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Aluminum | 200 | µg/L | 6.4 | 10 | M Pattanayek | 8/17/2009 |
| Antimony | U | µg/L | 0.33 | 1 | M Pattanayek | 8/17/2009 |
| Arsenic | 1.4J | µg/L | 0.93 | 5 | M Pattanayek | 8/17/2009 |
| Barium | 42 | µg/L | 2.5 | 5 | M Pattanayek | 8/17/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 8/17/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 8/17/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 8/17/2009 |
| Cobalt | 0.30J | µg/L | 0.04 | 1 | M Pattanayek | 8/17/2009 |
| Copper | 2.2 | µg/L | 0.38 | 1 | M Pattanayek | 8/17/2009 |
| Lead | 0.79J | µg/L | 0.10 | 1 | M Pattanayek | 8/17/2009 |
| Manganese | 53 | µg/L | 0.42 | 1 | M Pattanayek | 8/17/2009 |
| Nickel | U | µg/L | 0.25 | 1 | M Pattanayek | 8/17/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 8/17/2009 |
| Silver | U | µg/L | 0.03 | 0.25 | M Pattanayek | 8/17/2009 |
| Thallium | 0.34J | µg/L | 0.03 | 1 | M Pattanayek | 8/17/2009 |
| Vanadium | U | µg/L | 3.4 | 5 | M Pattanayek | 8/17/2009 |
| Zinc | 5.0 | µg/L | 1.9 | 5 | M Pattanayek | 8/17/2009 |

Lab-Sample Number: K00002739005
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: 08/13/2009 10:42
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: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.63 pH Units
Chlorine, residual:
Conductivity: 256 uMHO
Temperature: 22.48
Dissolved Oxygen: 7.49 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 | 8/19/2009 |

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

Lab-Sample Number: K00002739006
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: 08/13/2009 10:57
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: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.77 pH Units
Chlorine, residual:
Conductivity: 249 uMHO
Temperature: 23.08
Dissolved Oxygen: 8.20 mg/L
Other:
Flow: CFS

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 08/17/2009 | | | | S Ufegbu | 8/17/2009 |

| TEST: ICP | | METHOD: EPA 200.7 | | | | |
|-----------|--------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Iron | 320 | µg/L | 2.9 | 10 | A Bass | 8/18/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|------|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Aluminum | 300 | µg/L | 6.4 | 10 | A Wilson | 8/17/2009 |
| Antimony | U | µg/L | 0.33 | 1 | A Wilson | 8/17/2009 |
| Arsenic | 2.6J | µg/L | 0.93 | 5 | A Wilson | 8/17/2009 |
| Barium | 52 | µg/L | 2.5 | 5 | A Wilson | 8/17/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | A Wilson | 8/17/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | A Wilson | 8/17/2009 |
| Chromium | U | µg/L | 2.0 | 5 | A Wilson | 8/17/2009 |
| Cobalt | 0.43J | µg/L | 0.04 | 1 | A Wilson | 8/17/2009 |
| Copper | 2.2 | µg/L | 0.38 | 1 | A Wilson | 8/17/2009 |
| Lead | 0.40J | µg/L | 0.10 | 1 | A Wilson | 8/17/2009 |
| Manganese | 85 | µg/L | 0.42 | 1 | A Wilson | 8/17/2009 |
| Nickel | 0.35J | µg/L | 0.25 | 1 | A Wilson | 8/17/2009 |
| Selenium | U | µg/L | 1.3 | 5 | A Wilson | 8/17/2009 |
| Silver | U | µg/L | 0.03 | 0.25 | A Wilson | 8/17/2009 |
| Thallium | 0.050J | µg/L | 0.03 | 1 | A Wilson | 8/17/2009 |
| Vanadium | U | µg/L | 3.4 | 5 | A Wilson | 8/17/2009 |
| Zinc | 4.1J | µg/L | 1.9 | 5 | A Wilson | 8/17/2009 |

Lab-Sample Number: K00002739006
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: 08/13/2009 10:57
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: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.77 pH Units
Chlorine, residual:
Conductivity: 249 uMHO
Temperature: 23.08
Dissolved Oxygen: 8.20 mg/L
Other:
Flow: CFS

| TEST: Mercury | | METHOD: EPA 245.1 | | | | | |
|---------------|--------|-------------------|-------|-----|--------------|-----------|--|
| ANALYTE | RESULT | UNITS | MDL | MLQ | ANALYZED BY: | DATE | |
| Mercury | U | µg/L | 0.029 | 0.2 | A Bass | 8/19/2009 | |

