Suzanne Steab <suzannesteab@utah.gov>

Re: Crandall Canyon 2015 Annual Report Deficiency

Cheryl Parker <cherylparker@utah.gov> Tue, Aug 2, 2016 at 9:51 AM
To: "Madsen, Karin" <kmadsen@coalsource.com>
Cc: Suzanne Steab <suzannesteab@utah.gov>, Steve Christensen <stevechristensen@utah.gov>, Priscilla Burton <priscillaburton@utah.gov>

Karin,

Sorry for the delay in response. The subsidence information meets the annual report requirements. As for the pond issue we can move the discussion and requirements to the midterm response which you recently submitted. The simplest way to put it is water present in the pond does not remove the annual obligation of a reported sediment level. We will plan on setting up a field trip with you in the near future so we can further discuss the issue of measuring the sediment level with water in the pond.

Cheryl Parker, M.S., P.E. | Coal Program Engineer

State of Utah DNR
Division of Oil Gas & Mining
1594 W North Temple, Suite 1210
Salt Lake City, UT 84116
Office: 801-538-5286

On Mon, Jul 18, 2016 at 4:08 PM, Priscilla Burton <priscillaburton@utah.gov> wrote:

> I will defer to Cheryl.
>
> Priscilla Burton, MS, CPSSc
> Environmental Scientist III
> Utah Division of Oil, Gas & Mining
> Price Field Office
> phone: 435-613-3733
>
> On Mon, Jul 18, 2016 at 3:26 PM, Madsen, Karin <kmadsen@coalsource.com> wrote:
>
> > Good afternoon Cheryl and Priscilla,
> >
> > I am going over the 2 deficient areas on the Crandall Canyon Annual Report and the Responses follow:
> >
> > Subsidence Monitoring
> >
> > Ware Surveying has supplied us with a n updated spreadsheet showing a comparison between 2014 and 2015. I've let him know to include this comparison file in future reports. It is attached to this email.
> >
> > Burma Pond Information/Sampling
> >
> > The Burma pond inspection reports show an estimated sediment level take by our surveyor in November of

2015. As you know, the sludge deposited into Burma Pond is much different than regular sediment, and remains “fluffy” (for lack of a better word) when suspended in water. As explained in the annual report, the pond did not evaporate enough in 2015 to show an actual sediment level, because the sludge stays suspended in water and does not settle, which would be the accumulated depth. Until the pond dries out, and the sludge is allowed to compact, the accumulated sediment level is unknown. The level reported to us by the surveyor is an estimate, and is the level where the orange coloration begins under the surface of the water while it is still suspended. Currently, I have been having scamp haul water off the top of Burma pond back to the treatment cells at Crandall to force the pond to evaporate quicker. I am planning on pulling a sediment sample and getting a true accumulated sediment level this summer, no later than September. The pond currently has little standing water, but is still very sloppy. I expect it to be dried out and compacted soon.

Please let me know if this information is acceptable to fulfill the commitments.

Thanks!

Karin Odendahl-Madsen

Engineering Technician

UtahAmerican Energy Inc.

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UtahAmerican Energy, Inc.

