Incoming
C0150032
DK

OGMCOAL - Sludge and Whole-Water Chemistry Analytical Results

From: Kevin Lundmark
To: OGMCOAL
Date: 4/27/2010 11:20 AM
Subject: Sludge and Whole-Water Chemistry Analytical Results
CC: Steve Christensen
Attachments: 999 Flock Metals.pdf; 1006 Raw Mine Water 2 GRI.pdf

The attached reports present results for the 8 April 2010 sample of treatment sludge for analysis of (total) RCRA metals and 12 April 2010 analysis of mine water discharge.

>>> "Marrelli, Dana" <dmarrelli@coalsource.com> 4/27/2010 10:52 AM >>>
Hello Kevin,
I was out of the office all last week. Sorry for the delay. I have attached the analysis for the metals and also for the other parameters that you requested. Please let me know if you need anything else.
Thank you,
Dana

From: Kevin Lundmark [mailto:kevinlundmark@utah.gov]
Sent: Thursday, April 01, 2010 1:14 PM
To: Marrelli, Dana; Shaver, Dave
Cc: Karla Knoop; Daron Haddock; Jim Smith; OGMCOAL@utah.gov; Steve Christensen
Subject: Sampling at Crandall

Dave, Dana:
The metals results and field parameters for the February 23, 2010 sampling at Crandall were provided on March 1, 2010; however, we have not yet received the sulfate, alkalinity, TDS and TSS results. Please email the February 23, 2010 results for sulfate, alkalinity, TDS and TSS at your earliest convenience.

I have previously requested that a whole-water sample be collected of the mine discharge water. This request has been made on multiple calls, and was sent in emails on February 9, February 16 and March 2, 2010. I have provided the list of parameters below which should be included. Note that some of the parameters are included with the monthly monitoring being performed. Please complete this sampling as soon as possible. Let me know if you or your analytical laboratory have any questions about the requested analyses.

Water monitoring parameters should include:

1. calcium (dissolved)
2. potassium (dissolved)
3. sodium (dissolved)
4. magnesium (dissolved)
5. silica
6. chloride
7. hot acidity (Standard Methods 2310a)
8. aluminum (total & dissolved)
9. iron (total & dissolved)
10. manganese (total & dissolved)
11. sulfate

12. alkalinity (total, carbonate and bicarbonate)
13. TDS
14. suspended solids
15. ferrous iron (field)
16. pH (field)
17. dissolved oxygen (field)
18. conductivity (field)
19. temperature (field)
20. flow (field)

Thanks,
Kevin

HORIZON LABORATORIES

General Offices: P.O. Box 995 Price, UT. 84501 (435)637-8855
Laboratory: 65 North 300 East Price, UT. 84501

Report Date
4/15/2010

Client
UtahAmerican Energy Inc.
Genwal Resources, Inc.
PO Box 1077
Price, UT. 84501
Dave Shaver
(435)888-4017

Sample I.D.
Flock
Sampled By: D.M.
Date: 4/8/2010 Time: 11:00
Received
Date: 4/8/2010 Time: 14:05

Field Measurements				
Cond. uS	Temp. C	pH	D.O. ppm	Turbidity NTU

Notes:

Lab I.D. #: 999 Mine Code 8 Site Code

Certificate of Analysis

Analyte	Results	Units	MRL	Method	Date	Time	Analyst
Metals by ICP							
Arsenic, Total	<0.10	mg/L	0.10	EPA 200.7	4/13/2010	10:37	BLP
Barium, Total	0.825	mg/L	0.020	EPA 200.7	4/13/2010	10:37	BLP
Cadmium, Total	<0.02	mg/L	0.020	EPA 200.7	4/13/2010	10:37	BLP
Chromium, Total	<0.02	mg/L	0.020	EPA 200.7	4/13/2010	10:37	BLP
Lead, Total	<0.05	mg/L	0.050	EPA 200.7	4/13/2010	10:37	BLP
Selenium, Total	<0.10	mg/L	0.10	EPA 200.7	4/14/2010	10:35	BLP
Silver, Total	<0.02	mg/L	0.020	EPA 200.7	4/13/2010	10:37	BLP
Manual Cold Vapor							
Mercury, Total	<0.0005	mg/L	0.0005	EPA 245.1	4/14/2010	13:57	BLP

Brandon Pierce
Technical Director

All reported results meet the requirements of NELAC, except for Balance and Hardness.
Balance and Hardness are calculated from certified results.

