

# Analytical Environmental Services, Inc.

Date: 06-Jan-09

**CLIENT:** Tetra Tech EM Inc.  
**Lab Order:** 0812G73  
**Project:** TVA Kingston  
**Lab ID:** 0812G73-001

**Client Sample ID:** KIF-KWTPI  
**Collection Date:** 12/23/2008 11:47:00 AM  
**Matrix:** SURFACE WATER

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
<b>METALS, TOTAL</b>			<b>SW6010B</b>	<b>(SW3010A)</b>				Analyst: DJ
Aluminum	0.388		0.0230	0.200	mg/L	108148	1	12/24/2008 2:14:33 PM
Antimony	BRL		0.0063	0.0200	mg/L	108148	1	12/24/2008 2:14:33 PM
Arsenic	BRL		0.0031	0.0500	mg/L	108148	1	12/24/2008 2:14:33 PM
Barium	0.0234		0.0016	0.0200	mg/L	108148	1	12/24/2008 2:14:33 PM
Beryllium	BRL		0.0022	0.0100	mg/L	108148	1	12/24/2008 2:14:33 PM
Cadmium	BRL		0.0025	0.0050	mg/L	108148	1	12/24/2008 2:14:33 PM
Calcium	16.1		0.0110	0.100	mg/L	108148	1	12/24/2008 2:14:33 PM
Chromium	BRL		0.0075	0.0100	mg/L	108148	1	12/24/2008 2:14:33 PM
Cobalt	BRL		0.0013	0.0200	mg/L	108148	1	12/24/2008 2:14:33 PM
Copper	BRL		0.0016	0.0100	mg/L	108148	1	12/24/2008 2:14:33 PM
Iron	0.386		0.0360	0.100	mg/L	108148	1	12/24/2008 2:14:33 PM
Lead	BRL		0.0038	0.0100	mg/L	108148	1	12/24/2008 2:14:33 PM
Magnesium	4.16		0.0190	0.100	mg/L	108148	1	12/24/2008 2:14:33 PM
Manganese	0.0487		0.0019	0.0150	mg/L	108148	1	12/24/2008 4:11:41 PM
Nickel	BRL		0.0035	0.0200	mg/L	108148	1	12/24/2008 2:14:33 PM
Potassium	1.95		0.0300	0.500	mg/L	108148	1	12/24/2008 2:14:33 PM
Selenium	BRL		0.0060	0.0200	mg/L	108148	1	12/24/2008 2:14:33 PM
Silver	BRL		0.0003	0.0100	mg/L	108148	1	12/24/2008 2:14:33 PM
Sodium	8.77		0.0063	1.00	mg/L	108148	1	12/24/2008 2:14:33 PM
Thallium	0.0062	J	0.0041	0.0200	mg/L	108148	1	12/24/2008 2:14:33 PM
Vanadium	BRL		0.0016	0.0100	mg/L	108148	1	12/24/2008 2:14:33 PM
Zinc	BRL		0.0035	0.0200	mg/L	108148	1	12/24/2008 2:14:33 PM
<b>TOTAL METALS BY ICP/MS</b>			<b>SW6020</b>	<b>(SW3005A)</b>				Analyst: JY
Aluminum	247		5.12	10.0	ug/L	108443	1	1/5/2009 6:03:30 PM
Antimony	BRL		0.490	5.00	ug/L	108443	1	1/5/2009 6:03:30 PM
Arsenic	BRL		0.880	5.00	ug/L	108443	1	1/5/2009 6:03:30 PM
Barium	21.2		0.700	10.0	ug/L	108443	1	1/5/2009 6:03:30 PM
Beryllium	BRL		0.210	1.00	ug/L	108443	1	1/5/2009 6:03:30 PM
Cadmium	BRL		0.0970	0.700	ug/L	108443	1	1/5/2009 6:03:30 PM
Calcium	16500		14.1	100	ug/L	108443	1	1/5/2009 6:03:30 PM
Chromium	BRL		0.660	5.00	ug/L	108443	1	1/5/2009 6:03:30 PM
Cobalt	BRL		0.620	5.00	ug/L	108443	1	1/5/2009 6:03:30 PM
Copper	0.914	J	0.730	2.00	ug/L	108443	1	1/5/2009 6:03:30 PM
Iron	249		9.32	100	ug/L	108443	1	1/5/2009 6:03:30 PM
Lead	0.332	J	0.170	1.00	ug/L	108443	1	1/5/2009 6:03:30 PM
Magnesium	3630		7.83	100	ug/L	108443	1	1/5/2009 6:03:30 PM
Manganese	44.8		0.620	5.00	ug/L	108443	1	1/5/2009 6:03:30 PM
Nickel	0.672	J	0.650	5.00	ug/L	108443	1	1/5/2009 6:03:30 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- > Greater than Result value
- E Estimated value above quantitation range
- J Estimated value detected below Reporting Limit
- Rpt Lim Reporting Limit

- < Less than Result value
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- S Spike Recovery outside limits due to matrix
- BRL Not detected at MDL

**Analytical Environmental Services, Inc.**

Date: 06-Jan-09

CLIENT: Tetra Tech EM Inc.

Client Sample ID: KIF-KWTPI

Lab Order: 0812G73

Collection Date: 12/23/2008 11:47:00 AM

Project: TVA Kingston

Lab ID: 0812G73-001

Matrix: SURFACE WATER

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
<b>TOTAL METALS BY ICP/MS</b>								
			<b>SW6020</b>	<b>(SW3005A)</b>				Analyst: JY
Potassium	1890		7.74	100	ug/L	108443	1	1/5/2009 6:03:30 PM
Selenium	BRL		1.06	5.00	ug/L	108443	1	1/5/2009 6:03:30 PM
Silver	BRL		0.0630	1.00	ug/L	108443	1	1/5/2009 6:03:30 PM
Sodium	8490		7.81	500	ug/L	108443	1	1/5/2009 6:03:30 PM
Thallium	BRL		0.0620	1.00	ug/L	108443	1	1/5/2009 6:03:30 PM
Vanadium	BRL		0.670	5.00	ug/L	108443	1	1/5/2009 6:03:30 PM
Zinc	10.7		2.33	10.0	ug/L	108443	1	1/5/2009 6:03:30 PM
<b>MERCURY, TOTAL</b>								
			<b>SW7470A</b>	<b>(SW7470)</b>				Analyst: MAW
Mercury	BRL		0.00001	0.00020	mg/L	108151	1	12/24/2008 7:00:39 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL

# Analytical Environmental Services, Inc.

Date: 06-Jan-09

**CLIENT:** Tetra Tech EM Inc.  
**Lab Order:** 0812G73  
**Project:** TVA Kingston  
**Lab ID:** 0812G73-002

**Client Sample ID:** KIF-CRM 4.0  
**Collection Date:** 12/23/2008 2:23:00 PM  
**Matrix:** SURFACE WATER

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
<b>METALS, TOTAL</b>			<b>SW6010B</b>	<b>(SW3010A)</b>				<b>Analyst: DJ</b>
Aluminum	1.53		0.0230	0.200	mg/L	108148	1	12/24/2008 2:18:21 PM
Antimony	BRL		0.0063	0.0200	mg/L	108148	1	12/24/2008 2:18:21 PM
Arsenic	0.0039	J	0.0031	0.0500	mg/L	108148	1	12/24/2008 2:18:21 PM
Barium	0.0430		0.0016	0.0200	mg/L	108148	1	12/24/2008 2:18:21 PM
Beryllium	BRL		0.0022	0.0100	mg/L	108148	1	12/24/2008 2:18:21 PM
Cadmium	BRL		0.0025	0.0050	mg/L	108148	1	12/24/2008 2:18:21 PM
Calcium	30.8		0.0110	0.100	mg/L	108148	1	12/24/2008 2:18:21 PM
Chromium	BRL		0.0075	0.0100	mg/L	108148	1	12/24/2008 2:18:21 PM
Cobalt	BRL		0.0013	0.0200	mg/L	108148	1	12/24/2008 2:18:21 PM
Copper	BRL		0.0016	0.0100	mg/L	108148	1	12/24/2008 2:18:21 PM
Iron	1.08		0.0360	0.100	mg/L	108148	1	12/24/2008 2:18:21 PM
Lead	0.0046	J	0.0038	0.0100	mg/L	108148	1	12/24/2008 2:18:21 PM
Magnesium	8.51		0.0190	0.100	mg/L	108148	1	12/24/2008 2:18:21 PM
Manganese	0.0938		0.0019	0.0150	mg/L	108148	1	12/24/2008 4:15:17 PM
Nickel	BRL		0.0035	0.0200	mg/L	108148	1	12/24/2008 2:18:21 PM
Potassium	2.44		0.0300	0.500	mg/L	108148	1	12/24/2008 2:18:21 PM
Selenium	BRL		0.0060	0.0200	mg/L	108148	1	12/24/2008 2:18:21 PM
Silver	BRL		0.0003	0.0100	mg/L	108148	1	12/24/2008 2:18:21 PM
Sodium	5.85		0.0063	1.00	mg/L	108148	1	12/24/2008 2:18:21 PM
Thallium	BRL		0.0041	0.0200	mg/L	108148	1	12/24/2008 2:18:21 PM
Vanadium	0.0024	J	0.0016	0.0100	mg/L	108148	1	12/24/2008 2:18:21 PM
Zinc	0.0040	J	0.0035	0.0200	mg/L	108148	1	12/24/2008 2:18:21 PM
<b>MERCURY, TOTAL</b>			<b>SW7470A</b>	<b>(SW7470)</b>				<b>Analyst: MAW</b>
Mercury	BRL		0.00001	0.00020	mg/L	108151	1	12/24/2008 7:02:35 PM

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL

# Analytical Environmental Services, Inc.

Date: 06-Jan-09

CLIENT: Tetra Tech EM Inc.

Client Sample ID: KIF-ERM 0.1

Lab Order: 0812G73

Collection Date: 12/23/2008 2:32:00 PM

Project: TVA Kingston

Lab ID: 0812G73-003

Matrix: SURFACE WATER

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
<b>RESIDUE,SUSPENDED(TSS)(160.2/SM2540D)</b>								
Residue, Suspended (TSS)	14700		E160.2 6	(E160.2) 29 mg/L		108167	1	Analyst: ML 12/24/2008 12:00:00 P
<b>METALS, DISSOLVED</b>								
			SW6010B	(SAMP_FILT)				Analyst: DJ
Aluminum	0.164	J	0.0230	0.200 mg/L		108149	1	12/24/2008 1:32:00 PM
Antimony	BRL		0.0063	0.0200 mg/L		108149	1	12/24/2008 1:32:00 PM
Arsenic	0.0116	J	0.0031	0.0500 mg/L		108149	1	12/24/2008 1:32:00 PM
Barium	0.0345		0.0016	0.0200 mg/L		108149	1	12/24/2008 1:32:00 PM
Beryllium	BRL		0.0022	0.0100 mg/L		108149	1	12/24/2008 1:32:00 PM
Cadmium	BRL		0.0025	0.0050 mg/L		108149	1	12/24/2008 1:32:00 PM
Calcium	9.38		0.0110	0.100 mg/L		108149	1	12/24/2008 1:32:00 PM
Chromium	BRL		0.0075	0.0100 mg/L		108149	1	12/24/2008 3:48:05 PM
Cobalt	BRL		0.0013	0.0200 mg/L		108149	1	12/24/2008 1:32:00 PM
Copper	0.0017	J	0.0016	0.0100 mg/L		108149	1	12/24/2008 1:32:00 PM
Iron	0.187		0.0360	0.100 mg/L		108149	1	12/24/2008 1:32:00 PM
Lead	BRL		0.0038	0.0100 mg/L		108149	1	12/24/2008 1:32:00 PM
Magnesium	2.20		0.0190	0.100 mg/L		108149	1	12/24/2008 1:32:00 PM
Manganese	0.153		0.0019	0.0150 mg/L		108149	1	12/24/2008 3:48:05 PM
Nickel	BRL		0.0035	0.0200 mg/L		108149	1	12/24/2008 1:32:00 PM
Potassium	1.28		0.0300	0.500 mg/L		108149	1	12/24/2008 1:32:00 PM
Selenium	0.0075	J	0.0060	0.0200 mg/L		108149	1	12/24/2008 1:32:00 PM
Silver	BRL		0.0003	0.0100 mg/L		108149	1	12/24/2008 1:32:00 PM
Sodium	5.65		0.0063	1.00 mg/L		108149	1	12/24/2008 1:32:00 PM
Thallium	0.0077	J	0.0041	0.0200 mg/L		108149	1	12/24/2008 1:32:00 PM
Vanadium	0.0034	J	0.0016	0.0100 mg/L		108149	1	12/24/2008 1:32:00 PM
Zinc	0.0077	J	0.0035	0.0200 mg/L		108149	1	12/24/2008 1:32:00 PM
<b>METALS, TOTAL</b>								
			SW6010B	(SW3010A)				Analyst: DJ
Aluminum	121		0.115	1.00 mg/L		108148	5	12/24/2008 4:32:37 PM
Antimony	0.0065	J	0.0063	0.0200 mg/L		108148	1	12/24/2008 2:38:16 PM
Arsenic	1.49		0.0031	0.0500 mg/L		108148	1	12/24/2008 2:38:16 PM
Barium	1.47		0.0016	0.0200 mg/L		108148	1	12/24/2008 2:38:16 PM
Beryllium	0.0119		0.0022	0.0100 mg/L		108148	1	12/24/2008 2:38:16 PM
Cadmium	0.0155		0.0025	0.0050 mg/L		108148	1	12/24/2008 2:38:16 PM
Calcium	38.2		0.0110	0.100 mg/L		108148	1	12/24/2008 2:38:16 PM
Chromium	0.127		0.0075	0.0100 mg/L		108148	1	12/24/2008 2:38:16 PM
Cobalt	0.0768		0.0013	0.0200 mg/L		108148	1	12/24/2008 2:38:16 PM
Copper	0.225		0.0016	0.0100 mg/L		108148	1	12/24/2008 2:38:16 PM
Iron	67.0		0.180	0.500 mg/L		108148	5	12/24/2008 4:32:37 PM
Lead	0.0754		0.0038	0.0100 mg/L		108148	1	12/24/2008 2:38:16 PM

