



ENVIRONMENTAL  
SCIENCE CORP.

12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Mr. Stanley Bramlett  
TVA-Widows Creek Fossil Plant  
2800 Steamplant Rd.

Stevenson, AL 35772

Report Summary

Tuesday January 27, 2009

Report Number: L384911

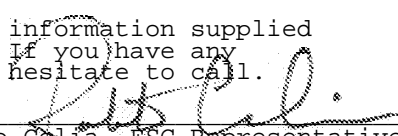
Samples Received: 01/23/09

Client Project: TVAWCF GYPSUM SPILL

Description: TVAWCF GYPSUM POND SPILL

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
Roberto Celis, ESC Representative

*Laboratory Certification Numbers*

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140  
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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Where applicable, sampling conducted by ESC is performed per guidance provided  
in laboratory standard operating procedures: 060302, 060303, and 060304.



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REPORT OF ANALYSIS

Mr. Stanley Bramlett  
TVA-Widows Creek Fossil Plant  
2800 Steamplant Rd.  
Stevenson, AL 35772

January 27, 2009

Date Received : 01/23/09 15:15  
Description : TVAWCF GYPSUM POND SPILL  
Sample ID : MDB-FB-138-20090123  
Collected By : R Wells/M Gamble  
Collection Date : 01/23/09 09:35

ESC Sample # : L384911-01

Site ID :

Project # : TVAWCF GYPSUM SPILL

Parameter	Result	Det. Limit	Units	Method	Prep	PID	Analyzed	AID
Nitrate	BDL	0.10	mg/l	300.0	01/23/09	1203	159 01/24/09 2017	MCH
Sulfate	BDL	5.0	mg/l	300.0	01/23/09	1203	159 01/24/09 2017	MCH
Alkalinity	BDL	20.	mg/l	2320B	01/24/09	0921	236 01/26/09 2000	NJM
COD	BDL	20.	mg/l	410.4	01/23/09	1644	234 01/26/09 1449	LLJ
Ammonia Nitrogen	BDL	0.10	mg/l	350.1	01/26/09	1617	245 01/27/09 1550	LEM
pH	5.3		su	4500H-B	01/27/09	0748	183 01/27/09 0934	TWF
Nitrate-Nitrite	BDL	0.10	mg/l	353.2	01/26/09	0855	165 01/26/09 1248	LEM
Oil & Grease (Hexane Extr)	BDL	5.6	mg/l	1664A	01/25/09	1144	78 01/25/09 1620	TLB
Phosphorus, Total	BDL	0.10	mg/l	365.1	01/23/09	1553	245 01/26/09 1040	LEM
Kjeldahl Nitrogen, TKN	0.20	0.10	mg/l	351.2	01/26/09	1423	245 01/26/09 1531	DTH
TOC (Total Organic Carbon)	BDL	1.0	mg/l	5310B	01/26/09	1319	162 01/26/09 1804	ADH
Dissolved Solids	16.	10.	mg/l	2540C	01/23/09	1642	193 01/26/09 1255	AMS
Suspended Solids	BDL	1.0	mg/l	2540D	01/23/09	1643	193 01/24/09 1346	AMS
Antimony	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1131	LAT
Arsenic	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1131	LAT
Cadmium	BDL	0.00050	mg/l	200.8	01/23/09	2112	449 01/26/09 1131	LAT
Beryllium	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1131	LAT
Chromium	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1131	LAT
Cobalt	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1131	LAT
Copper	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1131	LAT
Lead	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1131	LAT
Nickel	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1131	LAT
Selenium	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1131	LAT
Silver	0.10	0.00050	mg/l	200.8	01/23/09	2112	449 01/26/09 1131	LAT
Thallium	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1131	LAT
Zinc	BDL	0.010	mg/l	200.8	01/23/09	2112	449 01/26/09 1131	LAT
Mercury	BDL	0.00020	mg/l	245.1	01/23/09	2050	261 01/26/09 1545	KBW

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

AIHA - 09227, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Notes:

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L384911-01 (PH) - 5.3@11.6c



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Mr. Stanley Bramlett  
TVA-Widows Creek Fossil Plant  
2800 Steamplant Rd.  
Stevenson, AL 35772

January 27, 2009

Date Received : 01/23/09 15:15  
Description : TVAWCF GYPSUM POND SPILL  
Sample ID : MDB-FB-138-20090123  
Collected By : R Wells/M Gamble  
Collection Date : 01/23/09 09:35

ESC Sample # : L384911-01

Site ID :

