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C/015/015 Incoming



Consolidation Coal Company

P.O. Box 566  
Sesser, IL 62884  
phone: 618-625-2041

# 4305  
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October 07, 2013

Daron Haddock  
Environmental Manager  
Utah Division of Oil, Gas and Mining  
Coal Program  
1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801

Re: Emery Deep Mine Permit C/015/015  
Midterm Review task id #4363  
2013 Subsidence Update

Dear Mr. Haddock:

Per your July 3, 2013 Midterm Review memo Task #4363, phone conversation with Steve Christensen of your staff and the mid-term deficiency below, attached please find the updated 2013 subsidence report. EarthFax Engineering Group updated the most recent subsidence monitoring report in letter format. As this deficiency arose from the 2012 annual review and the subsidence report is not housed in the MRP, our intent is to begin submitting the subsidence report as part of the annual report as was committed to in the MRP.

**R645-301.525.440**, Please provide updated subsidence monitoring data, based on field inspection, that includes all information required in Chapter V, Page 37 of the approved MRP. (JO)

If you have any questions concerning this request, please contact me at (724) 485-4267.

Sincerely,

Kerry Goodballet P.E.  
Director of Permitting – Coal

Enclosure

**Deficiency List**  
**Task No. #4363**  
**Emery Deep Mine- Mid-term Permit Review**

Members of the review team with outstanding deficiencies:

Priscilla Burton (PB)  
Steve Christensen (SC)  
Joe Helfrich (JH)  
James Owen (JO)  
Suzanne Steab (SS)

**R645-301-241 and R645-301-341**, Chap III, p. 4a, item 2 states, "Based on findings from the investigative study, plans shall be developed to enhance the vegetation of each site." The following revisions should be made to the reclamation plan (as discussed during a site visit on October 11, 2011):

1. Stockpiles should be graded to gentle slopes (4h:1v) and have only shallow roughening, such as ripping on the contour, to allow water infiltration but to avoid water impoundment;
2. All sites should have 1 T/ac straw mulch incorporated with discing or ripping;
3. The seeded soil surface should be partially covered with a layer of wood-straw or gravel mulch to limit evaporation from the soil surface;
4. Subsoil and topsoil stockpiles should be fenced to keep out livestock.
5. Modify the seed mix to include only salt tolerant species and allow for a higher percentage shrubs and forbs that were noted to be successful. i.e. 4-wing saltbush, shadscale, gardner saltbush, mat saltbush, greasewood.
6. Adjust Reference Areas to eliminate duplication. (PB) (JH)

**R645-301-352**, The following locations should receive contemporaneous reclamation using the revised reclamation plan described above:

1. Lower the profile of pond 6 stockpiles, reseed and keep livestock off the piles.
2. Reclaim ponds 4 & 5 which serve no present function or modify the plan to retain these ponds improving the vegetation component for habitat improvement in accordance with R645-301-342.100.
3. Reclaim Pond 1 Subsoil Pile.

The Permittee should begin work on the above permitting revisions and contemporaneous reclamation tasks this field season (summer/fall 2013) to allow warm season planting and provide documentation of progress made towards achieving the above goals in the 2013 Annual Report. (PB) (JH)

**R645-301-731.210, -731.214**: The Permittee must satisfy the commitment located at the bottom of page VI-56. The Permittee must provide the Division with the annual hydrologic evaluation of Emery Town wells #1 and #2. (SC)

**R645-301.525.440**, Please provide updated subsidence monitoring data, based on field inspection, that includes all information required in Chapter V, Page 37 of the approved MRP. (JO)

**R645-301.830.140.** Please provide updated information for estimated bonding costs with supporting calculations for the estimates. This includes updated unit costs (to be used to update bond calculation spreadsheets) and updated escalation factors. Updates should be provided using the 2013 data from R.S. Means *Heavy Construction Cost* data manual and the Caterpillar Handbook or other appropriate resources. The bonding summary sheet and corresponding bond calculation sheets (located in Chapter IV of the MRP, beginning after page 11) need to be updated and appropriately escalated to 2018 dollars using Division's approved 1.5% and 5 year escalation. (JO)

**R645-301-112.330:** The Operator must submit updated pages to correct the Ownership and Control information in the Emery Deep MRP (Appendix 1-1). Some of the information in the current MRP (Appendix 1-1), does not match the information found in the Office of Surface Mining Applicant Violator System (AVS). (SS)

# EarthFax Engineering Group, LLC

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**EarthFax**

September 30, 2013

Kerry Goodballet, P.E.  
Director of Permitting - Coal  
Consolidation Coal Company  
P.P. Box 566  
Sesser, IL 62884-0566

Subject: Emery Mine Subsidence Inspection

Dear Kerry:

On September 18, 2013 I conducted an inspection of the area over the northeastern portion of the 00 North panel of the Emery Mine in Emery County, Utah. The purpose of this inspection was to update observations made during subsidence surveys conducted in December 2010 and January 2011 and evaluate the current status of efforts performed during the first quarter of 2011 to mitigate the surface impacts of subsidence in the area. These efforts involved regrading of the surface to cover cracks and smooth areas of abrupt changes in the ground surface.

