

Bratcher, Mike, EMNRD

From: Kristin Pope <kristin@rthicksconsult.com>
Sent: Tuesday, May 30, 2017 5:35 PM
To: Billings, Bradford, EMNRD; Bratcher, Mike, EMNRD
Cc: mike@rthicksconsult.com; 'Randall Hicks'; 'Michael Barrett'; Weaver, Crystal, EMNRD
Subject: RE: Lime Rock ASAU Trunk 2RP 3893`
Attachments: NoticeOfGwImpact_MWs.pdf

Mr. Billings, et. al,

Please find the attached submission that will serve as our notice of groundwater impact and notice to drill additional wells this month as we discussed during our May 23 meeting. As I mentioned this morning, Randy's project will have the rig for most of the week so we will drill MW-2 here on Friday, June 9, 50 ft down-gradient from MW-1. We are scheduled to drill the next two wells the week of June 26.

Please let me know if this approach meets OCD approval. Thank again for your help.

Kristin Pope
R.T. Hicks Consultants
Carlsbad Field Office
575.302.6755

From: Billings, Bradford, EMNRD [mailto:Bradford.Billings@state.nm.us]
Sent: Tuesday, May 16, 2017 8:35 AM
To: Kristin Pope; Bratcher, Mike, EMNRD
Cc: mike@rthicksconsult.com; 'Randall Hicks'; 'Michael Barrett'; Weaver, Crystal, EMNRD
Subject: RE: Lime Rock ASAU Trunk 2RP 3893`

Hello All,

First, thanks for sending in the information/draft/ideas. Much appreciated. We can talk about protocol for sampling when next we meet.

As the current monitor well has significant product measured in the well casing on top of ground water, I do not think ground water depths would be reliable as a depth to water measuring point. As a result, I believe we would need at least three more monitor wells to be placed to gain a reasonable approximation of a ground water gradient. Two more would not be sufficient.

I suggest placement for two of these three well to be somewhat flexible based on data derived from the placement of the first of these three new wells. With an idea towards first of new wells in anticipated most likely general ground water flow direction.

The intent here, as well, is to delineate the potential/real ground water contamination plume. OCD believes it too early in the process to develop sampling schedules on a limited number of wells, without better knowledge of contamination plume structure. Following this diagnosis we can better discuss sampling aspects, and or remedial efforts. I think it not likely that only three more wells will define the plume, but, it is a start.

OCD does not have an issue, per se, with a bail down test of the product abiding within the current monitor well, however, the specifics of the test (method/timing/disposition of removals, etc.) would need to be detailed.

In light of your submitted draft, and the above thoughts by OCD, it seems a meeting would be most productive before plans and or budgets are defined. Both Mike and Crystal will have valuable input on this as well. I am not sure of schedules, but, I will be in Artesia next week for a couple of days, and albeit we already have several things scheduled, it may be that some time can be earmarked for a sit down. Mike and Crystal would be best to check with on this aspect.

Again, thanks for sending in the information. Look forward to getting this rolling.

Sincerely,
Brad Billings

From: Kristin Pope [<mailto:kristin@rthicksconsult.com>]
Sent: Monday, May 15, 2017 7:28 PM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>
Cc: mike@rthicksconsult.com; 'Randall Hicks' <r@rthicksconsult.com>; 'Michael Barrett' <mbarrett@limerockresources.com>
Subject: RE: Lime Rock ASAU Trunk 2RP 3893`

Mike and Brad,

Before we officially submit, we wanted you to look at the locations of the proposed MW-2 and MW-3 to see if they meet the expectations that you and Randy discussed last month. Regional data tell us that groundwater flows south-southeast here so we placed the southern well 50 ft from MW-1 in the general direction of flow. We also suspect that the draw may provide recharge from the north and add a more southerly component to the flow. The regional data shows a groundwater table slope of 0.0024 (20-foot drop/8237 feet SE vector). This means that we can expect a drop in the water table over a length of 50 feet along the flow path of only $50 \times 0.0024 = 0.12$ foot or 1.44 inches. Thus, the location and separation of these wells will help us to pin down an accurate gradient. We will get these surveyed and sampled quickly after installation.

Figure 2 of the attached draft shows the proposed locations of the 2 additional wells. Once we can agree on their locations, we will clean up figure 2 a bit and formally submit. Thanks for your help.

Kristin Pope
R.T. Hicks Consultants
Carlsbad Field Office
575.302.6755

From: Bratcher, Mike, EMNRD [<mailto:mike.bratcher@state.nm.us>]
Sent: Thursday, May 11, 2017 4:35 PM
To: Michael Barrett (mbarrett@limerockresources.com)
Cc: mike@rthicksconsult.com; 'Jerry Smith'; 'Kristin Pope'; Randall Hicks; Billings, Bradford, EMNRD; Weaver, Crystal, EMNRD
Subject: RE: Lime Rock ASAU Trunk 2RP 3893`

RE: Lime Rock Resources * ASAU Trunk Line Release * **2RP-3893**

Mr. Barrett,

As we are now three months past the ground water sampling event for the above referenced release, OCD requests analytical data from that event, and, Lime Rock's proposal for moving forward on this project be submitted to OCD not later than 5/22/2017.

If you have any questions or concerns, please contact me, or Bradford Billings in the Santa Fe office.

Thank you,

Mike Bratcher
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Artesia NM 88210
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mike.bratcher@state.nm.us

From: Randall Hicks [<mailto:r@rthicksconsult.com>]
Sent: Wednesday, February 8, 2017 10:16 AM
To: Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Cc: mike@rthicksconsult.com; 'Michael Barrett' <mbarrett@limerockresources.com>; 'Jerry Smith' <JSmith@limerockresources.com>; 'Kristin Pope' <kristin@rthicksconsult.com>
Subject: FW: Lime Rock ASAU Trunk 2RP 3893`

Bradford and Mike

The attached was written on 1/10 and you should have received it on the 11th.
I have no record that the attachment left my email. The well is being installed today, which is how I realized I had no record of this going out.

I believe I faithfully recorded the conversation with Bradford with respect to responding to the denial of the initial workplan.

Randall Hicks
R.T. Hicks Consultants
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Office: 505-266-5004