

**From:** [Yu, Olivia, EMNRD](#)  
**To:** ["Graham, Rick": Yolanda Jimenez](#)  
**Cc:** [Griffin, Beau G](#); [Nash, Brett](#)  
**Subject:** RE: [EXTERNAL] RE: Key release  
**Date:** Monday, August 27, 2018 10:51:00 AM

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Dear Mr. Graham:

NMOCD received a paper copy of the remediation report for 1RP-5071 today, August 27, 2018. Upon review of the data, vertical delineation is still not completed. A subsurface caliche layer is not an acceptable rationale for incompleteness of delineation. As previously stated, the proposed 2 ft. excavation as a remedial activity was contingent upon completion of release characterization/delineation.

Please note that NMOCD prefers electronic submission of reports to facilitate documentation as well as correspondence with associated agencies.

Thanks,  
Olivia

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**From:** Graham, Rick <[rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)>  
**Sent:** Friday, July 27, 2018 2:14 PM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>; Yolanda Jimenez <[yjimenez@blm.gov](mailto:yjimenez@blm.gov)>  
**Cc:** Griffin, Beau G <[bgriffin@keyenergy.com](mailto:bgriffin@keyenergy.com)>; Nash, Brett <[bnash@keyenergy.com](mailto:bnash@keyenergy.com)>  
**Subject:** RE: [EXTERNAL] RE: Key release

Olivia,

Key plans to be onsite the morning of July 31<sup>st</sup> to excavate material from the impacted area at the Atha facility. Please note this as our 2-business day notification for remediation activities and let us know if you have any questions.

Thanks,

**Rick Graham** | Key Energy Services | Environmental Director  
o: 713.651.4437 | c: 346.274.5432 | e: [rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)

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**From:** Yu, Olivia, EMNRD [<mailto:Olivia.Yu@state.nm.us>]  
**Sent:** Friday, July 27, 2018 12:20 PM  
**To:** Graham, Rick <[rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)>; Yolanda Jimenez <[yjimenez@blm.gov](mailto:yjimenez@blm.gov)>  
**Cc:** Griffin, Beau G <[bgriffin@keyenergy.com](mailto:bgriffin@keyenergy.com)>; Nash, Brett <[bnash@keyenergy.com](mailto:bnash@keyenergy.com)>  
**Subject:** RE: [EXTERNAL] RE: Key release

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Mr. Graham:

Thank you for the data. As many of the delineation sample locations still have chloride levels exceeding permissible 600 mg/kg at 2 ft. bgs, please note that additional vertical delineation will need to proceed in depth. Also, the impacted area needs to be extended laterally, West of sample locations #10, #14, and #16 to complete horizontal delineation.

In the interest of moving 1RP-5071 towards resolution, NMOCD will grant the proposed remediation of excavation to 2 ft. bgs, on the condition that vertical and horizontal delineation be completed. Please note that if agreed upon, NMOCD cautions the Responsible Operator that delineation, while conducting remediation, is considered an at-risk activity.

Please be advised that correspondence of this release (1RP-5071) proceeded for over 2 months without an actual delineation or remediation plan. A remediation report will be required before closure with 1) all laboratory results and chain of custody documents; 2) summary of release characterization activities; 3) dated photos; and 4) a scaled map with the extended impact footprint in relation to the original release area. Provide tabulated GPS coordinates.

BLM like approval required. BLM may have additional concerns or stipulations. Please provide at least 2 business day of advanced

notice to observe delineation/remediation activities.

Thanks,  
Olivia

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**From:** Graham, Rick <[rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)>  
**Sent:** Friday, July 27, 2018 9:24 AM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>; Yolanda Jimenez <[yjimenez@blm.gov](mailto:yjimenez@blm.gov)>  
**Cc:** Griffin, Beau G <[bgriffin@keyenergy.com](mailto:bgriffin@keyenergy.com)>; Nash, Brett <[bnash@keyenergy.com](mailto:bnash@keyenergy.com)>  
**Subject:** RE: [EXTERNAL] RE: Key release

Olivia and Yolanda,

We have received the results from the additional sampling of the Atha, where we were able to excavate down to 2ft-bgs in previously identified sample locations and collect representative bottom samples (see table attached). Key has also put together a concentrations map for your review. We are ready to proceed on any excavation and/or remediation request that the NMOCD will issue. Please let us know if you have any questions.

Thanks,

**Rick Graham** | Key Energy Services | Environmental Director  
o: 713.651.4437 | c: 346.274.5432 | e: [rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)

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**From:** Yu, Olivia, EMNRD [<mailto:Olivia.Yu@state.nm.us>]  
**Sent:** Wednesday, July 11, 2018 12:19 PM  
**To:** Graham, Rick <[rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)>; Yolanda Jimenez <[yjimenez@blm.gov](mailto:yjimenez@blm.gov)>  
**Cc:** Griffin, Beau G <[bgriffin@keyenergy.com](mailto:bgriffin@keyenergy.com)>; Nash, Brett <[bnash@keyenergy.com](mailto:bnash@keyenergy.com)>  
**Subject:** RE: [EXTERNAL] RE: Key release

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Mr. Graham:

NMOCD would agree to the use of a backhoe to remove the impacted 2 ft. of soil before continuation of vertical and horizontal delineation for 1RP-5071.

Like approval from BLM required.

Thanks,  
Olivia

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**From:** Graham, Rick <[rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)>  
**Sent:** Tuesday, July 10, 2018 12:39 PM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>; Yolanda Jimenez <[yjimenez@blm.gov](mailto:yjimenez@blm.gov)>  
**Cc:** Griffin, Beau G <[bgriffin@keyenergy.com](mailto:bgriffin@keyenergy.com)>; Nash, Brett <[bnash@keyenergy.com](mailto:bnash@keyenergy.com)>  
**Subject:** RE: [EXTERNAL] RE: Key release

Olivia and Yolanda,

Key plans to use a backhoe to excavate soil sampling locations down to 2ft-bgs., in order to collect additional delineation samples at the Atha facility. Please let us know if you have any issue with the proposed sampling scope?

Thanks,

**Rick Graham** | Key Energy Services | Environmental Director  
o: 713.651.4437 | c: 346.274.5432 | e: [rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)

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**From:** Yu, Olivia, EMNRD [<mailto:Olivia.Yu@state.nm.us>]  
**Sent:** Friday, June 29, 2018 5:30 PM

**To:** Graham, Rick <[rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)>; Yolanda Jimenez <[yjimenez@blm.gov](mailto:yjimenez@blm.gov)>  
**Cc:** Griffin, Beau G <[bgriffin@keyenergy.com](mailto:bgriffin@keyenergy.com)>  
**Subject:** RE: [EXTERNAL] RE: Key release

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Mr. Graham:

Release characterization still needs to be completed for 1RP-5071. NMOCD recommends the use of a mechanical auger (i.e., direct push soil borer) or a drilling rig to complete vertical delineation due to the release location. However, a backhoe may be able to access the release area.

BLM may have additional right-of-entry requirements.

Thanks,  
Olivia

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**From:** Graham, Rick <[rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)>  
**Sent:** Friday, June 29, 2018 1:58 PM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>; Yolanda Jimenez <[yjimenez@blm.gov](mailto:yjimenez@blm.gov)>  
**Cc:** Griffin, Beau G <[bgriffin@keyenergy.com](mailto:bgriffin@keyenergy.com)>  
**Subject:** RE: [EXTERNAL] RE: Key release

Olivia,

Due to the shallow surface lithology of hard compacted soil at the site, we had refusal for the hand augering method we used at a depth of ~1 ft-bgs. This material was described as concrete like at the 1ft. depth and we were not able to advance the borings any deeper to collect 2ft. samples. We understand this was a deviation from the original sampling plan submitted and would appreciate any input on what the OCD & BLM would suggest next for further delineation sampling.

Thanks,

**Rick Graham** | Key Energy Services | Environmental Director  
o: 713.651.4437 | c: 346.274.5432 | e: [rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)

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**From:** Yu, Olivia, EMNRD [<mailto:Olivia.Yu@state.nm.us>]  
**Sent:** Wednesday, June 27, 2018 12:28 PM  
**To:** Graham, Rick <[rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)>; Yolanda Jimenez <[yjimenez@blm.gov](mailto:yjimenez@blm.gov)>  
**Cc:** Griffin, Beau G <[bgriffin@keyenergy.com](mailto:bgriffin@keyenergy.com)>  
**Subject:** RE: [EXTERNAL] RE: Key release

**\*\*\*Caution: This email originated from outside of the organization. Do NOT click on links or attachments unless you recognize the sender and know the content is safe.\*\*\***

Mr. Graham:

What is the rationale for not completing vertical delineation for 1RP-5071? The preliminary data provided indicated all samples at 1 ft. bgs are above permissible chloride limits. The proposed workplan stated that at least 2 ft. of data will be collected.