Qualifiers:

- \* Value exceeds Maximum Contaminant Level
- > Greater than Result value
- E Estimated value above quantitation range
- J Estimated value detected below Reporting Limit
- Rpt Lim Reporting Limit

- < Less than Result value
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- S Spike Recovery outside limits due to matrix
- BRL Not detected at MDL

**Analytical Environmental Services, Inc.**

Date: 06-Jan-09

**CLIENT:** Tetra Tech EM Inc.  
**Lab Order:** 0812G73  
**Project:** TVA Kingston  
**Lab ID:** 0812G73-003

**Client Sample ID:** KIF-ERM 0.1  
**Collection Date:** 12/23/2008 2:32:00 PM

**Matrix:** SURFACE WATER

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
<b>METALS, TOTAL</b>			<b>SW6010B</b>	<b>(SW3010A)</b>				<b>Analyst: DJ</b>
Magnesium	12.4		0.0190	0.100	mg/L	108148	1	12/24/2008 2:38:16 PM
Manganese	1.89		0.0019	0.0150	mg/L	108148	1	12/24/2008 4:18:52 PM
Nickel	0.103		0.0035	0.0200	mg/L	108148	1	12/24/2008 2:38:16 PM
Potassium	32.1		0.0300	0.500	mg/L	108148	1	12/24/2008 2:38:16 PM
Selenium	0.0180	J	0.0060	0.0200	mg/L	108148	1	12/24/2008 2:38:16 PM
Silver	BRL		0.0003	0.0100	mg/L	108148	1	12/24/2008 2:38:16 PM
Sodium	4.85		0.0063	1.00	mg/L	108148	1	12/24/2008 2:38:16 PM
Thallium	BRL		0.0041	0.0200	mg/L	108148	1	12/24/2008 2:38:16 PM
Vanadium	0.465		0.0016	0.0100	mg/L	108148	1	12/24/2008 2:38:16 PM
Zinc	0.266		0.0035	0.0200	mg/L	108148	1	12/24/2008 2:38:16 PM
<b>MERCURY, DISSOLVED</b>			<b>SW7470A</b>	<b>(SW7470)</b>				<b>Analyst: MAW</b>
Mercury	BRL		0.00001	0.00020	mg/L	108150	1	12/24/2008 6:39:10 PM
<b>MERCURY, TOTAL</b>			<b>SW7470A</b>	<b>(SW7470)</b>				<b>Analyst: MAW</b>
Mercury	BRL		0.00001	0.00020	mg/L	108151	1	12/24/2008 7:04:31 PM

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL

**Analytical Environmental Services, Inc.**

Date: 06-Jan-09

**CLIENT:** Tetra Tech EM Inc.  
**Lab Order:** 0812G73  
**Project:** TVA Kingston  
**Lab ID:** 0812G73-004

**Client Sample ID:** KIF-CRM 5.5  
**Collection Date:** 12/23/2008 2:10:00 PM  
**Matrix:** SURFACE WATER

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
<b>METALS, TOTAL</b>			<b>SW6010B</b>	<b>(SW3010A)</b>				Analyst: DJ
Aluminum	0.986		0.0230	0.200	mg/L	108148	1	12/24/2008 2:42:04 PM
Antimony	BRL		0.0063	0.0200	mg/L	108148	1	12/24/2008 2:42:04 PM
Arsenic	0.0050	J	0.0031	0.0500	mg/L	108148	1	12/24/2008 2:42:04 PM
Barium	0.0385		0.0016	0.0200	mg/L	108148	1	12/24/2008 2:42:04 PM
Beryllium	BRL		0.0022	0.0100	mg/L	108148	1	12/24/2008 2:42:04 PM
Cadmium	BRL		0.0025	0.0050	mg/L	108148	1	12/24/2008 2:42:04 PM
Calcium	35.0		0.0110	0.100	mg/L	108148	1	12/24/2008 2:42:04 PM
Chromium	BRL		0.0075	0.0100	mg/L	108148	1	12/24/2008 2:42:04 PM
Cobalt	BRL		0.0013	0.0200	mg/L	108148	1	12/24/2008 2:42:04 PM
Copper	BRL		0.0016	0.0100	mg/L	108148	1	12/24/2008 2:42:04 PM
Iron	0.733		0.0360	0.100	mg/L	108148	1	12/24/2008 2:42:04 PM
Lead	BRL		0.0038	0.0100	mg/L	108148	1	12/24/2008 2:42:04 PM
Magnesium	9.94		0.0190	0.100	mg/L	108148	1	12/24/2008 2:42:04 PM
Manganese	0.0453		0.0019	0.0150	mg/L	108148	1	12/24/2008 4:29:02 PM
Nickel	BRL		0.0035	0.0200	mg/L	108148	1	12/24/2008 2:42:04 PM
Potassium	2.45		0.0300	0.500	mg/L	108148	1	12/24/2008 2:42:04 PM
Selenium	BRL		0.0060	0.0200	mg/L	108148	1	12/24/2008 2:42:04 PM
Silver	BRL		0.0003	0.0100	mg/L	108148	1	12/24/2008 2:42:04 PM
Sodium	6.83		0.0063	1.00	mg/L	108148	1	12/24/2008 2:42:04 PM
Thallium	0.0043	J	0.0041	0.0200	mg/L	108148	1	12/24/2008 2:42:04 PM
Vanadium	BRL		0.0016	0.0100	mg/L	108148	1	12/24/2008 2:42:04 PM
Zinc	BRL		0.0035	0.0200	mg/L	108148	1	12/24/2008 2:42:04 PM
<b>MERCURY, TOTAL</b>			<b>SW7470A</b>	<b>(SW7470)</b>				Analyst: MAW
Mercury	BRL		0.00001	0.00020	mg/L	108151	1	12/24/2008 7:06:26 PM

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL

**Analytical Environmental Services, Inc.**

Date: 06-Jan-09

**CLIENT:** Tetra Tech EM Inc.  
**Lab Order:** 0812G73  
**Project:** TVA Kingston  
**Lab ID:** 0812G73-005

**Client Sample ID:** KIF- ERM 2.1  
**Collection Date:** 12/23/2008 3:15:00 PM

**Matrix:** SURFACE WATER

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
<b>METALS, TOTAL</b>			<b>SW6010B</b>	<b>(SW3010A)</b>				<b>Analyst: DJ</b>
Aluminum	1.13		0.0230	0.200	mg/L	108148	1	12/24/2008 2:52:19 PM
Antimony	BRL		0.0063	0.0200	mg/L	108148	1	12/24/2008 2:52:19 PM
Arsenic	BRL		0.0031	0.0500	mg/L	108148	1	12/24/2008 2:52:19 PM
Barium	0.0405		0.0016	0.0200	mg/L	108148	1	12/24/2008 2:52:19 PM
Beryllium	BRL		0.0022	0.0100	mg/L	108148	1	12/24/2008 2:52:19 PM
Cadmium	BRL		0.0025	0.0050	mg/L	108148	1	12/24/2008 2:52:19 PM
Calcium	8.04		0.0110	0.100	mg/L	108148	1	12/24/2008 2:52:19 PM
Chromium	BRL		0.0075	0.0100	mg/L	108148	1	12/24/2008 2:52:19 PM
Cobalt	BRL		0.0013	0.0200	mg/L	108148	1	12/24/2008 2:52:19 PM
Copper	BRL		0.0016	0.0100	mg/L	108148	1	12/24/2008 2:52:19 PM
Iron	0.660		0.0360	0.100	mg/L	108148	1	12/24/2008 2:52:19 PM
Lead	BRL		0.0038	0.0100	mg/L	108148	1	12/24/2008 2:52:19 PM
Magnesium	2.14		0.0190	0.100	mg/L	108148	1	12/24/2008 2:52:19 PM
Manganese	0.0738		0.0019	0.0150	mg/L	108148	1	12/24/2008 2:52:19 PM
Nickel	BRL		0.0035	0.0200	mg/L	108148	1	12/24/2008 2:52:19 PM
Potassium	1.52		0.0300	0.500	mg/L	108148	1	12/24/2008 2:52:19 PM
Selenium	BRL		0.0060	0.0200	mg/L	108148	1	12/24/2008 2:52:19 PM
Silver	BRL		0.0003	0.0100	mg/L	108148	1	12/24/2008 2:52:19 PM
Sodium	2.56		0.0063	1.00	mg/L	108148	1	12/24/2008 2:52:19 PM
Thallium	BRL		0.0041	0.0200	mg/L	108148	1	12/24/2008 2:52:19 PM
Vanadium	0.0026	J	0.0016	0.0100	mg/L	108148	1	12/24/2008 2:52:19 PM
Zinc	0.0046	J	0.0035	0.0200	mg/L	108148	1	12/24/2008 2:52:19 PM
<b>MERCURY, TOTAL</b>			<b>SW7470A</b>	<b>(SW7470)</b>				<b>Analyst: MAW</b>
Mercury	BRL		0.00001	0.00020	mg/L	108151	1	12/24/2008 7:08:22 PM

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL

**Analytical Environmental Services, Inc.**

Date: 06-Jan-09

**CLIENT:** Tetra Tech EM Inc.  
**Lab Order:** 0812G73  
**Project:** TVA Kingston  
**Lab ID:** 0812G73-006

**Client Sample ID:** KIF-ERM 4.0  
**Collection Date:** 12/23/2008 3:30:00 PM

**Matrix:** SURFACE WATER

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
<b>METALS, TOTAL</b>			<b>SW6010B</b>	<b>(SW3010A)</b>				<b>Analyst: DJ</b>
Aluminum	0.338		0.0230	0.200	mg/L	108148	1	12/24/2008 2:03:11 PM
Antimony	BRL		0.0063	0.0200	mg/L	108148	1	12/24/2008 2:03:11 PM
Arsenic	BRL		0.0031	0.0500	mg/L	108148	1	12/24/2008 2:03:11 PM
Barium	0.0304		0.0016	0.0200	mg/L	108148	1	12/24/2008 2:03:11 PM
Beryllium	BRL		0.0022	0.0100	mg/L	108148	1	12/24/2008 2:03:11 PM
Cadmium	BRL		0.0025	0.0050	mg/L	108148	1	12/24/2008 2:03:11 PM
Calcium	7.81		0.0110	0.100	mg/L	108148	1	12/24/2008 2:03:11 PM
Chromium	BRL		0.0075	0.0100	mg/L	108148	1	12/24/2008 2:03:11 PM
Cobalt	BRL		0.0013	0.0200	mg/L	108148	1	12/24/2008 2:03:11 PM
Copper	BRL		0.0016	0.0100	mg/L	108148	1	12/24/2008 2:03:11 PM
Iron	0.262		0.0360	0.100	mg/L	108148	1	12/24/2008 2:03:11 PM
Lead	BRL		0.0038	0.0100	mg/L	108148	1	12/24/2008 2:03:11 PM
Magnesium	1.78		0.0190	0.100	mg/L	108148	1	12/24/2008 2:03:11 PM
Manganese	0.0368		0.0019	0.0150	mg/L	108148	1	12/24/2008 4:08:08 PM
Nickel	BRL		0.0035	0.0200	mg/L	108148	1	12/24/2008 2:03:11 PM
Potassium	1.35		0.0300	0.500	mg/L	108148	1	12/24/2008 2:03:11 PM
Selenium	BRL		0.0060	0.0200	mg/L	108148	1	12/24/2008 2:03:11 PM
Silver	BRL		0.0003	0.0100	mg/L	108148	1	12/24/2008 2:03:11 PM
Sodium	2.53		0.0063	1.00	mg/L	108148	1	12/24/2008 2:03:11 PM
Thallium	0.0041	J	0.0041	0.0200	mg/L	108148	1	12/24/2008 2:03:11 PM
Vanadium	BRL		0.0016	0.0100	mg/L	108148	1	12/24/2008 2:03:11 PM
Zinc	BRL		0.0035	0.0200	mg/L	108148	1	12/24/2008 2:03:11 PM
<b>MERCURY, TOTAL</b>			<b>SW7470A</b>	<b>(SW7470)</b>				<b>Analyst: MAW</b>
Mercury	BRL		0.00001	0.00020	mg/L	108151	1	12/24/2008 6:48:50 PM