During the September 18, 2013 inspection, I observed six subsidence depressions in the subject area. The coordinates of these depressions are provided in Table 1 and the locations relative to the 00 North panel are shown on Figure 1. Photographs of conditions in each depression are provided in Attachment A. These conditions are briefly described below. All depressions are located on land owned by Consol.

## Depression #1

This depression covers an area of approximately 300 feet (North-South) by 150 feet (East-West). Subsidence cracks were observed primarily around the periphery of the depression. These cracks range up to a few inches in top wide and greater than 3 feet deep in some areas.

## Depression #2

This depression measures approximately 120 feet (N-S) by 70 feet (E-W) and is located immediately south of Depression #1. Subsidence cracks were observed primarily around the periphery of the depression. These cracks range up to a few inches in top wide and greater than 3 feet deep in some areas.

## Depression #3

This depression is located immediately west of Depression #1. It covers an area that measures about 300 feet (N-S) by 220 feet (E-W). Most of the observed cracks are on the west side of the depression. Most cracks are less than 1 foot deep, but a few exceed 3 feet in depth.

Ms. Kerry Goodballet  
September 30, 2013  
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Depression #5

This depression is nearly circular, measuring about 180 feet (N-S) by 200 feet (E-W). Subsidence cracks were observed primarily around the periphery of the depression. These cracks range up to a few inches in top wide and greater than 3 feet deep in some areas.

Depression #6

This depression is located between Depressions #2 and #5. It is approximately circular, measuring about 120 feet (N-S) by 100 feet (E-W). The depression contains a few cracks around the periphery, with one crack on the south side of the depression measuring more than 3 feet deep. Most of the other cracks are less than 1 foot deep.

Recommended Mitigation

From observations of sediment in several of the subsidence cracks and surface rills, it appears that the surface expressions of the subsidence cracks were enhanced by localized runoff from recent storm events. To ensure that the crack surfaces are not bridged by future grading, it is recommended that the deeper cracks be filled first by hand shoveling. The areas can then be graded with a dozer or other large equipment. During grading, the mitigated areas should be compacted by repeated passes of the grading equipment.

Following mitigation, I recommend that the area be re-inspected in accordance with the requirements of the Mining and Reclamation Plan. Subsidence cracks that reappear during the inspection period should be repaired as outlined above.

Please let me know if you have any questions.

Sincerely,



Richard B. White, P.E.  
President

cc: John Gefferth (Civil & Environmental Consultants, Inc.)

**TABLE 1**

**Emery Mine Subsidence Depressions  
Location of Approximate Middle  
18 Sep 2013**

Depression Number	Degree/Minute/Seconds		Decimal Degrees	
	Latitude	Longitude	Latitude	Longitude
1	38° 52' 59.0652"	111° 13' 08.4371"	38.88307°	111.21901°
2	38° 52' 56.4250"	111° 13' 08.8636"	38.88234°	111.21913°
3	38° 52' 58.9146"	111° 13' 11.2371"	38.88303°	111.21979°
4	38° 52' 59.8776"	111° 13' 13.7850"	38.88330	111.22050
5	38° 52' 58.0504"	111° 13' 12.3999"	38.88279	111.22011
6	38° 52' 56.4058"	111° 13' 11.1420"	38.88233	111.21976

Note: All areas of depression are located on land owned by Consol.



