



Suspected Release near Lauridson V V 18-16 well

John Peterson <JPeterson@kpk.com>

Tue, Mar 12, 2024 at 6:16 PM

To: "Arthur - DNR, Denise" <denise.arthur@state.co.us>, Laurel Anderson - DNR <laurel.anderson@state.co.us>, "Graber - DNR, Nikki" <nikki.graber@state.co.us>, "Binschus - DNR, Chris" <chris.binschus@state.co.us>

Cc: Jeffrey Kauffman <jkauffman@kpk.com>, Ross Watzman <rwatzman@kpk.com>, Mani Silva <msilva@kpk.com>

Thank you Denise. We did consider the possibility of a salt kill associated with oil and gas activities immediately upon notification, which is why we shut-in our facilities nearby by 3:10 pm on 3/6/24, 20 minutes after notification. We take every suspected spill/release notification seriously and investigate them immediately. We were investigating this issue into the night on 3/6/24 and continued through 3/8/24 before we reached our final conclusion. It wasn't until we spoke with the tenant farmer on the property and concluded that our facilities were not the source of the white powder that we resumed production.

Regards,

JP



John D. Peterson, P.G.

Director EHS & Compliance

1700 Lincoln Street, Suite 4550

Denver, CO 80203

jpeterson@kpk.com

www.kpk.com

O: 720-868-9848 x 0110

C: 303-550-8872

From: Arthur - DNR, Denise <denise.arthur@state.co.us>

Sent: Tuesday, March 12, 2024 5:08 PM

To: John Peterson <JPeterson@kpk.com>; Laurel Anderson - DNR <laurel.anderson@state.co.us>; Graber - DNR, Nikki <nikki.graber@state.co.us>; Binschus - DNR, Chris <chris.binschus@state.co.us>

Subject: [EXTERNAL]Fwd: [EXTERNAL]Suspected Release near Lauridson V V 18-16 well

Mr. Petersen,

Following the email thread below, Laurel Andersen forwarded your message to me, and I am responding briefly here. Upon closer evaluation of the location's conditions regarding the salt kill situation, our staff found that the current salt kill may have originated from unknown causes unrelated to oil and gas activity. Consequently, our staff has submitted an inspection report that does not attribute the current observed salt kill to the well as its source. However, it is important to acknowledge the possibility of future scenarios where your oil and gas operations could contribute to saline or sodic soil conditions in proximity to the wellhead.

Regards,

Denise T. Arthur, Ph.D.
Reclamation Supervisor



COLORADO
Energy & Carbon Management
Commission
Department of Natural Resources

Phone 720 630-6533
1120 Lincoln Street, Suite 801, Denver, CO 80203
denise.arthur@state.co.us | www.colorado.gov/cogcc

----- Forwarded message -----

From: **John Peterson** <JPeterson@kpk.com>

Date: Fri, Mar 8, 2024 at 4:24 PM

Subject: RE: [EXTERNAL]Suspected Release near Lauridson V V 18-16 well

To: Anderson - DNR, Laurel <laurel.anderson@state.co.us>

Cc: Nikki Graber - DNR <nikki.graber@state.co.us>, Ross Watzman <rwatzman@kpk.com>, Mani Silva <msilva@kpk.com>, Avi Mehler <AMehler@kpk.com>, Jeffrey Kauffman <jkauffman@kpk.com>

Laurel,

I received a voicemail return call from the farmer of the subject parcel. His name is [sic]. He indicated that the white residue is alkali and is natural and commonly occurring in the area.

JP



John D. Peterson, P.G.

Director EHS & Compliance

1700 Lincoln Street, Suite 4550

Denver, CO 80203

jpeterson@kpk.com

O: 720-868-9848 x 0110
C: 303-550-8872

From: John Peterson
Sent: Friday, March 8, 2024 12:52 PM
To: Anderson - DNR, Laurel <laurel.anderson@state.co.us>
Cc: Nikki Graber - DNR <nikki.graber@state.co.us>; Ross Watzman <rwatzman@kpk.com>; Mani Silva <msilva@kpk.com>; Avi Mehler <AMehler@kpk.com>; Jeffrey Kauffman <jkauffman@kpk.com>
Subject: RE: [EXTERNAL]Suspected Release near Lauridson V V 18-16 well

Laurel,

KPK has reached out to the landowner who referred us to the tenant farmer for the parcel containing our production well. We spoke to the farmer this morning but he was not the correct farmer for the parcel in question. We have contacted the landowner again to get the proper farmer but have not yet received contact information.