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL



# Analytical Environmental Services, Inc.

Date: 06-Jan-09

**CLIENT:** Tetra Tech EM Inc.  
**Lab Order:** 0812G73  
**Project:** TVA Kingston  
**Lab ID:** 0812G73-007

**Client Sample ID:** TT-ERM 1.9  
**Collection Date:** 12/23/2008 4:55:00 PM

**Matrix:** SURFACE WATER

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
<b>METALS, TOTAL</b>			<b>SW6010B</b>	<b>(SW3010A)</b>				Analyst: DJ
Aluminum	2.20		0.0230	0.200	mg/L	108148	1	12/24/2008 2:55:56 PM
Antimony	BRL		0.0063	0.0200	mg/L	108148	1	12/24/2008 2:55:56 PM
Arsenic	0.0208	J	0.0031	0.0500	mg/L	108148	1	12/24/2008 2:55:56 PM
Barium	0.0565		0.0016	0.0200	mg/L	108148	1	12/24/2008 2:55:56 PM
Beryllium	BRL		0.0022	0.0100	mg/L	108148	1	12/24/2008 2:55:56 PM
Cadmium	BRL		0.0025	0.0050	mg/L	108148	1	12/24/2008 2:55:56 PM
Calcium	9.11		0.0110	0.100	mg/L	108148	1	12/24/2008 2:55:56 PM
Chromium	BRL		0.0075	0.0100	mg/L	108148	1	12/24/2008 2:55:56 PM
Cobalt	BRL		0.0013	0.0200	mg/L	108148	1	12/24/2008 2:55:56 PM
Copper	0.0041	J	0.0016	0.0100	mg/L	108148	1	12/24/2008 2:55:56 PM
Iron	1.37		0.0360	0.100	mg/L	108148	1	12/24/2008 2:55:56 PM
Lead	0.0063	J	0.0038	0.0100	mg/L	108148	1	12/24/2008 2:55:56 PM
Magnesium	2.20		0.0190	0.100	mg/L	108148	1	12/24/2008 2:55:56 PM
Manganese	0.0898		0.0019	0.0150	mg/L	108148	1	12/24/2008 2:55:56 PM
Nickel	BRL		0.0035	0.0200	mg/L	108148	1	12/24/2008 2:55:56 PM
Potassium	1.71		0.0300	0.500	mg/L	108148	1	12/24/2008 2:55:56 PM
Selenium	BRL		0.0060	0.0200	mg/L	108148	1	12/24/2008 2:55:56 PM
Silver	BRL		0.0003	0.0100	mg/L	108148	1	12/24/2008 2:55:56 PM
Sodium	2.63		0.0063	1.00	mg/L	108148	1	12/24/2008 2:55:56 PM
Thallium	BRL		0.0041	0.0200	mg/L	108148	1	12/24/2008 2:55:56 PM
Vanadium	0.0074	J	0.0016	0.0100	mg/L	108148	1	12/24/2008 2:55:56 PM
Zinc	0.0371		0.0035	0.0200	mg/L	108148	1	12/24/2008 2:55:56 PM
<b>MERCURY, TOTAL</b>			<b>SW7470A</b>	<b>(SW7470)</b>				Analyst: MAW
Mercury	BRL		0.00001	0.00020	mg/L	108151	1	12/24/2008 7:10:19 PM

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL

**Analytical Environmental Services, Inc.**

Date: 06-Jan-09

**CLIENT:** Tetra Tech EM Inc.  
**Lab Order:** 0812G73  
**Project:** TVA Kingston  
**Lab ID:** 0812G73-008

**Client Sample ID:** DUPLICATE  
**Collection Date:** 12/23/2008 4:57:00 PM

**Matrix:** SURFACE WATER

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
<b>METALS, TOTAL</b>			<b>SW6010B</b>	<b>(SW3010A)</b>				Analyst: DJ
Aluminum	2.58		0.0230	0.200 mg/L		108148	1	12/24/2008 3:04:42 PM
Antimony	BRL		0.0063	0.0200 mg/L		108148	1	12/24/2008 3:04:42 PM
Arsenic	0.0337	J	0.0031	0.0500 mg/L		108148	1	12/24/2008 3:04:42 PM
Barium	0.0643		0.0016	0.0200 mg/L		108148	1	12/24/2008 3:04:42 PM
Beryllium	BRL		0.0022	0.0100 mg/L		108148	1	12/24/2008 3:04:42 PM
Cadmium	BRL		0.0025	0.0050 mg/L		108148	1	12/24/2008 3:04:42 PM
Calcium	9.26		0.0110	0.100 mg/L		108148	1	12/24/2008 3:04:42 PM
Chromium	BRL		0.0075	0.0100 mg/L		108148	1	12/24/2008 3:04:42 PM
Cobalt	BRL		0.0013	0.0200 mg/L		108148	1	12/24/2008 3:04:42 PM
Copper	0.0051	J	0.0016	0.0100 mg/L		108148	1	12/24/2008 3:04:42 PM
Iron	1.77		0.0360	0.100 mg/L		108148	1	12/24/2008 3:04:42 PM
Lead	0.0049	J	0.0038	0.0100 mg/L		108148	1	12/24/2008 3:04:42 PM
Magnesium	2.27		0.0190	0.100 mg/L		108148	1	12/24/2008 3:04:42 PM
Manganese	0.0970		0.0019	0.0150 mg/L		108148	1	12/24/2008 3:04:42 PM
Nickel	BRL		0.0035	0.0200 mg/L		108148	1	12/24/2008 3:04:42 PM
Potassium	1.80		0.0300	0.500 mg/L		108148	1	12/24/2008 3:04:42 PM
Selenium	BRL		0.0060	0.0200 mg/L		108148	1	12/24/2008 3:04:42 PM
Silver	BRL		0.0003	0.0100 mg/L		108148	1	12/24/2008 3:04:42 PM
Sodium	2.68		0.0063	1.00 mg/L		108148	1	12/24/2008 3:04:42 PM
Thallium	BRL		0.0041	0.0200 mg/L		108148	1	12/24/2008 3:04:42 PM
Vanadium	0.0108		0.0016	0.0100 mg/L		108148	1	12/24/2008 3:04:42 PM
Zinc	0.0350		0.0035	0.0200 mg/L		108148	1	12/24/2008 3:04:42 PM
<b>MERCURY, TOTAL</b>			<b>SW7470A</b>	<b>(SW7470)</b>				Analyst: MAW
Mercury	BRL		0.00001	0.00020 mg/L		108151	1	12/24/2008 7:12:15 PM

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL

# Analytical Environmental Services, Inc.

Date: 06-Jan-09

**CLIENT:** Tetra Tech EM Inc.  
**Lab Order:** 0812G73  
**Project:** TVA Kingston  
**Lab ID:** 0812G73-009

**Client Sample ID:** KIF-TRM568.5  
**Collection Date:** 12/23/2008 11:33:00 AM  
**Matrix:** SURFACE WATER

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
<b>RESIDUE,SUSPENDED(TSS)(160.2/SM2540D)</b>								
Residue, Suspended (TSS)	10		E160.2 1	(E160.2) 5 mg/L		108167	1	Analyst: ML 12/24/2008 12:00:00 P
<b>METALS, DISSOLVED</b>								
			SW6010B	(SAMP_FILT)				Analyst: DJ
Aluminum	BRL		0.0230	0.200 mg/L		108149	1	12/24/2008 1:35:35 PM
Antimony	BRL		0.0063	0.0200 mg/L		108149	1	12/24/2008 1:35:35 PM
Arsenic	BRL		0.0031	0.0500 mg/L		108149	1	12/24/2008 1:35:35 PM
Barium	0.0176	J	0.0016	0.0200 mg/L		108149	1	12/24/2008 1:35:35 PM
Beryllium	BRL		0.0022	0.0100 mg/L		108149	1	12/24/2008 1:35:35 PM
Cadmium	BRL		0.0025	0.0050 mg/L		108149	1	12/24/2008 1:35:35 PM
Calcium	13.8		0.0110	0.100 mg/L		108149	1	12/24/2008 1:35:35 PM
Chromium	BRL		0.0075	0.0100 mg/L		108149	1	12/24/2008 3:50:53 PM
Cobalt	BRL		0.0013	0.0200 mg/L		108149	1	12/24/2008 1:35:35 PM
Copper	BRL		0.0016	0.0100 mg/L		108149	1	12/24/2008 1:35:35 PM
Iron	BRL		0.0360	0.100 mg/L		108149	1	12/24/2008 1:35:35 PM
Lead	BRL		0.0038	0.0100 mg/L		108149	1	12/24/2008 1:35:35 PM
Magnesium	3.52		0.0190	0.100 mg/L		108149	1	12/24/2008 1:35:35 PM
Manganese	0.0046	J	0.0019	0.0150 mg/L		108149	1	12/24/2008 3:50:53 PM
Nickel	BRL		0.0035	0.0200 mg/L		108149	1	12/24/2008 1:35:35 PM
Potassium	1.57		0.0300	0.500 mg/L		108149	1	12/24/2008 1:35:35 PM
Selenium	BRL		0.0060	0.0200 mg/L		108149	1	12/24/2008 1:35:35 PM
Silver	BRL		0.0003	0.0100 mg/L		108149	1	12/24/2008 1:35:35 PM
Sodium	7.48		0.0063	1.00 mg/L		108149	1	12/24/2008 1:35:35 PM
Thallium	BRL		0.0041	0.0200 mg/L		108149	1	12/24/2008 1:35:35 PM
Vanadium	BRL		0.0016	0.0100 mg/L		108149	1	12/24/2008 1:35:35 PM
Zinc	BRL		0.0035	0.0200 mg/L		108149	1	12/24/2008 1:35:35 PM
<b>METALS, TOTAL</b>								
			SW6010B	(SW3010A)				Analyst: DJ
Aluminum	0.291		0.0230	0.200 mg/L		108148	1	12/24/2008 3:08:57 PM
Antimony	BRL		0.0063	0.0200 mg/L		108148	1	12/24/2008 3:08:57 PM
Arsenic	BRL		0.0031	0.0500 mg/L		108148	1	12/24/2008 3:08:57 PM
Barium	0.0218		0.0016	0.0200 mg/L		108148	1	12/24/2008 3:08:57 PM
Beryllium	BRL		0.0022	0.0100 mg/L		108148	1	12/24/2008 3:08:57 PM
Cadmium	BRL		0.0025	0.0050 mg/L		108148	1	12/24/2008 3:08:57 PM
Calcium	16.2		0.0110	0.100 mg/L		108148	1	12/24/2008 3:08:57 PM
Chromium	BRL		0.0075	0.0100 mg/L		108148	1	12/24/2008 3:08:57 PM
Cobalt	BRL		0.0013	0.0200 mg/L		108148	1	12/24/2008 3:08:57 PM
Copper	BRL		0.0016	0.0100 mg/L		108148	1	12/24/2008 3:08:57 PM
Iron	0.255		0.0360	0.100 mg/L		108148	1	12/24/2008 3:08:57 PM
Lead	BRL		0.0038	0.0100 mg/L		108148	1	12/24/2008 3:08:57 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- > Greater than Result value
- E Estimated value above quantitation range
- J Estimated value detected below Reporting Limit
- Rpt Lim Reporting Limit

- < Less than Result value
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- S Spike Recovery outside limits due to matrix
- BRL Not detected at MDL

**Analytical Environmental Services, Inc.**

Date: 06-Jan-09

**CLIENT:** Tetra Tech EM Inc.  
**Lab Order:** 0812G73  
**Project:** TVA Kingston  
**Lab ID:** 0812G73-009

**Client Sample ID:** KIF-TRM568.5  
**Collection Date:** 12/23/2008 11:33:00 AM  
**Matrix:** SURFACE WATER

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
<b>METALS, TOTAL</b>			<b>SW6010B</b>	<b>(SW3010A)</b>				Analyst: DJ
Magnesium	4.17		0.0190	0.100	mg/L	108148	1	12/24/2008 3:08:57 PM
Manganese	0.0288		0.0019	0.0150	mg/L	108148	1	12/24/2008 3:08:57 PM
Nickel	BRL		0.0035	0.0200	mg/L	108148	1	12/24/2008 3:08:57 PM
Potassium	1.97		0.0300	0.500	mg/L	108148	1	12/24/2008 3:08:57 PM
Selenium	BRL		0.0060	0.0200	mg/L	108148	1	12/24/2008 3:08:57 PM
Silver	BRL		0.0003	0.0100	mg/L	108148	1	12/24/2008 3:08:57 PM
Sodium	8.90		0.0063	1.00	mg/L	108148	1	12/24/2008 3:08:57 PM
Thallium	BRL		0.0041	0.0200	mg/L	108148	1	12/24/2008 3:08:57 PM
Vanadium	BRL		0.0016	0.0100	mg/L	108148	1	12/24/2008 3:08:57 PM
Zinc	BRL		0.0035	0.0200	mg/L	108148	1	12/24/2008 3:08:57 PM
<b>MERCURY, DISSOLVED</b>			<b>SW7470A</b>	<b>(SW7470)</b>				Analyst: MAW
Mercury	BRL		0.00001	0.00020	mg/L	108150	1	12/24/2008 6:41:05 PM
<b>MERCURY, TOTAL</b>			<b>SW7470A</b>	<b>(SW7470)</b>				Analyst: MAW
Mercury	BRL		0.00001	0.00020	mg/L	108151	1	12/24/2008 7:14:11 PM

**Qualifiers:**

*	Value exceeds Maximum Contaminant Level
>	Greater than Result value
E	Estimated value above quantitation range
J	Estimated value detected below Reporting Limit
Rpt Lim	Reporting Limit

<	Less than Result value
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
N	Analyte not NELAC certified
S	Spike Recovery outside limits due to matrix
BRL	Not detected at MDL

