From: Tavarez, Ike To: Yu, Olivia, EMNRD

Cc: Tucker, Shelly; Billings, Bradford, EMNRD; Rebecca Haskell; Robert McNeill; Dakota Neel; Gonzales, Clair

Subject: Re: COG - Lusk Deep Unit A #22H - Work Plan Approval Request

Date: Thursday, August 10, 2017 5:39:24 PM

## Thanks Olivia

Sounds good, we concur and we will let you know when get this setup.

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Sent from my iPhone
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> On Aug 10, 2017, at 4:28 PM, Yu, Olivia, EMNRD < Olivia. Yu@state.nm.us> wrote:
> Mr. Tavarez:
> Thank you for your prompt response. Please see the attachment for your records.
> NMOCD approves of the delineation and proposed remedial actions with two conditions for 1RP-4783 as
mentioned below. Delineation data provided in the workplan indicate chloride levels are above permissible <= 600
mg/kg at 3 ft. bgs. Therefore, bottom and sidewall confirmation samples are required. If bottom samples of the 3 ft.
excavation exceed 600 mg/kg, excavate to 4 ft. before placement of a liner. Please confirm.
> Thanks,
> Olivia
> From: Tavarez, Ike [mailto:Ike.Tavarez@tetratech.com]
> Sent: Thursday, August 10, 2017 1:34 PM
> To: Yu, Olivia, EMNRD < Olivia, Yu@state.nm.us>; Tucker, Shelly < stucker@blm.gov>; Billings, Bradford,
EMNRD <Bradford.Billings@state.nm.us>
> Cc: Rebecca Haskell < RHaskell@concho.com>; Robert McNeill < RMcNeill@concho.com>; Dakota Neel
<DNeel2@concho.com>; Gonzales, Clair <Clair.Gonzales@tetratech.com>
> Subject: RE: COG - Lusk Deep Unit A #22H - Work Plan Approval Request
> Olivia,
> Thanks for responding to our question. Sometimes using a backhoe or trackhoe you could potentially have some
cross-contamination occurring from the impacted upper soils sloughing during the sampling or trenching.
on the data, this may have been the case for the site. However, COG will installed the liner as you requested.
The elevated chlorides will be removed to a depth of 3-4' below surface and the 20 mil liner installed in the
excavation bottom. We will notify you when we setup the remediation, thanks
> Ike Tavarez, PG | Senior Project Manager
> Main: 432.682.4559 | Fax: 432.682.3946 | Cell: 432.425.3878
> Ike.Tavarez@tetratech.com<<u>mailto:Ike.Tavarez@tetratech.com</u>>
> Tetra Tech | Complex World, Clear Solutions<sup>TM</sup>
> 4000 North Big Spring, Suite 401 | Midland, TX 79705 | www.tetratech.com<a href="http://www.tetratech.com">http://www.tetratech.com</a>
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message and then delete it from your system.
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> From: Yu, Olivia, EMNRD [mailto:Olivia.Yu@state.nm.us]

> >

```
> Sent: Thursday, August 10, 2017 1:28 PM
> To: Tavarez, Ike < Ike.Tavarez@tetratech.com < mailto: Ike.Tavarez@tetratech.com >>; Gonzales, Clair
<Clair.Gonzales@tetratech.com<<u>mailto:Clair.Gonzales@tetratech.com</u>>>; Tucker, Shelly
<stucker@blm.gov<<u>mailto:stucker@blm.gov</u>>>; Billings, Bradford, EMNRD
<Bradford.Billings@state.nm.us<<u>mailto:Bradford.Billings@state.nm.us</u>>>
> Cc: Rebecca Haskell < RHaskell @concho.com < mailto: RHaskell @concho.com >>; Robert McNeill
<RMcNeill@concho.com<<u>mailto:RMcNeill@concho.com</u>>>; Dakota Neel
<DNeel2@concho.com<<u>mailto:DNeel2@concho.com</u>>>>
> Subject: RE: COG - Lusk Deep Unit A #22H - Work Plan Approval Request
> Mr. Tavarez:
> The information presented below is noted regarding the proposed remediation for 1RP-4783. However, please
explain the statement about cross contamination from impacted soil in the top 3 ft. Is the implication that soil
samples from 3 to 6 ft. sampling depths are also elevated and that soil at 7 and 8 ft. bgs would have been just below
the 600 mg/kg threshold?
> Moreover, in general, NMOCD requests that the Responsible Operator delineate to permissible chloride levels of
600 mg/kg with an additional sample at 5 ft. further in depth for releases in locations where groundwater is > 100 ft.
bgs. Therefore, the standard response to the data presented is to request a sample at 14 ft. bgs. to confirm that
permissible levels reached at 9 ft. is still maintained at 14 ft. Would additional vertical delineation be preferable?
For an impacted area of this size, a 20 mil liner is viable option. The liner, set below the proposed excavated depth
at 4 ft., is for revegetation purposes and to ensure potential groundwater is, and will, be protected.
> Please elaborate on sampling methodology to answer the above question and inform of decision.
> Thanks,
> Olivia
> From: Tavarez, Ike [mailto:Ike.Tavarez@tetratech.com]
> Sent: Wednesday, August 9, 2017 3:18 PM
> To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us<mailto:Olivia.Yu@state.nm.us>>; Gonzales, Clair
<Clair.Gonzales@tetratech.com<mailto:Clair.Gonzales@tetratech.com>>; Tucker, Shelly
<stucker@blm.gov<<u>mailto:stucker@blm.gov</u>>>
> Cc: Rebecca Haskell < RHaskell @concho.com < mailto: RHaskell @concho.com >>; Robert McNeill
<RMcNeill@concho.com<<u>mailto:RMcNeill@concho.com</u>>>; Dakota Neel
<DNeel2@concho.com<<u>mailto:DNeel2@concho.com</u>>>
> Subject: RE: COG - Lusk Deep Unit A #22H - Work Plan Approval Request
> Olivia,
> We have reviewed your stipulations for the site. We have a questions on the installation of the liner. The
elevated chlorides will be removed from the area (3.0' to 4.0' deep) with confirmation sampling.
> The chloride concentration detected in the deeper soils are not significant and the depth to groundwater in the area
is greater than 300' below surface. Based on that information, the remaining chloride concentrations do not appear
to be an environmental concern and the amount of chloride loading is not excessive enough to be a threat or concern
to the deep groundwater. In addition, the deeper chlorides detected may have been cross-contaminated from the
upper soils during the installation of the trench.
> Based on site information, the installation of the liner is not required. Let us know. We will let you know when
we setup the remediation. Thanks
> Ike Tavarez, PG | Senior Project Manager
> Main: 432.682.4559 | Fax: 432.682.3946 | Cell: 432.425.3878
> Ike.Tavarez@tetratech.com<<u>mailto:Ike.Tavarez@tetratech.com</u>>
> Tetra Tech | Complex World, Clear Solutions<sup>TM</sup>
> 4000 North Big Spring, Suite 401 | Midland, TX 79705 | www.tetratech.com<a href="http://www.tetratech.com">http://www.tetratech.com</a>
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message and then delete it from your system.
>
> From: Yu, Olivia, EMNRD [mailto:Olivia.Yu@state.nm.us]
> Sent: Tuesday, August 08, 2017 4:20 PM
> To: Gonzales, Clair <Clair.Gonzales@tetratech.com<<u>mailto:Clair.Gonzales@tetratech.com</u>>>; Tucker, Shelly
<stucker@blm.gov<<u>mailto:stucker@blm.gov</u>>>
> Cc: Rebecca Haskell < RHaskell@concho.com < mailto: RHaskell@concho.com >>; Tavarez, Ike
<Ike.Tavarez@tetratech.com</pre>
mailto:Ike.Tavarez@tetratech.com
>>; Robert McNeill
<RMcNeill@concho.com<<u>mailto:RMcNeill@concho.com</u>>>; Dakota Neel
<DNeel2@concho.com<<u>mailto:DNeel2@concho.com</u>>>
> Subject: RE: COG - Lusk Deep Unit A #22H - Work Plan Approval Request
> Dear Ms. Gonzales:
> This release has been issued a 1RP-4783. Please include this identifier in subsequent reports.
> Although vertical delineation is not considered complete with chloride levels above permissible 600 mg/kg at 7
and 8 ft. bgs, NMOCD would approve of the delineation and proposed remediation with these stipulations.
>
> 1. Laboratory chloride analyses of bottom and sidewall confirmation samples of a 4 ft. excavation. The proposed
3 ft. excavation is not sufficient as chloride content is still above permissible levels.
> 2. Properly set a minimum 20 mil liner to cap the elevated chloride levels at 7 and 8 ft. bgs.
> Please inform of decision.
> Thanks.
> Olivia
> From: Gonzales, Clair [mailto:Clair.Gonzales@tetratech.com]
> Sent: Monday, July 24, 2017 9:48 AM
> To: Yu, Olivia, EMNRD < Olivia. Yu@state.nm.us < mailto: Olivia. Yu@state.nm.us >>; Tucker, Shelly
<stucker@blm.gov<<u>mailto:stucker@blm.gov</u>>>
> Cc: Rebecca Haskell < RHaskell @concho.com < mailto: RHaskell @concho.com >>; Tavarez, Ike
<Ike.Tavarez@tetratech.com<<u>mailto:Ike.Tavarez@tetratech.com</u>>>; Robert McNeill
<RMcNeill@concho.com<<u>mailto:RMcNeill@concho.com</u>>>; Dakota Neel
<DNeel2@concho.com<<u>mailto:DNeel2@concho.com</u>>>
> Subject: COG - Lusk Deep Unit A #22H - Work Plan Approval Request
> Good Morning,
> Attached is the work plan for the above referenced site located in Lea County, New Mexico. Once approved,
COG will implement the proposed work plan. Let me know if you have any questions or concerns.
> Thank you,
> Clair Gonzales
> Clair Gonzales | Geologist III
> Phone: 432.687.8123| Mobile 432.260.8634 | Fax:432.682.3946
> clair.gonzales@tetratech.com<<u>mailto:clair.gonzales@tetratech.com</u>>
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*>* 

> <approved\_1RP4783\_COG Lusk Deep #22H Work Plan \_ Final.pdf>