

STATE OF
COLORADO**Doc# 2573006**
Date: 6/18/2019
Facility ID: 374696

Heil - DNR, John <john.heil@state.co.us>

Form 27 for TEP's KP 22-16 Pit Closure Submitted - Doc. Number 402071332

8 messages

Mike Gardner <MGardner@terraep.com>
To: John Heil <john.heil@state.co.us>

Wed, Jun 12, 2019 at 7:50 AM

Good Morning John,

As we discussed, this is just a quick note to let you know that I have submitted the above Form 27 for your review. The facility ID for the pit being closed is 374696. If you could please review this document at your earliest opportunity ... it would be greatly appreciated. We have equipment staged at the location and are ready to proceed with closure activities upon your concurrence. Please let me know if you have any questions.

Thank you.

Mike Gardner

Cell: (970) 623-4875

Office: (970) 263-2760

mgardner@terraep.com

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Heil - DNR, John <john.heil@state.co.us>
To: Mike Gardner <MGardner@terraep.com>
Cc: Alex Fischer - DNR <alex.fischer@state.co.us>

Wed, Jun 12, 2019 at 10:52 AM

Hello Mike,

I am currently reviewing the F27 Supplemental that you sent over for the TEP's KP-22-16 Pit and a few issues have caught my eye:

1. background SAR values range from 0.045-0.035 and the provided sample results range from 37-87.
2. background EC values range from 0.41-1.4 and the provided sample results range from 6.0-14.

The magnitude of difference between the background values and the provided sample results, along with Rule 910.3.D warrant me to keep this remediation open until those issues can be addressed. I will be talking with Alex today to figure out a way to proceed with this remediation.

Please provide the depths for the sample locations so I can get a better understanding of the situation.

Thanks,
[Quoted text hidden]

--

John Heil
Environmental Protection Specialist



COLORADO
Oil & Gas Conservation
Commission
Department of Natural Resources

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1818 Taughenbaugh Blvd., STE 103, Rifle, CO 81650
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Mike Gardner <MGardner@terraep.com>
To: "Heil - DNR, John" <john.heil@state.co.us>
Cc: Alex Fischer - DNR <alex.fischer@state.co.us>

Wed, Jun 12, 2019 at 11:22 AM

John,

The pit bottom sample location is probably 20' bgs, and each of side wall locations were collected approximately 5' up from the bottom ... therefore all of the sidewall sample points are ~ 15' bgs. In all of the locations, these elevated inorganic readings will easily be covered by 15 – 20 feet of clean fill which should easily fulfill the > 3-feet guidance in FAQ #32. I suspect that the inorganics are high simply because the sample points were all collected from lower locations within the pit.

I have two questions:

- If it would help, I can collect another round of inorganic samples from higher up on the side walls, yet still below the 3-foot mark below ground surface. Would that be of any help in this situation?
- Secondly, could you elaborate more on your comment about the magnitude of the difference between the background value and the actual sample value? Is there a "quantitative limit" on the difference in magnitude that is acceptable / allowed, and if so, what is it?

As you can see from the lab data, there are virtually no organics or BETX constituents identified in any of the samples. The main thing that we are seeing here are indications of salt impacts from the produced water in the deeper portions of this pit, but these areas will be safely covered with many feet of clean fill dirt. As per FAQ #32 ... "elevated levels of pH, SAR, and EC in deeper soils should not adversely affect the successful reclamation of the site, which is the objective of these concentrations levels."

I'm available to have a discussion with you and Alex if it would help us to figure out a path forward on this.

Mike Gardner

Cell: (970) 623-4875

Office: (970) 263-2760

mgardner@terraep.com

From: Heil - DNR, John <john.heil@state.co.us>
Sent: Wednesday, June 12, 2019 10:52 AM

To: Mike Gardner <MGardner@terraep.com>
Cc: Alex Fischer - DNR <alex.fischer@state.co.us>
Subject: Re: Form 27 for TEP's KP 22-16 Pit Closure Submitted - Doc. Number 402071332

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Please provide the depths for the sample locations so I can get a better understanding of the situation.