# Analytical Environmental Services, Inc.

Date: 06-Jan-09

**CLIENT:** Tetra Tech EM Inc.  
**Lab Order:** 0812G73  
**Project:** TVA Kingston  
**Lab ID:** 0812G73-010

**Client Sample ID:** KIF-CRM 0.0  
**Collection Date:** 12/23/2008 11:58:00 AM  
**Matrix:** SURFACE WATER

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
<b>RESIDUE,SUSPENDED(TSS)(160.2/SM2540D)</b>								
Residue, Suspended (TSS)	15		E160.2 1	(E160.2) 5 mg/L		108167	1	12/24/2008 12:00:00 P
<b>Analyst: ML</b>								
<b>METALS, DISSOLVED</b>								
			SW6010B	(SAMP_FILT)				<b>Analyst: DJ</b>
Aluminum	0.0268	J	0.0230	0.200 mg/L		108149	1	12/24/2008 1:20:45 PM
Antimony	BRL		0.0063	0.0200 mg/L		108149	1	12/24/2008 1:20:45 PM
Arsenic	BRL		0.0031	0.0500 mg/L		108149	1	12/24/2008 1:20:45 PM
Barium	0.0189	J	0.0016	0.0200 mg/L		108149	1	12/24/2008 1:20:45 PM
Beryllium	BRL		0.0022	0.0100 mg/L		108149	1	12/24/2008 1:20:45 PM
Cadmium	BRL		0.0025	0.0050 mg/L		108149	1	12/24/2008 1:20:45 PM
Calcium	14.8		0.0110	0.100 mg/L		108149	1	12/24/2008 1:20:45 PM
Chromium	BRL		0.0075	0.0100 mg/L		108149	1	12/24/2008 3:45:16 PM
Cobalt	BRL		0.0013	0.0200 mg/L		108149	1	12/24/2008 1:20:45 PM
Copper	BRL		0.0016	0.0100 mg/L		108149	1	12/24/2008 1:20:45 PM
Iron	BRL		0.0360	0.100 mg/L		108149	1	12/24/2008 1:20:45 PM
Lead	BRL		0.0038	0.0100 mg/L		108149	1	12/24/2008 1:20:45 PM
Magnesium	3.80		0.0190	0.100 mg/L		108149	1	12/24/2008 1:20:45 PM
Manganese	0.0094	J	0.0019	0.0150 mg/L		108149	1	12/24/2008 3:45:16 PM
Nickel	BRL		0.0035	0.0200 mg/L		108149	1	12/24/2008 1:20:45 PM
Potassium	1.78		0.0300	0.500 mg/L		108149	1	12/24/2008 1:20:45 PM
Selenium	BRL		0.0060	0.0200 mg/L		108149	1	12/24/2008 1:20:45 PM
Silver	BRL		0.0003	0.0100 mg/L		108149	1	12/24/2008 1:20:45 PM
Sodium	8.04		0.0063	1.00 mg/L		108149	1	12/24/2008 1:20:45 PM
Thallium	0.0046	J	0.0041	0.0200 mg/L		108149	1	12/24/2008 1:20:45 PM
Vanadium	BRL		0.0016	0.0100 mg/L		108149	1	12/24/2008 1:20:45 PM
Zinc	BRL		0.0035	0.0200 mg/L		108149	1	12/24/2008 1:20:45 PM
<b>METALS, TOTAL</b>								
			SW6010B	(SW3010A)				<b>Analyst: DJ</b>
Aluminum	0.265		0.0230	0.200 mg/L		108148	1	12/24/2008 3:13:30 PM
Antimony	BRL		0.0063	0.0200 mg/L		108148	1	12/24/2008 3:13:30 PM
Arsenic	0.0035	J	0.0031	0.0500 mg/L		108148	1	12/24/2008 3:13:30 PM
Barium	0.0215		0.0016	0.0200 mg/L		108148	1	12/24/2008 3:13:30 PM
Beryllium	BRL		0.0022	0.0100 mg/L		108148	1	12/24/2008 3:13:30 PM
Cadmium	BRL		0.0025	0.0050 mg/L		108148	1	12/24/2008 3:13:30 PM
Calcium	15.9		0.0110	0.100 mg/L		108148	1	12/24/2008 3:13:30 PM
Chromium	BRL		0.0075	0.0100 mg/L		108148	1	12/24/2008 3:13:30 PM
Cobalt	BRL		0.0013	0.0200 mg/L		108148	1	12/24/2008 3:13:30 PM
Copper	BRL		0.0016	0.0100 mg/L		108148	1	12/24/2008 3:13:30 PM
Iron	0.234		0.0360	0.100 mg/L		108148	1	12/24/2008 3:13:30 PM
Lead	BRL		0.0038	0.0100 mg/L		108148	1	12/24/2008 3:13:30 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- > Greater than Result value
- E Estimated value above quantitation range
- J Estimated value detected below Reporting Limit
- Rpt Lim Reporting Limit

- < Less than Result value
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- S Spike Recovery outside limits due to matrix
- BRL Not detected at MDL

**Analytical Environmental Services, Inc.**

Date: 06-Jan-09

**CLIENT:** Tetra Tech EM Inc.  
**Lab Order:** 0812G73  
**Project:** TVA Kingston  
**Lab ID:** 0812G73-010

**Client Sample ID:** KIF-CRM 0.0  
**Collection Date:** 12/23/2008 11:58:00 AM

**Matrix:** SURFACE WATER

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
<b>METALS, TOTAL</b>			<b>SW6010B</b>	<b>(SW3010A)</b>				<b>Analyst: DJ</b>
Magnesium	4.09		0.0190	0.100	mg/L	108148	1	12/24/2008 3:13:30 PM
Manganese	0.0248		0.0019	0.0150	mg/L	108148	1	12/24/2008 3:13:30 PM
Nickel	BRL		0.0035	0.0200	mg/L	108148	1	12/24/2008 3:13:30 PM
Potassium	1.92		0.0300	0.500	mg/L	108148	1	12/24/2008 3:13:30 PM
Selenium	BRL		0.0060	0.0200	mg/L	108148	1	12/24/2008 3:13:30 PM
Silver	BRL		0.0003	0.0100	mg/L	108148	1	12/24/2008 3:13:30 PM
Sodium	8.67		0.0063	1.00	mg/L	108148	1	12/24/2008 3:13:30 PM
Thallium	BRL		0.0041	0.0200	mg/L	108148	1	12/24/2008 3:13:30 PM
Vanadium	BRL		0.0016	0.0100	mg/L	108148	1	12/24/2008 3:13:30 PM
Zinc	BRL		0.0035	0.0200	mg/L	108148	1	12/24/2008 3:13:30 PM
<b>MERCURY, DISSOLVED</b>			<b>SW7470A</b>	<b>(SW7470)</b>				<b>Analyst: MAW</b>
Mercury	BRL		0.00001	0.00020	mg/L	108150	1	12/24/2008 6:43:00 PM
<b>MERCURY, TOTAL</b>			<b>SW7470A</b>	<b>(SW7470)</b>				<b>Analyst: MAW</b>
Mercury	BRL		0.00001	0.00020	mg/L	108151	1	12/24/2008 7:22:01 PM

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL

# Analytical Environmental Services, Inc.

Date: 06-Jan-09

CLIENT: Tetra Tech EM Inc.

Client Sample ID: KIF-CRM 2.0

Lab Order: 0812G73

Collection Date: 12/23/2008 12:16:00 PM

Project: TVA Kingston

Lab ID: 0812G73-011

Matrix: SURFACE WATER

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
<b>RESIDUE,SUSPENDED(TSS)(160.2/SM2540D)</b>								
Residue, Suspended (TSS)	80		E160.2 1	(E160.2) 5 mg/L		108167	1	Analyst: ML 12/24/2008 12:00:00 P
<b>METALS, DISSOLVED</b>								
			SW6010B	(SAMP_FILT)				Analyst: DJ
Aluminum	0.0302	J	0.0230	0.200 mg/L		108149	1	12/24/2008 1:39:14 PM
Antimony	BRL		0.0063	0.0200 mg/L		108149	1	12/24/2008 1:39:14 PM
Arsenic	BRL		0.0031	0.0500 mg/L		108149	1	12/24/2008 1:39:14 PM
Barium	0.0311		0.0016	0.0200 mg/L		108149	1	12/24/2008 1:39:14 PM
Beryllium	BRL		0.0022	0.0100 mg/L		108149	1	12/24/2008 1:39:14 PM
Cadmium	BRL		0.0025	0.0050 mg/L		108149	1	12/24/2008 1:39:14 PM
Calcium	22.9		0.0110	0.100 mg/L		108149	1	12/24/2008 1:39:14 PM
Chromium	BRL		0.0075	0.0100 mg/L		108149	1	12/24/2008 3:53:43 PM
Cobalt	BRL		0.0013	0.0200 mg/L		108149	1	12/24/2008 1:39:14 PM
Copper	BRL		0.0016	0.0100 mg/L		108149	1	12/24/2008 1:39:14 PM
Iron	0.0481	J	0.0360	0.100 mg/L		108149	1	12/24/2008 1:39:14 PM
Lead	BRL		0.0038	0.0100 mg/L		108149	1	12/24/2008 1:39:14 PM
Magnesium	6.30		0.0190	0.100 mg/L		108149	1	12/24/2008 1:39:14 PM
Manganese	0.0149	J	0.0019	0.0150 mg/L		108149	1	12/24/2008 3:53:43 PM
Nickel	BRL		0.0035	0.0200 mg/L		108149	1	12/24/2008 1:39:14 PM
Potassium	1.58		0.0300	0.500 mg/L		108149	1	12/24/2008 1:39:14 PM
Selenium	BRL		0.0060	0.0200 mg/L		108149	1	12/24/2008 1:39:14 PM
Silver	BRL		0.0003	0.0100 mg/L		108149	1	12/24/2008 1:39:14 PM
Sodium	4.50		0.0063	1.00 mg/L		108149	1	12/24/2008 1:39:14 PM
Thallium	BRL		0.0041	0.0200 mg/L		108149	1	12/24/2008 1:39:14 PM
Vanadium	BRL		0.0016	0.0100 mg/L		108149	1	12/24/2008 1:39:14 PM
Zinc	BRL		0.0035	0.0200 mg/L		108149	1	12/24/2008 1:39:14 PM
<b>METALS, TOTAL</b>								
			SW6010B	(SW3010A)				Analyst: DJ
Aluminum	0.905		0.0230	0.200 mg/L		108148	1	12/24/2008 3:17:06 PM
Antimony	BRL		0.0063	0.0200 mg/L		108148	1	12/24/2008 3:17:06 PM
Arsenic	0.0031	J	0.0031	0.0500 mg/L		108148	1	12/24/2008 3:17:06 PM
Barium	0.0436		0.0016	0.0200 mg/L		108148	1	12/24/2008 3:17:06 PM
Beryllium	BRL		0.0022	0.0100 mg/L		108148	1	12/24/2008 3:17:06 PM
Cadmium	BRL		0.0025	0.0050 mg/L		108148	1	12/24/2008 3:17:06 PM
Calcium	27.3		0.0110	0.100 mg/L		108148	1	12/24/2008 3:17:06 PM
Chromium	BRL		0.0075	0.0100 mg/L		108148	1	12/24/2008 3:17:06 PM
Cobalt	BRL		0.0013	0.0200 mg/L		108148	1	12/24/2008 3:17:06 PM
Copper	BRL		0.0016	0.0100 mg/L		108148	1	12/24/2008 3:17:06 PM
Iron	0.607		0.0360	0.100 mg/L		108148	1	12/24/2008 3:17:06 PM
Lead	BRL		0.0038	0.0100 mg/L		108148	1	12/24/2008 3:17:06 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL

# Analytical Environmental Services, Inc.

Date: 06-Jan-09

CLIENT: Tetra Tech EM Inc.  
Lab Order: 0812G73  
Project: TVA Kingston  
Lab ID: 0812G73-011

Client Sample ID: KIF-CRM 2.0  
Collection Date: 12/23/2008 12:16:00 PM  
Matrix: SURFACE WATER

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
<b>METALS, TOTAL</b>			<b>SW6010B</b>	<b>(SW3010A)</b>				Analyst: DJ
Magnesium	7.57		0.0190	0.100	mg/L	108148	1	12/24/2008 3:17:06 PM
Manganese	0.0512		0.0019	0.0150	mg/L	108148	1	12/24/2008 3:17:06 PM
Nickel	BRL		0.0035	0.0200	mg/L	108148	1	12/24/2008 3:17:06 PM
Potassium	2.14		0.0300	0.500	mg/L	108148	1	12/24/2008 3:17:06 PM
Selenium	BRL		0.0060	0.0200	mg/L	108148	1	12/24/2008 3:17:06 PM
Silver	BRL		0.0003	0.0100	mg/L	108148	1	12/24/2008 3:17:06 PM
Sodium	5.43		0.0063	1.00	mg/L	108148	1	12/24/2008 3:17:06 PM
Thallium	BRL		0.0041	0.0200	mg/L	108148	1	12/24/2008 3:17:06 PM
Vanadium	0.0024	J	0.0016	0.0100	mg/L	108148	1	12/24/2008 3:17:06 PM
Zinc	BRL		0.0035	0.0200	mg/L	108148	1	12/24/2008 3:17:06 PM
<b>MERCURY, DISSOLVED</b>			<b>SW7470A</b>	<b>(SW7470)</b>				Analyst: MAW
Mercury	BRL		0.00001	0.00020	mg/L	108150	1	12/24/2008 6:27:28 PM
<b>MERCURY, TOTAL</b>			<b>SW7470A</b>	<b>(SW7470)</b>				Analyst: MAW
Mercury	BRL		0.00001	0.00020	mg/L	108151	1	12/24/2008 7:23:57 PM