Thanks,  
Olivia

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**From:** Graham, Rick <[rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)>  
**Sent:** Monday, June 25, 2018 10:10 AM  
**To:** Yolanda Jimenez <[yjimenez@blm.gov](mailto:yjimenez@blm.gov)>; Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>  
**Cc:** Griffin, Beau G <[bgriffin@keyenergy.com](mailto:bgriffin@keyenergy.com)>  
**Subject:** RE: [EXTERNAL] RE: Key release

Olivia and Yolanda,

Please see the attached lab results, data table and figures for the delineation sampling event conducted at the Atha on 6/14/18. Please let us know your thoughts on the next step in the process and if you have any questions.

Thanks,

**Rick Graham** | Key Energy Services | Environmental Director  
o: 713.651.4437 | c: 346.274.5432 | e: [rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)

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**From:** Yolanda Jimenez [<mailto:yjimenez@blm.gov>]  
**Sent:** Tuesday, June 19, 2018 2:09 PM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>  
**Cc:** Graham, Rick <[rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)>; Griffin, Beau G <[bgriffin@keyenergy.com](mailto:bgriffin@keyenergy.com)>  
**Subject:** Re: [EXTERNAL] RE: Key release

**\*\*\*Caution: This email originated from outside of the organization. Do NOT click on links or attachments unless you recognize the sender and know the content is safe.\*\*\***

Hello, Mr. Rick. When you all get the sample results, please direct them to the BLM as well. Thanks.

Regards,

Yolanda

On Mon, Jun 11, 2018 at 4:31 PM Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)> wrote:

Mr. Graham:

Thank you for the additional release information regarding 1RP-5071. NMOCD approves of the proposed delineation plan and noted the date and time of sampling activities, occurring on Thursday, June 14, 2018.

Olivia

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**From:** Graham, Rick <[rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)>  
**Sent:** Monday, June 11, 2018 11:23 AM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>  
**Cc:** Yolanda Jordan <[yjimenez@blm.gov](mailto:yjimenez@blm.gov)>; Griffin, Beau G <[bgriffin@keyenergy.com](mailto:bgriffin@keyenergy.com)>  
**Subject:** RE: Key release

Olivia and Yolanda,

Please see our answers, listed in red below, to your questions in regards to the delineation plan for 1RP-5071. Also, please find our revised remediation plan/map attached to this email. As requested, the revised remediation plan/map is inclusive of answers to your questions below. We would like this notification to serve as our 48-hour notice to both the NM OCD and the BLM that Key will collect soil samples for analysis this **Thursday, June 14<sup>th</sup> 2018 beginning at 7 am.**

1. Please indicate the release point on a scaled map. Is the area under the filter pot lined?
  - **Yes, the area under the release point is a lined cement structure. Please see the map provided in the attached remediation plan for the exact point of release.**
2. Is the limit of the release area at the caliche berm? Please verify that the release did not impact the pasture (i.e., photos).
  - **After corresponding with Key operations, we now understand the caliche berm (not part of tank battery secondary containment) had a breach directly to the west of the release point which allowed the released liquids to reach the pasture to the west of the caliche berm. Please refer to the revised remediation plan/map to view the updated affected area and the additional sample locations to reflect these changes. An attached photo of the release area is also attached for reference.**
3. Please be advised that vertical delineation must proceed further than 2 ft. bgs if BTEX, TPH and chloride permissible levels are exceeded. Permissible chloride levels are 600 mg/kg.
  - **Vertical delineation will proceed further than 2 ft. bgs if BTEX, TPH and chloride levels are exceeded at 2 ft. bgs at any sample location.**

4. Soil samples representing the horizontal extent of the release must be collected as well. If the levels of BTEX, TPH, and chlorides exceed permissible levels at the edges of the identified release area, the sample area must be extended laterally, including West of the caliche berm.
  - Please refer to the revised remediation plan/map to view the updated affected area and the additional sample locations including those extending laterally just outside of the affected area.
5. Provide GPS coordinates of the sample locations.
  - Please refer to the revised remediation plan/map for each sample location's GPS coordinates.
6. Provide NMOCD at least 48-hours advance notice for an opportunity to witness soil sampling processes.
  - Please let this notification serve as Key's 48-hour notice to both the NM OCD and BLM that Key will collect soil samples for analysis this **Thursday, June 14<sup>th</sup> beginning at 7 am.**

Please let me know if you have any questions or concerns.

Thanks,

**Rick Graham** | Key Energy Services | Environmental Director  
o: 713.651.4437 | c: 346.274.5432 | e: [rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)

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**From:** Yu, Olivia, EMNRD [<mailto:Olivia.Yu@state.nm.us>]  
**Sent:** Wednesday, June 06, 2018 9:40 AM  
**To:** Graham, Rick <[rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)>  
**Cc:** Yolanda Jordan <[yjimenez@blm.gov](mailto:yjimenez@blm.gov)>; Griffin, Beau G <[bgriffin@keyenergy.com](mailto:bgriffin@keyenergy.com)>  
**Subject:** RE: Key release

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Good morning Mr. Graham:

Please address these points of concern regarding the proposed delineation plan for 1RP-5071:

1. Please indicate the release point on a scaled map. Is the area under the filter pot lined?
2. Is the limit of the release area at the caliche berm? Please verify that the release did not impact the pasture (i.e., photos).
3. Please be advised that vertical delineation must proceed further than 2 ft. bgs if BTEX, TPH, and chloride permissible levels are exceeded. Permissible chloride levels are 600 mg/kg.
4. Soil samples representing the horizontal extent of the release must be collected as well. If the levels of BTEX, TPH, and chlorides exceed permissible levels at the edges of the identified release area, the sample area must be extended laterally, including West of the caliche berm.
5. Provide GPS coordinates of the sample locations.
6. Provide NMOCD at least 48 hours advance notice for an opportunity to witness soil sampling processes.

BLM may have additional concerns or stipulations.

Thanks,  
Olivia

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**From:** Graham, Rick <[rgraham01@keyenergy.com](mailto:rgraham01@keyenergy.com)>  
**Sent:** Wednesday, May 30, 2018 8:48 AM  
**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>  
**Cc:** Yolanda Jordan <[yjimenez@blm.gov](mailto:yjimenez@blm.gov)>; Griffin, Beau G <[bgriffin@keyenergy.com](mailto:bgriffin@keyenergy.com)>  
**Subject:** RE: Key release

Olivia and Yolanda,

Do we have your approval to move forward with the work plan sent last week for investigation/delineation of any impacts at the Atha SWD? Our field team is ready to mobilize to the site and begin the work as soon as we get the go ahead from you both.

Thank you,

**Rick Graham** | Key Energy Services | Environmental Director

o: 713.651.4437 | c: 346.274.5432 | e: rgraham01@keyenergy.com

**From:** Graham, Rick  
**Sent:** Friday, May 25, 2018 9:32 AM  
**To:** 'Yu, Olivia, EMNRD' <Olivia.Yu@state.nm.us>  
**Cc:** Yolanda Jordan <yjimenez@blm.gov>; Griffin, Beau G <bgriffin@keyenergy.com>  
**Subject:** RE: Key release

Yolanda and Olivia,

Attached is Key's sampling work plan for the delineation of impacts resulting from the May 10<sup>th</sup> spill at the Atha SWD. Once we receive approval from your both, we will mobilize to the site for this task. Please let us know if you have any questions.

Thanks,

**Rick Graham** | Key Energy Services | Environmental Director  
o: 713.651.4437 | c: 346.274.5432 | e: rgraham01@keyenergy.com

**From:** Yu, Olivia, EMNRD [mailto:Olivia.Yu@state.nm.us]  
**Sent:** Tuesday, May 22, 2018 11:43 AM  
**To:** Graham, Rick <rgraham01@keyenergy.com>  
**Cc:** Yolanda Jordan <yjimenez@blm.gov>  
**Subject:** FW: Key release

Dear Mr. Graham:

Please be advised that NMOCD database indicates Federal surface and mineral ownerships. BLM can verify.

The IRP for this incident is

|             |           |   |                     |                     |              |            |           |
|-------------|-----------|---|---------------------|---------------------|--------------|------------|-----------|
| <b>5071</b> | 5/22/2018 | A | Key Energy Services | Atha SWD/ JH Day #2 | 30-025-08816 | 22S-36E-6D | 5/10/2018 |
|-------------|-----------|---|---------------------|---------------------|--------------|------------|-----------|

Please remember to include this IRP identifier to all communications. Also, please be advised that a release characterization/delineation workplan as detailed in the attachment must be approved by NMOCD BEFORE any remediation work.

Thanks,

Olivia Yu  
Environmental Specialist  
NMOCD, District I  
[Olivia.yu@state.nm.us](mailto:Olivia.yu@state.nm.us)  
575-393-6161 x113

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

**From:** Brown, Maxey G, EMNRD  
**Sent:** Friday, May 11, 2018 10:20 AM  
**To:** Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>  
**Subject:** Key release

Key Atha SWD tank battery. 70 bbls prod. Water on site. Rick Graham 713-651-4437. Event occurred 5/10/2018. Will submit C-141.  
30-025-08816.

Sent from Samsung Mobile

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## **Yolanda Jordan Jimenez**

**Environmental Protection Specialist**

**Bureau of Land Management**

Carlsbad Field Office

620 E. Greene Street

Carlsbad, NM 88220

Office: (575) 234-5916

Cell: (575) 361-4586

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