



OGMCOAL DNR &lt;ogmcoal@utah.gov&gt;

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**RE: Restoration of Prime Farmland after surface mining Coal Hollow C/015/0005**

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**Thapa, Bir - NRCS, Salt Lake City, UT** <Bir.Thapa@usda.gov>

Thu, Apr 2, 2020 at 9:32 AM

To: Priscilla Burton &lt;priscillaburton@utah.gov&gt;

Cc: OGMCOAL DNR &lt;ogmcoal@utah.gov&gt;, Christine Belka &lt;cbelka@osmre.gov&gt;, Steve Christensen &lt;stevechristensen@utah.gov&gt;

Good morning Priscilla!

I reviewed all the documents and proposed methods. I also updated each and everything to State Conservationist. As you know,

The main concern here is whether mine operator would compact soil beyond the capacity of plant roots to penetrate. Also post mining reconstruction effort would occur as outlined in the method pre-mining in 2018. As you suggested mine operator proposes using nuclear density probe to quantify bulk density of soil. Soil Scientists in general, quantify soil bulk density using core samples, but this method is very difficult to use in this case. The proposed method is mainly used by Engineers especially in road construction sites. It is rather expensive but reliable method. It may overestimate the bulk density values about 6-7% compared with core samples. My proposal is that that UDOGM soil scientist and I evaluate/observe how mine operator Engineer uses the nuclear density probe before using on the site. I have no hesitation to give our approval to use this method, but we make sure soil is not compacted when they reconstruct. I am also proposing to dig and see that roots are all well distributed throughout the A, B, C horizons. We can simply use auger for this purpose.

Kindly let me know if you need any other help in this regard.

Thank you,

**Bir Thapa, ph. D.****NRCS Utah State Office****State Soil Scientist**

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**From:** Priscilla Burton <[priscillaburton@utah.gov](mailto:priscillaburton@utah.gov)>  
**Sent:** Monday, March 23, 2020 12:14 PM  
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**Cc:** OGMCOAL DNR <[ogmcoal@utah.gov](mailto:ogmcoal@utah.gov)>; Christine Belka <[cbelka@osmre.gov](mailto:cbelka@osmre.gov)>; Steve Christensen <[stevechristensen@utah.gov](mailto:stevechristensen@utah.gov)>  
**Subject:** Restoration of Prime Farmland after surface mining Coal Hollow C/015/0005

Hello Mr. Thapa,

We spoke by telephone earlier today and you asked me to send an email outlining my request.

In 2016 and 2017, our agencies worked together to approve mining of prime farmland near the town of Alton in Kane County, Utah. The federal rule/law governing our responsibility is 30CFR823.4 Performance Standards on Prime Farmlands at [https://ecfr.io/Title-30/pt30.3.823#se30.3.823\\_14](https://ecfr.io/Title-30/pt30.3.823#se30.3.823_14) and section 515(b)(7) of the Surface Mining Control and Reclamation Act of 1977 (SMCRA). Here is a link to the SMCRA reference <https://www.osmre.gov/lrg/docs/SMCRA.pdf> please scroll to p. 77.

In 2019, The Coal Hollow Mine completed mining on the following prime farmland or farmland of statewide importance.

**In Range 6 West, Township 39 South Section 12:**

G. Ferril & Dorothy Heaton, P.O. Box 100063, Alton, UT 84710, 7.2 acres in parcel 9-6-12-1.

Orval & Greta Palmer, P.O. Box 100144, Alton, UT 84710-0144; 6.9 acres in parcels 9-6-12-3.

Dean R. Heaton, P.O. Box 435, Fredonia, AZ 86022, 17.9 acres in parcel 9-6-12-2.

**In R 5 West T 39 S Section 7:**

G. Ferril & Dorothy Heaton, have parcel 9-5-7-3A which is included in the 6.9 acres above.

Reconstruction of the soil will take place this summer. Former State Soil Scientist Michael Domeier and Meridith Albers reviewed and approved the soil reconstruction plans, which include density evaluation of the replaced soil horizons. Please see attached copy of the mine plan page (Chap 9, p. 12) that describes the density evaluation. The reconstruction plan was vague as to how to achieve a rapid, real time density measurement. The mine operator has suggested using a nuclear density probe. The operator gathered pre-disturbance measurements and proposes

comparing the pre-disturbance measurements with post reconstruction measurements to show the density requirement has been met.

I have attached the mine operator's density monitoring proposal for your review. The new information is presented as redline text and in the new Appendix 9-1. This most recent submittal is missing Appendix A and Appendix D. I will send these appendices in a separate email, so that the attachments do not exceed the maximum memory.

As required by SMCRA, I am asking for your comment and approval of this approach. Feel free to call me to discuss this proposal. I am also working from home this week, due to Clovid-19. You can reach me at the cell phone below or by email.

Regards,

Priscilla Burton, MS, CPM, CPSSc

Environmental Soil Scientist

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