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL



# Analytical Environmental Services, Inc.

Date: 06-Jan-09

**CLIENT:** Tetra Tech EM Inc.  
**Lab Order:** 0812G73  
**Project:** TVA Kingston  
**Lab ID:** 0812G73-012

**Client Sample ID:** TT-SS01  
**Collection Date:** 12/23/2008 4:55:00 PM  
**Matrix:** SEDIMENT

Analyses	Result	Qual	MDL	Rpt. Limit	Units	BatchID	DF	Date Analyzed
<b>METALS, TOTAL</b>			<b>SW6010B</b>	<b>(SW3050B)</b>				<b>Analyst: DJ</b>
Aluminum	26400		49.3	562	mg/Kg-dry	108096	10	12/24/2008 5:18:15 PM
Antimony	1.27	J	0.214	5.62	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Arsenic	44.8		0.169	5.62	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Barium	864		0.169	5.62	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Beryllium	6.25		0.0157	2.81	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Cadmium	0.577	J	0.0371	2.81	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Calcium	18300		220	562	mg/Kg-dry	108096	10	12/24/2008 5:18:15 PM
Chromium	41.3		0.0742	2.81	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Cobalt	17.7		0.0202	2.81	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Copper	59.9		0.0472	2.81	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Iron	12000		14.3	562	mg/Kg-dry	108096	10	12/24/2008 5:18:15 PM
Lead	20.3		0.112	5.62	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Magnesium	3900		1.32	56.2	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Manganese	66.9		0.202	5.62	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Nickel	29.4		0.0281	5.62	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Potassium	3280		1.23	112	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Selenium	3.13	J	0.450	5.62	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Silver	BRL		0.0157	2.81	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Sodium	672		4.87	112	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Thallium	4.36	J	0.202	5.62	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Vanadium	107		0.0270	5.62	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
Zinc	55.6		0.720	5.62	mg/Kg-dry	108096	1	12/24/2008 5:07:29 PM
<b>TOTAL MERCURY</b>			<b>SW7471A</b>	<b>(SW7471)</b>				<b>Analyst: MAW</b>
Mercury	0.0879	J	0.00478	0.137	mg/Kg-dry	108154	1	12/24/2008 2:41:24 PM
<b>VOLATILE ORGANICS</b>			<b>SW8260B</b>	<b>(SW5035)</b>				<b>Analyst: JE</b>
Benzene	BRL		0.18	1.3	ug/Kg-dry	108171	1	12/24/2008 3:25:00 PM
Toluene	BRL		0.17	1.3	ug/Kg-dry	108171	1	12/24/2008 3:25:00 PM
Ethylbenzene	BRL		0.22	1.3	ug/Kg-dry	108171	1	12/24/2008 3:25:00 PM
m,p-Xylene	BRL		0.47	1.3	ug/Kg-dry	108171	1	12/24/2008 3:25:00 PM
o-Xylene	BRL		0.49	1.3	ug/Kg-dry	108171	1	12/24/2008 3:25:00 PM
Surr: 4-Bromofluorobenzene	64.4		0	56-145	%REC	108171	1	12/24/2008 3:25:00 PM
<b>PERCENT MOISTURE</b>			<b>D2216</b>					<b>Analyst: MAS</b>
Percent Moisture	27.7		0	0	wt%		1	12/24/2008 12:00:00 P

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
			BRL	Not detected at MDL

# Analytical Environmental Services, Inc.

06-Jan-09

Lab Order: 0812G73  
Client: Tetra Tech EM Inc.  
Project: TVA Kingston

## DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
0812G73-001A	KIF-KWTPI	12/23/2008 11:47:00 AM	Surface Water	TOTAL MERCURY	12/24/2008	12/24/2008	12/24/2008
				TOTAL METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
				TOTAL METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
				Total Metals by ICP/MS	1/5/2009	1/5/2009	1/5/2009
0812G73-002A	KIF-CRM 4.0	12/23/2008 2:23:00 PM		TOTAL MERCURY	12/24/2008	12/24/2008	12/24/2008
				TOTAL METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
				TOTAL METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
0812G73-003A	KIF-ERM 0.1	12/23/2008 2:32:00 PM		TOTAL MERCURY	12/24/2008	12/24/2008	12/24/2008
				TOTAL METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
				TOTAL METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
				TOTAL METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
0812G73-003B				DISSOLVED METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
				DISSOLVED METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
				MERCURY, DISSOLVED	12/24/2008	12/24/2008	12/24/2008
				Residue, Suspended (TSS)	12/24/2008	12/24/2008	12/24/2008
0812G73-004A	KIF-CRM 5.5	12/23/2008 2:10:00 PM		TOTAL MERCURY	12/24/2008	12/24/2008	12/24/2008
				TOTAL METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
				TOTAL METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
0812G73-005A	KIF-ERM 2.1	12/23/2008 3:15:00 PM		TOTAL MERCURY	12/24/2008	12/24/2008	12/24/2008
				TOTAL METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
0812G73-006A	KIF-ERM 4.0	12/23/2008 3:30:00 PM		TOTAL MERCURY	12/24/2008	12/24/2008	12/24/2008
				TOTAL METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
0812G73-007A	TT-ERM 1.9	12/23/2008 4:55:00 PM		TOTAL MERCURY	12/24/2008	12/24/2008	12/24/2008
				TOTAL METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
0812G73-008A	DUPLICATE	12/23/2008 4:57:00 PM		TOTAL MERCURY	12/24/2008	12/24/2008	12/24/2008
				TOTAL METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
0812G73-009A	KIF-TRM568.5	12/23/2008 11:33:00 AM		TOTAL METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
				TOTAL MERCURY	12/24/2008	12/24/2008	12/24/2008

**Lab Order:** 0812G73  
**Client:** Tetra Tech EM Inc.  
**Project:** TVA Kingston

## DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
0812G73-009A	KIF-TRM568.5	12/23/2008 11:33:00 AM	Surface Water	TOTAL METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
0812G73-009B				DISSOLVED METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
				DISSOLVED METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
				MERCURY, DISSOLVED	12/24/2008	12/24/2008	12/24/2008
				Residue, Suspended (TSS)	12/24/2008	12/24/2008	12/24/2008
0812G73-010A	KIF-CRM 0.0	12/23/2008 11:58:00 AM		TOTAL MERCURY	12/24/2008	12/24/2008	12/24/2008
0812G73-010B				TOTAL METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
				DISSOLVED METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
				DISSOLVED METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
				MERCURY, DISSOLVED	12/24/2008	12/24/2008	12/24/2008
				Residue, Suspended (TSS)	12/24/2008	12/24/2008	12/24/2008
0812G73-011A	KIF-CRM 2.0	12/23/2008 12:16:00 PM		TOTAL MERCURY	12/24/2008	12/24/2008	12/24/2008
0812G73-011B				TOTAL METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
				DISSOLVED METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
				DISSOLVED METALS BY ICP	12/24/2008	12/24/2008	12/24/2008
				MERCURY, DISSOLVED	12/24/2008	12/24/2008	12/24/2008
				Residue, Suspended (TSS)	12/24/2008	12/24/2008	12/24/2008
0812G73-012A	TT-SS01	12/23/2008 4:55:00 PM	Sediment	VOLATILE ORGANICS: BTEX	12/24/2008	12/24/2008	12/24/2008
				VOLATILE ORGANICS: BTEX	12/24/2008	12/24/2008	12/24/2008
0812G73-012B				MERCURY	12/24/2008	12/24/2008	12/24/2008
				PERCENT MOISTURE			12/24/2008
				TOTAL METALS BY ICP	12/23/2008	12/23/2008	12/24/2008
				TOTAL METALS BY ICP	12/23/2008	12/23/2008	12/24/2008

**CLIENT:** Tetra Tech EM Inc.  
**Work Order:** 0812G73  
**Project:** TVA Kingston

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 160.2**

Sample ID: MB-108167	SampType: MBLK	TestCode: 160.2	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139624
Client ID:	Batch ID: 108167	TestNo: E160.2		Analysis Date: 12/24/2008	SeqNo: 2861338
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Residue, Suspended (TSS)	BRL	5.00			

Sample ID: 0812G90-001ADUP	SampType: DUP	TestCode: 160.2	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139624
Client ID:	Batch ID: 108167	TestNo: E160.2		Analysis Date: 12/24/2008	SeqNo: 2861336
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Residue, Suspended (TSS)	988	10.0	0	0	0 0 960 2.87 30

<b>Qualifiers:</b>	<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J		Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix		

CLIENT: Tetra Tech EM Inc.  
Work Order: 0812G73  
Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B\_TAL\_S

Sample ID: MB-108096	SampType: MBLK	TestCode: 6010B_TAL_	Units: mg/Kg	Prep Date: 12/23/2008	RunNo: 139613						
Client ID:	Batch ID: 108096	TestNo: SW6010B		Analysis Date: 12/23/2008	SeqNo: 2862406						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aluminum	BRL	50.0	0	0	0	0	0	0	0	0	
Antimony	BRL	5.00	0	0	0	0	0	0	0	0	
Arsenic	BRL	5.00	0	0	0	0	0	0	0	0	
Barium	BRL	5.00	0	0	0	0	0	0	0	0	
Beryllium	BRL	2.50	0	0	0	0	0	0	0	0	
Cadmium	BRL	2.50	0	0	0	0	0	0	0	0	
Calcium	26.98	50.0	0	0	0	0	0	0	0	0	J
Chromium	0.1341	2.50	0	0	0	0	0	0	0	0	J
Cobalt	BRL	2.50	0	0	0	0	0	0	0	0	
Copper	0.1093	2.50	0	0	0	0	0	0	0	0	J
Iron	1.985	50.0	0	0	0	0	0	0	0	0	J
Lead	BRL	5.00	0	0	0	0	0	0	0	0	
Magnesium	1.387	50.0	0	0	0	0	0	0	0	0	J
Manganese	BRL	5.00	0	0	0	0	0	0	0	0	
Nickel	0.5571	5.00	0	0	0	0	0	0	0	0	J
Potassium	1.24	100	0	0	0	0	0	0	0	0	J
Selenium	BRL	5.00	0	0	0	0	0	0	0	0	
Silver	BRL	2.50	0	0	0	0	0	0	0	0	
Sodium	5.56	100	0	0	0	0	0	0	0	0	J
Thallium	BRL	5.00	0	0	0	0	0	0	0	0	
Vanadium	BRL	5.00	0	0	0	0	0	0	0	0	
Zinc	0.9846	5.00	0	0	0	0	0	0	0	0	J

Sample ID: LCS-108096	SampType: LCS	TestCode: 6010B_TAL_	Units: mg/Kg	Prep Date: 12/23/2008	RunNo: 139613						
Client ID:	Batch ID: 108096	TestNo: SW6010B		Analysis Date: 12/23/2008	SeqNo: 2862405						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aluminum	479.6	50.0	500	0	95.9	80	120	0	0	0	
Antimony	47.67	5.00	50	0	95.3	80	120	0	0	0	

Qualifiers:	<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J		Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix		

CLIENT: Tetra Tech EM Inc.  
 Work Order: 0812G73  
 Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B\_TAL\_S

Sample ID: LCS-108096		SampType: LCS		TestCode: 6010B_TAL_		Units: mg/Kg		Prep Date: 12/23/2008		RunNo: 139613	
Client ID:		Batch ID: 108096		TestNo: SW6010B				Analysis Date: 12/23/2008		SeqNo: 2862405	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	48.8	5.00	50	0	97.6	80	120	0	0		
Barium	49.11	5.00	50	0	98.2	80	120	0	0		
Beryllium	49.52	2.50	50	0	99	80	120	0	0		
Cadmium	48.5	2.50	50	0	97	80	120	0	0		
Calcium	541.4	50.0	500	26.98	103	80	120	0	0		
Chromium	51.95	2.50	50	0.1341	104	80	120	0	0		
Cobalt	49.42	2.50	50	0	98.8	80	120	0	0		
Copper	49.7	2.50	50	0.1093	99.2	80	120	0	0		
Iron	500	50.0	500	1.985	99.6	80	120	0	0		
Lead	48.96	5.00	50	0	97.9	80	120	0	0		
Magnesium	477.7	50.0	500	1.387	95.3	80	120	0	0		
Manganese	49.42	5.00	50	0	98.8	80	120	0	0		
Nickel	51.04	5.00	50	0.5571	101	80	120	0	0		
Potassium	451.6	100	500	1.24	90.1	80	120	0	0		
Selenium	48.13	5.00	50	0	96.3	80	120	0	0		
Silver	4.801	2.50	5	0	96	80	120	0	0		
Sodium	473.6	100	500	5.56	93.6	80	120	0	0		
Thallium	47.45	5.00	50	0	94.9	80	120	0	0		
Vanadium	49.84	5.00	50	0	99.7	80	120	0	0		
Zinc	51.44	5.00	50	0.9846	101	80	120	0	0		

Sample ID: 0812E02-007AMS		SampType: MS	TestCode: 6010B_TAL_		Units: mg/Kg-dry	Prep Date: 12/23/2008		RunNo: 139613			
Client ID:		Batch ID: 108096	TestNo: SW6010B		Analysis Date: 12/23/2008		SeqNo: 2862409				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	3557	53.5	535.4	3056	93.5	75	125	0	0		
Antimony	61.53	5.35	53.54	27.55	63.5	75	125	0	0		S
Arsenic	54.26	5.35	53.54	7.21	87.9	75	125	0	0		
Barium	130.3	5.35	53.54	83.19	88	75	125	0	0		

**Qualifiers:**

<	Less than Result value	B	Analyte detected in the associated Method Blank
BRL	Below Reporting Limit	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit		

> Greater than Result value  
 E Estimated value above quantitation range  
 N Analyte not NELAC certified  
 S Spike Recovery outside limits due to matrix

CLIENT: Tetra Tech EM Inc.  
Work Order: 0812G73  
Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B\_TAL\_S

Sample ID: 0812E02-007AMS	SampType: MS	TestCode: 6010B_TAL_	Units: mg/Kg-dry	Prep Date: 12/23/2008	RunNo: 139613						
Client ID:	Batch ID: 108096	TestNo: SW6010B		Analysis Date: 12/23/2008	SeqNo: 2862409						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Beryllium	48.69	2.68	53.54	0.5446	89.9	75	125	0	0		
Cadmium	45.28	2.68	53.54	0.1004	84.4	75	125	0	0		
Cobalt	142	2.68	53.54	100.9	76.9	75	125	0	0		
Lead	401.2	5.35	53.54	301.7	186	75	125	0	0		S
Magnesium	1315	53.5	535.4	942	69.7	75	125	0	0		S
Manganese	466	5.35	53.54	403.7	116	75	125	0	0		
Potassium	2035	107	535.4	1479	104	75	125	0	0		
Selenium	41.62	5.35	53.54	0	77.7	75	125	0	0		
Silver	5.015	2.68	5.354	0.3611	86.9	75	125	0	0		
Thallium	27.66	5.35	53.54	0	51.7	75	125	0	0		S
Vanadium	64.36	5.35	53.54	17.29	87.9	75	125	0	0		
Zinc	668.3	5.35	53.54	659.6	16.2	75	125	0	0		S