Project # : TVAWCF GYPSUM SPILL

Parameter	Result	Det. Limit	Units	Method	Prep	PID	Analyzed	AID
Aluminum	0.12	0.10	mg/l	200.7	01/23/09	2114	449 01/26/09 1150	DMM
Barium	BDL	0.0050	mg/l	200.7	01/23/09	2114	449 01/26/09 1150	DMM
Calcium	BDL	0.50	mg/l	200.7	01/23/09	2114	449 01/26/09 1150	DMM
Iron	BDL	0.10	mg/l	200.7	01/23/09	2114	449 01/26/09 1150	DMM
Magnesium	BDL	0.10	mg/l	200.7	01/23/09	2114	449 01/26/09 1150	DMM
Manganese	BDL	0.010	mg/l	200.7	01/23/09	2114	449 01/26/09 1150	DMM
Potassium	BDL	0.50	mg/l	200.7	01/23/09	2114	449 01/26/09 1150	DMM
Sodium	0.81	0.50	mg/l	200.7	01/23/09	2114	449 01/26/09 1150	DMM
Vanadium	BDL	0.010	mg/l	200.7	01/23/09	2114	449 01/26/09 1150	DMM

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

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2800 Steamplant Rd.  
Stevenson, AL 35772

January 27, 2009

Date Received : 01/23/09 15:15  
Description : TVAWCF GYPSUM POND SPILL  
Sample ID : CRB-SW-139-20090123  
Collected By : R Wells/M Gamble  
Collection Date : 01/23/09 08:22

ESC Sample # : L384911-02

Site ID :

Project # : TVAWCF GYPSUM SPILL

Parameter	Result	Det. Limit	Units	Method	Prep	PID	Analyzed	AID
Nitrate	0.55	0.10	mg/l	300.0	01/23/09	1203	159 01/24/09 2037	MCH
Sulfate	8.8	5.0	mg/l	300.0	01/23/09	1203	159 01/24/09 2037	MCH
Alkalinity	80.	20.	mg/l	2320B	01/24/09	0921	236 01/26/09 2000	NJM
COD	43.	20.	mg/l	410.4	01/23/09	1644	234 01/26/09 1449	LLJ
Ammonia Nitrogen	BDL	0.10	mg/l	350.1	01/26/09	1617	245 01/27/09 1552	LEM
pH	7.3		su	4500H-B	01/27/09	0748	183 01/27/09 0934	TWF
Nitrate-Nitrite	0.53	0.10	mg/l	353.2	01/26/09	0855	165 01/26/09 1249	LEM
Oil & Grease (Hexane Extr)	BDL	5.0	mg/l	1664A	01/25/09	1144	78 01/25/09 1618	TLB
Phosphorus, Total	BDL	0.10	mg/l	365.1	01/23/09	1553	245 01/26/09 1041	LEM
Kjeldahl Nitrogen, TKN	0.42	0.10	mg/l	351.2	01/26/09	1423	245 01/27/09 0842	DTH
TOC (Total Organic Carbon)	1.0	1.0	mg/l	5310B	01/26/09	1319	162 01/26/09 1830	ADH
Dissolved Solids	110	10.	mg/l	2540C	01/23/09	1642	193 01/26/09 1214	AMS
Suspended Solids	2.0	1.0	mg/l	2540D	01/23/09	1643	193 01/24/09 1346	AMS
Antimony	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1147	LAT
Arsenic	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1147	LAT
Cadmium	BDL	0.00050	mg/l	200.8	01/23/09	2112	449 01/26/09 1147	LAT
Beryllium	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1147	LAT
Chromium	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1147	LAT
Cobalt	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1147	LAT
Copper	0.0015	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1147	LAT
Lead	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1147	LAT
Nickel	0.0019	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1147	LAT
Selenium	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1147	LAT
Silver	BDL	0.00050	mg/l	200.8	01/23/09	2112	449 01/26/09 1147	LAT
Thallium	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1147	LAT
Zinc	BDL	0.010	mg/l	200.8	01/23/09	2112	449 01/26/09 1147	LAT
Mercury	BDL	0.00020	mg/l	245.1	01/23/09	2050	261 01/26/09 1548	KBW

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

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KY - 90010, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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L384911-02 (PH) - 7.3@10.7c



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TVA-Widows Creek Fossil Plant  
2800 Steamplant Rd.  
Stevenson, AL 35772

January 27, 2009

Date Received : 01/23/09 15:15  
Description : TVAWCF GYPSUM POND SPILL  
Sample ID : CRB-SW-139-20090123  
Collected By : R Wells/M Gamble  
Collection Date : 01/23/09 08:22