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002739007
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: 08/13/2009 11:12
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: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.78 pH Units
Chlorine, residual:
Conductivity: 265 uMHO
Temperature: 24.62
Dissolved Oxygen: 8.04 mg/L
Other:
Flow: CFS

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 08/17/2009 | | | | S Ufegbu | 8/17/2009 |

| TEST: ICP | | METHOD: EPA 200.7 | | | | |
|-----------|--------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Iron | 190 | µg/L | 2.9 | 10 | A Bass | 8/18/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|------|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Aluminum | 190 | µg/L | 6.4 | 10 | M Pattanayek | 8/17/2009 |
| Antimony | 0.60J | µg/L | 0.33 | 1 | M Pattanayek | 8/17/2009 |
| Arsenic | 1.6J | µg/L | 0.93 | 5 | M Pattanayek | 8/17/2009 |
| Barium | 45 | µg/L | 2.5 | 5 | M Pattanayek | 8/17/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 8/17/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 8/17/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 8/17/2009 |
| Cobalt | 0.29J | µg/L | 0.04 | 1 | M Pattanayek | 8/17/2009 |
| Copper | 2.3 | µg/L | 0.38 | 1 | M Pattanayek | 8/17/2009 |
| Lead | 0.24J | µg/L | 0.10 | 1 | M Pattanayek | 8/17/2009 |
| Manganese | 41 | µg/L | 0.42 | 1 | M Pattanayek | 8/17/2009 |
| Nickel | U | µg/L | 0.25 | 1 | M Pattanayek | 8/17/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 8/17/2009 |
| Silver | 0.057J | µg/L | 0.03 | 0.25 | M Pattanayek | 8/17/2009 |
| Thallium | 0.19J | µg/L | 0.03 | 1 | M Pattanayek | 8/17/2009 |
| Vanadium | U | µg/L | 3.4 | 5 | M Pattanayek | 8/17/2009 |
| Zinc | 5.2 | µg/L | 1.9 | 5 | M Pattanayek | 8/17/2009 |

Lab-Sample Number: K00002739007
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: 08/13/2009 11:12
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: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.78 pH Units
Chlorine, residual:
Conductivity: 265 uMHO
Temperature: 24.62
Dissolved Oxygen: 8.04 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 | 8/19/2009 | |

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

Lab-Sample Number: K00002739008
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: 08/13/2009 11:35
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: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.66 pH Units
Chlorine, residual:
Conductivity: 279 uMHO
Temperature: 27.29
Dissolved Oxygen: 7.13 mg/L
Other:
Flow: CFS

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 08/17/2009 | | | | S Ufegbu | 8/17/2009 |

| TEST: ICP | | METHOD: EPA 200.7 | | | | |
|-----------|--------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Iron | 310 | µg/L | 2.9 | 10 | A Bass | 8/18/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|------|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Aluminum | 410 | µg/L | 6.4 | 10 | M Pattanayek | 8/17/2009 |
| Antimony | U | µg/L | 0.33 | 1 | M Pattanayek | 8/17/2009 |
| Arsenic | 3.8J | µg/L | 0.93 | 5 | M Pattanayek | 8/17/2009 |
| Barium | 64 | µg/L | 2.5 | 5 | M Pattanayek | 8/17/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 8/17/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 8/17/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 8/17/2009 |
| Cobalt | 0.43J | µg/L | 0.04 | 1 | M Pattanayek | 8/17/2009 |
| Copper | 7.9 | µg/L | 0.38 | 1 | M Pattanayek | 8/17/2009 |
| Lead | 0.51J | µg/L | 0.10 | 1 | M Pattanayek | 8/17/2009 |
| Manganese | 67 | µg/L | 0.42 | 1 | M Pattanayek | 8/17/2009 |
| Nickel | 0.47J | µg/L | 0.25 | 1 | M Pattanayek | 8/17/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 8/17/2009 |
| Silver | U | µg/L | 0.03 | 0.25 | M Pattanayek | 8/17/2009 |
| Thallium | 0.10J | µg/L | 0.03 | 1 | M Pattanayek | 8/17/2009 |
| Vanadium | 4.5J | µg/L | 3.4 | 5 | M Pattanayek | 8/17/2009 |
| Zinc | 7.9 | µg/L | 1.9 | 5 | M Pattanayek | 8/17/2009 |