FIGURE 1. EMERY MINE SUBSIDENCE DEPRESSIONS



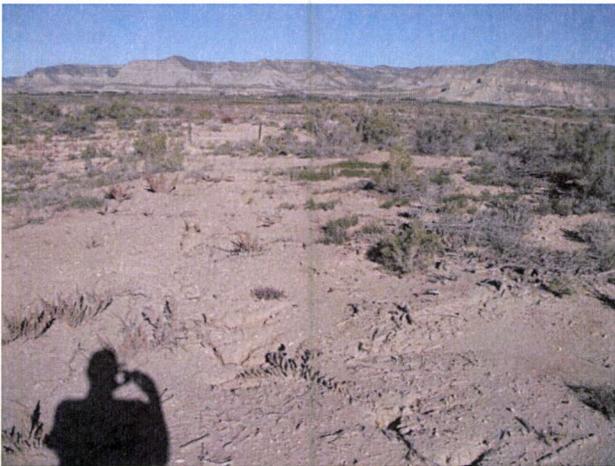
**ATTACHMENT A**

**Photographs of Subsidence  
(Date: 18 Sep 2013)**

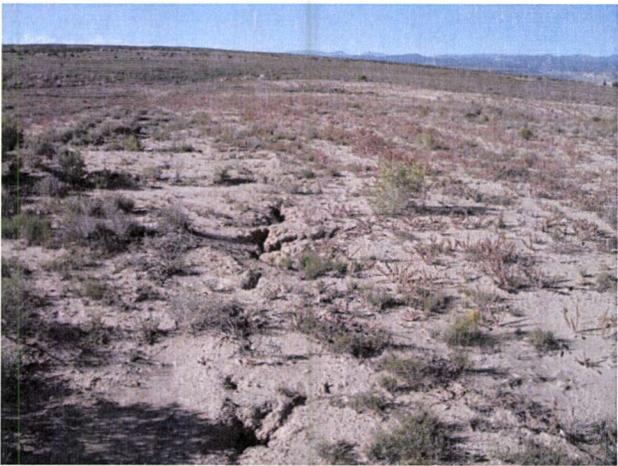
DEPRESSION #1



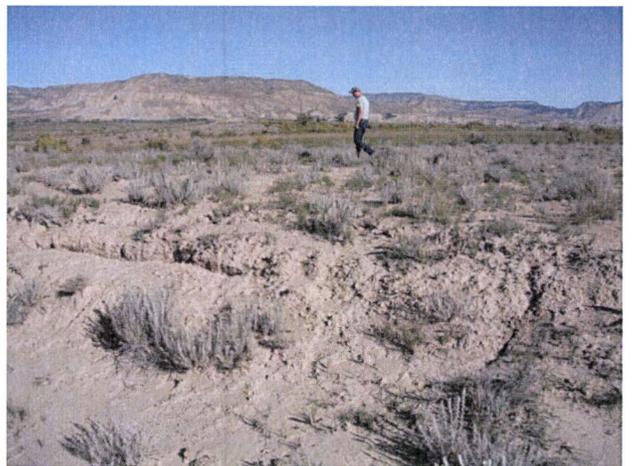
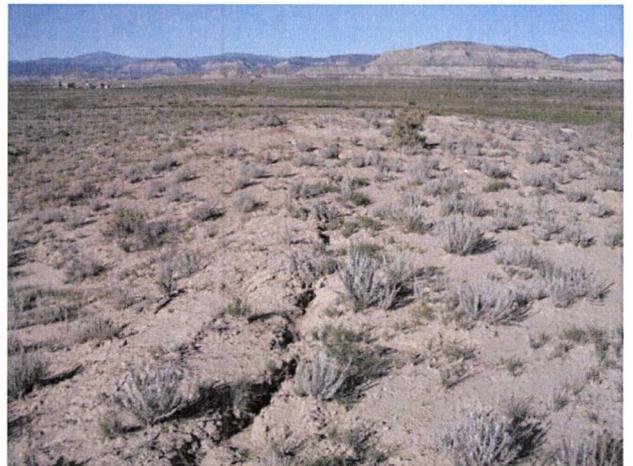
DEPRESSION #2



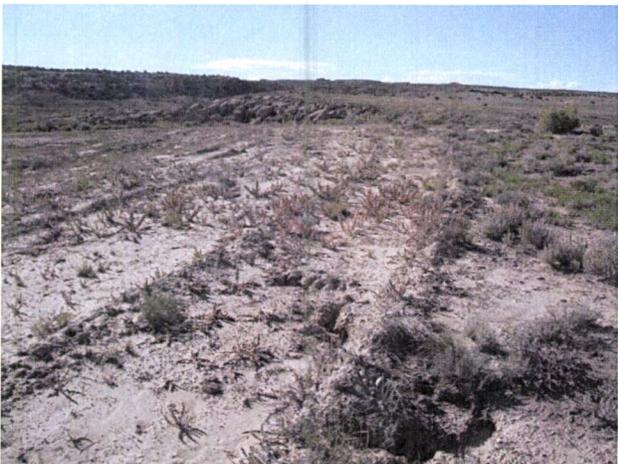
DEPRESSION #3



DEPRESSION #4



DEPRESSION #5



DEPRESSION #6

