

**From:** Geoff Leking  
**To:** [Yu, Olivia, EMNRD](#)  
**Cc:** [yjordan@blm.gov](mailto:yjordan@blm.gov)  
**Subject:** Re: Devon Biliken 7 Federal 1H - 1RP-4687 Planned Delineation Activities  
**Date:** Monday, December 11, 2017 2:32:51 PM

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Olivia

Soil samples will be collected intact. A remediation work plan will be submitted that is based on the findings of the delineation. Impacted soil which exceeds BLM and NMOCD guidelines will be segregated and disposed of at a BLM and NMOCD approved disposal facility. Thank you for your response.

Geoff Leking  
Etech

Sent from my iPhone

On Dec 11, 2017, at 2:52 PM, Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)> wrote:

Mr. Leking:

Thank you for the update regarding the sampling protocol for 1RP-4687. NMOCD approves of the proposed methodology for the collection of additional delineation samples. Please be advised that soil samples must be intact- not chips of rock/soil.

Also, upon review of the approved proposed delineation plan, NMOCD reiterates that delineation must be complete before remediation. In general, NMOCD does not permit chloride-impacted soil to be blended for backfill usage.

Thanks,  
Olivia

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**From:** Geoff Leking [<mailto:geoff@etechnv.com>]  
**Sent:** Monday, December 11, 2017 12:16 PM  
**To:** [yjordan@blm.gov](mailto:yjordan@blm.gov); Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>  
**Subject:** Devon Biliken 7 Federal 1H - 1RP-4687 Planned Delineation Activities

Yolanda and Olivia

The Delineation Work Plan for the above referenced site was approved by Randy Pair, BLM on September 7, 2017 and by Olivia Yu, NMOCD on September 22, 2017. The work plan specified that a drilling rig would be used to obtain additional delineation soil samples at the site. However, upon further discussion with Etech coworkers, it was suggested that sampling by hand auger could still be performed if the overlying caliche layer could be broken through manually (ie., using a long pry bar commonly called a

“spud bar”). It was also suggested that Etech’s Geoprobe machine (similar to a small drilling rig) might also be able to breach the caliche and perform the required sampling. Therefore, I would like to attempt to manually breach the caliche layer first. If I am able to breach the caliche layer, I would then proceed to sample using the hand auger following the same protocol as detailed in the Delineation Work Plan. In the case that I am unable to breach the caliche layer manually, then the Geoprobe or drill rig will be used to collect the additional delineation soil samples.

Thank you for your time and consideration on this matter. I look forward to your response.

**Geoff Leking**

***Etech Environmental & Safety Solutions, Inc.***

***PO Box 62228***

***Midland, Texas 79711***

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**From:** Geoff Leking  
**To:** [Yu, Olivia, EMNRD](#)  
**Subject:** Re: Biliken 7 Federal 1H Additional Chloride Delienation  
**Date:** Wednesday, December 27, 2017 9:48:24 AM

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Olivia

Completely agree. Just giving the reasoning for segregation. Thank you.

Geoff Leking  
Etech

Sent from my iPhone

On Dec 27, 2017, at 8:44 AM, Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)> wrote:

Mr. Leking:

Eligible does not mean necessarily permissible. Again, NMOCD will not consider remediation until delineation is completed.

Thanks,  
Olivia

Sent from Samsung Mobile

----- Original message -----

From: Geoff Leking  
Date: 12/26/2017 19:53 (GMT-07:00)  
To: "Yu, Olivia, EMNRD"  
Subject: Re: Biliken 7 Federal 1H Additional Chloride Delienation

Olivia

Soils excavated from the first < 600 mg/kg sample to the one 5' below it would be considered "clean and be eligible to be used for backfill after lab samples confirm them to be < 600 mg/kg.

Geoff Leking  
Etech

Sent from my iPhone

On Dec 26, 2017, at 1:31 PM, Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)> wrote:

Mr. Leking:

Is this request in reference to 1RP-4687? If so, NMOCD does not have an issue with the use of a backhoe to complete delineation. Please be advised that based on the provided data in report from August 21, 2017, none of the soil samples would be considered not impacted. What is the rationale for segregation of soil?

Thanks,  
Olivia

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**From:** Geoff Leking [<mailto:geoff@etechenv.com>]  
**Sent:** Wednesday, December 20, 2017 2:49 PM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>; Yolanda Jordan <[yjordan@blm.gov](mailto:yjordan@blm.gov)>  
**Subject:** Biliken 7 Federal 1H Additional Chloride Delienation

Olivia and Yolanda

While searching the NMOCD web page, I came across the delineation report for the Biliken 6 Federal 1H site that is approximately 0.7 miles northeast of the Biliken 7 Federal 1H site. SESI successfully used a backhoe to complete chloride delineation in the caliche at that site. Therefore, I propose that the same be done at the Biliken 7 Federal 1H site. Basically, the approved delineation plan would still be followed with the backhoe taking the place of the drilling rig. Let me know if this email will suffice for the modification of the delineation work plan. Note, all impacted soil will be segregated from non-impacted soil on 6 mil plastic. Thank you.

## **Geoff Leking**

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**From:** [Yu, Olivia, EMNRD](#)  
**To:** ["Geoff Leking"](#)  
**Subject:** RE: Devon Billiken 7 Federal 1H - 1RP-4687  
**Date:** Monday, February 19, 2018 1:52:00 PM

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Mr. Leking:

Thank you for the update.

Olivia

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**From:** Geoff Leking [mailto:geoff@etechenv.com]  
**Sent:** Monday, February 19, 2018 1:22 PM  
**To:** Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>  
**Subject:** RE: Devon Billiken 7 Federal 1H - 1RP-4687

Olivia

We are proceeding to gather quotes for performance of the borings. Thank you.

## Geoff Leking

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**From:** Yu, Olivia, EMNRD [mailto:[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)]  
**Sent:** Monday, February 19, 2018 11:12 AM  
**To:** Geoff Leking  
**Subject:** RE: Devon Billiken 7 Federal 1H - 1RP-4687

Mr. Leking:

This issue has been mentioned and addressed already. Further vertical delineation still will be necessary for 1RP-4687. There is no certainty that chlorides did not migrate through the caliche layer until proven otherwise with analytical data.

Thanks,

Olivia

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**From:** Geoff Leking [<mailto:geoff@etechenv.com>]  
**Sent:** Monday, February 19, 2018 7:57 AM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>  
**Subject:** Re: Devon Billiken 7 Federal 1H - 1RP-4687

Olivia

You are correct that the plan stated that a drill rig or other penetrative method would be utilized. However, in light of the nature of the caliche as observed, it was hoped you might provide relief from further vertical chloride delineation. The chloride concentrations at the 2.5 foot and three (3) foot depths were from sand above the caliche and not the caliche itself. Once the sand is stripped away and the backhoe scrapes into the caliche I believe the concentrations will be less than 600 mg/kg. At that point, I would believe this would indicate that the chloride did not migrate below the top of the caliche and that further vertical delineation would not be necessary. Thank you for your consideration on this matter.

Geoff Leking  
Etech  
Sent from my iPhone

On Feb 19, 2018, at 8:29 AM, Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)> wrote:

Good morning Mr. Leking:

The approved proposed delineation plan on September 22, 2017 for 1RP-4687 indicated that delineation samples were collected up to 3 ft. bgs, which contradicts the information presented below. Furthermore, additional delineation was to be completed by a drilling rig. Etech subsequently requested an amendment to the use of a backhoe on December 20, 2017. From the email communication on December 26, 2017, NMOCD assumed that if a backhoe was not successful, the original plan of a drilling rig will be used.

Thanks,  
Olivia

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**From:** Geoff Leking [<mailto:geoff@etechenv.com>]  
**Sent:** Thursday, February 15, 2018 10:34 AM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>  
**Subject:** Devon Billiken 7 Federal 1H - 1RP-4687

Olivia

The attempt to breach the caliche utilizing the backhoe was unsuccessful. The caliche

is very hard, well cemented, and impermeable. The backhoe was only able to scrape the surface of the caliche to approximately one (1) inch in depth, and repeated blows with the teeth of the backhoe bucket did not fracture the caliche. The potential for downward migration of chloride through the caliche is very low. If acceptable, I would like to collect surface samples from the top of the caliche and have them analyzed at the laboratory. If analysis indicates chloride concentrations less than 600 mg/kg, then the samples would serve as delineation and bottom hole samples. Depth to groundwater is from 150 feet to 175 feet below ground surface (bgs). Thank you, Olivia.

## **Geoff Leking**

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