Lab-Sample Number: K00002739008
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: 08/13/2009 11:35
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: 08/13/2009 13:10
Received By: Ken Hitchman

Field Determinations
pH: 7.66 pH Units
Chlorine, residual:
Conductivity: 279 uMHO
Temperature: 27.29
Dissolved Oxygen: 7.13 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 | 8/19/2009 |

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

| | | | |
|------------------------------|---|-----------------------------|--------------------|
| Lab-Sample Number: | K00002739009 | Field Determinations | |
| Project Name: | TVA-Ash Spill | pH: | 7.64 pH Units |
| Sample Description: | Clinch River mile 4.5 near Sugar Grove Valley R | Chlorine, residual: | |
| Sampler Project Name: | TVA Ash Spill | Conductivity: | 276 uMHO |
| Project Site No.: | 6 | Temperature: | 20.43 |
| Station No.: | CLINC004.5RO | Dissolved Oxygen: | 7.80 mg/L |
| Date/Time Collected: | 08/13/2009 11:50 | 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: | 08/13/2009 13:10 | | |
| Received By: | Ken Hitchman | | |

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 08/17/2009 | | | | S Ufegbu | 8/17/2009 |

| TEST: ICP | | METHOD: EPA 200.7 | | | | |
|-----------|--------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Iron | 230 | µg/L | 2.9 | 10 | A Bass | 8/18/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|------|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Aluminum | 150 | µg/L | 6.4 | 10 | M Pattanayek | 8/17/2009 |
| Antimony | U | µg/L | 0.33 | 1 | M Pattanayek | 8/17/2009 |
| Arsenic | U | µg/L | 0.93 | 5 | M Pattanayek | 8/17/2009 |
| Barium | 38 | µg/L | 2.5 | 5 | M Pattanayek | 8/17/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 8/17/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 8/17/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 8/17/2009 |
| Cobalt | 0.23J | µg/L | 0.04 | 1 | M Pattanayek | 8/17/2009 |
| Copper | 2.2 | µg/L | 0.38 | 1 | M Pattanayek | 8/17/2009 |
| Lead | 0.21J | µg/L | 0.10 | 1 | M Pattanayek | 8/17/2009 |
| Manganese | 0.43J | µg/L | 0.42 | 1 | M Pattanayek | 8/17/2009 |
| Nickel | U | µg/L | 0.25 | 1 | M Pattanayek | 8/17/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 8/17/2009 |
| Silver | U | µg/L | 0.03 | 0.25 | M Pattanayek | 8/17/2009 |
| Thallium | U | µg/L | 0.03 | 1 | M Pattanayek | 8/17/2009 |
| Vanadium | U | µg/L | 3.4 | 5 | M Pattanayek | 8/17/2009 |
| Zinc | 3.8J | µg/L | 1.9 | 5 | M Pattanayek | 8/17/2009 |

| | | | |
|------------------------------|---|-----------------------------|--------------------|
| Lab-Sample Number: | K00002739009 | Field Determinations | |
| Project Name: | TVA-Ash Spill | pH: | 7.64 pH Units |
| Sample Description: | Clinch River mile 4.5 near Sugar Grove Valley R | Chlorine, residual: | |
| Sampler Project Name: | TVA Ash Spill | Conductivity: | 276 uMHO |
| Project Site No.: | 6 | Temperature: | 20.43 |
| Station No.: | CLINC004.5RO | Dissolved Oxygen: | 7.80 mg/L |
| Date/Time Collected: | 08/13/2009 11:50 | 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: | 08/13/2009 13:10 | | |
| Received By: | Ken Hitchman | | |

| TEST: Mercury | | METHOD: EPA 245.1 | | | | | |
|---------------|--------|-------------------|-------|-----|--------------|-----------|--|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE | |
| Mercury | 0.03J | µg/L | 0.029 | 0.2 | A Bass | 8/19/2009 | |

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected