

From: Priscilla Burton
To: Rusty Netz; Scott Carlson123
Date: 5/19/2011 4:10 PM
Subject: Re: FW: 0070035 Sunnyside Outgoing Excess Spoil Pile #2 reclamation cover material analysis

Hello Rusty,

Section 9.6.5 (p. 900-12) describes reclamation of Excess Spoil #2 with less than 4 ft of cover as a demonstration of the success for lesser cover. Section 9.8.5 describes the application of fertilizer at final reclamation after testing. I do recommend that fertilizer be incorporated into the subsoil cover material for the following reasons:

Nitrate-Nitrogen in the samples was between 0.5 to 1.2 **ppm**. Nitrate nitrogen is one component of Total Nitrogen and in a soil with low organic matter, is likely the largest component. In this instance, we can assume that Nitrate-N is approximately equal to the Total N, which is reported in %. However the Nitrate-N reported in ppm must be divided by 10,000 to give a percent value. Therefore, the Nitrate-N value for the samples would correlate to a Total N% of 0.000054% to 0.000118%. These are very low values, compared to the average value of 0.06 to 0.5 in cultivated soils. Nitrogen will be needed in the soil profile to support bacterial decomposition of the mulch incorporated into the cover soil and the wood fiber hydromulch blown on top. That ultimately will create a source of organically bound nitrogen that will sustain the plant growth overtime.

Here's the facts regarding previous interim and final reclamation at Sunnyside Cogen:

1. Excess Spoil Pile #2 will be covered with 18 inches of soil, except for material analyzed and found to be acid/toxic forming.
2. The Old Coarse Refuse Road was reclaimed using 16-16-8 fertilizer (210 lbs/ac). The cover material had 0.04 to 0.08% **Total N**.
3. The 3rd and 4th lift of the coarse refuse pile were reclaimed in the spring of 1994 with 2 ft. of cover and 150 lbs/ac 16-16-8. **Total N%** of the cover was reported to be 0.07%.
4. The East Slurry Cell embankment received interim reclamation in 1995 without fertilizer. The soils had 0.07% **total N**.

I have not had a chance to look over the reclamation of the 3rd and 4th lift of the refuse pile or the east slurry cell embankment, but I have seen the OCRR and it looks very good.

Priscilla Burton, CPSSc
Division Oil Gas & Mining
319 Carbonville Rd., Ste. C
Price UT 84501
(435) 613-3733

>>> Rusty Netz <rusnetz@hotmail.com> Thursday, May 19, 2011 11:25 AM >>>

Priscilla,

Could you please comment on Scott's email below?

Rusty Netz
Sunnyside Cogen.
(435)888-4476 ext. 107

From: scarlson@twinpeakseng.com
To: rusnetz@hotmail.com
Subject: RE: 0070035 Sunnyside Outgoing Excess Spoil Pile #2 reclamation cover material analysis
Date: Thu, 19 May 2011 11:22:51 -0600

Rusty,
We should also confirm the Division's position regarding use of fertilizer as recommended by the testing lab. Generally DOGM prefers not to use fertilizer because of weed growth.
I am currently planning for this material to be the bottom 3 feet of cover with the top 1 foot being salvaged topsoil and/or clean borrow material. We would not suggest using fertilizer in the top foot.

However Pricilla should remember that after the four feet is placed, we will roughen up the surface with the back hoe and that will likely expose some of the lower material in the divots.

S Scott Carlson, PE, PLS
Twin Peaks PC
2264 North 1450 East
Lehi UT 84043
(801) 450-3511

From: Rusty Netz [<mailto:rusnetz@hotmail.com>]
Sent: Thursday, May 19, 2011 11:11 AM
To: Priscilla Burton; Scott Carlson123
Subject: RE: 0070035 Sunnyside Outgoing Excess Spoil Pile #2 reclamation cover material analysis

We haven't removed it yet. But we will remove (use or stock pile) the coal waste once the amendment is approved.

So based on what you see you would have no issue with this material being used for cover reclamation material?

Thanks again for all your help.

Rusty Netz
Sunnyside Cogen.

(435)888-4476 ext. 107

> Date: Thu, 19 May 2011 11:07:15 -0600
> From: priscillaburton@utah.gov
> To: rusnetz@hotmail.com
> CC: OGMCOAL@utah.gov
> Subject: 0070035 Sunnyside Outgoing Excess Spoil Pile #2 reclamation cover material analysis

>
> Hello Rusty,

>
> Thanks for the opportunity to review the analyses. At each location sampled, the analyses show suitable cover material. Did you also sample the layer of coal waste remaining at the subsoil salvage location or did you remove it?

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> Priscilla Burton, CPSSc
> Division Oil Gas & Mining
> 319 Carbonville Rd., Ste. C
> Price UT 84501
> (435) 613-3733

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> >>> Rusty Netz <rusnetz@hotmail.com> Wednesday, May 18, 2011 3:50 PM >>>

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> Priscilla,

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> Here are the results of the soil material pertaining to the potential new spoils area. Please let me know what you think.

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>
> Rusty Netz
> Sunnyside Cogen.
> (435)888-4476 ext. 107

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> From: bruce_webb@byu.edu
> To: rusnetz@hotmail.com
> Date: Wed, 18 May 2011 14:50:30 -0600
> Subject: soil analysis

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> Rusty,
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> Attached are the results of your soil analysis. if you have questions let us know.

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> Thanks,
>
> Bruce Webb
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