

OGMCOAL - Crandall Canyon: East Mountain reclamation slide

From: Steve Christensen
To: OGMCOAL
Date: 9/7/2011 8:36 AM
Subject: Crandall Canyon: East Mountain reclamation slide

>>> "Shaver, Dave" <dshaver@coalsource.com> 8/25/2011 12:42 PM >>>

I have forwarded this email on to Shane (Scamp), and discussed it with him directly. He has a hand crew up on the mountain now doing the reseeding work (as per discussions with Priscilla), and will have them begin the excelsior log installation work either tomorrow or Monday. In anticipation of this he told me yesterday he would have the hand crew start lugging the excelsior logs down to the slide area, so we should be able to get a jump on this one. Thanks for your input.

Dave

From: Steve Christensen [mailto:stevechristensen@utah.gov]
Sent: Tuesday, August 23, 2011 4:15 PM
To: Shaver, Dave; Daron Haddock; OGMCOAL@utah.gov; Priscilla Burton
Subject: East Mountain reclamation slide

Good afternoon,

Priscilla and I have had an opportunity to discuss the slide that occurred on East Mountain. I have to qualify this somewhat in that I'm doing a little arm chair quarter backing not having seen the damage first hand. However, based on the photographs and the discussion with Priscilla, our feeling is that mobilizing heavy equipment to the slide area would be counterproductive. Given the steep slope and the vegetative/stabilization success above the slide, our feeling is that cutting a road down to the slide to facilitate heavy equipment access could potentially cause more damage than the slide itself, not to mention the safety concerns. That said, we'd be looking at boots on the ground with hand tools. I've attached two photos that give a sense of what we're looking at.

Our recommendation would be to attempt to stabilize the slide area with additional seed applications and the placement of energy dissipaters above the cut. It's my understanding that reclamation of the remaining access road is to occur in September. When the contractors are on site to complete that work, it'd be our recommendation that they also perform the work on the slide area at that time.

Given the vegetative success we've seen thus far, our recommendation would be to apply the same seed mix and application rate as was utilized previously. Additionally, we'd recommend that some form of energy dissipaters be installed above the cut. Our hope would be to slow the runoff velocity on the slope above the cut and in doing so, minimize the uphill migration of the cut. Given the steepness of the terrain and access to the site, Excelsior logs would be a good option. I would envision 3 rows of Excelsior logs installed along the contour above the cut. One row would be placed directly adjacent to the cut itself with the next two installed uphill at approximately 10-20' spacing. Some earthwork with hand tools would be necessary in order to key the logs

firmly into place. The logs are most effective when there's a solid contact between the log and the ground. Additionally, the logs would need to be anchored in with either rebar or wooden stakes.

I'm out of the office for vacation starting this Thursday and won't be back until the 7th of September. If a meeting of the minds is set up prior to the 7th to discuss this, Priscilla is the Division's contact. It's unfortunate that the slide occurred, but given the amount of disturbance that was up there and the amount of reclamation success we've seen thus far, I think we're still ahead of the curve on this one.

Regards,
Steve

>>> Priscilla Burton 8/17/2011 6:18 PM >>>

Attached are photos of the area that slid at East Mountain. The area was on the reclaimed "oops" road, not part of the pads that were reclaimed, but just below pad 6. The area of failure left a cut approximately 15 ft. high and 30 ft. wide. The supersaturated soil slid over the hill, pushing topsoil to the side and leaving a trail that is approximately 150 ft. long on a very steep (28%) slope. The saturated soil slid over native ground and vegetation can be seen growing in the center of the slide area and in the topsoil "berms" that were pushed to the side.

I recommend stabilizing the area with rake and seed. Installation of excelsior logs may be helpful, but would be difficult to bring to the site. (In another location, photographs attached below, the excelsior logs did maintain the slope against a slide and prevented wholesale failure.) I do not recommend bringing in equipment to repair the damage, as this would disturb more ground to gain access.

I will be out of the office tomorrow, Thursday August 18. Back in the office on Monday, August 22.

Priscilla Burton, CPSSc
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