HORIZON LABORATORIES

General Offices: P.O. Box 995 Price, UT. 84501 (435)637-8855
Laboratory: 65 North 300 East Price, UT. 84501

Report Date
4/23/2010

Client
UtahAmerican Energy Inc.
Genwal Resources, Inc.
PO Box 1077
Price, UT. 84501
Dave Shaver
(435)888-4017

Sample I.D.
Raw Mine Water 2
Sampled By: D.M.
Date: 4/12/2010 **Time:** 15:06
Received
Date: 4/12/2010 **Time:** 16:24

Field Measurements

Cond. uS	Temp. C	pH	D.O. ppm	Turbidity NTU
		7.55		

Notes:
* Silica analyzed by Chemtech-Ford Laboratories.

Lab I.D. #: 1006 Mine Code 8 Site Code

Certificate of Analysis

Analyte	Results	Units	MRL	Method	Date	Time	Analyst
Wet Chem.							
Acidity to pH 8.3	-350	mg/L as $CaCO_3$	NA	SM 2310 B(4a)-97	4/22/2010	10:53	BLP
Alkalinity, Bicarbonate	380	mg/L as $CaCO_3$	10	SM2320-B-97	4/22/2010	9:35	BLP
Alkalinity, Carbonate	<10	mg/L as $CaCO_3$	10	SM2320-B-97	4/22/2010	9:35	BLP
Alkalinity, Total	380	mg/L as $CaCO_3$	20	SM2320-B-97	4/22/2010	9:35	BLP
Solids, Total Dissolved	643	mg/L	20	SM 2540 C-97	4/15/2010	13:57	BLP
Solids, Total Suspended	7	mg/L	4	SM 2540 D-97	4/15/2010	13:57	BLP
I.C./F.I.A.							
Chloride	10.76	mg/L	0.5	EPA 300.0	4/16/2010	10:38	BLP
Sulfate	183	mg/L	1	EPA 300.0	4/16/2010	10:38	BLP
Metals by ICP							
Aluminum, Dissolved	<0.02	mg/L	0.02	EPA 200.7	4/23/2010	10:59	BLP
Aluminum, Total	0.10	mg/L	0.02	EPA 200.7	4/16/2010	9:39	BLP
Calcium, Dissolved	99.88	mg/L	0.05	EPA 200.7	4/21/2010	14:31	BLP
Iron, Dissolved	1.034	mg/L	0.010	EPA 200.7	4/21/2010	14:31	BLP
Iron, Total	3.245	mg/L	0.010	EPA 200.7	4/16/2010	9:39	BLP
Magnesium, Dissolved	55.52	mg/L	0.050	EPA 200.7	4/21/2010	14:31	BLP
Manganese, Dissolved	0.122	mg/L	0.001	EPA 200.7	4/21/2010	14:31	BLP
Manganese, Total	0.128	mg/L	0.001	EPA 200.7	4/16/2010	9:39	BLP
Potassium, Dissolved	8.43	mg/L	0.3	EPA 200.7	4/21/2010	14:31	BLP
Sodium, Dissolved	34.34	mg/L	0.750	EPA 200.7	4/21/2010	14:31	BLP
Silica, Dissolved*	7.60	mg/L	0.100	EPA 200.7	4/22/2010	15:24	MJB
Calculations							
Hardness	478.03	mg/L as $CaCO_3$		SM2340-B	4/22/2010	16:08	BLP
Total Anions	11.71	meq/L			4/22/2010	16:08	BLP
Total Cations	11.26	meq/L			4/22/2010	16:08	BLP
Cation/ Anion Balance	-1.96	% difference		SM1030-E	4/22/2010	16:08	BLP

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Technical Director

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