Thanks,

On Wed, Jun 12, 2019 at 7:50 AM Mike Gardner <MGardner@terraep.com> wrote:

Good Morning John,

As we discussed, this is just a quick note to let you know that I have submitted the above Form 27 for your review. The facility ID for the pit being closed is 374696. If you could please review this document at your earliest opportunity ... it would be greatly appreciated. We have equipment staged at the location and are ready to proceed with closure activities upon your concurrence. Please let me know if you have any questions.

Thank you.

Mike Gardner

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--
John Heil
Environmental Protection Specialist

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Heil - DNR, John <john.heil@state.co.us>
To: Alex Fischer - DNR <alex.fischer@state.co.us>

Wed, Jun 12, 2019 at 12:18 PM

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--
John Heil
Environmental Protection Specialist



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Mike Gardner <MGardner@terraep.com>
To: "Heil - DNR, John" <john.heil@state.co.us>, Alex Fischer - DNR <alex.fischer@state.co.us>
Cc: Eric DeKam <EDeKam@terraep.com>, Shawn Brennan <sbrennan@terraep.com>

Tue, Jun 18, 2019 at 8:34 AM

John and Alex,

As we agreed last week, I was finally able to speak with both Kent and Brett Jolley regarding the pit closure at the KP 22-16 pit (Facility ID 374696). I explained to the Jolley's that we are preparing to close the pit, have removed the liner, and have collected representative sub-liner samples from the pit side-walls and pit bottom, and that the samples have been analyzed by ALS environmental laboratory. I explained that the analytical results show that both the SAR and EC are elevated above background and the COGCC 910-1 table value, and that COGCC requested that I discuss with them to see if they have any concerns with leaving these materials in place.

Brett and Kent both asked good questions about what SAR / EC were and were there any issues with burying this material. I explained that the primary issue with these inorganics constituents is that they can impact reclamation success if they are at the surface and left within the rooting zone (which is within 3 feet of the ground surface). However, I also explained that COGCC allows that "... "elevated levels of pH, SAR, and EC in deeper soils should not adversely affect the successful reclamation of the site, which is the objective of these concentrations levels" per FAQ #32. The Jolley's asked about the levels of the other potential contaminants (TPH, BETX, PAHs, etc.) and I was able to assure them that all of those organic contaminant levels were far below the COGCC 910-1 cleanup standards. Further, we had a good discussion that the pit will be filled entirely with clean fill and that the areas where the elevated inorganics were identified will absolutely be covered with 15 – 20 feet of clean fill.

After discussing this issue with both Brett and Kent separately, they then discussed this issue between themselves. Brett Jolley call me back and left the attached voice message for me at 3:04 yesterday afternoon (June 17, 2019). As indicated

on the attached message, both Kent and Brett are in agreement to proceed with the pit closure as planned with the understanding that the pit will be filled with clean fill material which will mitigate any concern with the elevated SAR readings.

I am also in receipt of a formal inspection that John and Steven conducted at this location on June 13, 2019. There are multiple corrective actions identified in the inspection report and most of them we are in agreement with and will be taken care of. In response to this inspection, please keep in mind this is an active construction site and yes, trash and debris can be found, as well as open excavations. We are in the process of cleaning all of this up as we do on every reclamation. Any oily soils and trash and debris will be collected, segregated, and disposed of accordingly. The corrective actions identified in this inspection report are all part of our normal pit closure and reclamation process, and they will be addressed in a FIRR once the pit closure and construction activities have been completed.

Given that the land owners are fully aware of the SAR / EC issue and they (the Jolley's) have approved TEP's plan to close the pit, TEP has fulfilled our commitment to COGCC to fully disclose and discuss this matter with the land owners. As Alex suggested, I can also submit another Supplemental Form 19 to document a "historical release" as possibly indicated by the SAR levels; however, I'm not sure that will provide any additional information beyond what we already know, but if this is still something that is required by COGCC ... we will do it.

TEP is respectfully requesting permission to proceed with closing this pit as soon as possible.

Mike Gardner

Cell: (970) 623-4875

Office: (970) 263-2760

mgardner@terraep.com

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voicemail201906171603fromWIRELESS CALLER 19703792319.mp3
16K

Fischer - DNR, Alex <alex.fischer@state.co.us>

Tue, Jun 18, 2019 at 9:24 AM

To: Mike Gardner <MGardner@terraep.com>

Cc: "Heil - DNR, John" <john.heil@state.co.us>, Eric DeKam <EDeKam@terraep.com>, Shawn Brennan <sbrennan@terraep.com>

Mike-

Based on the analytical previously provided, there does appear to be a historic release that has not been adequately delineated vertically and a F19 is required for this potential historic release.

TEP still needs to characterize the staining along the pit walls per Inspection 690200004. Provided that TEP characterizes this staining, and that the surface owner has provided concurrence via your email dated Jun 18, 2019 at 8:34 AM, TEP can proceed in backfilling the pit with clean fill. TEP may either collect samples and backfill, at risk, before analytical comes back; or sample wait for analytical to backfill. Concerns are for the organics (mainly BTEX, and TPH-DRO-GRO); however, samples for inorganics should be collected and analyzed for as well.

Observation:

Black and rust colored stained soil along all four excavation sidewalls of the pit ID# 374696 (See photos).

CA:

Document compliance of stained soil with table 910-1 by collecting additional samples per rule 910.b.(3).B. Provide soil sample documentation via Supplemental F27 for Remediation# 13721. Based on analytical submitted for REM 13721, the operator should determine the vertical and horizontal extent of impact.

Hope that this provided some additional guidance. I am up in the PowderWash today with very limited phone coverage.

Thanks
Alex

[Quoted text hidden]

--

Alex Fischer, P.G.

Environmental Supervisor, Western Colorado



P 303.894.2100 x5138 | F 303.894.2109 | C 303.501.3900

1120 Lincoln Street, Suite 801, Denver, CO 80203

| alex.fischer@state.co.us www.colorado.gov/cogcc

Fischer - DNR, Alex <alex.fischer@state.co.us>
To: John Heil <john.heil@state.co.us>

Tue, Jun 18, 2019 at 9:26 AM

John- Please capture this email to the REM. Also, please capture the vmail attachment as well that was with Mikes email.

Thanks
Alex

[Quoted text hidden]

Mike Gardner <MGardner@terraep.com>
To: "Fischer - DNR, Alex" <alex.fischer@state.co.us>
Cc: "Heil - DNR, John" <john.heil@state.co.us>, Eric DeKam <EDeKam@terraep.com>, Shawn Brennan <sbrennan@terraep.com>

Tue, Jun 18, 2019 at 10:11 AM

Alex,

I will go ahead and prepare an F19 for the potential historic release.

As far as the staining and areas of discoloration observed along the side walls is concerned, I explained to John on the phone that the discoloration in these pits can be caused by hydrocarbon staining, but it can also be caused by a residue from the black felt that underlies the actual poly liner. When the felt underlayment is removed from the sub-soils, it often times leaves a black discoloration that is not related to any hydrocarbon leak. I have seen this in many pits and I believe it is either caused by the dye from the felt fabric that eventually leaches out into the soil, but in some cases (especially in old pits), the felt fabric is embedded into the underlying soil, and when removed it actually peels off some of the black fibers leaving behind an appearance of black discoloration.

When closing any pit, we focus our verification sampling on any staining that we observe, and that was the definitely the case with the KP 22-16 pit. The areas of black and rust discoloration were sampled at the KP 22-16, and as the data shows, the hydrocarbon concentrations observed at these biased sample locations are extremely low on all of the side walls and the pit bottom. I am confident that our sampling targeted the areas of discoloration that John observed during his inspection, but as you requested, we will go ahead and collect additional samples to confirm this again.

Mike Gardner

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