ESC Sample # : L384911-02

Site ID :

Project # : TVAWCF GYPSUM SPILL

Parameter	Result	Det. Limit	Units	Method	Prep	PID	Analyzed	AID
Aluminum	0.17	0.10	mg/l	200.7	01/23/09	2114	449 01/26/09 1153	DMM
Barium	0.019	0.0050	mg/l	200.7	01/23/09	2114	449 01/26/09 1153	DMM
Calcium	30.	0.50	mg/l	200.7	01/23/09	2114	449 01/26/09 1153	DMM
Iron	0.25	0.10	mg/l	200.7	01/23/09	2114	449 01/26/09 1153	DMM
Magnesium	4.3	0.10	mg/l	200.7	01/23/09	2114	449 01/26/09 1153	DMM
Manganese	0.044	0.010	mg/l	200.7	01/23/09	2114	449 01/26/09 1153	DMM
Potassium	0.56	0.50	mg/l	200.7	01/23/09	2114	449 01/26/09 1153	DMM
Sodium	1.3	0.50	mg/l	200.7	01/23/09	2114	449 01/26/09 1153	DMM
Vanadium	BDL	0.010	mg/l	200.7	01/23/09	2114	449 01/26/09 1153	DMM

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

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KY - 90010, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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L384911-02 (PH) - 7.3@10.7c



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January 27, 2009

Date Received : 01/23/09 15:15  
Description : TVAWCF GYPSUM POND SPILL  
Sample ID : MDB-SW-140-20090123  
Collected By : R Wells/M Gamble  
Collection Date : 01/23/09 09:19

ESC Sample # : L384911-03

Site ID :

Project # : TVAWCF GYPSUM SPILL

Parameter	Result	Det. Limit	Units	Method	Prep	PID	Analyzed	AID
Nitrate	0.55	0.10	mg/l	300.0	01/23/09	1203	159 01/24/09 2057	MCH
Sulfate	14.	5.0	mg/l	300.0	01/23/09	1203	159 01/24/09 2057	MCH
Alkalinity	86.	20.	mg/l	2320B	01/24/09	0921	236 01/26/09 2000	NUM
COD	BDL	20.	mg/l	410.4	01/23/09	1644	234 01/26/09 1449	LLJ
Ammonia Nitrogen	BDL	0.10	mg/l	350.1	01/26/09	1617	245 01/27/09 1553	LEM
pH	7.5		su	4500H-B	01/27/09	0748	183 01/27/09 0934	TWF
Nitrate-Nitrite	0.50	0.10	mg/l	353.2	01/26/09	0855	165 01/26/09 1250	LEM
Oil & Grease (Hexane Extr)	BDL	5.0	mg/l	1664A	01/25/09	1144	78 01/25/09 1619	TLB
Phosphorus, Total	BDL	0.10	mg/l	365.1	01/23/09	1553	245 01/26/09 1042	LEM
Kjeldahl Nitrogen, TKN	0.39	0.10	mg/l	351.2	01/26/09	1423	245 01/27/09 0845	DTH
TOC (Total Organic Carbon)	1.1	1.0	mg/l	5310B	01/26/09	1319	162 01/26/09 1923	ADH
Dissolved Solids	120	10.	mg/l	2540C	01/23/09	1642	193 01/26/09 1214	AMS
Suspended Solids	2.2	1.0	mg/l	2540D	01/23/09	1643	193 01/24/09 1346	AMS
Antimony	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1150	LAT
Arsenic	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1150	LAT
Cadmium	BDL	0.00050	mg/l	200.8	01/23/09	2112	449 01/26/09 1150	LAT
Beryllium	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1150	LAT
Chromium	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1150	LAT
Cobalt	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1150	LAT
Copper	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1150	LAT
Lead	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1150	LAT
Nickel	0.0019	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1150	LAT
Selenium	0.0011	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1150	LAT
Silver	BDL	0.00050	mg/l	200.8	01/23/09	2112	449 01/26/09 1150	LAT
Thallium	BDL	0.0010	mg/l	200.8	01/23/09	2112	449 01/26/09 1150	LAT
Zinc	BDL	0.010	mg/l	200.8	01/23/09	2112	449 01/26/09 1150	LAT
Mercury	BDL	0.00020	mg/l	245.1	01/23/09	2050	261 01/26/09 1550	KBW

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

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L384911-03 (PH) - 7.5@10.6c



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2800 Steamplant Rd.  
Stevenson, AL 35772

January 27, 2009

Date Received : 01/23/09 15:15  
Description : TVAWCF GYPSUM POND SPILL  
Sample ID : MDB-SW-140-20090123  
Collected By : R Wells/M Gamble  
Collection Date : 01/23/09 09:19

ESC Sample # : L384911-03

Site ID :

Project # : TVAWCF GYPSUM SPILL

Parameter	Result	Det. Limit	Units	Method	Prep	PID	Analyzed	AID
Aluminum	0.20	0.10	mg/l	200.7	01/23/09	2114	449 01/26/09 1156	DMM
Barium	0.020	0.0050	mg/l	200.7	01/23/09	2114	449 01/26/09 1156	DMM
Calcium	34.	0.50	mg/l	200.7	01/23/09	2114	449 01/26/09 1156	DMM
Iron	0.29	0.10	mg/l	200.7	01/23/09	2114	449 01/26/09 1156	DMM
Magnesium	4.7	0.10	mg/l	200.7	01/23/09	2114	449 01/26/09 1156	DMM
Manganese	0.058	0.010	mg/l	200.7	01/23/09	2114	449 01/26/09 1156	DMM
Potassium	0.66	0.50	mg/l	200.7	01/23/09	2114	449 01/26/09 1156	DMM
Sodium	1.4	0.50	mg/l	200.7	01/23/09	2114	449 01/26/09 1156	DMM
Vanadium	BDL	0.010	mg/l	200.7	01/23/09	2114	449 01/26/09 1156	DMM

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

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KY - 90010, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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L384911-03 (PH) - 7.5@10.6c



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Mr. Stanley Bramlett  
TVA-Widows Creek Fossil Plant  
2800 Steamplant Rd.  
Stevenson, AL 35772

January 27, 2009

Date Received : 01/23/09 15:15  
Description : TVAWCF GYPSUM POND SPILL  
Sample ID : TN 117-SW-143-20090123  
Collected By : R Wells/M Gamble  
Collection Date : 01/23/09 08:32

ESC Sample # : L384911-04

Site ID :

Project # : TVAWCF GYPSUM SPILL

Parameter	Result	Det. Limit	Units	Method	Prep	PID	Analyzed	AID
Nitrate	0.41	0.10	mg/l	300.0	01/23/09 0802	159	01/23/09 1918	MCH
Sulfate	16.	5.0	mg/l	300.0	01/23/09 0802	159	01/23/09 1918	MCH
Alkalinity	56.	20.	mg/l	2320B	01/24/09 0921	236	01/26/09 2000	NJM
COD	BDL	20.	mg/l	410.4	01/23/09 1644	234	01/26/09 1449	LLJ
Ammonia Nitrogen	BDL	0.10	mg/l	350.1	01/26/09 1617	245	01/27/09 1554	LEM
pH	7.6		su	4500H-B	01/27/09 0748	183	01/27/09 0934	TWF
Nitrate-Nitrite	0.38	0.10	mg/l	353.2	01/26/09 0855	165	01/26/09 1253	LEM
Oil & Grease (Hexane Extr)	BDL	5.0	mg/l	1664A	01/25/09 1144	78	01/25/09 1619	TLB
Phosphorus, Total	BDL	0.10	mg/l	365.1	01/23/09 1553	245	01/26/09 1043	LEM
Kjeldahl Nitrogen, TKN	0.49	0.10	mg/l	351.2	01/26/09 1423	245	01/27/09 0846	DTH
TOC (Total Organic Carbon)	2.2	1.0	mg/l	5310B	01/26/09 1319	162	01/26/09 1935	ADH
Dissolved Solids	100	10.	mg/l	2540C	01/23/09 1642	193	01/26/09 1215	AMS
Suspended Solids	4.8	1.0	mg/l	2540D	01/23/09 1643	193	01/24/09 1346	AMS
Antimony	BDL	0.0010	mg/l	200.8	01/23/09 2112	449	01/26/09 1153	LAT
Arsenic	0.0012	0.0010	mg/l	200.8	01/23/09 2112	449	01/26/09 1153	LAT
Cadmium	BDL	0.00050	mg/l	200.8	01/23/09 2112	449	01/26/09 1153	LAT
Beryllium	BDL	0.0010	mg/l	200.8	01/23/09 2112	449	01/26/09 1153	LAT
Chromium	BDL	0.0010	mg/l	200.8	01/23/09 2112	449	01/26/09 1153	LAT
Cobalt	BDL	0.0010	mg/l	200.8	01/23/09 2112	449	01/26/09 1153	LAT
Copper	0.0016	0.0010	mg/l	200.8	01/23/09 2112	449	01/26/09 1153	LAT
Lead	BDL	0.0010	mg/l	200.8	01/23/09 2112	449	01/26/09 1153	LAT
Nickel	0.0016	0.0010	mg/l	200.8	01/23/09 2112	449	01/26/09 1153	LAT
Selenium	BDL	0.0010	mg/l	200.8	01/23/09 2112	449	01/26/09 1153	LAT
Silver	BDL	0.00050	mg/l	200.8	01/23/09 2112	449	01/26/09 1153	LAT
Thallium	BDL	0.0010	mg/l	200.8	01/23/09 2112	449	01/26/09 1153	LAT
Zinc	BDL	0.010	mg/l	200.8	01/23/09 2112	449	01/26/09 1153	LAT
Mercury	BDL	0.00020	mg/l	245.1	01/23/09 2050	261	01/26/09 1553	KBW