Sample ID: 0812E02-007AMS	SampType: MS	TestCode: 6010B_TAL_	Units: mg/Kg-dry	Prep Date: 12/23/2008	RunNo: 139613						
Client ID:	Batch ID: 108096	TestNo: SW6010B		Analysis Date: 12/24/2008	SeqNo: 2862441						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Calcium	18420	535	535.4	17790	118	75	125	0	0		
Chromium	6448	26.8	53.54	6391	106	75	125	0	0		
Copper	5164	26.8	53.54	5168	-7.65	75	125	0	0		S
Sodium	4847	1070	535.4	4558	54	75	125	0	0		S

Sample ID: 0812E02-007AMS	SampType: MS	TestCode: 6010B_TAL_	Units: mg/Kg-dry	Prep Date: 12/23/2008	RunNo: 139613						
Client ID:	Batch ID: 108096	TestNo: SW6010B		Analysis Date: 12/24/2008	SeqNo: 2862459						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	148400	5350	535.4	143000	1010	75	125	0	0		S
Nickel	85280	535	53.54	88350	-5720	75	125	0	0		S

**Qualifiers:** < Less than Result value  
BRL Below Reporting Limit  
J Estimated value detected below Reporting Limit  
Rpt Lim Reporting Limit  
> Greater than Result value  
E Estimated value above quantitation range  
N Analyte not NELAC certified  
S Spike Recovery outside limits due to matrix  
B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
R RPD outside limits due to matrix

CLIENT: Tetra Tech EM Inc.  
Work Order: 0812G73  
Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B\_TAL\_S

Sample ID: 0812E02-007AMSD		SampType: MSD		TestCode: 6010B_TAL_		Units: mg/Kg-dry		Prep Date: 12/23/2008		RunNo: 139613	
Client ID:		Batch ID: 108096		TestNo: SW6010B		Analysis Date: 12/23/2008		SeqNo: 2862411			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	3637	54.5	54.5	3056	107	75	125	3557	2.23	20	
Antimony	60.96	5.45	54.5	27.55	61.3	75	125	61.53	0.931	20	S
Arsenic	54.36	5.45	54.5	7.21	86.5	75	125	54.26	0.180	20	
Barium	146.1	5.45	54.5	83.19	115	75	125	130.3	11.4	20	
Beryllium	48.81	2.73	54.5	0.5446	88.5	75	125	48.69	0.230	20	
Cadmium	45.36	2.73	54.5	0.1004	83	75	125	45.28	0.178	20	
Cobalt	144.8	2.73	54.5	100.9	80.6	75	125	142	1.91	20	
Lead	368.9	5.45	54.5	301.7	123	75	125	401.2	8.39	20	
Magnesium	1352	54.5	54.5	942	75.2	75	125	1315	2.76	20	
Manganese	472.2	5.45	54.5	403.7	126	75	125	466	1.32	20	S
Potassium	2075	109	54.5	1479	109	75	125	2035	1.97	20	
Selenium	40.2	5.45	54.5	0	73.7	75	125	41.62	3.47	20	S
Silver	5.307	2.73	5.45	0.3611	90.8	75	125	5.015	5.66	20	
Thallium	28.13	5.45	54.5	0	51.6	75	125	27.66	1.69	20	S
Vanadium	65.58	5.45	54.5	17.29	88.6	75	125	64.36	1.87	20	
Zinc	688.6	5.45	54.5	659.6	53.2	75	125	668.3	2.99	20	S

Sample ID: 0812E02-007AMSD		SampType: MSD		TestCode: 6010B_TAL_		Units: mg/Kg-dry		Prep Date: 12/23/2008		RunNo: 139613	
Client ID:		Batch ID: 108096		TestNo: SW6010B		Analysis Date: 12/24/2008		SeqNo: 2862443			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	20310	545	545	17790	463	75	125	18420	9.76	20	S
Chromium	6605	27.3	54.5	6391	393	75	125	6448	2.41	20	S
Copper	5406	27.3	54.5	5168	437	75	125	5164	4.58	20	S
Sodium	4926	1090	545	4558	67.5	75	125	4847	1.62	20	S

**Qualifiers:** < Less than Result value  
BRL Below Reporting Limit  
J Estimated value detected below Reporting Limit  
Rpt Lim Reporting Limit  
> Greater than Result value  
E Estimated value above quantitation range  
N Analyte not NELAC certified  
S Spike Recovery outside limits due to matrix  
B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
R RPD outside limits due to matrix



CLIENT: Tetra Tech EM Inc.  
Work Order: 0812G73  
Project: TVA Kingston

## ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B\_TAL\_S

Sample ID: 0812E02-007AMSD		SampType: MSD	TestCode: 6010B_TAL_		Units: mg/Kg-dry	Prep Date: 12/23/2008		RunNo: 139613			
Client ID:		Batch ID: 108096	TestNo: SW6010B			Analysis Date: 12/24/2008		SeqNo: 2862462			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	155100	5450	545	143000	2220	75	125	148400	4.40	20	S
Nickel	87620	545	54.5	88350	-1340	75	125	85280	2.70	20	S

Qualifiers:	<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J		Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix		

CLIENT: Tetra Tech EM Inc.  
 Work Order: 0812G73  
 Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B\_TAL\_W\_D

Sample ID: MB-108149	SampType: MBLK	TestCode: 6010B_TAL_	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139609						
Client ID:	Batch ID: 108149	TestNo: SW6010B		Analysis Date: 12/24/2008	SeqNo: 2861362						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aluminum	BRL	0.200	0	0	0	0	0	0	0	0	0
Antimony	BRL	0.0200	0	0	0	0	0	0	0	0	0
Arsenic	BRL	0.0500	0	0	0	0	0	0	0	0	0
Barium	BRL	0.0200	0	0	0	0	0	0	0	0	0
Beryllium	BRL	0.0100	0	0	0	0	0	0	0	0	0
Cadmium	BRL	0.00500	0	0	0	0	0	0	0	0	0
Calcium	BRL	0.100	0	0	0	0	0	0	0	0	0
Chromium	BRL	0.0100	0	0	0	0	0	0	0	0	0
Cobalt	BRL	0.0200	0	0	0	0	0	0	0	0	0
Copper	BRL	0.0100	0	0	0	0	0	0	0	0	0
Iron	BRL	0.100	0	0	0	0	0	0	0	0	0
Lead	BRL	0.0100	0	0	0	0	0	0	0	0	0
Magnesium	BRL	0.100	0	0	0	0	0	0	0	0	0
Manganese	BRL	0.0150	0	0	0	0	0	0	0	0	0
Nickel	BRL	0.0200	0	0	0	0	0	0	0	0	0
Potassium	BRL	0.500	0	0	0	0	0	0	0	0	0
Selenium	BRL	0.0200	0	0	0	0	0	0	0	0	0
Silver	BRL	0.0100	0	0	0	0	0	0	0	0	0
Sodium	BRL	1.00	0	0	0	0	0	0	0	0	0
Thallium	BRL	0.0200	0	0	0	0	0	0	0	0	0
Vanadium	BRL	0.0100	0	0	0	0	0	0	0	0	0
Zinc	BRL	0.0200	0	0	0	0	0	0	0	0	0

Sample ID: LCS-108149	SampType: LCS	TestCode: 6010B_TAL_	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139609						
Client ID:	Batch ID: 108149	TestNo: SW6010B		Analysis Date: 12/24/2008	SeqNo: 2861059						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aluminum	9.97	0.200	10	0	99.7	80	120	0	0	0	0
Antimony	1.013	0.0200	1	0	101	80	120	0	0	0	0

Qualifiers:	<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J		Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix		

CLIENT: Tetra Tech EM Inc.  
Work Order: 0812G73  
Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B\_TAL\_W\_D

Sample ID: LCS-108149	SampType: LCS	TestCode: 6010B_TAL_	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139609						
Client ID:	Batch ID: 108149	TestNo: SW6010B		Analysis Date: 12/24/2008	SeqNo: 2861059						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	1.025	0.0500	1	0	103	80	120	0	0		
Barium	1.002	0.0200	1	0	100	80	120	0	0		
Beryllium	1.013	0.0100	1	0	101	80	120	0	0		
Cadmium	1.018	0.00500	1	0	102	80	120	0	0		
Calcium	9.919	0.100	10	0	99.2	80	120	0	0		
Chromium	1.075	0.0100	1	0	108	80	120	0	0		
Cobalt	1.013	0.0200	1	0	101	80	120	0	0		
Copper	0.9996	0.0100	1	0	100	80	120	0	0		
Iron	10.1	0.100	10	0	101	80	120	0	0		
Lead	0.999	0.0100	1	0	99.9	80	120	0	0		
Magnesium	10.1	0.100	10	0	101	80	120	0	0		
Manganese	1.143	0.0150	1	0	114	80	120	0	0		
Nickel	1.009	0.0200	1	0	101	80	120	0	0		
Potassium	10.15	0.500	10	0	101	80	120	0	0		
Selenium	0.9936	0.0200	1	0	99.4	80	120	0	0		
Silver	0.09945	0.0100	0.1	0	99.5	80	120	0	0		
Sodium	10.03	1.00	10	0	100	80	120	0	0		
Thallium	0.9902	0.0200	1	0	99	80	120	0	0		
Vanadium	1.006	0.0100	1	0	101	80	120	0	0		
Zinc	1.011	0.0200	1	0	101	80	120	0	0		

Sample ID: 0812G73-010BMS	SampType: MS	TestCode: 6010B_TAL_	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139609						
Client ID: KIF-CRM 0.0	Batch ID: 108149	TestNo: SW6010B		Analysis Date: 12/24/2008	SeqNo: 2861062						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aluminum	9.608	0.200	10	0.02676	95.8	75	125	0	0		
Antimony	1	0.0200	1	0	100	75	125	0	0		
Arsenic	1.013	0.0500	1	0	101	75	125	0	0		
Barium	0.9931	0.0200	1	0.01891	97.4	75	125	0	0		

## Qualifiers:

<	Less than Result value	>	Greater than Result value
BRL	Below Reporting Limit	E	Estimated value above quantitation range
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix
		B	Analyte detected in the associated Method Blank
		H	Holding times for preparation or analysis exceeded
		R	RPD outside limits due to matrix

CLIENT: Tetra Tech EM Inc.  
Work Order: 0812G73  
Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B\_TAL\_W\_D

Sample ID: 0812G73-010BMS			SampType: MS		TestCode: 6010B_TAL_		Units: mg/L		Prep Date: 12/24/2008		RunNo: 139609	
Client ID: KIF-CRM 0.0			Batch ID: 108149		TestNo: SW6010B				Analysis Date: 12/24/2008		SeqNo: 2861062	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Beryllium	0.9917	0.0100	1	0	99.2	75	125	0	0			
Cadmium	0.9935	0.00500	1	0	99.4	75	125	0	0			
Calcium	23.32	0.100	10	14.85	84.7	75	125	0	0			
Chromium	1.029	0.0100	1	0.02611	100	75	125	0	0			
Cobalt	0.9848	0.0200	1	0	98.5	75	125	0	0			
Copper	0.9755	0.0100	1	0	97.6	75	125	0	0			
Iron	9.911	0.100	10	0	99.1	75	125	0	0			
Lead	0.9794	0.0100	1	0	97.9	75	125	0	0			
Magnesium	12.93	0.100	10	3.802	91.2	75	125	0	0			
Manganese	1.194	0.0150	1	0.05757	114	75	125	0	0			
Nickel	0.9827	0.0200	1	0	98.3	75	125	0	0			
Potassium	11.78	0.500	10	1.779	100	75	125	0	0			
Selenium	0.9899	0.0200	1	0	99	75	125	0	0			
Silver	0.09719	0.0100	0.1	0	97.2	75	125	0	0			
Sodium	16.52	1.00	10	8.042	84.8	75	125	0	0			
Thallium	0.9552	0.0200	1	0.004626	95.1	75	125	0	0			
Vanadium	0.9833	0.0100	1	0	98.3	75	125	0	0			
Zinc	0.9888	0.0200	1	0	98.9	75	125	0	0			

Sample ID: 0812G73-010BMSD		SampType: MSD	TestCode: 6010B_TAL_		Units: mg/L		Prep Date: 12/24/2008		RunNo: 139609		
Client ID: KIF-CRM 0.0		Batch ID: 108149	TestNo: SW6010B				Analysis Date: 12/24/2008		SeqNo: 2861063		
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	9.672	0.200	10	0.02676	96.5	75	125	9.608	0.671	20	
Antimony	1.004	0.0200	1	0	100	75	125	1	0.402	20	
Arsenic	1.025	0.0500	1	0	102	75	125	1.013	1.17	20	
Barium	0.9998	0.0200	1	0.01891	98.1	75	125	0.9931	0.672	20	
Beryllium	0.9985	0.0100	1	0	99.9	75	125	0.9917	0.684	20	
Cadmium	1.004	0.00500	1	0	100	75	125	0.9935	1.07	20	

**Qualifiers:**

<	Less than Result value	>	Greater than Result value
BRL	Below Reporting Limit	E	Estimated value above quantitation range
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix

Analyte detected in the associated Method Blank  
Holding times for preparation or analysis exceeded  
RPD outside limits due to matrix