Crandall Canyon Mine - Subsidence Survey

9/16/2015

YEAR			2004	2007	2008	2009	2010	2011	2012	2013	2014	2015	
STATION	NORTHING (FEET)	EASTING (FEET)	ELEVATION (FEET)	ELEVATION (FEET)	ELEVATION (FEET)	ELEVATION (FEET)	ELEVATION (FEET)	ELEVATION (FEET)	ELEVATION (FEET)	ELEVATION (FEET)	ELEVATION (FEET)	ELEVATION (FEET)	2014-2015 (FEET)
A	413190.85	2080628.41	10440.47	10439.53	10439.43	10439.47	10439.48	10439.41	10439.43	10439.45	10439.44	10439.45	-0.01
B	413095.74	2080610.92	10426.40	10425.43	10425.40	10425.41	10425.38	10425.41	10425.40	10425.37	10425.40	10425.47	-0.07
C	412995.22	2080594.07	10412.27	10411.20	10411.23	10411.23	10411.16	10411.18	10411.17	10411.20	10411.16	10411.24	-0.08
D	412897.30	2080578.76	10400.21	10399.21	10399.25	10399.18	10399.23	10399.24	10399.21	10399.27	10399.23	10399.27	-0.04
E	412795.72	2080563.91	10385.11	10384.15	10384.18	10384.13	10384.16	10384.17	10384.18	10384.15	10384.14	10384.20	-0.06
J	412296.72	2080487.65	10323.47	10323.29	10323.20	10323.15	10323.26	10323.18	10323.19	10323.22	10323.22	10323.26	-0.04
N	411898.88	2080428.44	10313.15	10313.15	10313.13	10313.16	10313.16	10313.16	10313.10	10313.17	10313.15	10313.16	-0.01
O	411798.12	2080415.52	10316.56	10316.49	10316.50	10316.56	10316.52	10316.56	10316.57	10316.55	10316.53	10316.52	0.01
P	411700.03	2080403.24	10321.64	10321.65	10321.65	10321.69	10321.66	10321.65	10321.64	10321.63	10321.65	10321.64	0.01
Q	411599.74	2080390.76	10326.61	---	---	---	---	10326.53	10326.53	10326.56	10326.55	10326.52	0.03
R	411550.40	2080383.83	10330.17	---	---	---	---	10330.15	10330.08	10330.11	10330.09	10330.07	0.02
S	411501.07	2080376.56	10333.65	---	---	---	---	10333.51	10333.57	10333.54	10333.52	10333.59	-0.07
T	411399.27	2080366.35	10342.83	---	---	---	---	10342.74	10342.75	10342.77	10342.74	10342.78	-0.04
U	411299.82	2080354.19	10349.80	---	---	---	---	10349.68	10349.64	10349.69	10349.68	10349.67	0.01
V	411247.57	2080350.11	10353.81	---	---	---	---	10353.84	10353.77	10353.80	10353.81	10353.74	0.07
W	411198.08	2080343.54	10358.03	---	---	---	---	10357.94	10357.98	10357.93	10357.96	10357.96	0.00
X	411147.67	2080337.97	10360.97	---	---	---	---	10360.78	10360.89	10360.83	10360.81	10360.84	-0.03
Y	411097.90	2080332.61	10365.90	---	---	---	---	10365.78	10365.84	10365.85	10365.85	10365.77	0.08
Z	411044.53	2080331.80	10371.01	---	---	---	---	10370.93	10371.01	10370.98	10370.99	10370.99	0.00
AA	410994.37	2080331.13	10376.37	---	---	---	---	10376.27	10376.36	10376.34	10376.30	10376.35	-0.05
EE	410741.97	2080325.86	10430.72	---	---	---	---	10430.86	10430.97	10430.91	10430.94	10430.95	-0.01
GG	410619.62	2080334.65	10435.38	---	---	---	---	10435.09	10435.41	10435.40	10435.43	10435.39	0.04
HH	410508.23	2080321.51	10435.17	---	---	---	---	10435.63	10435.11	10435.18	10435.15	10435.16	-0.01
II	410458.36	2080312.15	10433.84	---	---	---	---	10434.29	10433.84	10433.88	10433.82	10433.61	0.21
JJ	410409.35	2080302.79	10433.25	---	---	---	---	10433.73	10433.20	10433.23	10433.20	10433.08	0.13
KK	410359.98	2080292.88	10432.40	---	---	---	---	10432.87	10432.42	10432.40	10432.43	10432.22	0.21
LL	410265.30	2080265.04	10428.65	---	---	---	---	10428.57	10428.47	10428.49	10428.46	10428.55	-0.09
NN	409769.08	2080125.54	10347.00	---	---	---	---	10346.66	10346.71	10346.68	10346.70	10346.75	-0.05
OO	409498.68	2080210.27	10284.52	---	---	---	---	10284.27	10284.26	10284.29	10284.25	10284.17	0.08
PP	409291.54	2080286.75	10262.98	---	---	---	---	10263.41	10263.41	10263.38	10263.39	10263.17	0.22

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