I did take the opportunity to consult with the farmer about white powder in fields and his experience with it. He indicated that this powder is called “alkali”. It can often appear in areas of the field that are not well drained from precipitation. He confirmed, as we saw in the field on Wednesday, that the area with powder is quite wet and there is a lowspot (swale) in that field that drains to the south toward county road 8. I observed another smaller drainage features that flows to the north of the production well.

I found an article discussing perennial solutions for Alkali Areas from the South Dakota State University Agricultural Extension. (<https://extension.sdstate.edu/perennial-solutions-alkali-areas>) The article explained that soil salinity issues result in the upward soil movement of salt as water evaporates on the soil surface.

KPKs flowlines are not located above or near the alkali soil observed at the Lauridson VV 18-16. The nearest alkali soil observed was approximately 40 feet west of the wellhead. As you indicated, the soils are very moist with no odor and no reported volatile organic vapors using a PID. KPK reviewed historical aerial photographs of the subject parcel and could see the alkali soil expression has increased, diminished, and completely disappeared entirely over time, particularly influenced by time of year and apparent moisture content of the soil. The observations are as follows:

Aerial Photo Year	Observation in the Suspect Area
2002-2013	Intermittent features indicative of poor soil drainage and changing surface cover conditions.
6/2014	Expression of Alkali at the surface and anomalies in vegetative cover
10/2014	No expression of Alkali soil and more robust vegetative cover present

10/2015	Small areas of alkali soil observed
6/2017	Alkali soil observed in area larger than 2015
5/2018	Large area of Alkali soil
9/2019	Reduction in Alkali soil impact area
10/2019	No alkali soil observed and soil appears very dry
6/2020	Slight evidence of alkali soil and stressed vegetation areas present
9/2020	No alkali and relatively dry soil observed on the farmland. Swale where alkali is usually precipitated has green vegetation compared do surrounding land.
5/2021	Slight evidence of alkali soil and stressed vegetation areas present. Moisture content appears higher in the swale and drainage areas than the surrounding land.
6/2021	Increase in Alkali from prior month.
4/2023	No alkali observed on the surface
5/2023	Increase in Alkali from prior month.

KPK observed similar soil conditions on the property located at the southeast corner of CR 19 and CR8 on 3/6/2024 after departing from the site and no oil and gas operations appear associated with this area.

Based on the information provided above, KPK has no reason to believe that the alkali is associated with our operations. We will resume production of those wells today and we plan to take no further action regarding this matter. KPK will forward a response from the tenant farmer upon receipt.

Please let me know if you have any questions.

JP

John D. Peterson, P.G.

Director EHS & Compliance

1700 Lincoln Street, Suite 4550

Denver, CO 80203

jpeterson@kpk.com

www.kpk.com

O: 720-868-9848 x 0110

C: 303-550-8872

From: Anderson - DNR, Laurel <laurel.anderson@state.co.us>
Sent: Friday, March 8, 2024 10:51 AM
To: John Peterson <JPeterson@kpk.com>
Cc: Nikki Graber - DNR <nikki.graber@state.co.us>
Subject: [EXTERNAL]Suspected Release near Lauridson V V 18-16 well

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Good morning, John,

Thank you for coming out to the suspected release near the Lauridson V V 18-16 well and having crews shut in and blow down the wells in the area on Wednesday.

Have you or Avi heard from the landowner? What is KPK's immediate plan to address the suspected release? Please provide us with an update by 5:00pm Monday March 11, 2024.

A photo and map from our drone flight are attached below.

Panoramic photo taken north of Lauridson V V 18-16 well facing south.



Drone map - North is up



Have a good weekend,

Laurel Anderson
Environmental Protection Specialist
My pronouns: she/her/hers



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Department of Natural Resources

P 303.894.2100 | C 970-404-9911 | F 303.894.2109
[1120 Lincoln Street, Suite 801, Denver, CO 80203](https://www.colorado.gov/ecmc)
Laurel.Anderson@state.co.us | www.colorado.gov/ecmc

Upcoming days out of office: March 1st, 15th, 25th & 29th