CLIENT: Tetra Tech EM Inc.  
Work Order: 0812G73  
Project: TVA Kingston

## ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B\_TAL\_W\_D

Sample ID: 0812G73-010BM		MSD	SampType:		TestCode: 6010B_TAL_		Units: mg/L		Prep Date: 12/24/2008		RunNo: 139609		
Client ID: KIF-CRM 0.0		Batch ID: 108149		TestNo: SW6010B		Analysis Date: 12/24/2008						SeqNo: 2861063	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Calcium	23.4	0.100	10	14.85	85.5	75	125	23.32	0.352	20			
Chromium	1.029	0.0100	1	0.02611	100	75	125	1.029	0.0155	20			
Cobalt	0.9942	0.0200	1	0	99.4	75	125	0.9848	0.943	20			
Copper	0.9825	0.0100	1	0	98.2	75	125	0.9755	0.711	20			
Iron	10.01	0.100	10	0	100	75	125	9.911	0.947	20			
Lead	0.9887	0.0100	1	0	98.9	75	125	0.9794	0.944	20			
Magnesium	12.99	0.100	10	3.802	91.9	75	125	12.93	0.511	20			
Manganese	1.178	0.0150	1	0.05757	112	75	125	1.194	1.32	20			
Nickel	0.9894	0.0200	1	0	98.9	75	125	0.9827	0.677	20			
Potassium	11.84	0.500	10	1.779	101	75	125	11.78	0.534	20			
Selenium	1.002	0.0200	1	0	100	75	125	0.9899	1.18	20			
Silver	0.09789	0.0100	0.1	0	97.9	75	125	0.09719	0.709	20			
Sodium	16.46	1.00	10	8.042	84.2	75	125	16.52	0.338	20			
Thallium	0.9679	0.0200	1	0.004626	96.3	75	125	0.9552	1.32	20			
Vanadium	0.9918	0.0100	1	0	99.2	75	125	0.9833	0.861	20			
Zinc	0.9984	0.0200	1	0	99.8	75	125	0.9888	0.959	20			

### Qualifiers:

<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL	Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

CLIENT: Tetra Tech EM Inc.  
Work Order: 0812G73  
Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B\_TAL\_W\_T

Sample ID: MB-108148	SampType: MBLK	TestCode: 6010B_TAL_	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139622						
Client ID:	Batch ID: 108148	TestNo: SW6010B		Analysis Date: 12/24/2008	SeqNo: 2861450						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aluminum	BRL	0.200	0	0	0	0	0	0	0	0	
Antimony	BRL	0.0200	0	0	0	0	0	0	0	0	
Arsenic	BRL	0.0500	0	0	0	0	0	0	0	0	
Barium	BRL	0.0200	0	0	0	0	0	0	0	0	
Beryllium	BRL	0.0100	0	0	0	0	0	0	0	0	
Cadmium	BRL	0.00500	0	0	0	0	0	0	0	0	
Calcium	BRL	0.100	0	0	0	0	0	0	0	0	
Chromium	BRL	0.0100	0	0	0	0	0	0	0	0	
Cobalt	BRL	0.0200	0	0	0	0	0	0	0	0	
Copper	BRL	0.0100	0	0	0	0	0	0	0	0	
Iron	BRL	0.100	0	0	0	0	0	0	0	0	
Lead	BRL	0.0100	0	0	0	0	0	0	0	0	
Magnesium	BRL	0.100	0	0	0	0	0	0	0	0	
Manganese	BRL	0.0150	0	0	0	0	0	0	0	0	
Nickel	BRL	0.0200	0	0	0	0	0	0	0	0	
Potassium	BRL	0.500	0	0	0	0	0	0	0	0	
Selenium	BRL	0.0200	0	0	0	0	0	0	0	0	
Silver	BRL	0.0100	0	0	0	0	0	0	0	0	
Sodium	BRL	1.00	0	0	0	0	0	0	0	0	
Thallium	0.00522	0.0200	0	0	0	0	0	0	0	0	J
Vanadium	BRL	0.0100	0	0	0	0	0	0	0	0	
Zinc	BRL	0.0200	0	0	0	0	0	0	0	0	

Sample ID: LCS-108148	SampType: LCS	TestCode: 6010B_TAL_	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139622						
Client ID:	Batch ID: 108148	TestNo: SW6010B		Analysis Date: 12/24/2008	SeqNo: 2861240						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aluminum	10.18	0.200	10	0	102	85	115	0	0	0	
Antimony	1.036	0.0200	1	0	104	85	115	0	0	0	

Qualifiers:	<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	BRL	Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

CLIENT: Tetra Tech EM Inc.  
Work Order: 0812G73  
Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B\_TAL\_W\_T

Sample ID: LCS-108148		SampType: LCS		TestCode: 6010B_TAL_		Units: mg/L		Prep Date: 12/24/2008		RunNo: 139622	
Client ID:		Batch ID: 108148		TestNo: SW6010B				Analysis Date: 12/24/2008		SeqNo: 2861240	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.058	0.0500	1	0	106	85	115	0	0		
Barium	1.024	0.0200	1	0	102	85	115	0	0		
Beryllium	1.035	0.0100	1	0	104	85	115	0	0		
Cadmium	1.046	0.00500	1	0	105	85	115	0	0		
Calcium	10.16	0.100	10	0	102	85	115	0	0		
Chromium	1.033	0.0100	1	0	103	85	115	0	0		
Cobalt	1.041	0.0200	1	0	104	85	115	0	0		
Copper	1.025	0.0100	1	0	103	85	115	0	0		
Iron	10.35	0.100	10	0	104	85	115	0	0		
Lead	1.031	0.0100	1	0	103	85	115	0	0		
Magnesium	10.32	0.100	10	0	103	85	115	0	0		
Manganese	1.148	0.0150	1	0	115	85	115	0	0		
Nickel	1.038	0.0200	1	0	104	85	115	0	0		
Potassium	10.38	0.500	10	0	104	85	115	0	0		
Selenium	1.043	0.0200	1	0	104	85	115	0	0		
Silver	0.1016	0.0100	0.1	0	102	85	115	0	0		
Sodium	9.852	1.00	10	0	98.5	85	115	0	0		
Thallium	1.02	0.0200	1	0.00522	101	85	115	0	0		
Vanadium	1.032	0.0100	1	0	103	85	115	0	0		
Zinc	1.036	0.0200	1	0	104	85	115	0	0		

Sample ID: 0812G73-006AMS	SampType: MS	TestCode: 6010B_TAL_	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139622						
Client ID: KIF-ERM 4.0	Batch ID: 108148	TestNo: SW6010B		Analysis Date: 12/24/2008	SeqNo: 2861245						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	10.27	0.200	10	0.3378	99.3	75	125	0	0		
Antimony	1.02	0.0200	1	0	102	75	125	0	0		
Arsenic	1.038	0.0500	1	0	104	75	125	0	0		
Barium	1.031	0.0200	1	0.03038	100	75	125	0	0		

**Qualifiers:**

<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL	Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

CLIENT: Tetra Tech EM Inc.  
Work Order: 0812G73  
Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B\_TAL\_W\_T

Sample ID: 0812G73-006AMS	SampType: MS	TestCode: 6010B_TAL_	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139622						
Client ID: KIF-ERM 4.0	Batch ID: 108148	TestNo: SW6010B		Analysis Date: 12/24/2008	SeqNo: 2861245						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Beryllium	1.018	0.0100	1	0	102	75	125	0	0		
Cadmium	1.022	0.00500	1	0	102	75	125	0	0		
Calcium	17.16	0.100	10	7.813	93.5	75	125	0	0		
Chromium	1.012	0.0100	1	0	101	75	125	0	0		
Cobalt	1.015	0.0200	1	0	102	75	125	0	0		
Copper	0.9997	0.0100	1	0	100	75	125	0	0		
Iron	10.4	0.100	10	0.262	101	75	125	0	0		
Lead	1.012	0.0100	1	0	101	75	125	0	0		
Magnesium	11.79	0.100	10	1.777	100	75	125	0	0		
Manganese	1.131	0.0150	1	0.1222	101	75	125	0	0		
Nickel	1.01	0.0200	1	0	101	75	125	0	0		
Potassium	11.73	0.500	10	1.354	104	75	125	0	0		
Selenium	1.027	0.0200	1	0	103	75	125	0	0		
Silver	0.09982	0.0100	0.1	0	99.8	75	125	0	0		
Sodium	11.99	1.00	10	2.528	94.7	75	125	0	0		
Thallium	0.9916	0.0200	1	0.004134	98.7	75	125	0	0		
Vanadium	1.011	0.0100	1	0	101	75	125	0	0		
Zinc	1.018	0.0200	1	0	102	75	125	0	0		

Sample ID: 0812G73-006AMSD	SampType: MSD	TestCode: 6010B_TAL_	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139622						
Client ID: KIF-ERM 4.0	Batch ID: 108148	TestNo: SW6010B		Analysis Date: 12/24/2008	SeqNo: 2861247						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aluminum	10.34	0.200	10	0.3378	100	75	125	10.27	0.721	20	
Antimony	1.03	0.0200	1	0	103	75	125	1.02	1.03	20	
Arsenic	1.054	0.0500	1	0	105	75	125	1.038	1.50	20	
Barium	1.036	0.0200	1	0.03038	101	75	125	1.031	0.526	20	
Beryllium	1.023	0.0100	1	0	102	75	125	1.018	0.512	20	
Cadmium	1.031	0.00500	1	0	103	75	125	1.022	0.895	20	

Qualifiers:	<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J		Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix		



CLIENT: Tetra Tech EM Inc.  
Work Order: 0812G73  
Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: 6010B\_TAL\_W\_T

Sample ID: 0812G73-006AMSD		SampType: MSD		TestCode: 6010B_TAL_		Units: mg/L		Prep Date: 12/24/2008		RunNo: 139622	
Client ID: KIF-ERM 4.0		Batch ID: 108148		TestNo: SW6010B				Analysis Date: 12/24/2008		SeqNo: 2861247	
Analyte	Result	RPT Limit	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	17.57	0.100	10	7.813	97.5	75	125	17.16	2.31	20	
Chromium	1.018	0.0100	1	0	102	75	125	1.012	0.574	20	
Cobalt	1.023	0.0200	1	0	102	75	125	1.015	0.764	20	
Copper	1.01	0.0100	1	0	101	75	125	0.9997	1.01	20	
Iron	10.5	0.100	10	0.262	102	75	125	10.4	0.990	20	
Lead	1.018	0.0100	1	0	102	75	125	1.012	0.586	20	
Magnesium	11.95	0.100	10	1.777	102	75	125	11.79	1.39	20	
Manganese	1.11	0.0150	1	0.1222	98.7	75	125	1.131	1.92	20	
Nickel	1.019	0.0200	1	0	102	75	125	1.01	0.946	20	
Potassium	11.86	0.500	10	1.354	105	75	125	11.73	1.12	20	
Selenium	1.035	0.0200	1	0	103	75	125	1.027	0.800	20	
Silver	0.1003	0.0100	0.1	0	100	75	125	0.09982	0.502	20	
Sodium	12.19	1.00	10	2.528	96.7	75	125	11.99	1.66	20	
Thallium	1.006	0.0200	1	0.004134	100	75	125	0.9916	1.43	20	
Vanadium	1.016	0.0100	1	0	102	75	125	1.011	0.558	20	
Zinc	1.023	0.0200	1	0	102	75	125	1.018	0.564	20	

Qualifiers:		<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank	
BRL	Below Reporting Limit			E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded	
J	Estimated value detected below Reporting Limit			N	Analyte not NELAC certified	R	RPD outside limits due to matrix	
Rpt Lim	Reporting Limit			S	Spike Recovery outside limits due to matrix			

CLIENT: Tetra Tech EM Inc.  
Work Order: 0812G73  
Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: 6020\_W

Sample ID: MB-108443	SampType: MBLK	TestCode: 6020_W	Units: ug/L	Prep Date: 1/5/2009	RunNo: 140089						
Client ID:	Batch ID: 108443	TestNo: SW6020		Analysis Date: 1/5/2009	SeqNo: 2870833						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aluminum	BRL	10.0	0	0	0	0	0	0	0	0	
Antimony	BRL	5.00	0	0	0	0	0	0	0	0	
Arsenic	BRL	5.00	0	0	0	0	0	0	0	0	
Barium	BRL	10.0	0	0	0	0	0	0	0	0	
Beryllium	BRL	1.00	0	0	0	0	0	0	0	0	
Cadmium	BRL	0.700	0	0	0	0	0	0	0	0	
Calcium	BRL	100	0	0	0	0	0	0	0	0	
Chromium	BRL	5.00	0	0	0	0	0	0	0	0	
Cobalt	BRL	5.00	0	0	0	0	0	0	0	0	
Copper	BRL	2.00	0	0	0	0	0	0	0	0	
Iron	BRL	100	0	0	0	0	0	0	0	0	
Lead	BRL	1.00	0	0	0	0	0	0	0	0	
Magnesium	9.598	100	0	0	0	0	0	0	0	0	J
Manganese	BRL	5.00	0	0	0	0	0	0	0	0	
Nickel	BRL	5.00	0	0	0	0	0	0	0	0	
Potassium	BRL	100	0	0	0	0	0	0	0	0	
Selenium	BRL	5.00	0	0	0	0	0	0	0	0	
Silver	BRL	1.00	0	0	0	0	0	0	0	0	
Sodium	BRL	500	0	0	0	0	0	0	0	0	
Thallium	BRL	1.00	0	0	0	0	0	0	0	0	
Vanadium	BRL	5.00	0	0	0	0	0	0	0	0	
Zinc	BRL	10.0	0	0	0	0	0	0	0	0	

Sample ID: LCS-108443	SampType: LCS	TestCode: 6020_W	Units: ug/L	Prep Date: 1/5/2009	RunNo: 140089						
Client ID:	Batch ID: 108443	TestNo: SW6020		Analysis Date: 1/5/2009	SeqNo: 2870832						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aluminum	1036	10.0	1000	0	104	85	115	0	0	0	
Antimony	100.3	5.00	100	0	100	85	115	0	0	0	

**Qualifiers:** < Less than Result value  
BRL Below Reporting Limit  
J Estimated value detected below Reporting Limit  
Rpt Lim Reporting Limit  
> Greater than Result value  
E Estimated value above quantitation range  
N Analyte not NELAC certified  
S Spike Recovery outside limits due to matrix  
B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
R RPD outside limits due to matrix

