OGMCOAL DNR <ogmcoal@utah.gov>

## Monitoring Report South Fork of Quitchupah

1 message

**Vicky Miller** <vmiller@bowieresources.com> Tue, Jun 17, 2014 at 8:07 AM
To: "Steve Christensen (stevechristensen@utah.gov)" <stevechristensen@utah.gov>, "Amanda Daniels (amandadaniels@utah.gov)" <amandadaniels@utah.gov>, "OGMCOAL OGMCOAL (OGMCOAL@utah.gov)" <OGMCOAL@utah.gov>, James Owen <jamesowen@utah.gov>, "Hamilton, Rob -FS (rhamilton@fs.fed.us)" <rhamilton@fs.fed.us>
Cc: John Byars <jbyars@bowieresources.com>

Sufco personnel hiked into the South Fork on June 3 with Joe Helfrich and Chris Hansen to observe the flow from Wedge Spring and in the channel. The area of the repaired cracks was also observed during the visit. The flow appears similar when compared above and below the repaired cracks. Sufco personnel estimated a flow of 500 gpm in the channel, 200 yards downstream of monitoring point 006A.

We observed similar flow above and below the area of the repaired cracks on June 6th and 10th. Flow measurements were taken by Erik Petersen on the 10th below the repaired cracks at monitoring location 006C (422 gpm) and between 006C and the springs (395 gpm).

The South Fork of Quitchupah Creek was observed by Sufco, Bowie Resources, DOGM and OSM personnel on June 11. The area of the repaired cracks was observed as well as channel flow to the area of Wedge Spring. The flow appeared similar in the locations observed. The stream channel and springs above the road to Spring 006A were inspected for impacts associated with subsidence, to the best of my knowledge no impacts were noted.

On June 12th, three additional small cracks (0.5 to 1.5 inches wide) were discovered in the channel a short distance above the original repaired area. The cracks appeared to have sealed with sediment, but were filled with bentonite as a precaution.

A drawing showing the location of mining is attached to this e-mail. If there are questions please contact me at this e-mail address or by phone at (435) 286-4481, Vicky.

On Mon, Jun 2, 2014 at 11:36 AM, Vicky Miller <vmiller@bowieresources.com<mailto:vmiller@bowieresources.com>> wrote:
We were able to access the South Fork of Quitchupah on May 19th. The length of the creek below the road to the confluence of the North and South Fork was surveyed. The approximate flow above the road was 192 gpm, in the deep canyon below monitoring point 006 C the flow was estimated at 40 gpm.
On May 23 the repair of the cracks was observed to be holding with the uninterrupted flow being estimated at 150 +/- at the road crossing and below monitoring point 006C. On May 27, Joe Helfrich and mine personnel observed the flow in the South Fork to be uninterrupted from the road crossing to the confluence. The flow in the creek above the road was measured at approximately 300 gpm on May 29, similar flow was observed from above Spring 006A to the confluence of the South and North Forks of Quitchupah. Flow appears to fluctuate during the day, likely due to snow melt from higher elevations and the potential for diversion of water at the top of South Fork.

It rained on the 23rd, 25th, 29th and 30th . Photos 2839, 2759 and 2765 depict flow in creek below the location of crack repair. Photo 2822 is flow above the crack repair.

Attached is a drawing showing the location of mining as of June 1, 2014. Please contact me with questions. Thanks, Vicky

From: Vicky Miller
Sent: Tuesday, May 20, 2014 12:18 PM
To: 'Steve Christensen (stevechristensen@utah.gov<mailto:stevechristensen@utah.gov>)'; 'Amanda Daniels (amandadaniels@utah.gov<mailto:amandadaniels@utah.gov>)'; James Owen; 'Hamilton, Rob -FS (rhamilton@fs.fed.us<mailto:rhamilton@fs.fed.us>)'
Cc: John Byars; 'OGMCOAL OGMCOAL (OGMCOAL@utah.gov<mailto:OGMCOAL@utah.gov>)'
Subject: FW: Monitoring Report South Fork of Quitchupah

We were able to access the South Fork of Quitchupah creek on May 7th, 15th and 16th. Unsuccessful attempts were made to access the creek on May 8th, 9th, 12th and 13th. We were pushed off the mountain by snow on the 7th, which began midday and continuing into the night, approximately 8 inches fell. About two inches fell in the next two days and 18 inches in the next four days. Flow was estimated between 83 and 110 gpm during the two week period. Two pictures have been included one showing the flow in the upper reaches and the other in the deep canyon of South Fork of Quitchupah creek.

We have discovered cracks in the deep canyon stream channel that have interrupted/diverted flow in the channel. We will be sealing the crack(s) as soon as we can get the grouting material delivered, we anticipate completing the repair this week using grout and/or native materials.

Attached is a drawing showing the location of mining as of May 18, 2014. Please contact me with questions and concerns. Thanks, Vicky

From: Vicky Miller
Sent: Monday, May 5, 2014 9:09 AM
To: 'Steve Christensen (stevechristensen@utah.gov<mailto:stevechristensen@utah.gov><mailto:stevechristensen@utah.gov<mailto:stevechristensen@utah.gov>>)'; 'Amanda Daniels (amandadaniels@utah.gov<mailto:amandadaniels@utah.gov><mailto:amandadaniels@utah.gov<mailto:amandadaniels@utah.gov>>)'; James Owen; 'Hamilton, Rob -FS (rhamilton@fs.fed.us<mailto:rhamilton@fs.fed.us><mailto:rhamilton@fs.fed.us<mailto:rhamilton@fs.fed.us>>)'

Cc: John Byars; 'OGMCOAL OGMCOAL
(OGMCOAL@utah.gov<mailto:OGMCOAL@utah.gov><mailto:OGMCOAL@utah.gov<mailto:OGMCOAL@utah.gov>>)'
Subject: FW: Monitoring Report South Fork of Quitchupah

We accessed the South Fork of Quitchupah creek on April 22 and May 2. Attempts were made on 4/26/14 and 4/28/14, weather and muddy roads prevented access.

The creek was accessed thru Link Canyon on the 22nd and by the Accord Lake road on May 2nd. The flow on the 22nd was approximately 76 gpm and on the 2nd was approximately 60 gpm. Parts of the channel in the upper part of the deep canyon were still snow/ice covered on May 2nd (see photo). We were able to observe water flowing at the road crossing and in two locations in the deep canyon. It snowed and rained four days during this two week period.

Attached is a drawing showing the location of mining.

Please contact me with questions or concerns. Thanks, Vicky

From: Vicky Miller
Sent: Tuesday, April 22, 2014 7:42 AM
To: 'Steve Christensen
(stevechristensen@utah.gov<mailto:stevechristensen@utah.gov><mailto:stevechristensen@utah.gov<mailto:stevechristensen@utah.gov>>)';
'Amanda Daniels
(amandadaniels@utah.gov<mailto:amandadaniels@utah.gov><mailto:amandadaniels@utah.gov<mailto:amandadaniels@utah.gov>>)';
James Owen; 'Hamilton, Rob -FS
(rhamilton@fs.fed.us<mailto:rhamilton@fs.fed.us><mailto:rhamilton@fs.fed.us<mailto:rhamilton@fs.fed.us>>)'
Cc: John Byars; 'OGMCOAL OGMCOAL
(OGMCOAL@utah.gov<mailto:OGMCOAL@utah.gov><mailto:OGMCOAL@utah.gov<mailto:OGMCOAL@utah.gov>>)'
Subject: Monitoring Report South Fork of Quitchupah

We were able to access the South Fork of Quitchupah creek on April 10th and 16th. On the 10th we were able to observe water running above and below where the creek crosses the Forest Service road, however the portion of the creek in the deep canyon was obscured from view by snow and ice. The creek was accessed on the 10th by four wheeler and a couple of miles on foot.

On the 16th the creek was accessed by vehicle from Link Canyon, there was still no vehicle access from the road beginning at Accord Lake. We were able to observe water flowing at the road crossing and in three locations in the canyon, including the confluence of the north and south forks of the Quitchupah.

Flow on the 10th was estimated at 85 gpm, flow on the 16th was approximately 70 gpm at the road crossing. The water was laden with sediment on both days (see attached photo). We received approximately 1.5 inches of snow at the mine site during the two week period.

A drawing showing the location of mining is also attached. Please contact me with questions or concerns. Thanks, Vicky

From: Vicky Miller
Sent: Tuesday, April 8, 2014 11:06 AM
To: 'Steve Christensen
(stevechristensen@utah.gov<mailto:stevechristensen@utah.gov><mailto:stevechristensen@utah.gov<mailto:stevechristensen@utah.gov>>)';
'Amanda Daniels
(amandadaniels@utah.gov<mailto:amandadaniels@utah.gov><mailto:amandadaniels@utah.gov<mailto:amandadaniels@utah.gov>>)';
James Owen; 'Hamilton, Rob -FS
(rhamilton@fs.fed.us<mailto:rhamilton@fs.fed.us><mailto:rhamilton@fs.fed.us<mailto:rhamilton@fs.fed.us>>)'; John Byars
Cc: 'OGMCOAL OGMCOAL
(OGMCOAL@utah.gov<mailto:OGMCOAL@utah.gov><mailto:OGMCOAL@utah.gov<mailto:OGMCOAL@utah.gov>>)'
Subject: FW: Monitoring Report South Fork of Quitchupah

We were unable to access the South Fork of Quitchupah in the past weeks because the roads were impassible due to snow drifts and mud. The mine site received approximately 4 inches of snow during the two week period. A drawing showing the location of mining is attached.

Please contact me with any questions or concerns.

Thanks, Vicky

From: Vicky Miller
Sent: Wednesday, March 26, 2014 8:28 AM
To: 'Steve Christensen
(stevechristensen@utah.gov<mailto:stevechristensen@utah.gov><mailto:stevechristensen@utah.gov<mailto:stevechristensen@utah.gov>>)';
'Amanda Daniels
(amandadaniels@utah.gov<mailto:amandadaniels@utah.gov><mailto:amandadaniels@utah.gov<mailto:amandadaniels@utah.gov>>)';
James Owen; 'Hamilton, Rob -FS
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Cc: John Byars; 'OGMCOAL OGMCOAL
(OGMCOAL@utah.gov<mailto:OGMCOAL@utah.gov><mailto:OGMCOAL@utah.gov<mailto:OGMCOAL@utah.gov>>)'
Subject: Monitoring Report South Fork of Quitchupah

We were unable to access the South Fork of Quitchupah in the past weeks because the roads were impassible due to snow drifts and the thawing of snow drifts along the roads. The mine site received approximately 1 inch of snow during the two week period. A drawing showing

the location of mining is attached.

Please contact me with any questions or concerns.

Thanks, Vicky

From: Vicky Miller
Sent: Monday, March 10, 2014 11:59 AM
To: 'Steve Christensen (stevechristensen@utah.gov<mailto:stevechristensen@utah.gov><mailto:stevechristensen@utah.gov<mailto:stevechristensen@utah.gov>>)'; James Owen; 'Amanda Daniels (amandadaniels@utah.gov<mailto:amandadaniels@utah.gov><mailto:amandadaniels@utah.gov<mailto:amandadaniels@utah.gov>>)'; 'Hamilton, Rob -FS (rhamilton@fs.fed.us<mailto:rhamilton@fs.fed.us><mailto:rhamilton@fs.fed.us<mailto:rhamilton@fs.fed.us>>)'
Cc: John Byars; 'OGMCOAL OGMCOAL (OGMCOAL@utah.gov<mailto:OGMCOAL@utah.gov><mailto:OGMCOAL@utah.gov<mailto:OGMCOAL@utah.gov>>)'
Subject: Monitoring Report South Fork of Quitchupah

We were able to access the South Fork of Quitchupah on 3/3/14 and 3/5/15. The snow covering the channel was approximately 4.5 feet deep (see photo, looking downstream from where the stream crosses the road). We were unable to observe flow. The mine site received about 2.5" of snow during the past two weeks. In addition, a drawing showing the location of mining is attached.

Please contact me with questions or concerns.

Thanks, Vicky

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