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

AIHA - 09227, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Notes:

The reported analytical results relate only to the sample submitted  
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L384911-04 (PH) - 7.6@10.9c





**ENVIRONMENTAL  
SCIENCE CORP.**

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Est. 1970

REPORT OF ANALYSIS

Mr. Stanley Bramlett  
TVA-Widows Creek Fossil Plant  
2800 Steamplant Rd.  
Stevenson, AL 35772

January 27, 2009

Date Received : 01/23/09 15:15  
Description : TVAWCF GYPSUM POND SPILL  
Sample ID : TN 117-SW-143-20090123  
Collected By : R Wells/M Gamble  
Collection Date : 01/23/09 08:32

ESC Sample # : L384911-04

Site ID :

Project # : TVAWCF GYPSUM SPILL

Parameter	Result	Det. Limit	Units	Method	Prep	PID	Analyzed	AID
Aluminum	0.38	0.10	mg/l	200.7	01/23/09	2114	449 01/26/09 1117	DMM
Barium	0.025	0.0050	mg/l	200.7	01/23/09	2114	449 01/26/09 1117	DMM
Calcium	18.	0.50	mg/l	200.7	01/23/09	2114	449 01/26/09 1117	DMM
Iron	0.30	0.10	mg/l	200.7	01/23/09	2114	449 01/26/09 1117	DMM
Magnesium	4.4	0.10	mg/l	200.7	01/23/09	2114	449 01/26/09 1117	DMM
Manganese	0.032	0.010	mg/l	200.7	01/23/09	2114	449 01/26/09 1117	DMM
Potassium	1.7	0.50	mg/l	200.7	01/23/09	2114	449 01/26/09 1117	DMM
Sodium	7.8	0.50	mg/l	200.7	01/23/09	2114	449 01/26/09 1117	DMM
Vanadium	BDL	0.010	mg/l	200.7	01/23/09	2114	449 01/26/09 1117	DMM

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

AIHA - 09227, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Notes:

The reported analytical results relate only to the sample submitted  
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Reported: 01/27/09 16:54 Printed: 01/27/09 17:05

L384911-04 (PH) - 7.6@10.9c

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L384911-01	WG404019	SAMP	Dissolved Solids	R605325	J3
	WG404333	SAMP	pH	R607008	T8
L384911-02	WG404333	SAMP	pH	R607008	T8
L384911-03	WG404333	SAMP	pH	R607008	T8
L384911-04	WG404020	SAMP	Suspended Solids	R605145	J3
	WG404333	SAMP	pH	R607008	T8
	WG404048	SAMP	Copper	R606089	P1
	WG404048	SAMP	Selenium	R606089	P1
	WG404048	SAMP	Silver	R606089	P1

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed  
01/27/09 at 17:05:47

TSR Signing Reports: 400  
R3 - Rush: Two Day

Must have cooler receipt form-LC

Sample: L384911-01 Account: TVAWCF Received: 01/23/09 15:15 Due Date: 01/27/09 00:00 RPT Date: 01/27/09 16:54

Sample: L384911-02 Account: TVAWCF Received: 01/23/09 15:15 Due Date: 01/27/09 00:00 RPT Date: 01/27/09 16:54

Sample: L384911-03 Account: TVAWCF Received: 01/23/09 15:15 Due Date: 01/27/09 00:00 RPT Date: 01/27/09 16:54

Sample: L384911-04 Account: TVAWCF Received: 01/23/09 15:15 Due Date: 01/27/09 00:00 RPT Date: 01/27/09 16:54