CLIENT: Tetra Tech EM Inc.  
 Work Order: 0812G73  
 Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: 6020\_W

Sample ID: LCS-108443	SampType: LCS	TestCode: 6020_W	Units: ug/L	Prep Date: 1/5/2009	RunNo: 140089
Client ID: 108443	Batch ID: 108443	TestNo: SW6020		Analysis Date: 1/5/2009	SeqNo: 2870832

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	100.7	5.00	100	0	101	85	115	0	0	0	
Barium	101.9	10.0	100	0	102	85	115	0	0	0	
Beryllium	104.1	1.00	100	0	104	85	115	0	0	0	
Cadmium	102.6	0.700	100	0	103	85	115	0	0	0	
Calcium	1051	100	1000	0	105	80	120	0	0	0	
Chromium	100.1	5.00	100	0	100	85	115	0	0	0	
Cobalt	99.04	5.00	100	0	99	85	115	0	0	0	
Copper	103	2.00	100	0	103	85	115	0	0	0	
Iron	1031	100	1000	0	103	85	115	0	0	0	
Lead	100.5	1.00	100	0	101	85	115	0	0	0	
Magnesium	1060	100	1000	9.598	105	80	120	0	0	0	
Manganese	99.81	5.00	100	0	99.8	85	115	0	0	0	
Nickel	101.8	5.00	100	0	102	85	115	0	0	0	
Potassium	1041	100	1000	0	104	80	120	0	0	0	
Selenium	100.7	5.00	100	0	101	85	115	0	0	0	
Silver	10.3	1.00	10	0	103	85	115	0	0	0	
Sodium	1076	500	1000	0	108	80	120	0	0	0	
Thallium	100.6	1.00	100	0	101	85	115	0	0	0	
Vanadium	102	5.00	100	0	102	85	115	0	0	0	
Zinc	102.2	10.0	100	0	102	85	115	0	0	0	

Sample ID: 0812G73-001AMS	SampType: MS	TestCode: 6020_W	Units: ug/L	Prep Date: 1/5/2009	RunNo: 140089
Client ID: KIF-KWTPI	Batch ID: 108443	TestNo: SW6020		Analysis Date: 1/5/2009	SeqNo: 2870835

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	1241	10.0	1000	247.3	99.4	70	130	0	0	0	
Antimony	98.57	5.00	100	0	98.6	70	130	0	0	0	
Arsenic	100.4	5.00	100	0	100	70	130	0	0	0	
Barium	119.9	10.0	100	21.17	98.7	70	130	0	0	0	

**Qualifiers:**

<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL	Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

CLIENT: Tetra Tech EM Inc.  
 Work Order: 0812G73  
 Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: 6020\_W

Sample ID: 0812G73-001AMS	SampType: MS	TestCode: 6020_W	Units: ug/L	Prep Date: 1/5/2009	RunNo: 140089						
Client ID: KIF-KWTPJ	Batch ID: 108443	TestNo: SW6020		Analysis Date: 1/5/2009	SeqNo: 2870835						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Beryllium	103.1	1.00	100	0	103	70	130	0	0		
Cadmium	100.7	0.700	100	0	101	70	130	0	0		
Calcium	17120	100	1000	16480	64	70	130	0	0		S
Chromium	96.9	5.00	100	0	96.9	70	130	0	0		
Cobalt	95.19	5.00	100	0	95.2	70	130	0	0		
Copper	99.59	2.00	100	0.914	98.7	70	130	0	0		
Iron	1220	100	1000	249	97.1	70	130	0	0		
Lead	99.4	1.00	100	0.332	99.1	70	130	0	0		
Magnesium	4487	100	1000	3634	85.3	70	130	0	0		
Manganese	141.5	5.00	100	44.76	96.7	70	130	0	0		
Nickel	98.96	5.00	100	0.672	98.3	70	130	0	0		
Potassium	2641	100	1000	1891	75	70	130	0	0		
Selenium	99.98	5.00	100	0	100	70	130	0	0		
Silver	10.12	1.00	10	0	101	70	130	0	0		
Sodium	9290	500	1000	8489	80.1	70	130	0	0		
Thallium	100.2	1.00	100	0	100	70	130	0	0		
Vanadium	99.54	5.00	100	0	99.5	70	130	0	0		
Zinc	105.3	10.0	100	10.67	94.6	70	130	0	0		

Sample ID: 0812G73-001AMSD	SampType: MSD	TestCode: 6020_W	Units: ug/L	Prep Date: 1/5/2009	RunNo: 140089						
Client ID: KIF-KWTPJ	Batch ID: 108443	TestNo: SW6020		Analysis Date: 1/5/2009	SeqNo: 2870836						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aluminum	1254	10.0	1000	247.3	101	70	130	1241	1.04	20	
Antimony	100.7	5.00	100	0	101	70	130	98.57	2.14	20	
Arsenic	102.5	5.00	100	0	103	70	130	100.4	2.07	20	
Barium	122.4	10.0	100	21.17	101	70	130	119.9	2.06	20	
Beryllium	104.2	1.00	100	0	104	70	130	103.1	1.06	20	
Cadmium	102.6	0.700	100	0	103	70	130	100.7	1.87	20	

Qualifiers:	<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J		Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix		

CLIENT: Tetra Tech EM Inc.  
 Work Order: 0812G73  
 Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: 6020\_W

Sample ID: 0812G73-001AMSD		SampType: MSD		TestCode: 6020_W		Units: ug/L		Prep Date: 1/5/2009		RunNo: 140089	
Client ID: KIF-KWTPI		Batch ID: 108443		TestNo: SW6020				Analysis Date: 1/5/2009		SeqNo: 2870836	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	17320	100	1000	16480	84	70	130	17120	1.16	20	
Chromium	99.07	5.00	100	0	99.1	70	130	96.9	2.21	20	
Cobalt	95.29	5.00	100	0	95.3	70	130	95.19	0.105	20	
Copper	110.3	2.00	100	0.914	109	70	130	99.59	10.2	20	
Iron	1226	100	1000	249	97.7	70	130	1220	0.491	20	
Lead	100.7	1.00	100	0.332	100	70	130	99.4	1.30	20	
Magnesium	4547	100	1000	3634	91.3	70	130	4487	1.33	20	
Manganese	143.4	5.00	100	44.76	98.6	70	130	141.5	1.33	20	
Nickel	99.61	5.00	100	0.672	98.9	70	130	98.96	0.655	20	
Potassium	2662	100	1000	1891	77.1	70	130	2641	0.792	20	
Selenium	99.46	5.00	100	0	99.5	70	130	99.98	0.521	20	
Silver	10.2	1.00	10	0	102	70	130	10.12	0.787	20	
Sodium	9417	500	1000	8489	92.8	70	130	9290	1.36	20	
Thallium	101.4	1.00	100	0	101	70	130	100.2	1.19	20	
Vanadium	101.4	5.00	100	0	101	70	130	99.54	1.85	20	
Zinc	125.5	10.0	100	10.67	115	70	130	105.3	17.5	20	

Qualifiers:	<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J		Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix		

CLIENT: Tetra Tech EM Inc.  
 Work Order: 0812G73  
 Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: 7470A\_W\_D

Sample ID: MB-108150	SampType: MBLK	TestCode: 7470A_W_D	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139643
Client ID:	Batch ID: 108150	TestNo: SW7470A		Analysis Date: 12/24/2008	SeqNo: 2861741
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	BRL	0.000200	0	0	0 0 0 0

Sample ID: LCS-108150	SampType: LCS	TestCode: 7470A_W_D	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139643
Client ID:	Batch ID: 108150	TestNo: SW7470A		Analysis Date: 12/24/2008	SeqNo: 2861742
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	0.004924	0.000200	0.005	0	98.5 85 115 0 0

Sample ID: 0812G73-011BMS	SampType: MS	TestCode: 7470A_W_D	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139643
Client ID: KIF-CRM 2.0	Batch ID: 108150	TestNo: SW7470A		Analysis Date: 12/24/2008	SeqNo: 2861746
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	0.004717	0.000200	0.005	0	94.3 70 130 0 0

Sample ID: 0812G73-011BMSD	SampType: MSD	TestCode: 7470A_W_D	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139643
Client ID: KIF-CRM 2.0	Batch ID: 108150	TestNo: SW7470A		Analysis Date: 12/24/2008	SeqNo: 2861747
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	0.004823	0.000200	0.005	0	96.5 70 130 0.004717 2.22 20

Qualifiers:	<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	BRL	Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**CLIENT:** Tetra Tech EM Inc.  
**Work Order:** 0812G73  
**Project:** TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

**TestCode:** 7470A\_W\_T

Sample ID: MB-108151	SampType: MBLK	TestCode: 7470A_W_T	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139644						
Client ID:	Batch ID: 108151	TestNo: SW7470A		Analysis Date: 12/24/2008	SeqNo: 2861782						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	BRL	0.000200	0	0	0	0	0	0	0	0	

Sample ID: LCS-108151	SampType: LCS	TestCode: 7470A_W_T	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139644						
Client ID:	Batch ID: 108151	TestNo: SW7470A		Analysis Date: 12/24/2008	SeqNo: 2861783						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004777	0.000200	0.005	0	95.5	85	115	0	0	0	

Sample ID: 0812G73-006AMS	SampType: MS	TestCode: 7470A_W_T	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139644						
Client ID: KIF-ERM 4.0	Batch ID: 108151	TestNo: SW7470A		Analysis Date: 12/24/2008	SeqNo: 2861785						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004774	0.000200	0.005	0	95.5	70	130	0	0	0	

Sample ID: 0812G73-006AMSD	SampType: MSD	TestCode: 7470A_W_T	Units: mg/L	Prep Date: 12/24/2008	RunNo: 139644						
Client ID: KIF-ERM 4.0	Batch ID: 108151	TestNo: SW7470A		Analysis Date: 12/24/2008	SeqNo: 2861788						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004702	0.000200	0.005	0	94	70	130	0.004774	1.51	20	

<b>Qualifiers:</b>	<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL	BRL	Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

CLIENT: Tetra Tech EM Inc.  
 Work Order: 0812G73  
 Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: 7471A\_S

Sample ID: MB-108154	SampType: MBLK	TestCode: 7471A_S	Units: mg/Kg	Prep Date: 12/24/2008	RunNo: 139620
Client ID:	Batch ID: 108154	TestNo: SW7471A		Analysis Date: 12/24/2008	SeqNo: 2861176
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	BRL	0.100	0	0	0 0 0 0

Sample ID: LCS-108154	SampType: LCS	TestCode: 7471A_S	Units: mg/Kg	Prep Date: 12/24/2008	RunNo: 139620
Client ID:	Batch ID: 108154	TestNo: SW7471A		Analysis Date: 12/24/2008	SeqNo: 2861177
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	0.3921	0.100	0.4	0	98 80 120 0 0

Sample ID: 0812G39-003CMS	SampType: MS	TestCode: 7471A_S	Units: mg/Kg-dry	Prep Date: 12/24/2008	RunNo: 139620
Client ID:	Batch ID: 108154	TestNo: SW7471A		Analysis Date: 12/24/2008	SeqNo: 2861181
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	0.5018	0.123	0.4918	0.03689	94.5 70 130 0 0

Sample ID: 0812G39-003CMSD	SampType: MSD	TestCode: 7471A_S	Units: mg/Kg-dry	Prep Date: 12/24/2008	RunNo: 139620
Client ID:	Batch ID: 108154	TestNo: SW7471A		Analysis Date: 12/24/2008	SeqNo: 2861184
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	0.4971	0.123	0.4938	0.03689	93.2 70 130 0.5018 0.925 30

Qualifiers:	<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J		Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix		



**CLIENT:** Tetra Tech EM Inc.  
**Work Order:** 0812G73  
**Project:** TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

**TestCode:** BTEX\_S-MS

Sample ID: MB-108171	SampType: MBLK	TestCode: BTEX_S-MS	Units: ug/Kg	Prep Date: 12/24/2008	RunNo: 139632						
Client ID:	Batch ID: 108171	TestNo: SW8260B		Analysis Date: 12/24/2008	SeqNo: 2861310						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: LCS-108171	SampType: LCS	TestCode: BTEX_S-MS	Units: ug/Kg	Prep Date: 12/24/2008	RunNo: 139632						
Client ID:	Batch ID: 108171	TestNo: SW8260B		Analysis Date: 12/24/2008	SeqNo: 2861381						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: 0812F89-001AMS	SampType: MS	TestCode: BTEX_S-MS	Units: ug/Kg-dry	Prep Date: 12/24/2008	RunNo: 139688						
Client ID:	Batch ID: 108171	TestNo: SW8260B		Analysis Date: 12/24/2008	SeqNo: 2862830						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:	<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J		Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix		

CLIENT: Tetra Tech EM Inc.  
 Work Order: 0812G73  
 Project: TVA Kingston

# ANALYTICAL QC SUMMARY REPORT

TestCode: BTEX\_S-MS

Sample ID: 0812F89-001AMSD		SampType: MSD		TestCode: BTEX_S-MS		Units: ug/Kg-dry		Prep Date: 12/24/2008		RunNo: 139688	
Client ID:		Batch ID: 108171		TestNo: SW8260B				Analysis Date: 12/24/2008		SeqNo: 2862832	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	71.3	1.3	63.99	0	111	62.1	134	78	8.98	20	
Ethylbenzene	67.34	1.3	63.99	0	105	60.8	141	75.19	11.0	20	
m,p-Xylene	134.4	1.3	128	0	105	56.2	144	147.4	9.24	20	
o-Xylene	68.33	1.3	63.99	0	107	62.4	138	74.73	8.95	20	
Toluene	70.38	1.3	63.99	0	110	60.2	136	78	10.3	20	
Surr: 4-Bromofluorobenzene	63.35	0	63.99	0	99	56	145	63.38	0	0	

Qualifiers:	<	Less than Result value	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range	H	Holding times for preparation or analysis exceeded
J		Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix		